

Emergency and Immediate Care



Sheffield is a leading national and international centre for emergency medicine research. Academic emergency medicine is based in the section of Health Services Research in the School of Health and Related Research (SchARR) and the Emergency Department of the Northern General Hospital. We are also linked with Yorkshire Ambulance Service and a number of other organisations.

Research undertaken in emergency medicine

The range of research methods reflects the range of issues that need to be addressed to deliver high quality evidence based emergency care. Research methods include single-centre and multi-centre clinical trials, cluster trials, observational studies, organisational evaluation, qualitative research, meta-analysis, modelling and cost-effectiveness analysis. We have developed productive collaborations with a wide variety of academic disciplines.

We have studied a wide range of issues in emergency care:

- The role of emergency care practitioners and paramedic practitioners
- Waiting times in the emergency department
- Chest pain care, including chest pain units, point of care testing and primary angioplasty
- Methods for evaluating emergency care systems

Clinical academia

Clinical academic training is provided at all levels of medical career progression:

- Medical student SSC modules alongside established projects
- One-year intercalated BMedSci degrees
- 4-month foundation year attachments
- Three-year academic clinical fellow (ST1-3) posts
- Full-time MD/PhD research fellowships
- Four-year clinical lecturer posts

Rehabilitation and Assistive Technology

As more people are living longer and surviving long-term chronic conditions the need for rehabilitation and assistive technology to improve the quality of life and independence of individuals is becoming greater.

This research group is involved in research relating to the needs of people with a range of challenging disabilities, including:

- the development of appropriate assessment techniques
- skill mix and work force issues
- development and evaluation of new and innovative rehabilitation approaches

The Group integrates and values both medical and social models of disability and service provision.

Research relating to Assistive Technology includes development and evaluation of:

- telehealth, in conditions which include dementia, frail elderly, cardiac disease and COPD
- computerised home-based therapy approaches, particularly for those with rehabilitation needs following stroke
- communication aids, specifically those that are voice operated

The interdisciplinary research team includes nurses, social scientists, psychologists, information specialists, medical engineers, clinical scientists and allied health professionals.

The Research Group also hosts The Royal College of General Practitioners Sheffield Faculty.

Introduction

Health Services Research is fundamental to the delivery of health care to the population. Whilst it is important to discover new therapies, it is equally important to discover whether these, in fact, work in practice, and whether they are both effective and efficient. This is the remit of our Section. In particular we concentrate on the clinical areas of Emergency Medicine, Rehabilitation and Assistive Technology and Mental Health. These are complemented by first class statistical and clinical trials research groups.

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For further information visit: www.shef.ac.uk/scharr/sections/hsr

Medical Statistics Group

The Medical Statistics Group (MSG) was established in 2004 and currently has six members. Members work closely with the Medical School, the Yorkshire and Humber Research Design Service and the Clinical Trials Research Unit.

The MSG aims to:

- develop new statistical methodology relevant to medical and health services research
- provide high quality advice on research proposals using modern statistical methods in the analysis and display of data
- provide direct input to medical and health services research projects through collaborative research and consulting
- develop and deliver statistics modules for undergraduate and postgraduate degree schemes
- train medical and health services professionals in the theory and application of appropriate statistical methods in their own research
- train the next generation of medical statisticians.

The MSG operates in research, teaching and consultancy. The members of the MSG teach and examine across the whole range of university courses including: undergraduate MBChB Medicine degree; Intercalated MBChB and the Masters in Public Health (MPH).

The MSG undertakes a broadly based research programme in applied projects and in statistical methodology. Some examples of our methodological interests are: Cluster Randomised trials; design, analysis and interpretation of studies with Quality of Life outcomes; Early phase trials; Sample size determination; Displaying data; Teaching statistics to less numerate students.

The Mental Health Group

The Mental Health Group undertakes research in two broad areas, psychological therapies and services within the *Centre for Psychological Services Research (CPSR)* and in conflict and its resolution, through the *Centre for the Study of Conflict and Reconciliation (CSCR)*.

Psychological Services Research (PSR) aims to improve decision-making, quality, and outcomes of services treating people presenting with psychological problems. Research includes systematic reviews and randomised controlled trials, the latter in collaboration with the Clinical Trials Research Unit. This includes a trial of cognitive behavioural and cognitive analytic therapy in borderline personality disorder (SPeDi). Service research includes an evaluation of a new service model for improving access to psychological therapies (IAPT). In addition we have translational research to improve care and self-management of people with long term depression (IQUESTS) and a study of the adverse effects of psychological therapies (ADEPT).

CSCR has been involved in training psychological therapists in conflict and conflict resolution and in evaluating this training. This is part of an MSc in Psychotherapeutic Studies by distance learning. The development and evaluation of this has been supported by the European Commission. Research includes the benefits of teaching adolescents about mental health, peer support to counter school bullying, domestic violence, sibling bullying, cyber-bullying, and the impact of bullying on the inclusion of pupils with Asperger syndrome in mainstream secondary schools.

Medical Care Research Unit

Established in 1966, the Medical Care Research Unit (MCRU) is a centrally-funded Department of Health research unit directed by Professor Jon Nicholl.

The aim of the Unit is to conduct research that influences health care practice and policy for the benefit of NHS patients and the public. It describes and evaluates services and technologies from a societal point of view, taking into account social and economic implications alongside individual and clinical outcomes.

The Unit's core contract is based on a renewable five-year programme grant, funded by the Department's policy research programme. As well as research funded through the core programme, MCRU carries out research funded by project grants from the NHS, research councils, and charities.

The key focus of our research is on emergency and urgent care services and the current five year programme is investigating Emergency and Urgent Care Systems to establish: how they are organised; how to monitor their performance; and how to evaluate the system from the patient perspective.



Clinical Trials Research Unit

The Sheffield Clinical Trials Research Unit (CTRU) is registered with the NIHR Clinical Research Network Co-ordinating Centre and provides advice and services to investigators planning or running clinical trials. It has expertise in the design, operational conduct, analysis and dissemination of clinical trials with experience of implementing studies to international regulatory standards in clinical, community and general practice settings.

Expertise and services:

- Trial design and protocol development
- Assistance in seeking funding and preparation of grant applications
- Ethics, Research governance and MHRA support
- Trial management and governance
- Clinical trial implementation
- Randomisation services
- Data management
- Web-based database system design in accordance with FDA standards
- Economic evaluation
- Statistical advice and analysis

The CTRU is currently involved with studies in a diversity of areas including: emergency services, management of depression in primary care and secondary care, assistive technology, physical activity, weight reduction, rehabilitation, neurology and speech therapy.



Studies are funded through the MRC, HTA, Research for Patient Benefit and NIHR Programme Grants. The CTRU can assist your research from the earliest stages from identifying funding sources and protocol development through to implementation and publication.

Further information can also be found at the CTRU website www.sheffield.ac.uk/ctr or contact at ctr@sheffield.ac.uk.