

Institute of Psychiatry,  
Psychology & Neuroscience

KING'S  
*College*  
LONDON

# Making a difference

Research that changes health care and policy



# Making a difference

**THE RIPPLE EFFECT**

## SHOWCASING THE IMPACT OF OUR RESEARCH



**Making a difference** is at the heart of what we do. And we have done so for a hundred years. The Institute traces its origins to the Maudsley Hospital when it was founded to bring together research, education and the practice of psychiatry. Over those hundred years we have discovered causes of mental and neurological disorders, introduced new treatments and therapies and changed public policy and perception. In 2014, we became the Institute of Psychiatry, Psychology & Neuroscience to reflect the growing breadth of our research and education expertise and the changing way in which we now understand and treat mental health disorders and brain disease.

Our researchers work with other universities, industry, health care providers and policy-makers to impact the lives of people living with mental illness and brain disorders. Through King's Health Partners Academic Health Sciences Centre, our research is directly integrated with clinical services within the South London and Maudsley, King's College Hospital and Guy's and St Thomas' NHS Foundation Trusts. In addition, through our educational mandate as a faculty of King's College London we train the next generation of doctors, researchers and health practitioners.

I'm proud to introduce this series which showcases the far-reaching impact of our work. As you are reading this, we are hard at work to produce some more.

Thanks for your interest in our work.

**Professor Shitij Kapur**

Executive Dean & Head of the Institute of Psychiatry, Psychology & Neuroscience

# 1 Institute of Psychiatry, Psychology & Neuroscience

## TALKING THERAPY FOR PSYCHOSIS

For many years, medication was the only treatment option for people with psychosis. Our researchers developed and successfully piloted a form of talking therapy called cognitive behaviour therapy (CBT) to help people with schizophrenia and schizo-affective disorder try to understand and make sense of their hallucinations and delusions, and find ways of coping with the experiences.

In 1995, we published the manual *Cognitive Behaviour Therapy for Psychosis* and led a trial of CBT for psychosis to test its success.

The study showed that CBT for psychosis helped the symptoms of 50 per cent of people who had one-to-one sessions over a period of nine months, on top of the treatment and care they were already receiving. They also showed a 'significant and continuing' improvement nine months after the treatment ended.

Those benefiting all had a long history of psychosis, and had persistent and medication-resistant symptoms. CBT had a similar effect on symptoms as the effect of clozapine, an antipsychotic drug. In addition, very few people dropped out of the CBT programme and the majority were satisfied with the results.

An economic evaluation showed that the cost of providing CBT was offset by money that would otherwise have been spent on other mental health services.

The talking treatment was first recommended by NICE in 2002, and in 2009 NICE recommended that CBT for psychosis should be offered to all people with schizophrenia for at least 16 one-to-one sessions. NHS trusts are now required to put in place plans to implement this recommendation.

Our researchers continue to develop different types of CBT that target specific symptoms of psychosis, including a therapy designed to challenge the power of voices that tell people to act in a harmful way.

Professors Philippa Garety & Elizabeth Kuipers

### Making a difference

Our researchers pioneered the development of cognitive behaviour therapy for psychosis, now a recommended treatment for people who have schizophrenia.



### Making a difference

Our researchers played a pivotal role in ensuring early methadone treatment for heroin addiction is supervised, preventing an estimated 2,500 deaths in England.



# 2

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## SUPERVISED METHADONE TREATMENT SAVES LIVES

Many people in treatment for heroin addiction are prescribed methadone. The synthetic opiate helps people through the day without cravings or withdrawal symptoms and makes it possible for them to rebuild a life without crime or the risk of hepatitis and HIV from shared needles.

In 1995, our researchers at the National Addiction Centre (NAC) carried out a survey of high street pharmacists in England and Wales, and found that people on methadone treatment were not being given any sort of supervision. This meant methadone was being sent home with the risk of overdose, double dosing with heroin, storing the drug insecurely and potentially putting children at risk, or selling it on the black market.

In fact, the death toll from methadone overdoses was almost equal to the number of deaths from heroin overdoses.

The Department of Health's 1996 task force report then suggested supervised daily dispensing of methadone be piloted. Three years later, national guidelines in England, Wales, Scotland and Northern Ireland recommended daily supervision of methadone during the first three months of treatment.

Supervised dosing progressively became routine. A decade after the first survey, our researchers surveyed high street pharmacists again. 36 per cent of all methadone prescriptions were supervised by a pharmacist or addictions professional, with many of the remaining prescriptions being for people who were past the early stages of treatment.

Over the past two decades, the number of people receiving methadone maintenance treatment has increased dramatically but the number of deaths as a result of methadone overdose has not. Researchers measured impact and it is calculated that the introduction of supervised dosing saved an estimated 2,500 lives in England between 2001 and 2008.

Professors John Strang & Wayne Hall



# 3 Institute of Psychiatry, Psychology & Neuroscience

## PEER SUPPORT TO OVERCOME TRAUMA

Trauma Risk Management (TRiM) is a system that enables UK servicemen and women to help their colleagues cope in the aftermath of traumatic events.

