



International Comparative Evaluation

ESF MO Forum meeting

10/5/10

Drivers for a shared approach to evaluate research portfolios



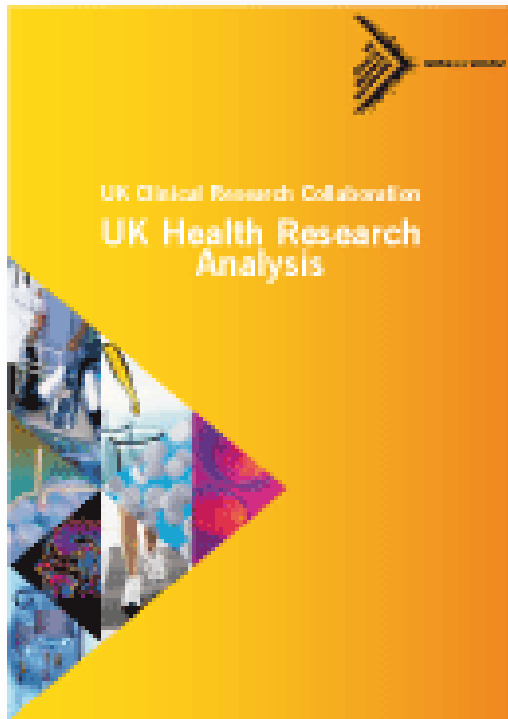
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- An increasing need for analysis of research portfolios, comparison of portfolios with other funding bodies and development of new research strategies for the future
 - Increasing need to systematically evaluate the impact of research funding
 - Increasing need for joint programming and collaboration between national funding agencies

Need for a common language for
categorising research portfolios, and
outputs, so that information can be
shared in a meaningful way

Impact of UK HRCS Analysis

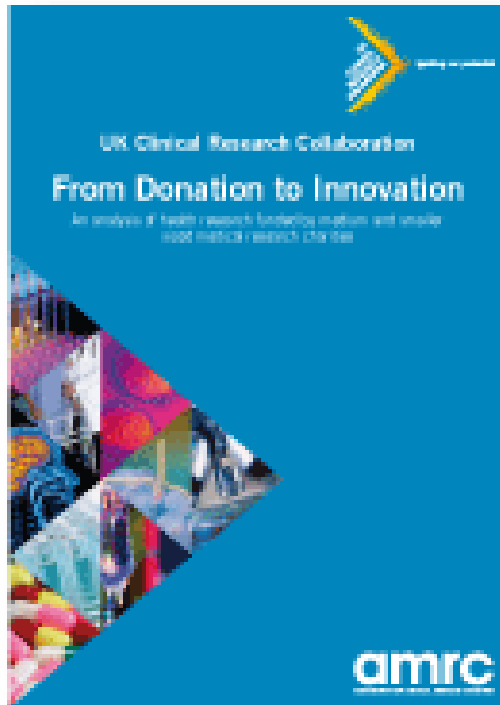
- Health Research Classification System (HRCS) has contributed to strategy development in several organisations in the UK since 2004/05
- Stimulated joint funding initiatives, examples include, but not limited
 - National Prevention Research Initiative (more than £30m committed)
 - Public Health Initiative (£20m)
 - Microbiology Initiative (£16m)
- 22 Government and charity funders in the UK still use the approach
- Also in use by non-UK funders
 - MRC Singapore, Food and Health Bureau, Hong Kong
 - Pilots in Ireland, Sweden, CIHR

UK Health Research Analysis (2006)



