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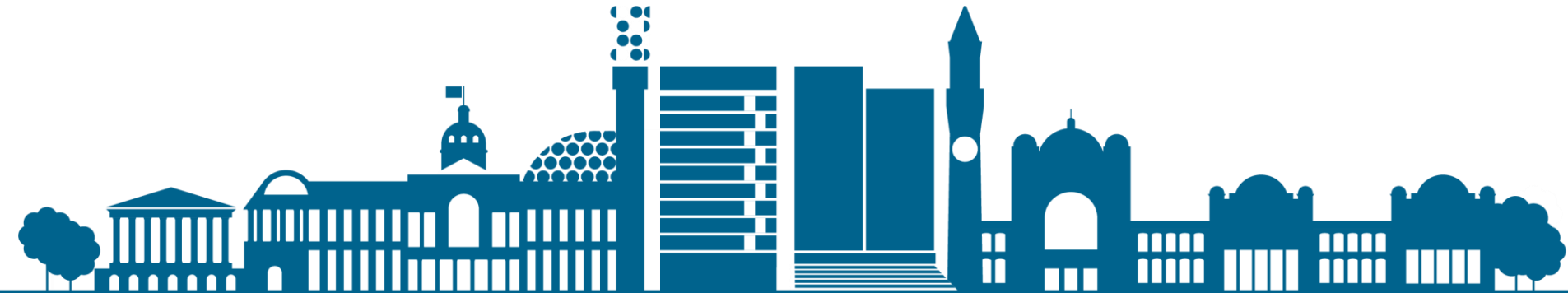
Cochrane Methods
Screening and Diagnosis

Developing robust review protocols with increasingly diverse evidence

Issues in reviews of test accuracy

Yemisi Takwoingi

Test Evaluation Research Group



Declaration of interest

- Co-convenor of Cochrane Screening and Diagnostic Test Methods Group
- Associate Editor of Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy (DTA)
- Statistical Editor for Cochrane Bone, Joint and Muscle Trauma Group
- Editor
 - Cochrane DTA Editorial Team
 - Cochrane Infectious Diseases Group

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Acknowledgements

The first ten years of Cochrane DTA reviews: Progress and common methodological challenges

Sophie Beese¹, Bella Harris¹, Clare Davenport¹, Sue Mallett¹,
Yemisi Takwoingi¹, Jon Deeks¹ on behalf of the DTA Editorial Team²

¹Test Evaluation Research Group, Institute of Applied Health Research, University of Birmingham, UK

²Lots of different places, All over the world.



