Author's response to reviews

Title: Learning to Prescribe - Pharmacists' Experiences of Supplementary Prescribing Training

Authors:

Richard J Cooper (richard.cooper@nottingham.ac.uk)
Joanne Lymn (joanne.lymn@nottingham.ac.uk)
Claire Anderson (claire.anderson@nottingham.ac.uk)
Tony Avery (a.avery@nottingham.ac.uk)
Paul Bissell (P.bissell@sheffield.ac.uk)
Louise Guillaume (l.r.guillaume@sheffield.ac.uk)
Allen Hutchinson (allen.hutchinson@sheffield.ac.uk)
Elizabeth Murphy (e.murphy@nottingham.ac.uk)
Julie Ratcliffe (julie.ratcliffe@unisa.edu.au)
Paul Ward (Paul.ward@flinders.edu.au)

Version: 2 Date: 10 October 2008

Author's response to reviews: see over
Responses to reviewers’ comments Manuscript ID 3982248962025482)

We would like to thank both the reviewers for their comments on the original draft of the paper, which have allowed us to produce a revised paper which we believe is stronger as a result. Many minor changes to wording have been undertaken, which we believe have resulted in a paper that is more readable but suitable for a broad, international audience.

Review Mary Tully (MT)

1 We have revised the paper following MT’s clarification about the choice of wording for courses with different health care professions and have used the term ‘inter-professional’ throughout. Furthermore, as per her suggestion, we have included a definition in the introduction:

“This reflects broader recognition within healthcare that providing combined training can provide a range of benefits, as stated in one of the common definitions of inter-professional learning:
"two or more professions learn from and about each other to improve collaboration and the quality of care."’ CAIPE 1996

2 Following MT’s helpful comment, the word ‘completed’ is used instead of ‘undertaken’ to reflect those who had not yet completed independent prescribing courses.

3 The revised paper now includes actual numbers as well as percentages for the attitudinal data.

4 The phrase "shadowing a doctor" has now been changed to

"It was apparent that pharmacists valued elements of training that gave insights into what subsequent prescribing practice would involve (such as when they observed and worked alongside doctors in the period of learning in practice)" to reflect the observation that pharmacists simply enjoyed all aspects of working with doctors, but particularly because it showed them what to expect when they qualified and practiced themselves.

5 The term PG Dip is now described fully as "[post-graduate diploma]"

6 Recent communication with the RPSGB revealed that formal approved prior learning exemption is not allowed for full sections of courses and the revised paper now reads:

"At present, the use of APL to exempt pharmacists from whole sections of courses is not available on prescribing courses, and although individual HEIs may allow pharmacists to negotiate exemption from some of the taught elements (such as numeracy which nurses must undertake for example), pharmacists must still undertake and pass every course exam."
The comment about multidisciplinary training has been removed as this was not a key point and may have caused confusion.

7 We had already included the reference by Offredy et al (2007) but have now included the Bradley et al (2006) reference and a further one from Morrison-Griffiths et at (2006).

8 The phrase issues relating to doctors has now been removed and the revised paper includes a less ambiguous phrase which does not suggest it emerged from the data. It reads as follows, and represents a pure discussion point and possible recommendation.
"In the UK, doctors are presently not remunerated for their roles as DMPs"

Reference 20 has now been removed and replaced with one from the RPSGB which refers to the eventual integration of prescribing training into undergrad curricula.

The limitation about pharmacists' succinct responses now accommodates not only the questionnaire format but also admits of it being their choice not to add more detail. The revised paper now reads:

"and pharmacists did not describe or articulate their experiences and perceptions in the same detail that, for example, qualitative interview might have permitted."

We have kept the enumeration in the discussion, mainly since we recognised that the discussion is relatively long and we wanted to signpost readers to where one discussion point ended and another began.

We have retained the limitation section at the end of the paper because it makes reference to some of the points which are included in the discussion and so to move this section to the start of the discussion could appear confusing to the reader or require further explanation which we feel would alter the readability of the section.