TRiM was first developed in the Royal Marines and then tested in a trial led by our researchers at King's Centre for Military Health Research (KCMHR) involving 12 of the Royal Navy's ships.

As part of TRiM, volunteers undergo 2.5 days' training to give them the skills they need to recognise when colleagues are showing signs of stress or struggling after a distressing experience, and the wherewithal to organise support from within the unit – or arrange specialist help for the few people who need it.

The strength of TRiM is that it allows people to be identified 'in-house' and be offered peer support in the first instance – they talk to a colleague who understands the nature of the job first, rather than a mental health specialist.

At the heart of TRiM is an informal risk assessment process led by the trained volunteer to gauge whether someone is at risk of developing problems after a traumatic experience.

A follow-up interview a month later assesses whether they are recovering, and if not they are encouraged to seek support from mental health professionals.

Following the KCMHR trial, all three Armed Services adopted TRiM, and it is now also used by the London Ambulance Service, various police forces and fire services in England as well as government agencies, the BBC and private companies who have employees who may be exposed to trauma in the course of their work.

**Professor Neil Greenberg & Major Norman Jones**

### Making a difference

**Our researchers developed a peer support system to help people cope after traumatic events, which is now used in the military as well as ambulance and fire services.**

**Photo** Personnel complete an operational mental health survey whilst on deployment.



#### Making a difference

Our researchers developed specialist training materials to enable mental health professionals to help victims of domestic violence.



# 4

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## SUPPORTING VICTIMS OF DOMESTIC VIOLENCE

Our research has shown that up to two thirds of women who use mental health services have experienced domestic violence, yet mental health professionals are unaware of the majority of these experiences. Training is vital to help professionals know how to 'enquire safely', offer support themselves, and/or work with an organisation that specialises in helping victims of domestic violence.

Training materials for health professionals were originally developed under the auspices of the LARA (Linking Abuse and Recovery through Advocacy) study and successfully piloted with staff at the South London and Maudsley NHS Foundation Trust within community mental health teams.

Our researchers have adapted these to create tailored training for mental health professionals about domestic violence and mental health, and have contributed to the Royal College of Psychiatrists' curriculum for undergraduate psychiatry specifying that all trainee doctors should be taught about the link between domestic violence and mental health problems.

Our research indicates that domestic violence can damage mental health but also that mental health problems render a woman more vulnerable to domestic violence. Moreover, when domestic violence is experienced in pregnancy, not only is the woman at increased risk of mental health problems such as depression, anxiety, or post-traumatic stress disorder, but her child is also at risk of developing behavioural problems by age three.

Our researchers have written continuing professional development papers for both psychiatrists and nurses. Their work is cited in best practice guidance about commissioning services for women and children who experience violence or abuse and in the Annual Report of the Chief Medical Officer 2013 which focused on mental health.

**Professor Louise Howard**



## SPECIALIST SERVICES FOR PERSONALITY DISORDERS

About four in every 100 people have a personality disorder. People with a personality disorder are more likely to develop other mental health problems, take their own life, and experience physical health problems.

Until recently most mental health trusts didn't run services specifically for people with a personality disorder and many health professionals did not have the necessary skills to offer appropriate support.

Our researchers carried out a series of studies including a survey which showed that nearly a quarter of GP patients had a personality disorder and visited the surgery more frequently and more spontaneously than other patients.

The evidence contributed to the Department of Health's National Personality Disorder Development Programme, which ran until 2011. Thereafter, services for personality disorders were developed and training initiatives for health professionals were launched. This resulted in specialist personality disorder services becoming routinely available within the NHS.

Our researchers were involved in evaluating services for men with a personality disorder who were at high risk of offending, and the effectiveness of 11 pilot specialist community-based services for people with a personality disorder. Evidence from this work was used in UK guidelines about antisocial and borderline personality disorders.

Our researchers have also developed a short, screening questionnaire (SAPAS) that allows health professionals to identify people who potentially have a personality disorder and refer them on to specialist services where a detailed assessment can be undertaken. It has now been translated into Danish, French, Spanish and Japanese.

Dr Paul Moran

### Making a difference

**Our research has helped put personality disorders firmly on policy-makers' agendas and has helped make specialist services available within the NHS.**





#### Making a difference

Pioneered by our researchers, 'memory services' are being opened across England to give people with early signs of dementia easy access to health and social care professionals.



# 6

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## MEMORY SERVICES OPENED ACROSS ENGLAND

'Memory services' give people who may have early signs of dementia easy access to health and social care professionals. They can make a diagnosis, explain what that diagnosis means and make sure appropriate treatment and support is organised. This allows people to have more control over their lives and gives them and their families time to come to terms with the situation and plan for the future.

Memory services are based on The Croydon Memory Service in south London which was pioneered and evaluated by our researchers. When this service was developed, most people who had dementia were not being diagnosed early.

