

Final report N101: Extending ORRCA to create a central resource for **retention** research within clinical trials (ORRCA 2)

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Budget: £40,830

Final spend: £40827.37

Award objectives and achievements:

1. To extend ORRCA to include a searchable database of retention literature

Search strategies developed for Medline (Ovid), Scopus, Web of Science, CINAHL, PsycINFO and Cochrane library identified over 70,000 abstracts for review of which 3,638 full text papers have been reviewed. Changes to the ORRCA database infrastructure were completed in September 2019, with eligible retention articles being uploaded regularly since then. The literature review is nearly complete with hand-searches of relevant systematic reviews underway.

2. Update the ORRCA database for 2017 publications

Search strategies were reviewed and updated in response to peer review feedback from the recent publication in Clinical Trials. The revised search strategies identified 14,465 abstracts of which 1007 full text articles were reviewed, adding a further 365 articles to the database.

3. Map the published literature including the overlap between recruitment and retention in order to highlight potential SWATS.

Analysis of 2010-2017 publications for ORRCA and ORRCA2 was completed and presented at ICTMC 2019. A full analysis for all literature will be undertaken following the completion of the literature review in 2020 once hand-searches have been completed.

4. To develop text mining methodology for future maintenance.

A PhD studentship within the Computer Science Department at the University of Liverpool started in September. The PhD is being co-supervised by Prof. Williamson and Prof. Gamble with the aim of developing a text mining algorithm for ORRCA and ORRCA2.

Impact

- During 2019, the number of database users increased by 20% on the previous year (1225 compared to 1023) with a 52% increase in the number of searches (1327 compared to 874). International interest in the resource continues to grow with the majority of users from UK, US, Ireland, Australia, India and Canada.
- A pop-up survey has been embedded in the ORRCA website to assess who using the database and for what purpose. Survey response rate is low. However, early results from shows that the ORRCA/ORRCA2 resource is predominantly being used for methodological research (67%) as well as informing trial design (33%), identifying literature to contextualize results (33%) and to conduct systematic reviews (17%) (n=12). All respondents (n=9) found research within the database to help answer their question. The next step will be promotion of the survey through social media and the newsletter.
- Advertising of volunteer review opportunities through our network partners and social media has helped raise the profile of the resource whilst attracting new UK and international reviewers. Currently we are working with 30 reviewers from UK, Ireland, USA, Australia, Sweden and Ukraine.

- The ORRCA and ORRCA2 abstract review process has provided opportunities for trial managers, data managers and researchers in related fields wanting to gain experience of clinical trials methodological research. Eight of our reviewers in 2019 came from the Clinical Trials MSc course at London School of Hygiene and Tropical Medicine. Connections have since been established with the Clinical Trials MSc course in Birmingham and we hope to regularly advertise through these channels to help facilitate methodological skills development.
- Presentations at the ACTA International Clinical Trials Conference 2019 (Sydney, Australia) and ICTMC 2019 (Brighton, UK) increased awareness of the resource. An abstract has also been submitted to SCT 2020 (Baltimore, US).
- ORRCA2 will be used as a basis for an update of the Systematic review of retention strategies¹ in 2020.
- Publication of ORRCA2 results planned for 2020.

Next Steps:

- Update of ORRCA and ORRCA2 annually, integrating text mining algorithm for future updates.
- Work with the TMRP Trial Conduct working group co-leads to ensure the ongoing support for ORRCA/ ORRCA2 updates.
- Continue to develop international partnerships to engage reviewers and promote use of the resource.

References

1. Brueton VC, Tierney J, Stenning S, Harding S, Meredith S, Nazareth I, et al. Strategies to improve retention in randomised trials. *Cochrane Database of Systematic Reviews* 2013(12).

We acknowledge all the co-applicants and volunteer reviewers who have made this project possible. A full list of reviewers can be found at www.orrca.org.uk.