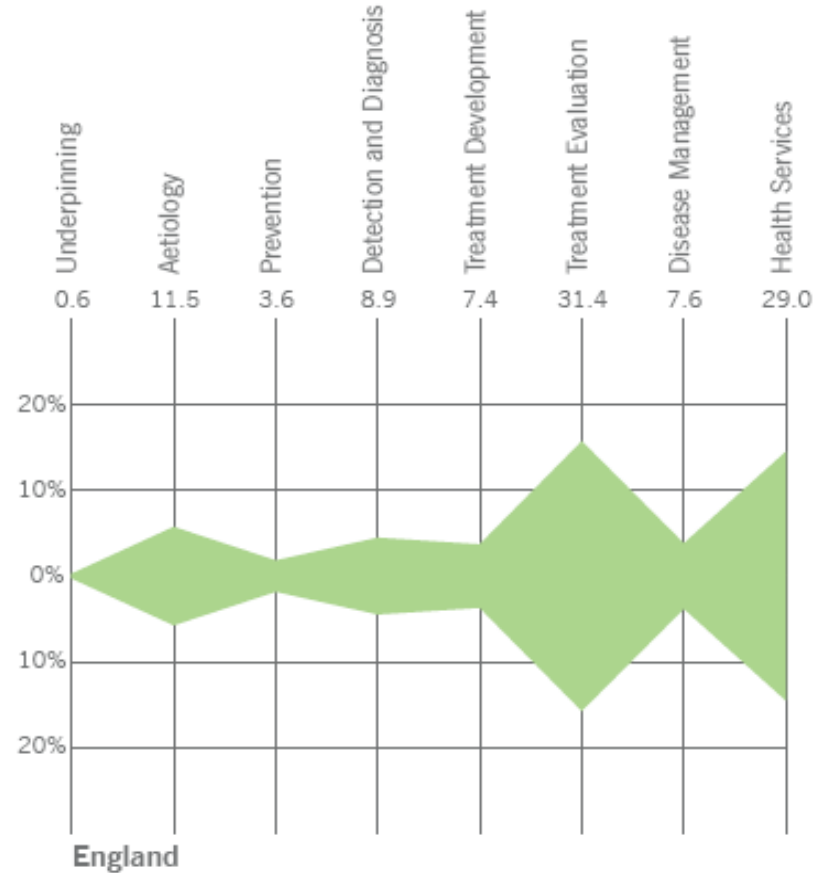
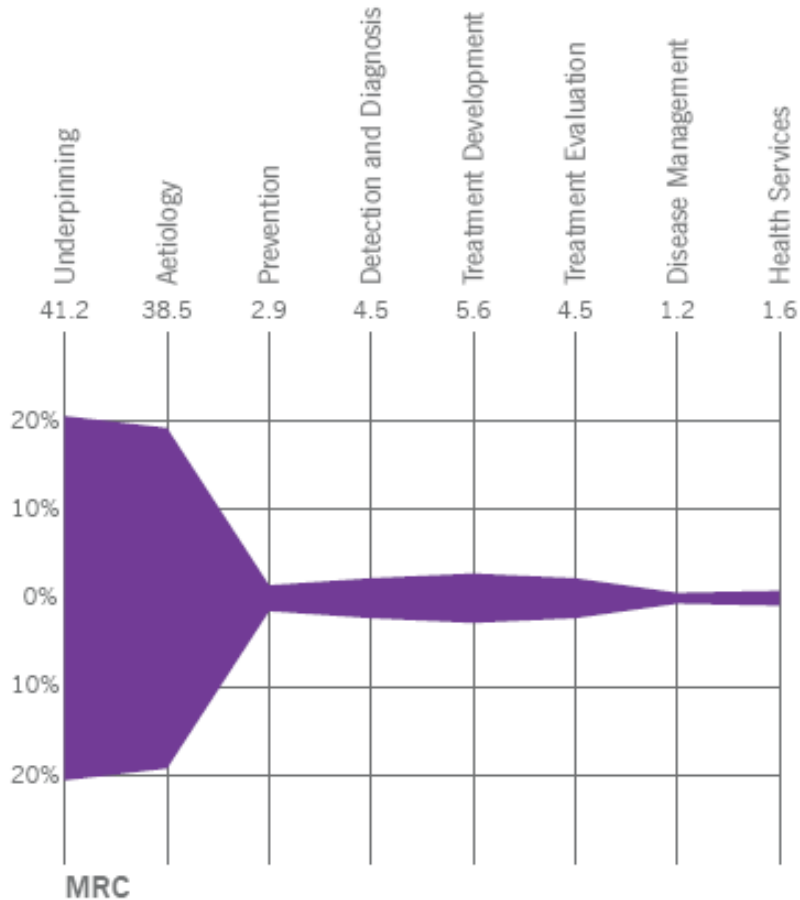
The *UK Health Research Analysis* report, published in 2006 provided an overview of all types of health research activity across all areas of health and disease in the UK, funded by the largest government and charity health-related research funders.