An evaluation in 2007 showed that after the Croydon Memory Service opened, substantially more people were given a diagnosis of dementia. Ongoing research also demonstrated its clinical and cost-effectiveness enabling people to be supported in their own homes rather than be admitted to residential care, improving their quality of life.

In 2009, the first ever five-year National Dementia Strategy for England proposed the creation of a national network of memory services inspired by the Croydon template. By 2011, there had already been widespread investment in specially commissioned memory services. And in 2012, Prime Minister David Cameron re-iterated the Government's commitment to opening a memory service in every neighbourhood in England in his 'dementia challenge'.

The Royal College of Psychiatrists has launched the Memory Services National Accreditation Programme to ensure the quality of memory clinics across England. Together with improved rates of high quality early diagnosis of dementia, memory services have provided the recruiting base for clinical trials of potential disease modifying treatments for Alzheimer's disease.

Professors Sube Banerjee & Robert Howard

## COMMUNICATING WITH THE PUBLIC IN A NATIONAL CRISIS

Government plans about how to communicate with the public during a national health crisis – from flu pandemic to terrorist attack – are informed by our research.

Our researchers have led two programmes of research about the public response to various potential emergency scenarios.

The first discussed five fictional emergencies caused by chlorine gas, smallpox, pneumonic plague, a 'dirty bomb' and radiation exposure.

The second surveyed public response in the aftermath of real-life incidents including the 7/7 London bombings in 2005; the outbreak of swine flu in 2009; and the response of British nationals in Japan to the meltdown of the Fukushima nuclear plant in 2011.

The work has highlighted information that people wish to, or need to, know immediately following a disaster. The research has also illustrated how the content of official statements made during a crisis should be planned, monitored and modified for best effect in the light of feedback from the public.

Contrary to what emergency planners often think, the work has shown that people generally don't panic following a major incident. In fact, public apathy may be a much bigger problem – people often don't take advice in a public health crisis, for example.

Helping people feel well-informed can make a big difference, and our researchers have shown that it is possible to design reliable and accurate information about specific threats in advance. By using focus groups and surveys, they can test whether that information is likely to be understood and be effective, and have it ready to get out very quickly in the event of a disaster or emergency.

The research team is contracted by the Department of Health to gather feedback from the public during the next flu pandemic and are already preparing surveys in advance.

### Making a difference

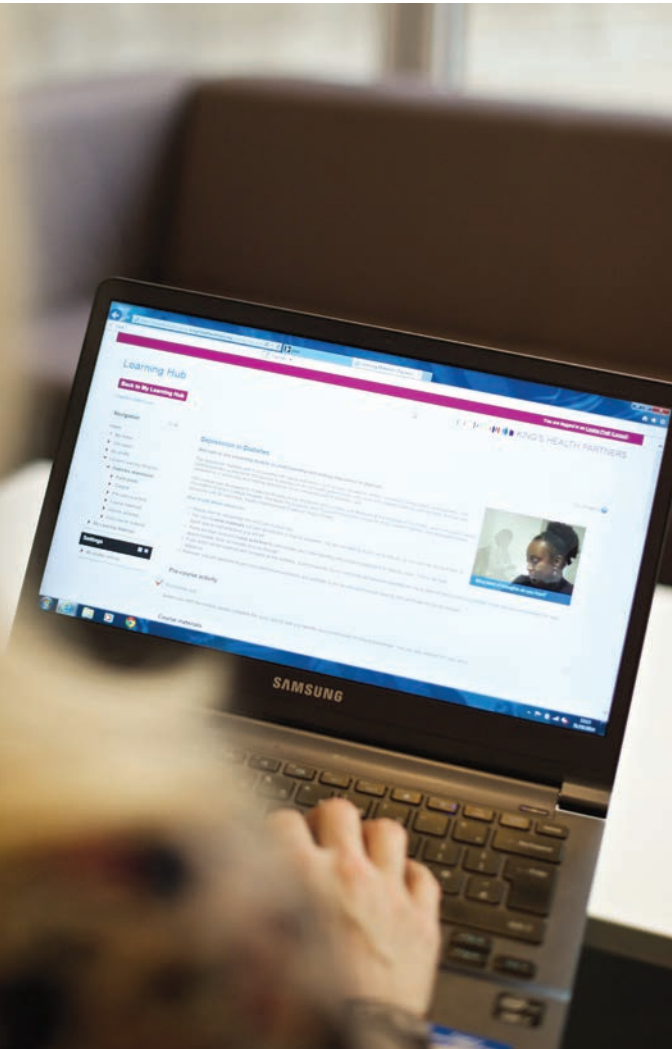
Our research has helped inform Government plans about how to communicate with the public during a national health crisis. As a result of this work, the team is now a central part of a £3.6m Health Protection Research Unit in Emergency Preparedness and Response.



### Making a difference

**Our research has shown that psychological support can help people better manage their diabetes, and diabetes clinics across the country now offer psychological care.**

**Photo** E-learning programme for GPs and diabetes specialists



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## PSYCHOLOGICAL SUPPORT FOR PEOPLE LIVING WITH DIABETES

People with diabetes sometimes find it difficult to adapt to the demands of the condition, including monitoring their blood glucose, injecting insulin, or taking other medication in order to stay well and prevent future complications.

