



Stratified Medicine - developing disease-focussed partnerships to stratify disease and the methodological challenges.

Dr Des Walsh

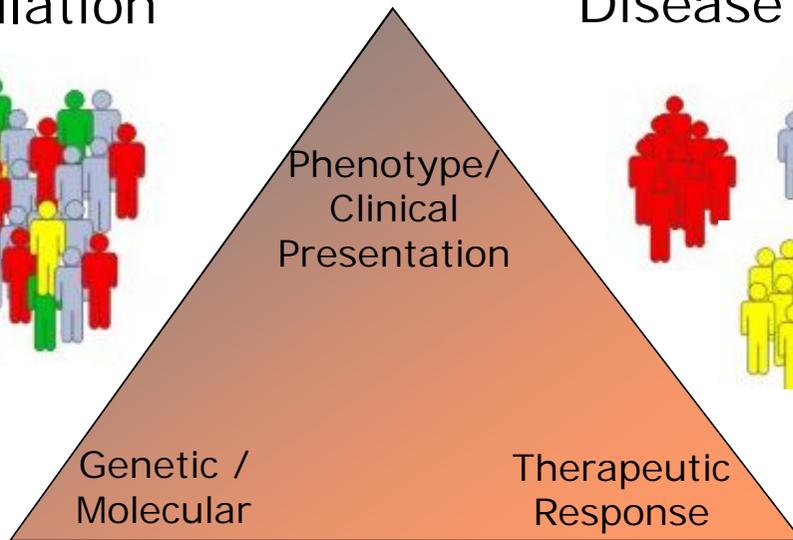
Medical Research Council

*Tools*

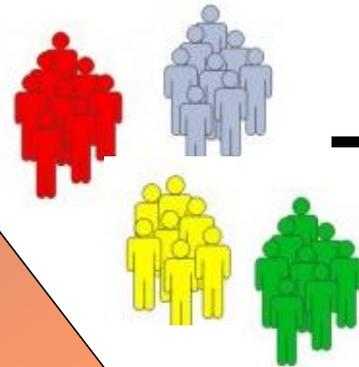
*Outputs*

*Uses*

Affected population

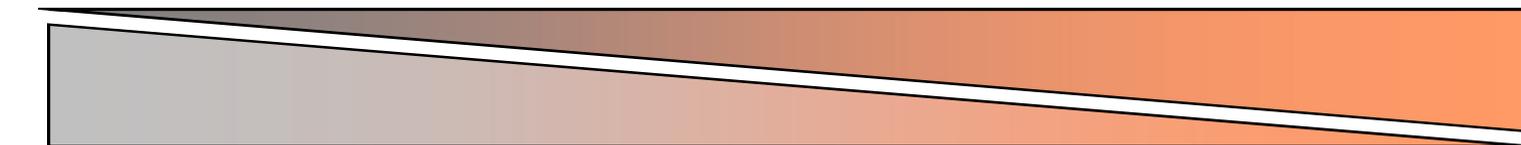


Disease Strata



Diagnostics  
Biomarker validation  
Rx trials

*Commercial – Pharma, biotech, devices*

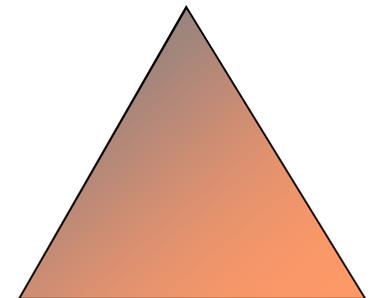


*Academic*

## Expert Group Recommendations

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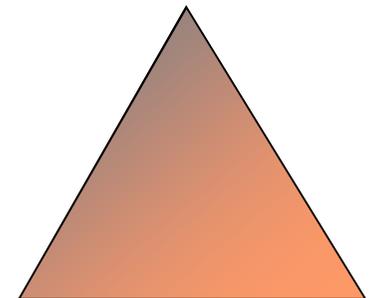
- Take a disease focussed approach (where there is evidence that therapeutically relevant strata exist)
- Focus on research that can deliver
- Focus on diseases that are ripe for stratification
- Form key partnerships with industry, NIHR and others
  - Making best use of existing resources and infrastructure
  - Build on and coordinate with other funders' initiatives