From Donation to Innovation (2007)

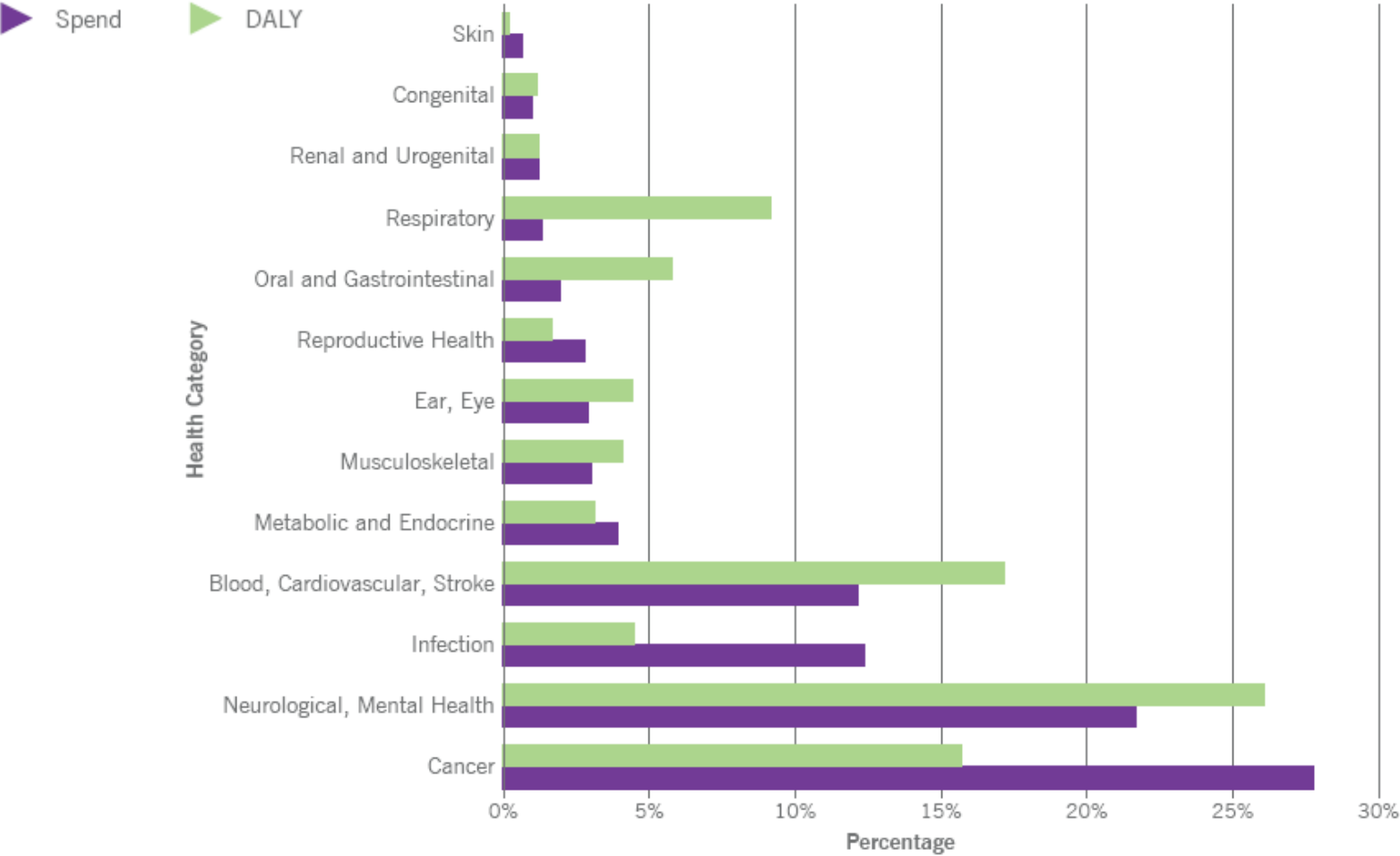


From Donation to Innovation, is an in-depth analysis of research funded by medium and smaller sized members of the Association of Medical Research Charities (AMRC). This report provides a breakdown of spending by 29 charities (not included in the 2006 UK Health Research Analysis report) across all types of health research.