People can feel sad, angry, anxious, or resentful or even try to forget their diagnosis and this can stop them managing their diabetes properly. Our research has shown that depression is very common and can make the symptoms of diabetes worse. People can also develop other serious mental health problems such as eating disorders and needle phobias.

Our research has demonstrated that a combination of motivational interviewing (MI) and cognitive behaviour therapy (CBT) can make a difference to people with type 1 diabetes who find it hard to control their blood glucose.

Clinics offering MI and CBT are now an integral part of the diabetes service run by King's College Hospital NHS Foundation Trust, and our researchers train liaison psychiatrists to work in the field. Clinical guidelines in the UK and internationally, including in Canada and Australia, now recommend that mental health professionals be involved in diabetes care.

In south London, the team leads the 3 Dimensions of Care for Diabetes (3DFD) which works with diabetes specialists in hospitals and community-based clinics in Lambeth and Southwark, and comprises a psychiatrist and two community support workers who offer practical help with day-to-day difficulties, including housing problems, domestic violence, benefits and debt.

Our researchers have developed an e-learning programme for GPs and diabetes specialists to give them the skills they need to diagnose and treat depression, and are now developing an online cognitive behaviour therapy for people with diabetes, to be delivered by specially trained nurses.

**Professor Khalida Ismail**



# 9

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## FAMILY THERAPY FOR ADOLESCENTS WITH ANOREXIA

Anorexia nervosa is one of the leading causes of mental health related deaths in the UK and affects approximately 1 in 150 teenage girls in the UK. 40-50 per cent are treated as inpatients for an average four to five months. While this is effective in the short term, relapse rates are high.

The aim of family therapy is to engage family members to help the young person fight the illness and regain a healthy weight. Families can become organised around the illness and therapy helps break the cycle within a household.

Over nine to 12 months, families have up to 20 sessions and are given education, information and practical strategies to help their child.

Family therapy for adolescents was first trialled by our researchers in the 1980s, and they showed that it was effective for recently diagnosed teenagers still living at home. This led to the development of specialist child and adolescent services at the South London and Maudsley NHS Foundation Trust (SLaM), and informed NICE guidelines. Known as the 'Maudsley Model' outside the UK, it is now recommended in clinical guidelines in many countries, including the USA, Australia and New Zealand.

Our researchers have further refined family therapy and developed 'multi-family therapy' – a more intensive treatment involving five to seven families working together, sharing their experiences, providing support for each other and finding joint solutions. This is now offered within SLaM's service.

Family therapy for anorexia nervosa at SLaM has improved recovery rates, and reduced the need for hospitalisation by 50 per cent. The service has been used as a template for services in the UK and abroad, and our researchers have trained many professionals in family and multi-family therapy for anorexia.

Professor Ivan Eisler

### Making a difference

**Our researchers pioneered the use of family therapy for anorexia, an intervention that is now recommended across the UK and around the world.**





#### Making a difference

Our researchers wrote the first self-care manual for bulimia to use cognitive behaviour therapy techniques. Now translated into six languages, and adapted as an online therapy, it is recommended as the first step in treating the disorder.



## 10 SELF-CARE FOR BULIMIA

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An estimated eight per cent of women experience bulimia at some time in their lives. Our researchers pioneered the development of 'guided self-care' to help break the characteristic cycle of bingeing and purging.

Our researchers wrote *Getting Better Bit(e) by Bit(e)*, the first ever self-care manual for bulimia to use cognitive behaviour therapy (CBT) techniques. A number of trials then showed that working through the manual with support from a therapist was as effective as individual or group CBT – and more cost-effective.

Partly because of a lack of services, our researchers developed and evaluated new ways of providing quick access to guided self-care via computer programmes and the internet – and have demonstrated that these modes of delivery work well, particularly for web-literate younger women.

*Overcoming Bulimia*, the online version, is now offered routinely to women who are referred to the South London and Maudsley NHS Foundation Trust (SLaM) outpatient clinic at their first appointment. The alternative to self-care is often to join the waiting list for one-to-one or group CBT.

Many women with bulimia don't ask for help or are ashamed of their eating disorder. As a result they get worse and become harder to treat – self-care online may be particularly appropriate for these women. Making self-help treatment available online is also cost-effective because patients don't have to regularly attend a hospital or outpatient clinic.

Self-care is now recommended as the first step in the treatment of bulimia in national guidelines in the UK, Germany and the USA, and the manual has been translated into six languages. In 2012, 67 per cent of UK specialist eating disorders services used self-care interventions for the treatment of bulimia.

Professors Ulrike Schmidt & Janet Treasure

# 11

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## PROTECTING THE WELLBEING OF UK ARMED FORCES

The UK military's Harmony Guidelines stipulate the duration of tours of duty. They differ for each of the Armed Services, and are designed to safeguard against excessive deployments and overstretch.

