Authorship of Cochrane Reviews – from the Cochrane Council , March 2019

The Cochrane Library depends entirely on author teams to write and maintain its core publications, Cochrane reviews. Without them the Library would be rapidly out of date and all the secondary products and the efforts at 'Knowledge Translation' would be meaningless.

The past few years have seen a significant increase in the requirements made of authors (and editors) aimed at increasing the quality and reliability of Cochrane reviews. These all add complexity to the process and therefore time demands on the authors. The developments in IT systems, though helping, have not solved this problem. Now there are demands for more complex reviews (e.g. network meta-analyses, diagnostic test reviews, prognostic reviews) and for more speed, timeliness and higher quality. At the same time there has been a large increase in the number of systematic reviews published outside Cochrane in mainstream peer-reviewed journals, many of which use RevMan and Grade tables. Some of these are of high quality but many are not. It is therefore increasingly important that Cochrane maintains its 'brand leadership' and reputation for quality.

In 2011 Burton and Chapman directly contacted the 131 authors of 34 reviews published in one issue of the Cochrane Library 'to determine the proportion that is the result of professional, semi---professional or volunteer effort'. (See appendix 1). Their survey revealed that 31% (95%CI 23-38) carried out reviews as part of their job, 31% (95%CI 23-39) for career development or academic credit, 5% (95%CI 1.5-9) as part of their training and 13% (95% CI 7-19) did it voluntarily.

At the beginning of 2018 the author representatives on the Council surveyed authors about their concerns, experience and general opinion of the various changes in the structure of Cochrane and of the improvements in the systematic review production planned in the 2020 strategy. They were invited to look at these documents: '*Cochrane Review Group Transformation Program Implementation Plan'* and '*Strategy 2020: 2018 targets'* and send in comments.

Unfortunately, the response rate was not high with only 18 authors answering. The key concerns were about the prioritisation of reviews and the support they received' The major points made included:

1. Prioritisation:
    - A risk that many reviews that are not on that list will become outdated
    - The work done by authors who have registered titles or published protocols may be lost because the editorial groups are focused on the priority topics
    - Prioritization may mean that the highest quality systematic reviews on some topics will not be published in the Cochrane Library, but elsewhere.
    - Destruction of the human capital that was (mostly voluntarily) invested in SR's not included in the priority list.
    - Authors may leave Cochrane and/or publish outside Cochrane.
    - Concern about how priorities are determined.
2. Review production and support
    - Strategy 2020 is focused on issues other aspects than daily review production
    - The available tools have not had major improvements and remain useful and robust for reviews that include RCTs but are not good for reviews that include non-randomised trials

- "…Covidence is an improvement in terms of efficiency but this is still a rather blunt instrument that fits reviews well that consist solely of standard RCTs but it has almost no features for non-standard non-randomised studies"
- RevMan is not a good support for "living systematic reviews"
- There is need to make the review updating process more efficient.

3. Commitment to support authors.
    - The voluntary collaboration of the authors seems not to be recognised which seems to discourage some authors.
    - "Cochrane was always a voluntary collaboration which I saw as one of its key functions to promote learnings about SRs and one of many ways this was done is by supporting authors when/if needed in several rounds of revisions. It is quite concerning that the new policy is rather then revise and support authors in revisions to reject the review if it's not considered up to scratch."

In 2018 the Council carried out another, very different survey asking the Managing Editors (MEs) to estimate how many of the authors of their reviews published in the past 12 months they considered to be:

1. True volunteers: people, usually but not exclusively, health professionals who write and maintain reviews entirely in their own time without any financial remuneration.
2. Partial volunteers: people who are employed full or part time in a role related to systematic reviewing and health knowledge (for example systematic reviewers working for health organisations such as NICE) and who author reviews voluntarily and not as part of their paid employment.
3. Professional reviewers: people whose paid role includes authoring Cochrane reviews; these may be on short term, grant-funded contracts or as part of established academic posts.

They were also asked to estimate the requirement for support needed by authors from the editorial base because of specific problems and the number of priority reviews which could not be started for different reasons. The results and the additional full text comments are summarised in appendix 2. As expected, the MEs found it difficult to make these estimates because they do not have direct information on the authorship categories and the responses showed considerable variation across all the responding CRGS. However 80% of the MEs estimated that fewer than 20% of their authors were 'professional reviewers' and only 6% of MEs believed that more than 40% of their authors were 'professional'. The responses and comments indicate that a significant number of CRGs have problems with the quality of their authors' work and have to provide support especially for MECIR standards.

The results of both surveys suggest that up to about 30% of review authors are employed specifically to carry out Cochrane reviews which means that a majority work as volunteers either as part of their professional academic role or entirely in their free time. Volunteer authors are probably motivated by a number of things such as:

- a clinical interest in the clinical area or specific topic
- an altruistic desire to further knowledge
- an opportunity for training and development
- the desire for a named publication which will lead to career advancement.

