

## Efficacy Mechanisms and Evaluation board (EME)

Professor Paul Little



## New and changing

- MRC funding, NIHR oversight
- Still finding its feet
- Board members change with time
  - > ongoing change and inconsistency is likely



## Positioning

- Between a) MRC/Wellcome and b) NIHR HTA
- a): MRC experimental medicine schemes
  - early development of novel therapies, interventions, and diagnostics
  - ‘can it work’ proof of concept
  - Phase I (dose escalation (safe range), side effects etc n=30) Phase II (larger, clarify dose/side effects, ?effective; +/- compare existing Rx)
- b) NIHR Health Technology Assessment (HTA) programme
  - effectiveness, costs, and broader impact of health technologies for those who use, manage and provide care in the NHS where some evidence of efficacy
  - Phase III/IV Clinical and cost-effectiveness: ‘is it worth it’



## Positioning II

- EME plugs the gap (so phase III, also II)
  - primarily efficacy of the intervention: “does it work?”
    - e.g. drug: get to the point where a marketing authorisation could be sought or use in healthcare supported.
    - Will address safety
  - exploring mechanism/processes (NOT alone; NOT mandatory)
- Range of issues:
  - could include shared funding (but not concurrent parallel)
  - can include devices, public health
    - and some trials have included cost-effectiveness
  - NOT methods, animal work, global health (i.e. has to be NHS relevant)
  - can including feasibility/pilot work (leading to further EME funding)
  - Can use surrogate markers (but need to be pretty sure these are important!)



## Other funding streams

- HTA: pragmatic comparison of effectiveness and cost effectiveness of technology/devices/medicines/services
  - e.g. MBCBT vs antidepressants
- HSR: more applied
  - Particular issues: quality, access and equity, relevance and appropriateness to the needs of individuals and communities, effectiveness and efficiency, how services are experienced.
- NIHR Programmes
  - applied, need to demonstrate benefit that the NHS likely to be able to use within 5 years,
- SDO: highly applied assessment of services
  - e.g.:
    - The impact of the Liverpool Care Pathway on care of dying patients in nursing homes and intensive care units in England
    - the impact of variations in the provision of out of hours end of life care on patients and carers’ experiences and satisfaction.
- Public Health: applied public health interventions
  - e.g. [Royal Horticultural Society’s \(RHS\) ‘Campaign for School Gardening’](#) effect on intake of fruit and vegetables in primary school children.



## Members

- Professor Lucinda Billingham Biostatistics, CRC CTU, Birmingham
- Professor Andrew Bradley Surgery, Cambridge
- Professor Martin Brown, Stroke, UCL
- Professor David Cameron Oncology, Edinburgh
- Professor Fiona Campbell Health Services Research, Bristol
- Professor Andrew J Carr Orthopaedics, Oxford
- Professor Graham Dunn Biomedical Statistics, Manchester
- Professor Richard Eastell Professor of Bone Metabolism, Sheffield
- Professor Kim Fox Cardiology, Brompton
- Professor Jayne Franklin Endocrinology, Birmingham
- Dr Simon Gates, Stats, CTU, Warwick
- Professor Ian Goodwin Psychiatry, Cambridge
- Professor Ian Harvey, Epidemiology & Public Health, East Anglia
- Professor Paul Little Primary Care, Southampton
- Professor Jane Norman, Maternal and Fetal Health, Edinburgh
- Professor Munir Pirmohamed, Clinical Pharmacology, Liverpool
- Professor Jonathan Weber Communicable Diseases/STI Medicine, Imperial
- Professor Bryan Williams Cardiology/Hypertension, Leicester
- Professor John G Williams Health Services Research/O, Swansea



## Examples of current studies

- Amino acid regimen and intravenous lipid composition in preterm parenteral nutrition
- Metformin to reduce excess birthweight in offspring of obese pregnant women
- Study of Tolerance to Oral Peanut
- Peroxisome Proliferator-Activated Receptor-gamma for asthma
- Does Levodopa (3,4-dihydroxy-L-phenylalanine) drug treatment in combination with routine NHS occupational and physical therapy, delivered early after stroke within a stroke service, improve functional recovery including walking and arm function
- Losartan as an anti-fibrotic agent in non-alcoholic hepatitis
- Parent-determined oral montelukast therapy for preschool wheeze with stratification for arachidonate-5-lipoxygenase (ALOX5) promoter
- Neural and biomechanical correlates of response to the use of an anklefoot cast provided to improve walking recovery early after stroke. (Phase II)
- Imaging perfusion deficits and thrombolysis safety and efficacy in acute ischaemic stroke. The Third International Stroke Trial (IST-3).
- Remote ischaemic preconditioning in renal transplant

## Process and likely success (example of the latest board)

- 9/23 preliminary applications were shortlisted (40%)
  - 3 DBMs
  - fail on methodology (common!) and the idea
  - usually one or two referees but variable
- 5 full proposals (40%) were funded
  - subject to changes in response to Board feedback and further clarification on specific issues raised by the Board (40%)
  - one had been through outline stage twice and full once: so keep going!
  - 1 full proposal was invited to resubmit in response to Board feedback.
- 7 full proposals not funded
  - Why?
    - Board comments not taken into account
    - Poor value for money in competition
    - Referees negative.