

Cochrane Individual Participant Data (IPD) Meta-analysis Methods Group

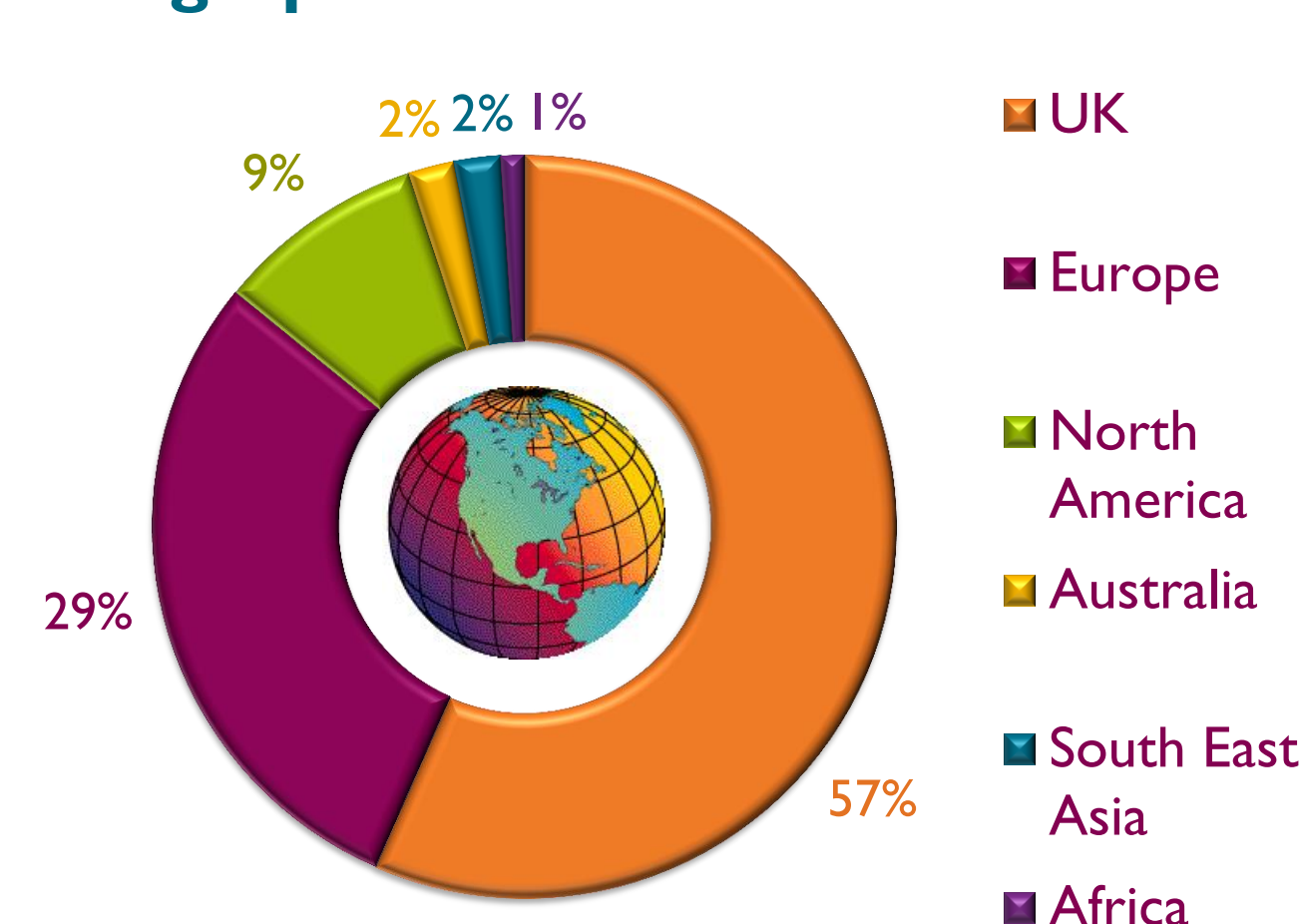
The convenors are **Jayne Tierney¹**, **Lesley Stewart²**, **Maroeska Rovers³**, and **Mike Clarke⁴**, and the coordinator is **Larysa Rydzewska¹**

¹MRC Clinical Trials Unit at UCL, London. ²Centre for Reviews and Dissemination, York. ³Radboud University Nijmegen Medical Centre, Nijmegen. ⁴Queens University, Belfast.

Who we are and what we do?