MRC compared to NHS (England)



Proportion of combined spend compared to DALY rates



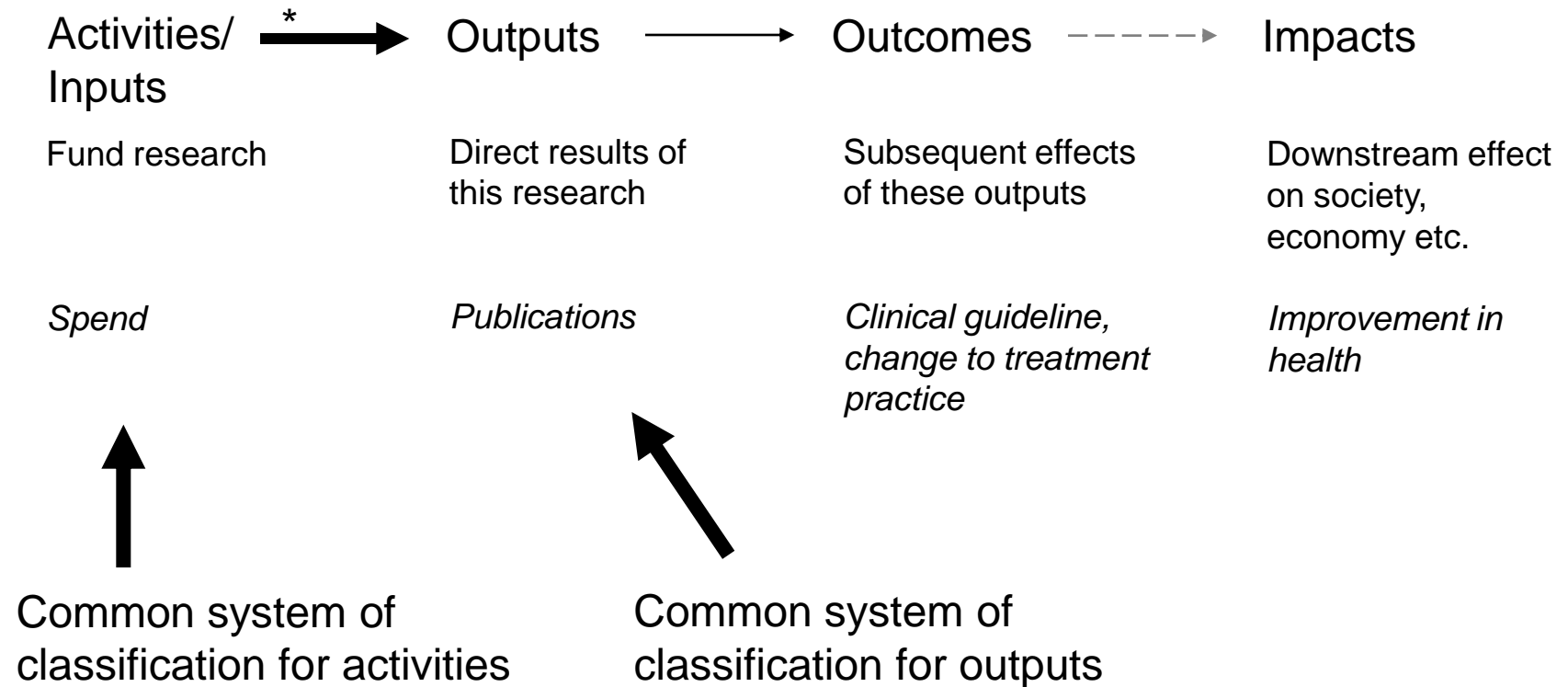
Future of HRCS

- UK funding agencies that participated in the analysis of 2004/05 health research funding are discussing a **further analysis of their portfolios**
- Funders are interested in demonstrating the extent to which strategic actions have changed the landscape of public and charitable health research over the five years 2004/05 – 2009/10
- There may be an opportunity for **any international funding agency to join this exercise**, or for parallel, or subsequent analysis to be carried out across Europe/internationally

Comparative Evaluation

- The UKCRC analysis was extremely influential in identifying gaps and opportunities – for example the low investment in respiratory medicine, prevention research etc.
- For the first time funding agencies could refer to an independently verified, standard comparison of their portfolios. There was a **common language for defining their activity**
- Now there is greater interest in following the progress, productivity and quality of **output** from research.
- Having a common scheme for defining input investment at the project level provides an opportunity to link **output, outcome and impact data** to these projects
- There still is a need to take a similar approach to defining outputs. For some outputs this is straightforward (e.g. publications), for others care needs to be taken over the way information is collected (e.g. definition of a “collaboration”)

Start by comparing funding inputs, then link output data to this



* Attribution of outputs to particular activities is more robust than attribution of outcomes, or impacts due to lag time, multiple inputs etc.