# Delivery of stratified medicine

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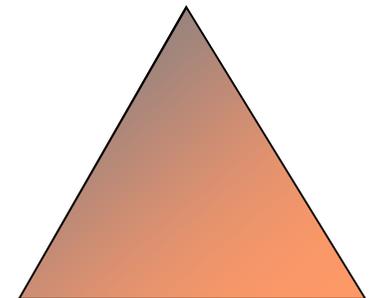
- Consortia based, programmatic support
  - Milestone driven, payment on results
- Collaboration rather than competition
  - Sharing across institutes and sectors
  - Common platforms
- Industry engaged from outset
- Modelled on the MRC/ABPI Inflammation and Immunology Initiative



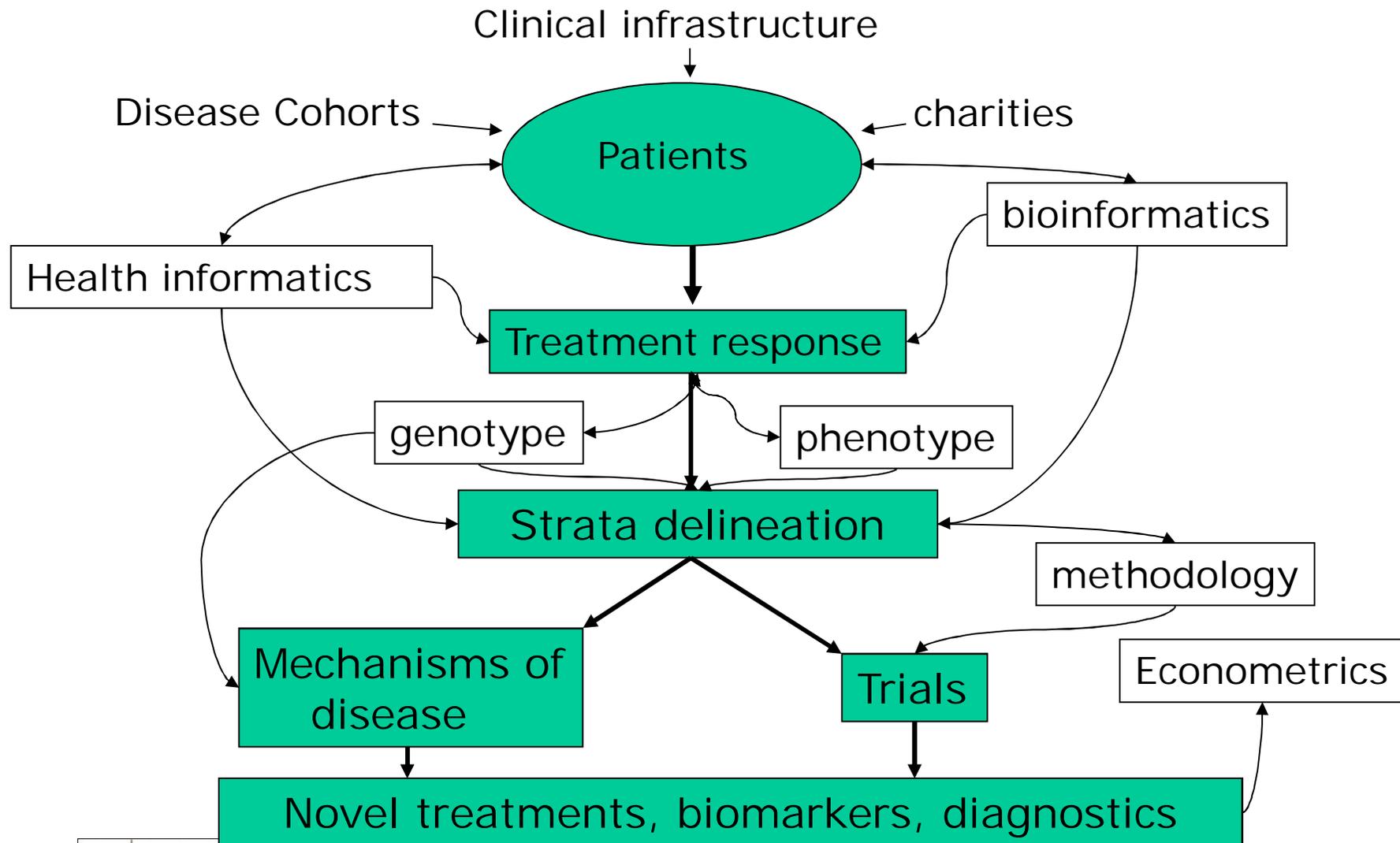
## Future consortium - Essential ingredients to develop disease-focussed approach

