Executive Summary

The UK Clinical Research Collaboration (UKCRC) is a partnership of the main stakeholders that influence clinical research in the UK. The Collaboration was set up in 2004 with the aim of establishing the UK as a world leader in clinical research. One of the goals of the UKCRC is to develop a coherent approach to funding health related research. A key step in this process is to map the current UK-wide research portfolio and create an evidence base that can be used to inform individual and joint planning and to facilitate coordination between funders.

This report presents the results of this mapping exercise - an analysis of the directly funded UK research portfolios of the 11 largest government and charity funders of health related research. Collectively the portfolios of the participating organisations represent the overwhelming majority of non-commercial health research in the UK. It is the first time a national analysis of the distribution of research funding across all types of research activity and all areas of health and disease has been carried out on this scale anywhere in the world.

There are a number of elements of funding that are essential to support research activity. This analysis focuses exclusively on directly funded peer reviewed research awards where funding can be directly attributed to a clearly defined set of research objectives such as training awards, projects, programmes, institutes and centres. It is not designed to be a national audit of all spending on biomedical and health research by the participating funders and consequently does not include indirect support costs such as administration, infrastructure and core support costs (eg for the Wellcome Trust Sanger Institute); UK Health Departments’ R&D support costs for NHS providers; or research taking place outside the UK. The analysis provides an overview of research taking place in the UK during the 2004/2005 financial year and is based on a total of 9638 peer reviewed awards, representing a total spend of £950m on this type of research during this period.

In order to conduct the analysis, a central UKCRC Research Database was established containing the directly funded health relevant research portfolios of the participating funders. A bespoke Health Research Classification System (HRCS) was developed to classify the research portfolios on the Database. The HRCS is a two dimensional analytical framework, enabling research to be classified according to the type of research activity taking place (Research Activity Codes) and according to the area of health or disease under investigation (Health Categories). The Research Activity Codes organise research into eight top level codes that cover the full spectrum of biomedical and health research. Each of these eight main codes is further subdivided to give a total of 48 Sub-codes. The Health Categories contain 21 separate groupings that encompass all diseases, conditions and areas of health.

Every research award on the Database was classified using the HRCS to reflect the central aim or ‘centre of gravity’ of the research taking place within the duration of the funding. Rigorous quality control measures were taken to ensure accurate and consistent coding across the portfolios of the different funders. The analysis presented in this report is primarily on the collective research portfolios of the participating organisations and focuses on the Health Categories and the main eight Research Activity Codes.

Analysis of the distribution of the combined research funding across the eight main Research Activity Codes indicates that one third of spending is concentrated in Underpinning...
research, aimed at understanding normal functions and processes. Aetiology, which includes all studies into the risk, cause or development of disease, also represents one third of the total spend. The remaining third is spent on research into diagnosis of disease, development and evaluation of treatments, disease management and organisation of healthcare. A total of 2.5% of funds is dedicated to research focused on the primary prevention of disease.

The report shows that the distribution of funds across different types of research activity varies between individual funding organisations and across different areas of health and disease. Of the total research funded, 25% is applicable to all diseases or relevant to general health and well-being, whilst 75% relates to research that can be attributed to specific diseases and areas of health. For the research funding that is specific to individual areas of health and disease, two thirds of the aggregate funds are spent on Cancer, Neurological, Infection and Cardiovascular research. In general the pattern of research funding follows the ranking of burden of disease as measured by Disability Adjusted Life Years (DALY) rates for the UK. Exceptions to this trend were observed in the areas of Respiratory, and Oral and Gastrointestinal, where the comparative research funding is lower than the relative burden of disease and for Infection, where the relative research funding is higher than the UK DALY ranking.

Analyses have previously been carried out in the UK in single disease areas such as cancer but an overview of research funding across all diseases has not been attempted before. This report provides a breakdown of the relative research funding for 19 individual areas of health and disease. A geographical distribution of funding within the UK is also provided.

The pattern of direct research funding observed in this study is a composite of 11 different research portfolios. This pattern has emerged over a period of time and has been shaped by a variety of different factors. In any given area of health related research the factors that might influence the amount of activity include: scientific opportunity; size and quality of the research workforce; ‘researchability’ or tractability of an area; burden of disease; and the level of charity fundraising. There is no correct or appropriate shape for the overall UK portfolio and, as this type of exercise has not been conducted before, there are no comparative national analyses available.

The funding organisations participating in the analysis are a mixture of public and charity bodies. They have different drivers and approaches to funding research and will use the findings from the analysis in different ways. The data in this report represent a snapshot of ‘live’ funding for the financial year 2004/2005. Since then the participating organisations have launched a number of initiatives aimed at boosting clinical research and experimental medicine, including joint initiatives developed under the auspices of the UKCRC.

The UKCRC brings together key stakeholders to address complex issues that could not be tackled by a single organisation. This analysis represents a powerful example of joint working between the main funders of health research in the UK. In the future the UKCRC Secretariat will explore the feasibility of including data from smaller medical research charities and Industry to add to the picture of health research in the UK.