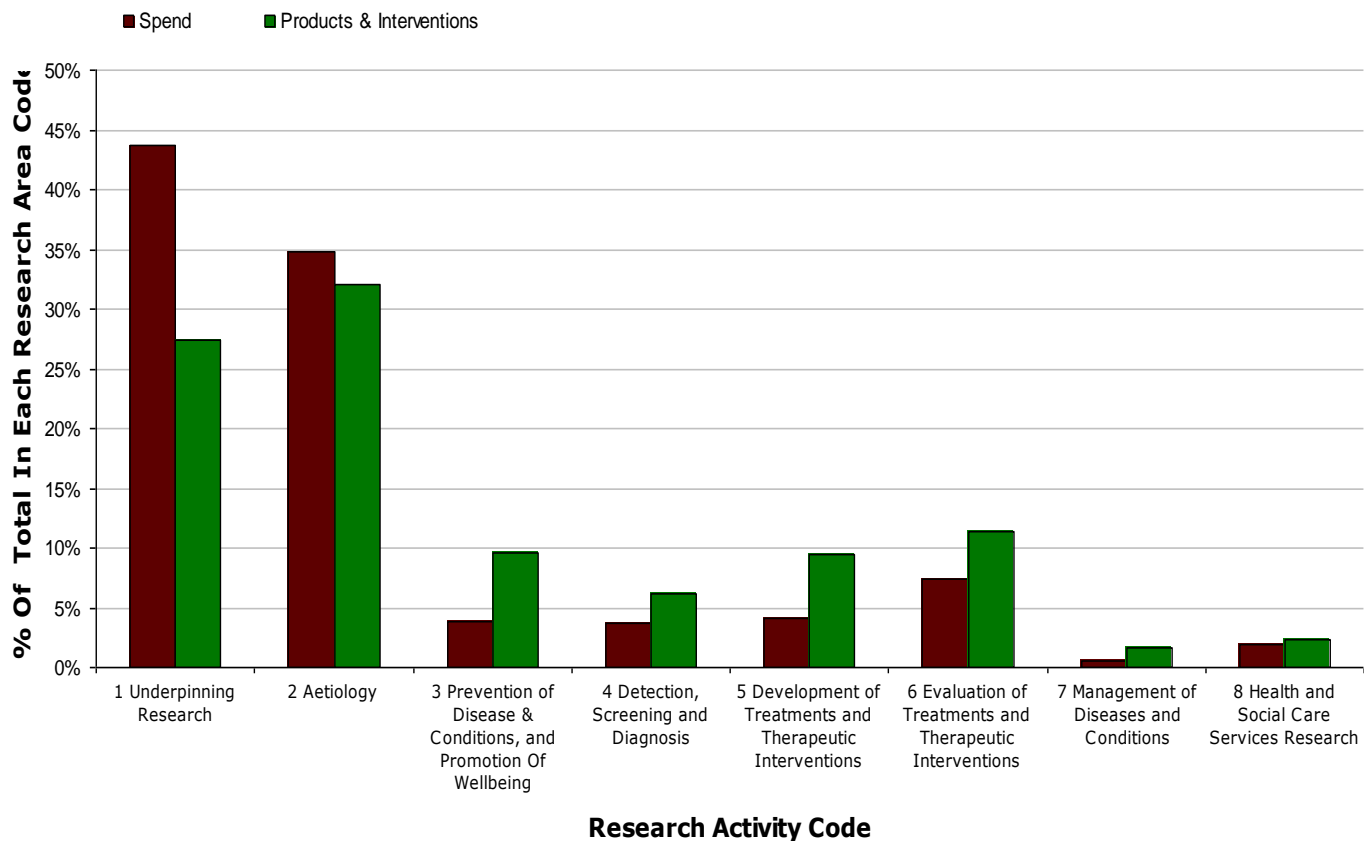
Move to collecting and comparing outputs, outcomes and impacts