For the army, the guidelines state that a tour should last for six months and be followed by a 24-month break. Therefore, if the guideline is followed, a unit should not be deployed for more than 12 months within a three-year period.

Our researchers at King's Centre for Military Health Research (KCMHR) highlighted the importance of adherence to these guidelines and the effect on personnel's mental health.

They showed that when service personnel were deployed for more than 13 months within three years, they were more likely to report mental ill health, symptoms of physical ill health and problems at home. Unforeseen increases in the length of a tour were detrimental: if the tour of duty was longer than anticipated, service personnel were much more likely to report symptoms of post-traumatic stress disorder (PTSD) afterwards.

Our research was cited in the 2008 Armed Forces' Pay Review Body report that recommended a one per cent increase to service wages. The risk of developing mental health problems – particularly when Harmony Guidelines are breached – was one of the reasons for the increase.

As the only UK source of data on the impact of tour length on mental health, our researchers gave evidence to a special committee set up to consider proposals for increasing tour length from six months to nine months. Our research played a key part in the 2011 decision not to increase the length of tours.

KCMHR figures suggest that, for each year of continued operations in Iraq and Afghanistan, adherence to the Harmony Guidelines prevents an additional 7.1 per cent of common mental illnesses and PTSD, and 7.7 per cent of alcohol problems.

Professors Simon Wessely & Roberto Rona

### Making a difference

Our research into the mental health consequences of deployment helped secure a pay increase for members of the UK's armed forces and influenced a top-level military decision not to extend the length of operational tours.





Making a difference

Our research on the adverse effects of cannabis contributed to a major public debate and Government campaign about the potential risks of cannabis.

Image The FRANK campaign educates young people about cannabis and mental health.

# FRANK

## cannabis stories

# 12

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## UNCOVERING THE LINK BETWEEN CANNABIS AND PSYCHOSIS

Our researchers led a study of 1,000 men and women in New Zealand which showed that people who had been regular cannabis users at 15 were about four times more likely to have psychotic symptoms by the time they were 26 than their abstaining peers.

Further research showed that people who smoke a potent form of cannabis (skunk) regularly are much more likely to develop psychosis than those who use traditional cannabis resin (hash) or old-fashioned grass.

Skunk contains much more THC (the psychoactive ingredient that produces the 'high') than hash or grass, and virtually no CBD (which seems to moderate the effect of THC). Our research illustrated that an injection of pure synthetic THC can induce transient symptoms of psychosis in people who have no experience of mental health problems.

In the wake of these studies and other evidence from around the world, the Home Secretary asked the UK Advisory Council on the Misuse of Drugs (ACMD) to review the legal classification of cannabis in 2007.

The ACMD concluded that cannabis should remain as a class C drug, but confirmed that the drug, particularly skunk, can damage people's mental health, especially if young people start to use it at an early age. Despite this, cannabis was re-classified from class C (the least harmful) to class B.

The Department of Health then launched a major TV, radio and online campaign aimed at young people to demonstrate the role cannabis can play in the development of mental health problems.

Our research into the effects of CBD and THC has also led to a partnership with the pharmaceutical industry to develop a new antipsychotic medication based on CBD.

Professors Terrie Moffitt, Avshalom Caspi, Philip McGuire, Sir Robin Murray, Louise Arseneault, Drs Paul Morrison & Marta DiForti

Each year, about 150,000 people in the UK have a stroke. Strokes happen when there is a blood clot or a bleed in the brain. At hyper acute units, people receive expert care, including immediate access to a brain scan to aid assessment and clot-busting drugs, if appropriate. Patients may then be transferred to a stroke unit closer to home for continued treatment and rehabilitation.

When our research began in the 1990s, all stroke patients were admitted to general medical wards where our researchers realised that many patients either died or had long-lasting disabilities.

They were involved in establishing a stroke unit staffed by a multi-disciplinary team and set out to investigate whether providing timely care in an organised way, based on assessment and setting goals, worked.

Our researchers carried out several trials illustrating both the clinical and cost-effectiveness of stroke units. They showed that patients cared for on general wards were more likely to die or be institutionalised following a stroke. People cared for on specialist stroke units, however, had fewer complications, were more likely to survive and more likely to return home and regain independence.

This work influenced Government policy leading to the creation of stroke units in hospitals throughout the UK. Now, admission to a specialist stroke unit is recommended in UK national guidelines, and around the world.

In the UK, there has been a steady increase in the number of patients receiving specialist care. In 2010, 88 per cent of patients were admitted to a stroke unit during their stay, compared to 46 per cent in 2004; and 56 per cent were admitted to an acute stroke unit within four hours in 2013, compared to 17 per cent in 2008.

**Professor Lalit Kalra**

#### **Making a difference**

**Our research demonstrated that specialist stroke units help patients survive and recover more quickly – as a result, the services are available across the UK.**

**Photo** Patient receiving treatment on the Hyper Acute Stroke Unit at King's College Hospital.







# 14 PREVENTING DEATHS FROM HEROIN OVERDOSE AT HOME

Institute of Psychiatry, Psychology & Neuroscience

Naloxone is a fast-acting heroin overdose antidote used originally only by the medical profession – it restores consciousness and allows crucial extra time to seek or dispense medical treatment. In 1996, researchers at our National Addiction Centre (NAC) first promoted the idea of ‘take-home’ naloxone – a single injection that could be given by friends and relatives.

