

Addiction and substance misuse

RESEARCH STRATEGY

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Introduction from Sir Leszek Borysiewicz, MRC Chief Executive

Addiction and substance misuse have devastating effects on peoples' lives and communities. The costs to society are large; the Government spends more than £15 billion annually in meeting the costs of drug-related social and economic harms and young people in the UK are thought to be among the heaviest licit and illicit drug users in Europe.

Following a review of the addiction and substance misuse field in 2008, the MRC is driving forward a strategy to address the need for new knowledge, to build capacity in the UK research base, and to encourage cross-disciplinary communication and collaboration. In consultation with major stakeholders, priority themes for research have been agreed and funding will be focused on these key areas of need.

Since the start of this initiative, significant progress has already been made through firstly funding a number of pilot studies, and secondly by establishing national networks of experts, which we have termed addiction research clusters. These clusters are considered fundamental to addressing the need for capacity building and interdisciplinary research. While research clusters will be well placed to submit competitive proposals to existing funding schemes operated by the MRC, the Economic and Social Research Council (ESRC), the National Institute for Health Research (NIHR) and others, this initiative also provides a ring-fenced fund of £4.5 million which will be available exclusively to the research clusters for novel research. The MRC and the ESRC have contributed to this fund. These awards will be made by the middle of 2010.

In summary, the MRC has coordinated scientists in the addiction field and funded innovative research. Using the research cluster structure we will now build capacity and facilitate interdisciplinary research to address the most pertinent questions in public health that the MRC has identified. We will help the clusters attract experts from other fields and ensure active involvement from key stakeholders. We hope this novel approach will make a real difference to those whose lives are being affected by addiction and substance misuse.



Overview

The MRC is leading a strategy for addiction research in partnership with members of the Office for Strategic Coordination of Health Research (OSCHR) and the ESRC. A number of other key stakeholders are engaged in ongoing consultation, including government departments, devolved administrations and research charities. This multidisciplinary initiative aims to strengthen the translation of research into public health benefit in the area of addiction and substance misuse to reduce the harm caused by illicit drugs, alcohol, tobacco (nicotine) and problem gambling.

In the view of the MRC, the addiction field needs further investment and would benefit from strategic support.

The aims of the new strategy are to:

- Make better use of existing resources (expertise and infrastructure).
- Build research capacity in the UK within the addiction field.
- Increase coordination and connectivity.
- Carry out innovative, cross-disciplinary studies that meet the needs of a wide range of stakeholders and lead to improved public health.
- Take a front-line position in the cross-Government drive to reduce the harm caused by illicit drugs, alcohol, tobacco (nicotine) and problem gambling.

Rationale

Addiction and substance misuse are major medical, social and economic problems for the UK. Continued use of illegal psychotropic drugs, the misuse of alcohol and problems caused by gambling often result in devastating effects on both individuals and families. Young people are especially vulnerable.

- The pathways into addiction are not well understood.
- Knowledge of the biological and social consequences of addiction and substance misuse is lacking.
- The problems posed by dangerous drinking in the UK need further research.
- New interventions to treat or prevent addiction and substance misuse are urgently needed.

The MRC-led addiction and substance misuse research strategy is an unprecedented effort to address these problems, bringing together experts across many disciplines to work towards a common aim.



Achievements

The addiction and substance misuse research strategy is already making a difference in the UK.

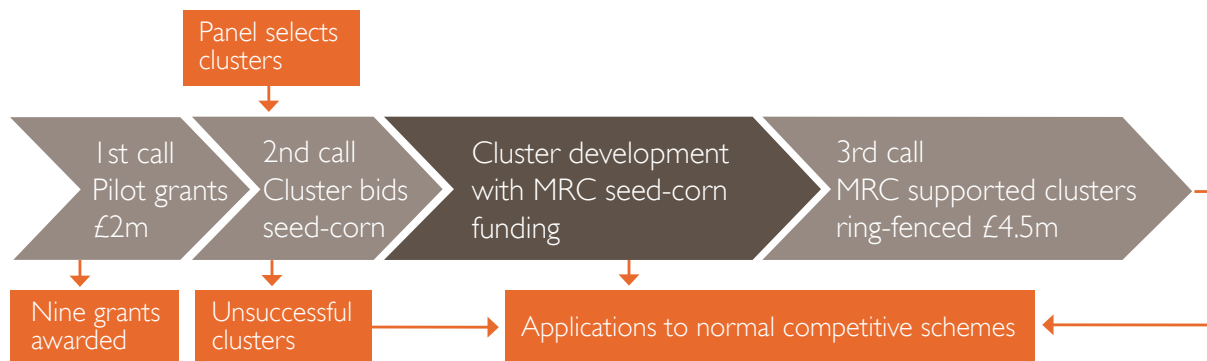
- Almost £2m has been awarded in the first round of funding to make better use of existing resources and to undertake pilot and proof-of-principle research (see p5).
- Cross-discipline discussion and proposal planning are already underway among scientists.
- Unmet priority needs have been identified in consultation with the academic community and stakeholders. These needs have been divided into four broad categories: cause, harms, treatment and alcohol.
- The strategy has been widely presented to policy-makers who strongly support it.
- A call for addiction research clusters has led to 11 bids being selected (see p7), and these now have the opportunity to develop plans for innovative research that will be funded through a competitive call for proposals in 2010.
- Together, the MRC and the ESRC have made available £4.5m to fund research clusters under this call.
- An addiction and substance misuse strategic oversight group has been set up to steer the next stages of the strategy and to facilitate and monitor the process of cluster development.