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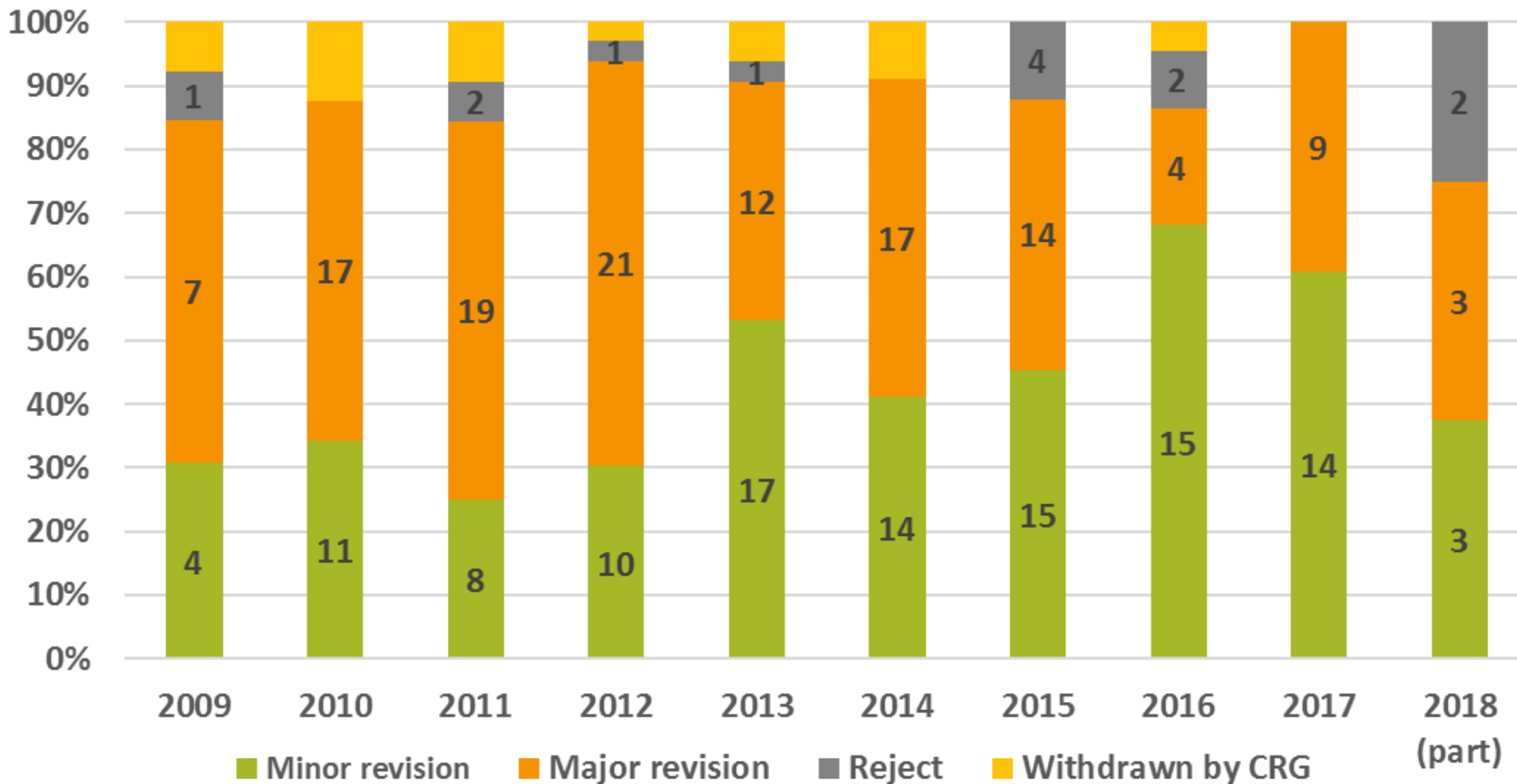


Background

- Cochrane DTA reviews first published in 2008
- Cochrane DTA Editorial Team (DTA-ET) support Cochrane Review Groups (CRGs) in evaluating submitted DTA Protocols and DTA Reviews
 - organising expert search, statistical and DTA methods peer review
 - providing methodological editorial guidance
- Prior to publication, all Cochrane DTA Protocols and Reviews must be signed off by both the DTA-ET and the CRG