Since then NAC research has shown that 80 per cent of drug overdoses are witnessed, 80 per cent involve heroin or opiates, 80 per cent happen at home, and that friends and family want to learn how to help in an emergency. NAC researchers designed training for peers, relatives and health professionals about what to do if they encounter an overdose, and how to inject naloxone.

After several pilot schemes led by the NAC, take-home naloxone programmes were launched in Scotland (2010) and Wales (2011) and are both measuring lives saved.

Following this, the NAC team showed that one in every 200 released prisoners in England who previously had a heroin habit died from a drug overdose within a month of leaving prison. The N-ALIVE trial has already randomised 1,500 former heroin users as they are released from English prisons, to assess the number of lives saved when they are given take-home naloxone.

In 2012, the UK Advisory Council on the Misuse of Drugs recommended that naloxone, and training, be made more widely available to reduce the 2,000 fatal opioid overdoses that happen annually in the UK. National agencies in the USA are now introducing take-home naloxone more widely, and in 2012 the UN passed a resolution encouraging all member states to include take-home naloxone programmes in their national drugs policies. In November 2014, the World Health Organisation launched new international guidelines, with input from staff at NAC, to stimulate wider international provision.

Professors John Strang, Michael Farrell & John Marsden

# STEM CELL THERAPY TO REPAIR STROKE DAMAGE

About 150,000 people have a stroke every year in the UK. Most are ischemic because the blood supply to the brain is blocked. As a result, billions of brain cells die because they are deprived of oxygen and are no longer able to send signals to other parts of the brain. About half of the people who survive a stroke are left with some sort of disability as a result.

Neural stem cells have the ability to become any of the cells that make up brain tissue. For more than a decade, our scientists have collaborated with the biotech and King's College London spinout company ReNeuron to develop stem cell therapies to help the brain recover after a stroke. Early research was designed primarily to evaluate the safety of the stem cells and the technique used to implant them in the brain.

Our scientists helped devise the technology to generate neural stem cells that have the potential to be used for therapy. The procedure, called 'conditional immortalisation', enables one single neural stem cell to 'expand' to yield an infinite number of exact copies. This has allowed ReNeuron's lab to generate enough CTXoEo3 neural stem cells to provide thousands of doses of the therapeutic stem cell line ReNoo1.

With pivotal funding from the Charles Wolfson Charitable Trust, our researchers were then able demonstrate that rats disabled by a stroke 'got better' when CTXoEo3 cells were injected into their brains.

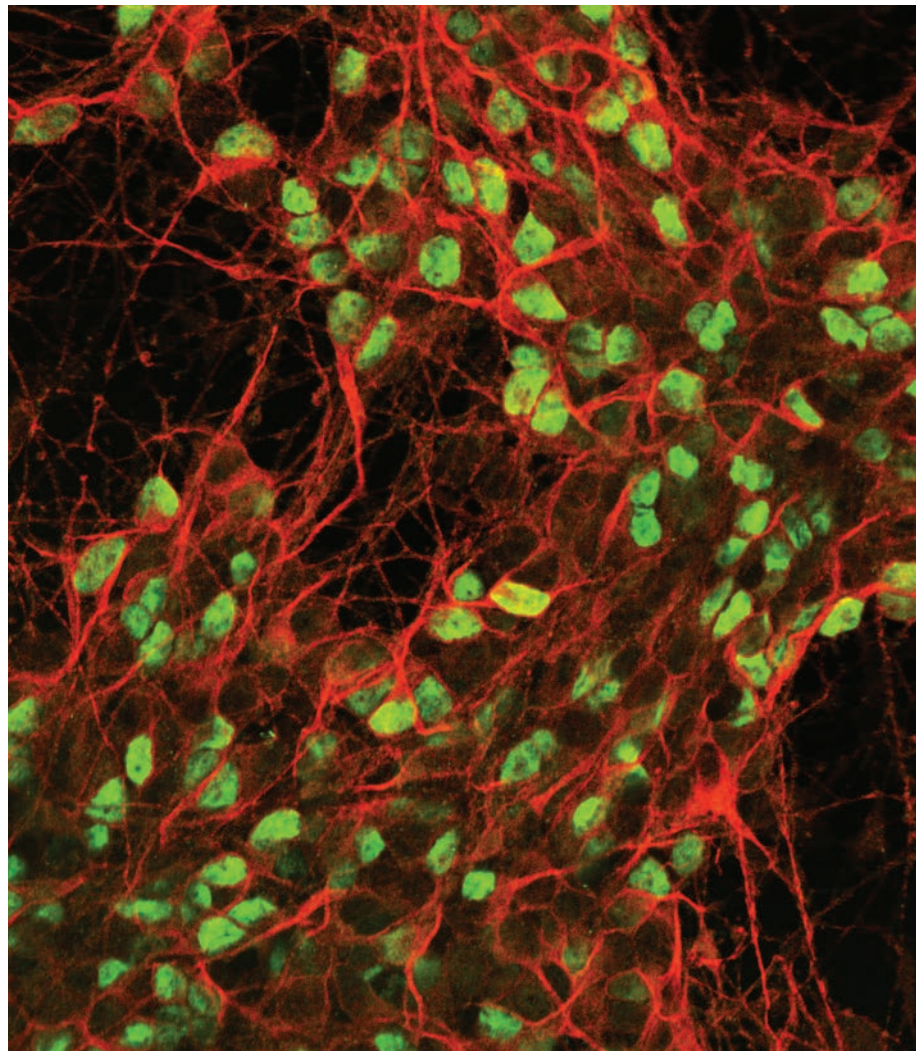
These studies were used to support ReNeuron's application for regulatory approval to test ReNoo1 in humans. ReNoo1 has now been tested on 12 stroke victims in the UK's first ever clinical trial of a therapeutic product containing manufactured neural stem cells. This therapy proved safe and the patients showed a clear, though modest, improvement in neurological symptoms. We are now moving into a Phase II trial in an attempt to prove efficacy.