We have retained the use of the term 'pharmacology' throughout for several reasons:

a. Other literature uses this generic term indistinguishably and so we wished to maintain consistency with the wider literature
b. Pharmacists did not appear to distinguish or clarify what they understood by pharmacology and, for example, the term clinical pharmacology was not used by them.

However, we do acknowledge the MT's point and agree that it is possible to make a distinction, which is important in some contexts.

Reviewer Derek Stewart (DS)

1 DS's first comment was that few data were provided about the effect of time on variables such as usefulness of training. In the original paper we did refer to the lack of association between training attitudes and year of qualification but we have significantly added to this reporting in the revised paper. In the revised paper, we now note in the abstract:

"There was no association between pharmacists' attitudes towards prescribing training and when they undertook training between 2004 and 2007 but earlier cohorts were more likely to be using supplementary prescribing in practice."

And in the revised main body of the paper, we note in more detail:

"Possible association between pharmacists' attitudes towards training and year of qualifying as a supplementary prescriber were undertaken using Chi-square analysis, but no statistically significant associations were identified across the four cohorts. Nor were there any significant associations between training attitudes and current supplementary prescribing status "

2 The reason for sampling pharmacists in England was because the Department of Health, who funded the research, specified England rather than UK. In part, this decision may also be explained by the continuing devolution of health
care services in the UK, such that there are now some differences between England, Scotland, Wales and Northern Ireland. However, it should be noted that the majority of SP qualified pharmacists are in England - personal communication with the Royal Pharmaceutical Society in late summer 2007 indicated that around 65% of the UK total were in England.

3 DS makes the point that few novel findings are reported but we consider the identification of several existing problems with SP prescribing to be of importance in itself, and refer in the discussion to our disappointment at this finding:

"Since this survey included pharmacists who had qualified up until mid-2007 and hence reflected possible changes to courses, it is therefore disappointing to find that issues that were reported in research involving early training cohorts still remain. As noted, year of qualification was not significantly associated with a change in pharmacists' attitudes towards SP courses."

However, we believe that this paper does report novel findings and moreover is able to include a more nuanced discussion of the findings than several previous papers. For example, we believe that pharmacists' views on pharmacology training and also training alongside other health care professionals such as nurses is very salient. But perhaps most importantly, the emergence of the 'stepping stone' concept with SP being viewed instrumentally as part of pharmacists' professional projects we believe is novel. Although other studies have reported upon pharmacists' intention to train as independent prescribers, we believe this paper adds significantly more to this trend and debate and may be of relevance to broader debates about professional boundary encroachment, for example. The analysis of year of qualification and prescribing status is also unique and whilst potentially explained by practical points such as time/opportunities to find prescribing jobs, this is still an important new finding.

4 DS's noted that more justification was needed for the research and the knowledge gaps to be filled. In responding to these points, we believe that this has already been clearly set out in original paper in the background, but the revised paper adds a further phrase relating to the use of prescribing in practice:

The abstract now reads:

"Aims: to explore pharmacists’ perceptions and experiences of learning to prescribe on supplementary prescribing (SP) courses, particularly in relation to inter-professional learning, course content and subsequent use of prescribing in practice."

The main text now reads:

"The aim in this paper is to explore the experiences and perceptions of pharmacists who completed SP training between 2003 and 2007. Including later cohorts allows us to consider the effect of changes to courses over time and subsequent use of prescribing in practice. Particular objectives were to explore possible tensions between increasingly inter-disciplinary prescribing courses and specific elements of course content such as pharmacology training, and the relationship between SP and IP training."
We feel that perhaps DS was referring more to the abstract, and in the revised paper, we have included some of these specific objectives in the abstract as well as the body of the paper.