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- Clinical insight into potential strata linked to molecular and / or phenotypic analyses *and/or*
- Existing knowledge of failure of certain groups to respond to therapeutic intervention *and*
- Increased knowledge of these strata would be expected to have a positive effect on clinical outcomes
- economic realism

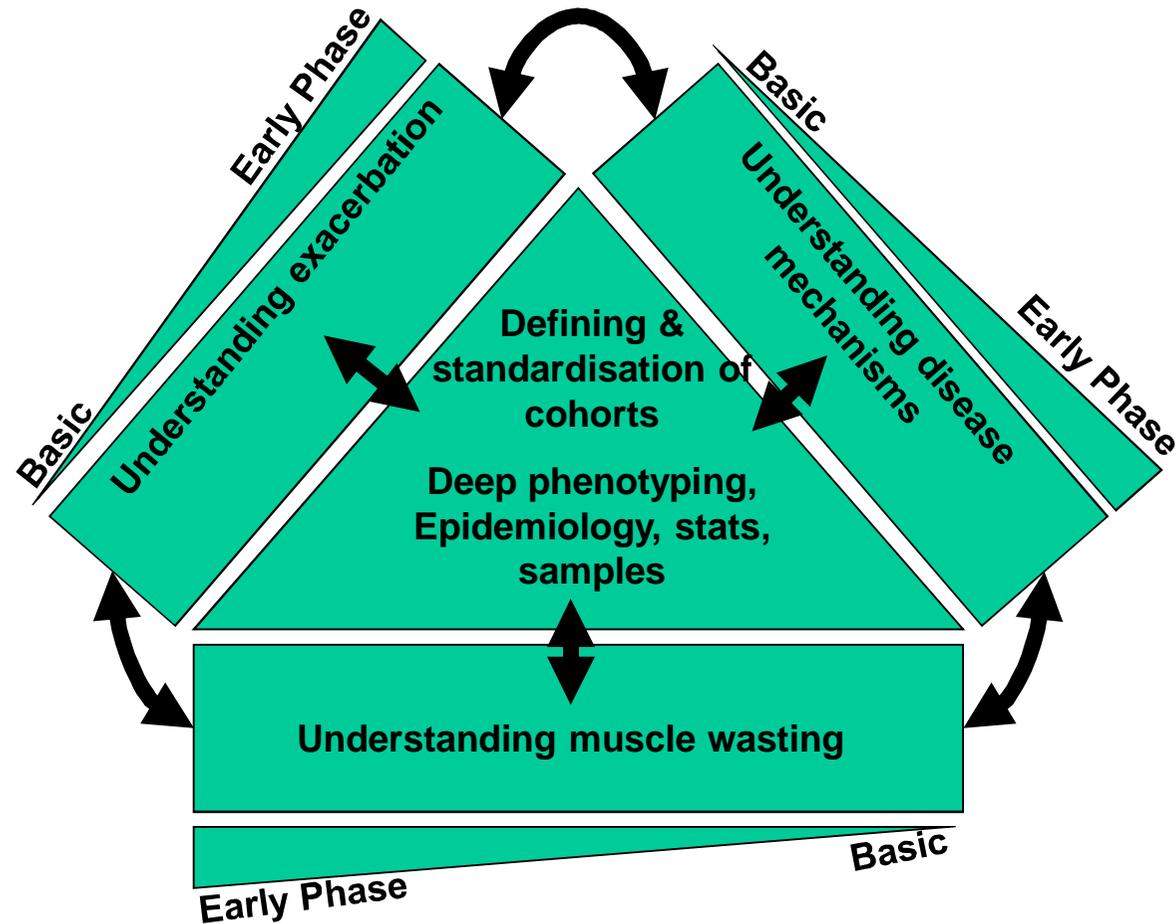


# The perfect paradigm?



# COPD Consortium – well phenotyped patients form the core for deeper clinical studies and trials

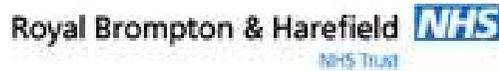
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- £6m over 4years

# COPD Partners

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# Stratifying type II diabetes

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- Consortium development to:
  - Define mechanisms of extreme drug response
  - Establish a resource for biomarker and pharmacogenetic discovery
  - Stratify by clinical criteria using trial and longitudinal drug-response data
  - Does short term drug response predict the best treatment for a patient?

# Diabetes Partners (still growing)

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AstraZeneca



Bristol-Myers Squibb



# Awarded Consortia

Dr Eleanor Barnes	University of Oxford	Stratified Medicine to Optimise Treatment for Patients with Hepatitis C Virus Infection (STOP-HCV)	£3.53m over 60m
Professor Costantino Pitzalis	Queen Mary, University of London	Maximizing Therapeutic Utility of Biologics in Rheumatoid Arthritis through Stratified Healthcare.	£2.72 over 60m
Professor Timothy Cox	University of Cambridge	Predictive measurements to stratify clinical outcomes in children and adults with Gaucher disease and responses to specific therapies	£3.22m over 60m
Professor Chris Brightling <i>et al</i>	University of Leicester	COPD MAP	£6m over 60m
Professors John Isaacs & Andy Cope	University of Nottingham & KCL	Towards a cure for rheumatoid arthritis	£3.5m over 60m
Professor Andrew Hattersley	University of Exeter	MRC APBI Stratification and Extreme Response Mechanism IN Diabetes (MASTERMIND)	£6m over 60m