Professor Jack Price & Dr Mike Modo

## Making a difference

**Our stem cell research underpinned the UK's first ever clinical trial to treat stroke patients with manufactured neural stem cells.**

**Image** Human spinal cord neurons made from human neural stem cells which, when engrafted into damaged rat spinal cord, bring about enhanced functional recovery.





#### Making a difference

Our researchers designed training to help parents and other carers better support someone who has anorexia and speed their recovery.



# 16

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## TRAINING FOR CARERS OF PEOPLE WITH ANOREXIA

Anorexia nervosa can provoke an intense emotional response from family members, but parents and other carers are often uncertain about their own role, how to help, or how to react to or manage problems that arise.

Our research has shown that anxiety and stress at home can inhibit recovery and even encourage the eating disorder to thrive.

Developed by our researchers, the 'New Maudsley Method' helps family members learn techniques that can help facilitate weight gain, re-establish healthy eating, deal with crises and conflicts at home, and assess risk. Family members are given information about anorexia and also learn to cope with, and reduce, their own anxiety, which can help the person who has anorexia.

Many people who have anorexia first become unwell as teenagers when many of them are still living at home with their parents. The New Maudsley Method was developed after a series of research projects that sought to find out about the experience of living with and supporting someone who has anorexia, and then examined how different caring styles had an impact on the symptoms of the eating disorder.

The research team also discovered that many parents were depressed and anxious, felt under-supported and wanted to know about the best way of helping at home.

Our researchers continue to explore different ways of delivering and enhancing the training, such as telephone coaching for parents, and films aimed at family members and carers.

Workshops for family members are now an integral part of the eating disorders clinical services offered by the South London and Maudsley NHS Foundation Trust, where sessions for patients' parents and family members are routinely offered.

Professors Janet Treasure & Ulrike Schmidt

## THE CAMBERWELL ASSESSMENT OF NEED

The Camberwell Assessment of Need (CAN) is used around the world to help health and social care professionals fully understand the problems and difficulties experienced by people who have a serious mental illness, and then plan appropriate care and support.

The assessment tool was first created and validated by our researchers in 1994 and is now incorporated into routine clinical practice in many countries.

In Canada, for example, it inspired the development of the Ontario Common Assessment of Need, used by nearly 300 community-based organisations providing mental health services. In The Netherlands, it is one of the core instruments that comprise the Cumulative Needs for Care Monitor, used to plan treatment and conduct research.

CAN is designed to facilitate a discussion about 22 different subject matters covering all aspects of an individual's life and mental wellbeing – accommodation, daytime activities, psychotic symptoms, childcare, money, psychological distress, physical health and relationships, for example.

For each domain, the goal is to identify if an individual has any difficulties, and if they do, establish what level of help they are getting, what level of help they need, and whether they are satisfied with the help they receive.