DS notes that the response rate was relatively poor and we agree that this rate raises some issues about validity. We were careful in the original paper to make this clear to readers in the following statement: "In terms of study limitations, the response rate means that it may not be possible to generalise from this sample to all RPSGB registered pharmacists, or those in other parts of the UK. Due to study time limitations, it was not possible to analyse non-responders"

We believe that the response rate may have been affected to a certain extent by the length of the questionnaire, which included a number of different sections. A shorter questionnaire, and with perhaps less open response sections may have led to less 'fatigue' but we believe less rich data. In the revised paper, we have added the following additional sentence, which we believe recognizes this point and also offers insights that may be of value to other researchers: "The relatively long length of the questionnaire may have contributed to the lower response rate."

Title: DS felt that including English in the title was more appropriate and this has been included in the revised paper.

We have corrected the typo 'nurses' to 'nursing', as kindly suggested.

We have not changed DS's comment about SP training being additional to the pharmacy degree, nor the comment about the period of learning in practice, since we consider these to be too specific for an abstract. They are covered in detail in the main body of the original paper and are also referred to in the revised paper (see note 13 for the additional text).

We have, as DS suggested, included N sampled in the method part of the abstract but we are not sure what DS is referring to when we state that the survey is to explore 'pharmacists' general perceptions of SP' - as this feels a clear and self-evident phrase to indicate that we sought general views.

We have clarified the conclusion in the abstract about inter-disciplinary learning by including in the results a short comment.

DS recommended the use of the statutory definitions of supplementary and also independent prescribing but we felt that the descriptions provided in the original paper accurately captured all the features of both types of prescribing, whilst also being more succinct and more readable than reproducing the definitions. Importantly, too, our definitions allowed us to emphasise certain points, such as the differences in how doctors are involved in both types, which we believe is an important conceptual point.
DS also suggests not using the term ‘dependent’ as this may lead to confusion due to the original use in the Crown review. However, we strongly feel that for an international audience, the use of the word ‘dependent’ may assist understanding of supplementary prescribing, since the doctor is still involved. We are also aware of several synonymous uses of dependent and supplementary in the UK literature (see Brookes and Smith (eds) Non-medical prescribing in Health Care Practice Basingstoke, Palgrave-Macmillan, 2007 passim and Jones M (ed) in Nurse Prescribing London, Harcourt, 1999 Chapter 15)

The ‘keystone’ reference has been retained but re-worded to assist in clarity, since we feel that it is a fitting term from the literature that emphasises the importance of the educational aspects of supplementary prescribing in the UK. The new sentence reads: “For pharmacists, this is in addition to their mandatory under-graduate pharmacy degree and such training has been referred to as the ‘keystone’ [7] of the UK non-medical prescribing initiative.”

DS also notes that independent prescribing courses have been around for some time and combined courses are available. Our investigations suggest that the actual situation is more complex, with many UK pharmacy courses for independent prescribing still not have been accredited (In January 2008, for example, we were informed that 13 accreditations of independent courses had been completed but 25 were still pending). Hence, no changes have been made to the revised paper in this respect, and the wording in the original retained: "UK prescribing courses are also subject to change and, at the time of writing for example, pharmacist prescribing courses were undergoing accreditation to provide a combined IP and SP prescribing course, although interim top-up courses for pharmacist independent prescribing are available.”

DS also makes note of several other papers and in the revised paper, we have included those by Lloyd et al and George et al 2008 to support the paper. DS suggested that George et al 2006 could be included but this was in fact already in the original paper.

In the method section, DS again refers to why sampling in England alone was used and this is covered in point 2. We note in the methods that the larger study was a Department of Health funded evaluation of England only (as per the funder’s requirements).

RPSGB is now included in the methods section, having been previously described in full in the introduction.

Number sampled (808) now included in methods.

The pilot sample included several contacts of the authors and a snowball approach was also used to obtain further participants in the pilot stage. These prescribers were nurses and pharmacists who would not have been sampled in the later main survey and included some who were using mainly independent prescribing in their practice and some who were not currently practicing in
England. Hence, these were not excluded from the main sample. Due to time constraints (the survey being but one part of a much larger evaluation) test-retest for reliability was not possible, although as notes in the original paper, no concerns emerged about content or face validity.