Timeline

The first call for grants to fund proof-of-principle research made nine awards worth £1.95m in February 2009 (see p5).

The second call for proposals closed in May 2009. This call provided initial seed-corn funding to develop interdisciplinary addiction research clusters (see p7). The objective of this call was to support networking, build research capacity, import new expertise and increase coordination.

Interdisciplinary research clusters, supported by MRC seed-corn funding, will have access to a ring-fenced fund of £4.5m. This fund will be available in a third call which will be launched in the final quarter of 2009. Awards will be made early in 2010.





Research supported through the first call

£2m has been awarded to nine groups to undertake pilot or proof-of-concept research addressing the areas outlined below.

Understanding

- Adolescent substance use trajectories using the Avon Longitudinal Cohort of Adults and Children.
- Understanding alcohol's effects on inhibition of behaviour: implications for treatment.
- Genetic influences underlying impulsivity and risk for drug addiction.
- Predicting relapse in treatment-seeking pathological gamblers using impulsivity and compulsivity assays.

Mechanisms

- Neurobiology of cognition and craving in opiate addiction: implications for relapse.
- Molecular and physiological mechanism of GABA(A) receptor function in striatal circuits underlying addiction.
- Imaging D3 receptors in alcoholism.

Treatments

- Exploring the potential of D-cycloserine and cannabidiol to enhance cue exposure therapies in substance dependence.
- Transdermal delivery of a buprenorphine/naltrexone combination for the treatment of polydrug abuse.

Interdisciplinary research clusters

To deliver this strategy, the MRC and the ESRC believe that the UK addiction research base needs to increase capacity and improve cross-disciplinary links. A key part of the strategy is to support the development of interdisciplinary clusters of experts with excellent research track records in their own disciplines (not necessarily addiction). These research clusters will provide a platform for competitive innovative research proposals.

Key elements of the research clusters are:

- **Collaboration** between disciplines and institutions to address a common problem; combining social, medical and biological research.
- **New expertise** to build capacity.
- **New questions** to be addressed within the agreed addiction themes through improved access to expertise/ infrastructure.
- Facilitation of interdisciplinary research **beyond the traditional** MRC remit.
- Implementation of findings through **stakeholder support**.
- Providing evidence for health care **policy and practice**.



Clusters supported for the development phase

| Cluster leader | Thematic priority | Cluster title |
|--|-------------------|--|
| Charles Abraham University of Sussex | alcohol/cause | Developing evidence-based behaviour change interventions and policies to reduce alcohol use and misuse among young people |
| Miles Cox University of Bangor | alcohol treatment | Applied Cognitive Neuroscience Cluster: Developing Innovative Cognitive-Motivational and Neuroscientific Interventions for Alcohol Abuse |
| Colin Drummond Institute of Psychiatry King's College London | alcohol/treatment | Experimental and clinical research on treatment of alcohol misuse and dependence cluster (ECTAD) |
| Andrew Furlong University of Glasgow | cause | Addictions in youth and young adulthood: Causes, trajectories and risk factors |
| Matthew Hickman University of Bristol | cause/treatment | Causes, epidemiology and prevention of substance use (and gambling) among young people |
| Martin McKee London School of Hygiene and Tropical Medicine | alcohol/treatment | The REAP cluster: Research for Effective Alcohol Policies |
| Petra Meier University of Sheffield | alcohol/treatment | Capacity development for Alcohol Policy Effectiveness Research (CAPER) |
| Tim Millar University of Manchester | harms/alcohol | Nationally Integrated Quantitative Understanding of Addiction Harms (NIQUAD) |
| David Nutt and Trevor Robbins Imperial College London with University of Cambridge | treatment/cause | ICCAM – Imperial College and Cambridge Addiction. A two-university cluster for the study of aetiology and translation in addiction with partnerships |
| Gunter Schumann Institute of Psychiatry King's College London | cause/treatment | Functional Genomics and Identification of Biomarkers in Addictions |
| David Stephens University of Sussex | treatment/cause | GABAA receptors in neurobiology of drug and alcohol addictions (Causes of Addiction and Vulnerability Factors) |

Opportunities for stakeholder involvement

Consultation

The aim of this strategy is to facilitate research that feeds directly into public health needs and delivers real outcomes, making a difference in the short term as well as the long term. The MRC is actively encouraging scientists to engage with stakeholders to ensure that these public health needs are addressed.

Policy

One aim of the initiative, supported by the stakeholders who have helped shape the programme to date, is that the research outputs should provide an improved evidence base to support policy in this area and its implementation. This should be supported through the cluster mechanism, which will facilitate dialogue between the research community and policy makers.

Funding

It is anticipated that research arising from this strategy will provide a platform for further work, such as developing treatments and interventions to meet public health needs. Clusters will also provide a focus for collaborative opportunities with international partners, as well as a basis for multidisciplinary training to enhance the addiction research field even further.

A commitment from other stakeholders and funding bodies to support the work arising from this strategy would mean that the research can feed into long term Government goals. This shared commitment offers a realistic route to improving understanding and treatment of those affected by addiction and substance misuse.



Further information

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