The MRC e-Val project



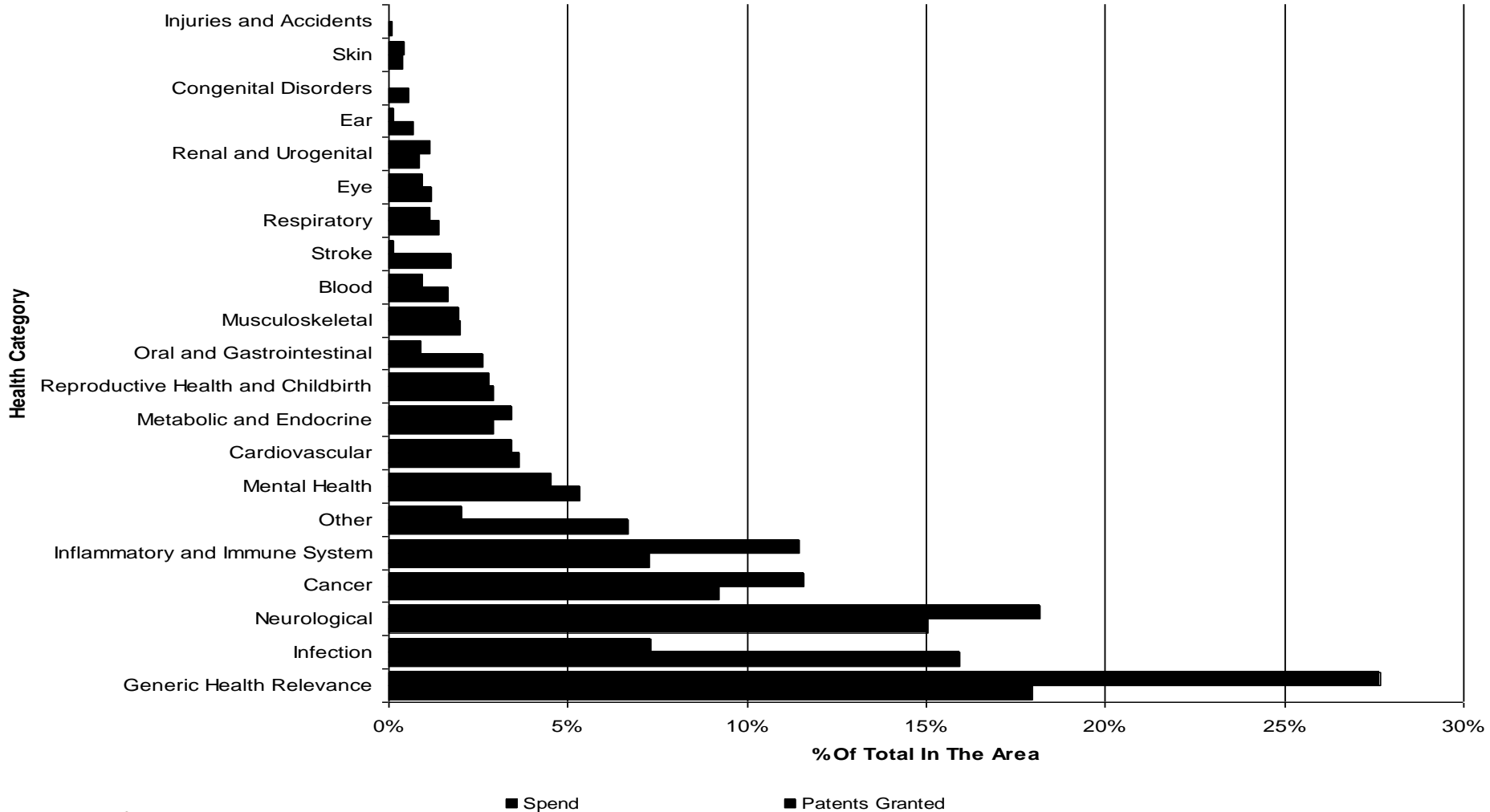
- MRC e-Val is an online survey of over 3000 MRC funded researchers, collecting evidence of output, outcomes and impact
- MRC e-Val will gather data every year. In 2009 the MRC collected data on outputs/outcomes/impacts arising in 2006-08 in a single exercise – corresponding to £1.2 billion of MRC spend
- This information is being used by the MRC to look at the **progress, productivity and quality of delivery** across the entire MRC portfolio
- Linking these outputs to projects classified using the HRCS allows us to cut the data by health category and research activity.
- MRC e-Val questions (and therefore defined outputs) are being used by NIHR, and other research councils in the UK.