The last two are perhaps the dominant reasons and this can lead to problems as indicated by the Burton and Chapman survey.

One would expect that people employed specifically to carry out reviews will have the necessary skills and experience and be able to access to support and training in their organisation. But the skills of volunteer authors are likely to be more variable. Some will be seasoned Cochrane authors but a significant number will be inexperienced and may not always get as much support as they need from their more experienced named co-authors. They will need training and ongoing support from the Review Group's editorial base in order to deliver a review of good quality and they are unlikely to be able to take on the more complex types of review. They may not have good English language skills and there is no leverage to get them to deliver on time. Most Review Groups have strategies for identifying risky author teams at the start, but it is still difficult and time-wasting to stop poor performers once they have started. Those who are primarily motivated by the need for a publication may not, once that is achieved, want to take on another review and be reluctant to stay involved and update their review.

One solution to this is to increase the proportion of authors who are 'professional' but this clearly has a major implication for funding support which is hard to get in some countries and for some clinical areas. In our view this constitutes a significant ongoing problem for many, if not all CRGs, and may evolve into a major crisis. It is often discussed in passing at meetings of the Coordinating Editors but there seems to be no strategic approach to addressing it in the long term.

We would recommend that the Central Executive Team undertakes a strategic review of the problem of recruiting, training and retaining authors in order to support Goals 1 and 4 of Strategy to 2020.

Fergus Macbeth

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Appendix 1

Burton-Chapman poster copy.pdf

Appendix 2: Analysis of Author survey

This survey entailed asking the MEs of all Cochrane review groups to answer a questionnaire, asking about the nature of their authors, the problems that needed support from the editorial base and the number of priority reviews that could not be started for various specified reasons.

Replies were received from 43 CRGs - an 80% response rate. One reply did not identify which CRG it was from, but the data were included. There were two duplicates providing slightly different responses, and the data from only the first reply were included.

These were all estimates and did not come from a fully informed analysis by the individual MEs and so the results must be all regarded as very uncertain. Also the definitions of the kinds of authors and the nature of the support and the problems were clearly open to interpretation as evidenced by some of the comments. However, we believe the results do give a broad impression of how the authors and the problems experienced by the CRGs are perceived. It would be difficult to get more reliable information without detailed and time-consuming work in a dedicated project.

	True volunteers (%)	Partial volunteers (%)	Professional (%)
0-20%	30	23	80
20-40%	25	23	13
40-60%	15	21	1
60-80%	17.5	26	5
80-100%	12.5	8	0

Fig 1: Percentage responses to the questions about the estimated nature of the authors – i.e. 12.5% of respondents estimated that 80-100% of their authors were 'true volunteers', and 80% estimated that only 0-20% of their authors were 'professional' reviewers. Definitions: True volunteers (health professionals or others with NO protected time for research); Partial volunteers (people with academic credentials and/or affiliation with protected time for research, that could work either on reviews or on other research i.e. they are not mandated to do reviews); Professional reviewers (people who get paid or employed specifically to do reviews).

	Regular problems (%)	MECIR problems (%)	Language problems (%)	Technological problems (%)	Hands on support (%)
0-20%	17.5	13	47.5	79	21
20-40%	17.5	21	27.5	8	24
40-60%	25	18	10	11	3
60-80%	25	20	10	3	26
80-100%	15	28	5	0	26

Fig 2: Percentage responses to the questions about the estimated requirement for support needed by authors from the editorial base because of specific problems.

	No reliable team (%)	No update team (%)	No team for complex reviews (%)
None	40	52.5	64
1-2 reviews	40	17.5	33
3-5 reviews	15	17.5	3.5
6-9 reviews	2.5	7.5	0
10+ reviews	2.5	5	0

Fig 3: Percentage responses to the questions about the estimated number of priority reviews which could not be started for different reasons.

In addition, we received the following free text comments:

Q2 For the reviews and protocols published by your CRG over the past 12 month, what would be your estimate of the proportion of authors for your CRG who are 'true volunteers', 'partial volunteers' and 'professionals' (definitions given below):	Group
1. True volunteers (health professionals or others with NO protected time for research)	
2. Partial volunteers (people with academic credentials and/or affiliation with protected time for research, that could work either on reviews or on other research i.e. they are not mandated to do reviews)	
3. Professional reviewers (people who get paid or employed specifically to do reviews)	
This is near impossible to estimate, however, judging by the frequent delays in submissions etc. I feel that most authors are 'true volunteers'. We don't gather this information anywhere….	Heart
I am not aware of any "paid reviewers"	Gynaecology and Fertility
Would love to know what the actual answer is!!	Airways
Cochrane Methodology Reviews are usually done by academic researchers	Methodology Review Group
Rough estimate based on lead author and 1 or 2 other authors on the review team	Breast cancer group
This varies year by year, we lost our systematic reviewer in the last 12 months so less professional reviewers than the last 12 months so less professional reviewers than previous years	Vascular
We do not know who, or how many authors, are working in the capacities listed	Acute Respiratory Infections
Going forward we aim to ensure teams have more protected time	Skin
I have been very true to the '12 months' time frame in this question. A more 'normal' year for the Group may produce different answers here!	Incontinence
Hard to answer this as don't know all author groups individual circumstances and even professional reviewers we work with are very overburdened with work	Common Mental Disorders
Most of what gets published has a good proportion of 'professional' reviewers. Less professional teams take longer to publish, or never publish	Injuries
We published 2 in past 12 months, one protocol for NMA, one DTA; funding issues	Back and Neck