- Methods Group (MG) registered with Cochrane in 1994
- Includes people involved or interested in the conduct of systematic reviews and meta-analyses based on individual participant data (IPD)
- Over the last 10 years, membership has doubled to more than 100 members, and spans nearly 20 countries

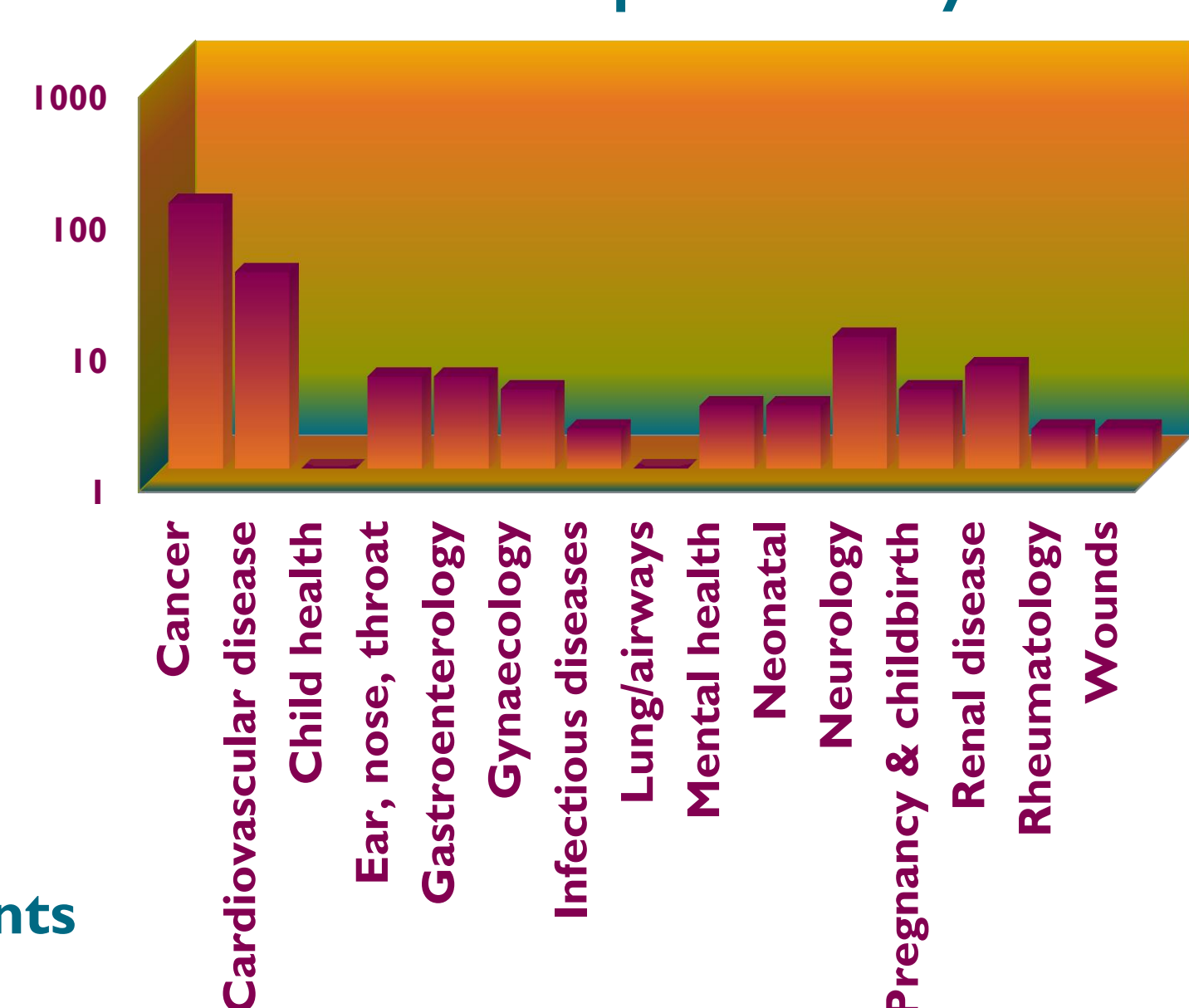
Geographical distribution of MG members



104 members; 18 countries; 5 continents

- Experience in wide range of healthcare areas e.g. cancer, epilepsy, stroke, perinatal care, renal disease, cardiovascular disease and malaria
- Working on IPD meta-analyses in prevention, diagnosis, treatment, rehabilitation and prognosis, as well as related methodological research
- Hold regular workshops on various aspects of IPD meta-analyses at UK & Ireland-based Cochrane Contributors Meetings and Cochrane Colloquia
- Provide guidance to those undertaking Cochrane Reviews based on IPD
- Offer peer review for IPD-related aspects of submitted Cochrane Reviews