Spend and numbers of new products and interventions 2006-09 reported by HRCS Research Activity



	Research Activity Code								Total
Spend (£m)	512	407	45	44	49	87	6	23	1172
Products & Interventions	80	93	28	18	28	33	5	7	291

Patents granted (Split by HRCS Health Category)



Output Data

MRC e-Val 2009 headline results



- MRC attributed research (papers published 2006-08) produced a normalised citation impact (citations to end 2009) of twice the world average
- 200 patents were granted between 2006-09, 35% of which had been successfully licensed
- MRC research contributed to the creation or growth of over 30 spin out companies since 2006
- 13% of MRC researchers had active and productive interactions with the private sector
- £556 million of direct funding was attracted to the UK, partly as a result of MRC support
- Many hundreds of reports which can be used as case studies of contributions to policy setting and other outcomes and impacts were gathered, and set in the context of the entire MRC portfolio

What would the ESF working group address?

- **The potential to develop a common understanding of research portfolios across Europe**
 - What support can be given for standard classification of portfolios?
 - How can this information be brought together?
 - Is the HRCS a solution, or can it be improved upon?
- **The potential to develop standardised datasets of output**
 - What support can be given to standardising the gathering of evidence of output?
 - How can this information be brought together?
- **An opportunity to analyse health-related research portfolios internationally**
 - Is there support from European funders of health research?
- The MRC has been keen to highlight these ideas and plans to partners in Europe, through the EMRC, EUROHORCS and ESF

UK Pubmed Central Initiative



- 8 of the UK health research funding agencies have funded UK Pubmed Central (UK PMC), building on the PMC initiative in the USA to act as a **repository for full text open access papers**
- UK PMC currently provides free access to over 1.7 million full text papers, 19 million abstracts in PubMed, **details of funding awarded by the 8 UKPMC partners**, and online tools for researchers to attribute their papers to funding sources. UKPMC also draws in data from other sources such as patent datasets and clinical guidelines
- UK PMC is generating interest across Europe and recently announced that funding agencies in **Ireland and Italy would join the initiative**
- It is MRC's view, shared by UKCRC partner funding agencies, that UKPMC could be the **ideal publicly available repository for information about health research portfolios**, and present an opportunity to link output data (such as publications, patents etc.) to this.

Co-ordination of UK Health Research Strategies

A case study for comparison of Health Portfolios



- The UK Clinical Research Collaboration (UKCRC) was established in 2004 with the aim of “ensuring a coherent approach to the funding of clinical research in the UK by developing a culture of communication and coordinated strategies between the major funders”.
- A first step was to fully describe the funding landscape – to identify gaps and opportunities for health research in the UK.
- A bespoke Health Research Classification System (HRCS) was developed collaboratively, based on the Common Scientific Outline used by the US National Cancer Institute to allow meaningful comparisons to be made across the different funders’ research portfolios.

The Health Research Classification System (HRCS)