# In the pipeline

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Professor Sanjay Sisodiya	University College London	EPISTAR - Epilepsy Stratification	£3.97m over 48m
Professor Christopher Griffiths	University of Manchester	Psoriasis Stratification to Optimise Relevant Therapy (PSORT)	£3.99m over 48m
Professor Paul Matthews	Imperial College London	Treatment Stratification for Disease Modifying Therapy in Multiple Sclerosis Patients	£5.34m over 60m
Professor Shitij Kapur	Kings College London	Treatment refractory schizophrenia: building networks and elucidating mechanisms for a Stratified Medicine approach	£2.77m Only requesting development funds
Professor Morris Brown	University of Cambridge	Rational treatment of hypertension: from Essential to Stratified	£4.13m over 60m
Professor Graham Lord	Kings College London	The prevention and treatment of the complications of transplantation by stratification of risk	£2.63m over 48m
Professor David Jones	University of Newcastle	Stratified Medicine in Primary Biliary Cirrhosis: Understanding Disease Mechanisms and Targeting Therapies	£1.03m over 36m

# Maximising impact of research – data sharing

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- Discovery of research datasets with metadata & essential documentation
- Managed access to, & use of, data for high-quality secondary research
- Planning & implementation of effective data management in research
- Curation to enable informed re-use of preserved data
- Long-term preservation of high-value MRC-funded datasets
- Tools, standards & guidance to support these activities.

# MRP Highlight Notice

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- methodological challenges particularly around
  - biomarker identification and evaluation
  - trial design
  - regulatory approvals
  - health informatics
  - health economics
  - public perceptions

# Opportunities

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- Development of novel methodologies to complement the funded consortia
- Work alongside the developmental consortia to incorporate methodologies within the final applications
- Not service delivery