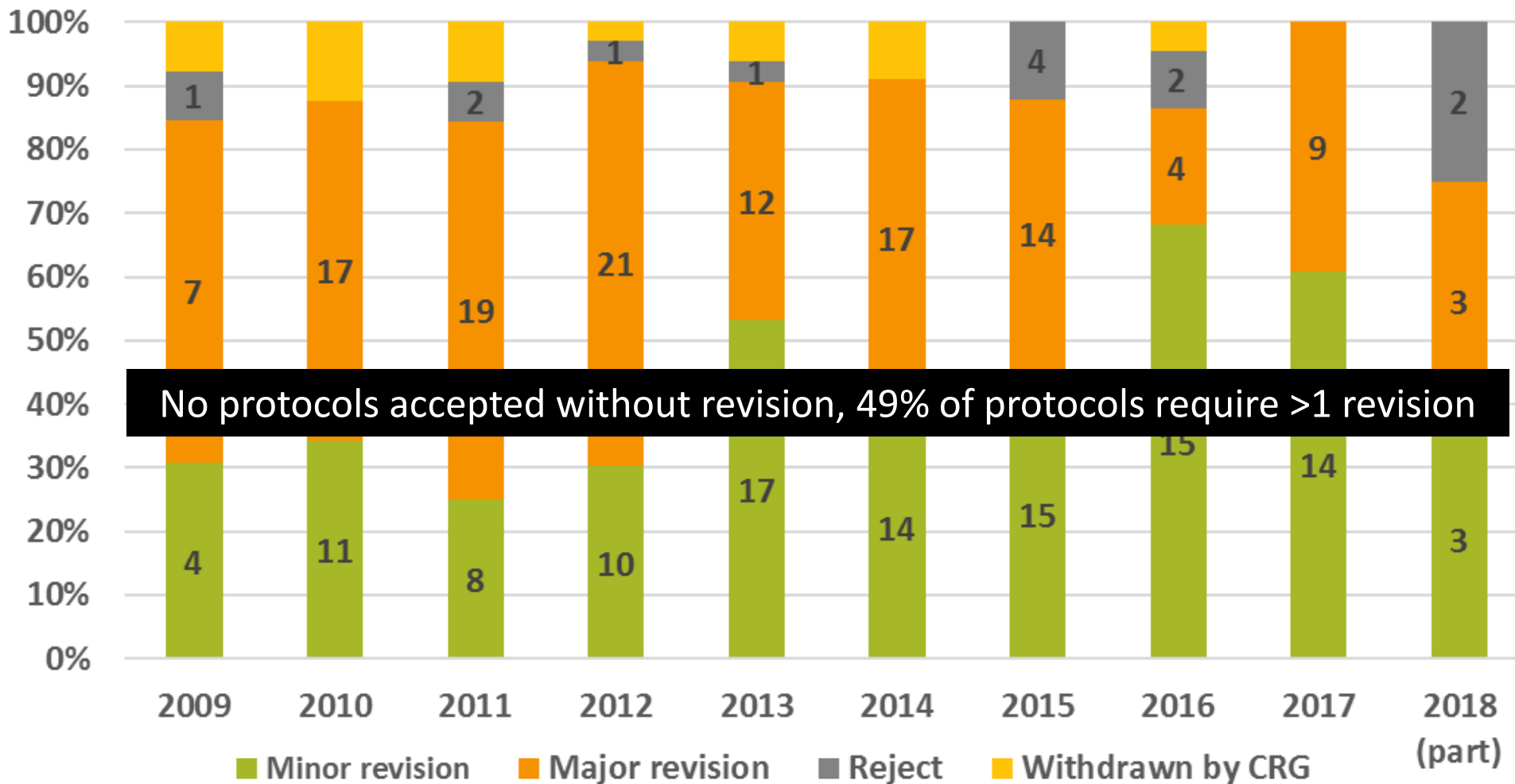
Decisions by DTA editorial team

Protocols: Decisions made on first submission



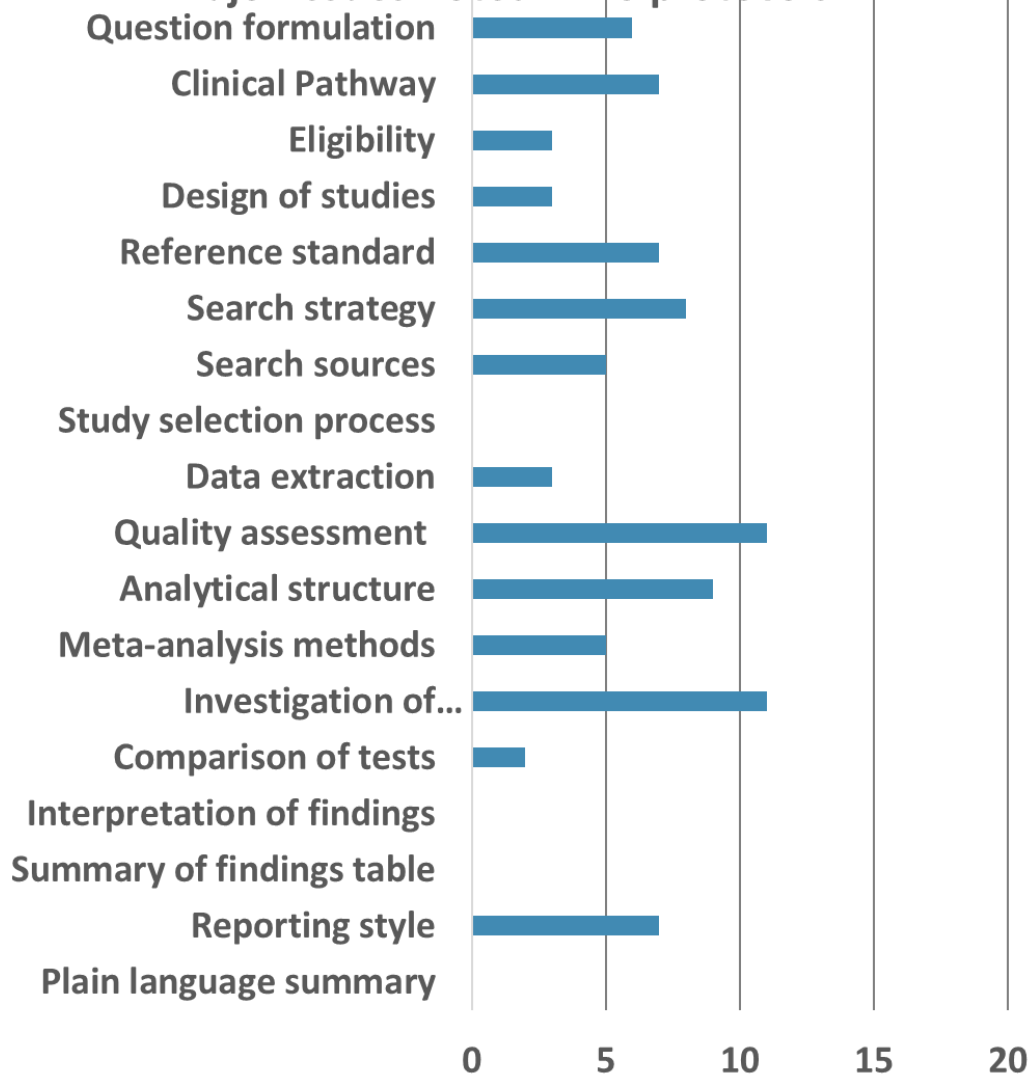