Q3 In the last 12 months, what proportion of reviews had:	Group
1. Regular methodological problems (not MECIR related)	
2. MECIR compliance problems	
3. Language problems	
4. Technological problems	
5. Had 'hands-on' support from an 'in-house' researcher or editor from your CRG (planned or unplanned):	
Not sure what the last Q is getting at - we do fewer major rewrites than before, but there frequently we go beyond providing a few tips and pointers…	Airways
To get our priority reviews ready on time, our editorial base focuses on these topics and provides 'hands-on' support	Breast cancer group
All protocols and reviews receive support from ME who is in effect the methods support person/editor for review teams	Vascular
We have a methodologist giving in-house support	Skin
We have not prioritised our reviews	Methodology Review Group
We do not know who, or how many authors, are working in the capacities listed	Acute Respiratory Infections
Not sure what you mean by hands on support, if it includes written instructions based on the MECIR checklist and our own checklists it should be 81-100% instead of the 0-20% that it is now	Childhood Cancer
Again, we have been fortunate that the reviews included in this question were written by strong teams whose first language is English. My answers here are not reflective of my typical experience, which would give a higher percentage to both language and technical problems	Incontinence
The editorial office supports every single review, from formulation of the PICOs to calculation of effect estimates, stylistics. Would assume hands-on input would be sufficient for being a co-author.	Colorectal Cancer
We tell authors to turn on the guidance pane in RevMan. We send our guidance document. In spite of this, the same issues recur. Different author groups, of course.	Gynaecology and Fertility
I'm not clear what you mean by technological problems	Infectious Diseases Group
Not sure about some definitions here- what are 'regular' methodological problems? Do language problems mean difficulties for review authors who don't have English as a first language or does it include review authors who struggle to write in plain English or don't express GRADE wording correctly	Wounds
Considering submissions to the editorial base, not just what was published	Injuries
Am not quite clear on what 'hands-on' support means. All author teams get extensive support from the ME. They also receive several rounds of feedback from an editor and from our CoEd.	Developmental, Psychosocial and Learning Problems

Q4 Thinking about the work done in the last 12 months:	Group
1. Recruiting authors - How many priority reviews have you been unable to do because you could not create a reliable team?	
2. Retaining authors - How many priority updates were you unable to do because you could not or did not want to maintain the original team?	
3. Complex reviews - How many complex reviews you were unable to do because you did not have a team with the required skills?	
This is an enormous problem in spite of our efforts. My answer to the retaining authors question is possibly on the low side because we do all we can to support and slightly refresh academically well qualified original teams who might lack Cochrane expertise and time, rather than attempt to recruit wholly new teams. However it is rare for them to have sufficient Cochrane expertise to update a review to current standards	Neuromuscular
By "unable to do" I mean "unable to do " by the desired deadline; the reviewers are still coming, but later than expected	Gynaecology and Fertility
It's still hard to find good teams with time available to write particular reviews. But I don't know how to quantify this - we don't have a priority list of this sort right now....	Airways
Retaining authors: issue is not the fact that authors would like to do the update but make little progress so are in progress but are not completed. Complex reviews: we would like to do more DTA reviews but have no suitable, reliable people who can take this on or complete	Vascular
We currently don't have priority or complex reviews so these questions are NA	Childhood Cancer
Last question is difficult to answer, as complexity might arise later in the process.	Colorectal Cancer
It is more difficult to find external reviewers	Haematological Malignancies
Not sure if 'do' here means complete and publish. This is difficult to estimate	Wounds
a) Recruiting authors: This is not really relevant as we have not yet attempted to form author teams to address priority reviews - we usually have teams who have already formed in response to the need for a guideline. b) Retaining authors: not applicable, we are working solely to reduce our backlog/reviews already in the editorial process. Besides, the real problem is that generally speaking old authors are not up to date with the latest requirements, so even if they did remain (and they usually want to remain authors) they don’t have the right skills to produce a review that meets current expectations. c) Complex reviews: we have one complex review in progress as part of a Programme Grant and have a competent team in place.	Injuries
We are not doing complex reviews at present, and have nothing on the priority list	Injuries
We started priority setting activities last year; priority list reviews used existing teams	Back and Neck
We have not prioritised our reviews	Methodology Review Group