IPD reviews published by the MG



New guidance for IPD



Methodology has evolved and the conduct and reporting of IPD meta-analyses can be variable

- Difficult for clinicians, patients, policy-makers, journal editors and funders to assess and judge quality of IPD meta-analyses
- Current guidance does not adequately address the range of uses of IPD and updated guidance on appraisal and reporting is needed
- Funding was obtained from the UK MRC Network of Hubs for Trials Methodology Research to provide improved guidance for systematic reviews based on IPD
- In Sept 2012, a workshop was held in London, bringing together international experts, including MG members, to discuss key IPD topics
- Series of guidance papers currently being developed



What is different about IPD meta-analyses?

Meta-analyses based on aggregate data

- Based on published data and/or summary data obtained from trial investigators
- Can be limited by both availability and quality of data

Meta-analyses based on IPD

- Usually international collaborative projects, involving the researchers who did the relevant studies
- Central collection and re-analysis of original data from all relevant trials
- Benefit from improved data quality and analysis
- Usually more complex and resource intensive
- Considered the “gold standard”

More people now using IPD

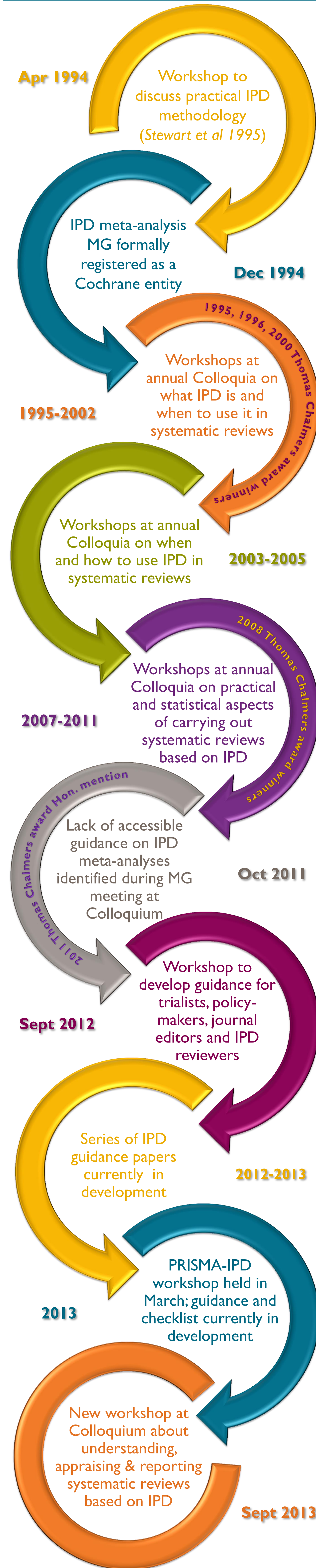
- Use of the IPD approach has increased over time
- Extended into many areas of healthcare as well as prognostic and diagnostic studies
- Brings new practical and methodological challenges

Extending PRISMA to IPD



- PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement is in widespread use, and has proved useful for both researchers and publishers
- However, it was not developed with IPD meta-analyses in mind and some items do not fit with the IPD approach
- In March 2013, a consensus meeting, involving members of the MG and funded by the Centre for Reviews and Dissemination, was held in York
- An IPD extension to PRISMA is currently in development

MG Timeline (1994-2013)



Methods research by members of the Group

Examples of some recent publications on our website include

Analysis

- Comparison of methods for statistical analysis of IPD (Stewart et al, 2012)
- One-stage versus two-stage approach (Bowden et al, 2011)
- Review of methods for assessment of patient-level interactions (Fisher et al, 2011)

Network meta-analysis

- Mixed treatment comparisons (Blanchard et al, 2011)

Diagnostic and prognostic modelling

- Framework for developing, implementing and evaluating clinical prediction models in IPD meta-analyses (Debray et al, 2013)

Bias

- Can trial quality be reliably assessed from published reports of cancer trials: evaluation of risk of bias assessments in systematic reviews. (Vale et al, 2013)
- Assessment of bias in IPD meta-analyses (Ahmed et al, 2012)

Want to know more or want to get involved?

For more information about all the Group's activities, please have a look at our website. It also contains information about our activities, along with guidance for those planning or undertaking IPD meta-analyses. Visitors can also find more information about IPD meta-analyses and browse through the IPD meta-analysis projects and IPD-related methodological research undertaken by Group members.

You can also sign up to join the Methods Group, using the online membership form.

<http://ipdmamg.cochrane.org/>

