

A pragmatic approach to the design and calibration of a Bayesian CRM dose finding trial

Cole, Michael; Stocken, Deborah; Yap, Christina

DOI:

[10.1186/1745-6215-16-S2-P210](https://doi.org/10.1186/1745-6215-16-S2-P210)

License:

Creative Commons: Attribution (CC BY)

Document Version

Publisher's PDF, also known as Version of record

Citation for published version (Harvard):

Cole, M, Stocken, D & Yap, C 2015, 'A pragmatic approach to the design and calibration of a Bayesian CRM dose finding trial', *Trials*, vol. 16, no. Suppl 2, pp. P210. <https://doi.org/10.1186/1745-6215-16-S2-P210>

[Link to publication on Research at Birmingham portal](#)

Publisher Rights Statement:

Eligibility for repository: Checked on 22/12/2015

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

POSTER PRESENTATION

Open Access

A pragmatic approach to the design and calibration of a Bayesian CRM dose finding trial

Michael Cole^{1*}, Deborah Stocken¹, Christina Yap²

From 3rd International Clinical Trials Methodology Conference
Glasgow, UK. 16-17 November 2015

The Continual Reassessment Method (CRM) is not widely used in early phase dose finding trials partly because the logistics of development and implementation are perceived as complex and time consuming. Details are presented of the steps involved when designing such a trial using an adaptation of a Bayesian CRM calibration algorithm proposed by Cheung [1].

In addition to clinician centred parameters including target toxicity probability and number of test doses, the Bayesian CRM requires specification of the prior probability of toxicity associated with each of the test doses and the prior SD of the single model parameter. Cheung's simple pragmatic approach is used to aid selection of these parameters.

Competing designs are assessed in terms of risk-adjusted accuracy and trial specific requirements including the mean number of patients treated above the maximum tolerated dose. Performance measures are estimated by Monte Carlo simulation across a range of scenarios chosen solely upon the target toxicity level and the number of test doses.

We demonstrate that following this pragmatic approach to CRM design calibration, design of CRM trials need not be overly complex or time-consuming.

Authors' details

¹Newcastle University, Newcastle upon Tyne, UK. ²University of Birmingham, Birmingham, UK.

Published: 16 November 2015

Reference

1. Cheung YK: Dose Finding by the Continual Reassessment Method. New York: Chapman & Hall/CRC Press; 2011.

¹Newcastle University, Newcastle upon Tyne, UK
Full list of author information is available at the end of the article

doi:10.1186/1745-6215-16-S2-P210

Cite this article as: Cole et al.: A pragmatic approach to the design and calibration of a Bayesian CRM dose finding trial. *Trials* 2015 **16**(Suppl 2):P210.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit