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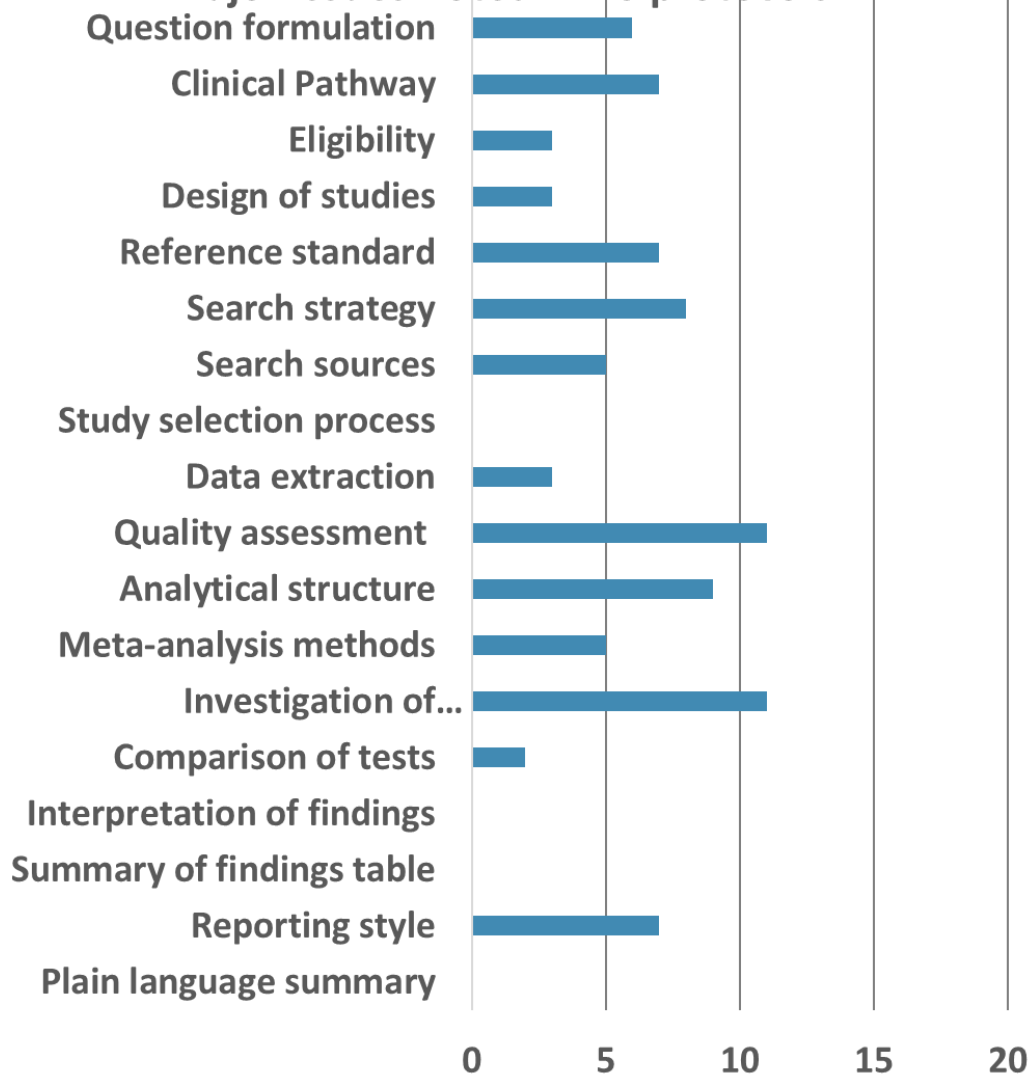
Issues identified by DTA editorial review