20 Questions relating to income were included for another part of the evaluation – namely an economic evaluation of supplementary prescribing but were not described in this paper, as they were not considered relevant.

21 SPSS version 12 was used and is now included in the revised paper.

22 DS suggests the reporting of two different sample sizes in the results section. The different figures represent differences in the numbers of respondents to different questions i.e. all the pharmacists responded to the question about whether they were currently prescribing but only 363 valid responses were found for the question about gender.

23 Following DS’s kind observation, the term ‘respondent’ is now used throughout in the revised paper.

24 Not all demographic details were reported, as we did not consider these all to be relevant to the training focus of the paper.

25 The revised paper clarifies post-graduate qualification by noting that the post-graduate qualification was often at a Masters level.

26 DS suggested more analysis of those not currently prescribing and the revised paper includes significant reporting on this in relation to association with cohort year and intention to use independent prescribing:

“There was a statistically significant association between current supplementary prescribing status and year of qualification as a supplementary prescriber, with 70.7% of pharmacists qualifying in 2004 reporting current prescribing, compared to 55.6% of those qualifying in 2005, and 44% of those qualifying in 2006 ($\chi^2 = 14.35, \text{ d.f.} = 1, p=0.002$).”

“It was apparent that, although no significant association between training cohorts and attitudes towards courses were identified, year of qualifying as a supplementary prescriber was associated with whether the pharmacist reported currently using supplementary prescribing in practice. Whilst it is not possible to make any inference about the influence of actual courses upon this association, a more practical explanation may arise in that earlier cohorts will have had more time and opportunities since qualifying to begin prescribing compared to later cohorts.”

“There was statistically significant association between current supplementary prescribing status and independent prescribing status and intentions, with current supplementary prescribers being more likely to be already using, or
training for, independent prescribing, than pharmacists not using supplementary prescribing (χ² = 42.804, d.f. =3, p=0.000)."

27 DS felt that the open response questions were given ‘much space’ but we believe that this was justified for several reasons:

a. Firstly, existing research in this area has often used survey methods and reported often quantitative attitudinal data and our aim in this paper was to describe and represent pharmacists’ more qualitative responses and,

b. Secondly, this we believe allowed for a more detailed and rich account of pharmacists’ experiences and views to emerge, and upon which some of the themes and discussion points were made.

28 DS refers to the 1-2 comments statement and raised several questions related to it. We are slightly unsure about DS’s comments and have assumed he was seeking clarification. To explain, the main reason for including the reference in the original paper was to provide the reader with more detailed insights into the nature of pharmacists’ responses, namely that many only listed a single or at most a couple of positive responses. This was followed-up by the sentence after the quote, which we felt reflected a transparent approach to our research, in indicating the limited responses often made by pharmacists. However, to assist clarity in the revised paper we have rephrased the initial sentence to read:

“Most pharmacists only listed one or two ‘useful aspects’ in their responses but others were more effusive…”

29 DS asks if any contrasting quotes were included and only two responses to this question were negative, that is the respondents said ‘nothing positive’. However, we believe that the next section in the paper ‘least useful aspects’ obviously reflects contrasting views about what was not thought positive. But again, here, we noted in the original paper that it was an interesting finding that several (n=14) pharmacists stated that there was nothing negative about the course.

30 We thank DS again for spotting the typo ‘various’, which has now been changed to ‘varied’.

31 DS felt the discussion was very long but we consider this to be justified mainly since other studies have included relatively brief discussion of findings, which have prevented more exploratory and sustained discussion about supplementary prescribing. We believe that the publication format of BMC Medical Education (with the possibility of slightly longer word counts) justified including a longer discussion section, so as to explore points not made in previous studies, and in more detail.

Richard Cooper September 2008