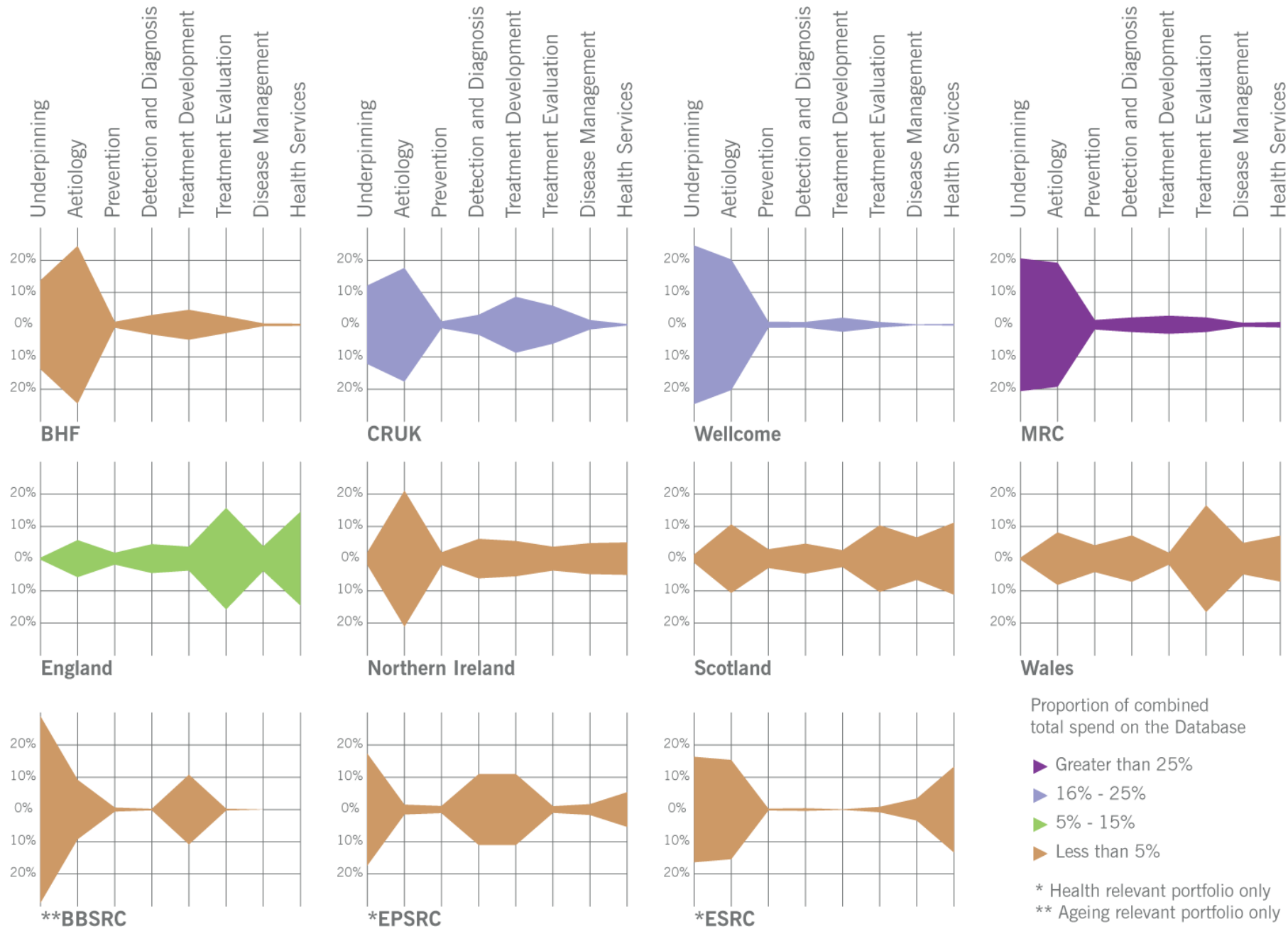


- HRCS is a two dimensional framework. Codes from both HRCS dimensions are applied when classifying
- 21 Health Categories are used to classify the type of health or disease being studied. These encompass all diseases, conditions and areas of health
- 48 Research Activity Codes classify the type of research being undertaken (from basic to applied). The codes are divided into eight groups:
 - 1 Underpinning
 - 2 Aetiology
 - 3 Prevention
 - 4 Detection and Diagnosis
 - 5 Treatment Development
 - 6 Treatment Evaluation
 - 7 Disease Management
 - 8 Health Services

Application of the HRCS

- HRCS codes are assigned to capture the **main objective(s)** of a particular study - so the system provides a broad overview of the *centre of gravity* of a set of research awards
- **Defined percentages** are assigned to all HRCS codes - which means that the associated funding is analysed exactly with no double counting
- The UKCRC carefully validated coded portfolio information provided by funding agencies, checking consistency between coders
- Two major analyses of UK health research funding were carried out and published in 2006/07.

Profile of Organisation Spend by Research Activity



Proportion of Combined Spend on Health Specific Categories