Major issues noted in 20 protocols



Issues identified by DTA editorial review

Major issues noted in 20 protocols



- >25% protocols had issues with
 - question formulation
 - clinical pathway
 - reference standard
 - search strategies
 - quality assessment
 - analytical structure
 - investigation of heterogeneity
 - reporting style
- Issues have decreased by 25% for protocols over 10 years

Examples of issues identified

- **Clinical pathways** need to show role of the test, be clearly described
- **Reference standards** need to be clearly defined
- **Search** comments to add MESH terms, subheadings, avoid methodological filters are common; and searching sources with a non-English language focus
- **Quality assessment** need to provide review specific details, strategies to assess overall bias for each QUADAS-2 domain
- **Analytical structure** specifies what will be combined or analysed separately. Test thresholds and definitions for sensitivity analyses often need detail.
- **Test comparison** strategies and meta-analysis method required
- **Meta-analysis** rationale for methods (curves/points) often lacking
- **Investigation of heterogeneity** often lacking clear definitions of subgroups

Thanks to our many volunteers, past & present

- **DTA Editors Team A:** Ingrid Arevalo-Rodriguez, Clare Davenport, Mariska Leeflang (chair), Jo Leonardi-Bee, Bernd Richter, Marta Roque, Mia Schmidt-Hansen, Alex Sutton, Gautham Suresh, Karen Steingart, Yemisi Takwoingi, Brett Thombs, Gianni Virgilli, Stewart Walsh.
- **DTA Editors Team B:** Miriam Brazzelli, Jon Deeks (chair), Matthew Grainge, Sascha Koepke, Petra Macaskill, Susan Mallett, Bo Rud, Rob Scholten, Ann van den Bruel, Danielle van der Windt.
- **DTA Editors Emeritus:** Patrick Bossuyt, Paul Brocklehurst, Constantine Gatsonis, Peter Herbison, Lotty Hooft, Chris Hyde, Nuala Livingstone, Ben Mol, Hans Reitsma, Stefano Ricci, Maroeska Rovers, Arianne Verhagen, Tanya Walsh.
- **DTA Programme Managers:** Tess Moore, Susi Wisniewski, Paul Good, Bella Harris and Sophie Beese.
- and the many **Search, Statistical and DTA Methods Peer Reviewers.**