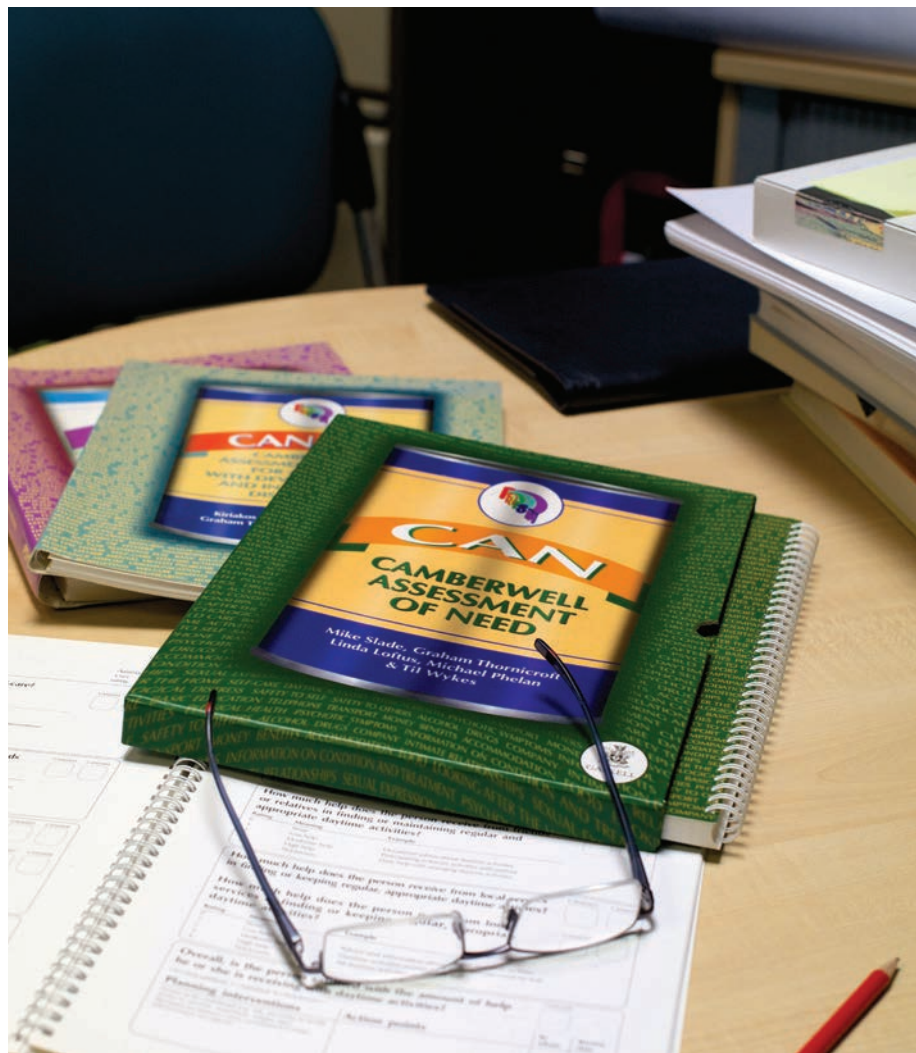
Most importantly, CAN encourages people who are being assessed to voice and record their opinions. The tool recognises the subjective nature of 'need' and that care plans are informed by both the professional and the individual they are supporting.

CAN has been translated into 26 languages and modified versions have been developed for different groups of people – for older adults, people with intellectual disabilities, people who use forensic mental health services, and for new mothers and pregnant women who have mental health problems.

Professor Mike Slade

### Making a difference

Our researchers developed the Camberwell Assessment of Need which is now used around the world to help health and social care professionals understand and address the difficulties experienced by people with severe mental illness.





#### Making a difference

Our researchers developed questionnaires that are now used by doctors to help ensure patients with Parkinson's get treatment for debilitating non-motor symptoms.



## 18 Institute of Psychiatry, Psychology & Neuroscience **TREATING NON-MOTOR SYMPTOMS OF PARKINSON'S**

Practically everyone who has Parkinson's disease also has debilitating 'non-motor' symptoms that often have a greater impact on their quality of life than the movement difficulties caused by Parkinson's. These include memory loss, sleep problems, mood changes, dribbling, apathy, concentration difficulties, fatigue and constipation.

Most people who have Parkinson's disease experience at least six non-motor symptoms, but some people can have up to 30. All non-motor symptoms are treatable but doctors need to be made aware of them. Our research showed that despite this, doctors and nurses across Europe did not discuss non-motor symptoms with their patients, and patients themselves did not mention them, either because they were embarrassed or because they did not think the symptoms were related to the disease.

Our researchers developed and validated NMSQuest (Non-Motor Symptoms Questionnaire), a simple questionnaire now used in clinics around the world to help ensure patients get the treatment they need for non-motor symptoms caused by Parkinson's disease.

Patients can download the questionnaire from the Parkinson's UK and International Parkinson's and Movement Disorders Society websites. They simply fill it out and give it to their GP or specialist. NMSQuest is now recommended along with use of Parkinson's Disease Sleep Scales (PDSS) by NICE as well as in the NHS Best Practice Tariff criteria for management of Parkinson's.

Our researchers also led the development and validation of two scales that are regularly used in research studies to measure the effect of new treatments on non-motor symptoms. The Non-Motor Symptom Scale (NMSS) is now used in the majority of clinical trials of new drugs for Parkinson's, and the PDSS and the updated PDSS-2 have been used in trials to measure the impact of medication on sleep disturbances.

**Professor K Ray Chaudhuri**

## PHARMACEUTICAL HEROIN: TREATING CHRONIC ADDICTION

Methadone is widely used in heroin treatment programmes, but a small proportion of heroin addicts fail to benefit from it and are responsible for the majority of drug-related crime.

Researchers at the National Addiction Centre (NAC) led the Randomised Injectable Opioid Treatment Trial (RIOTT) which demonstrated that when entrenched addicts are prescribed pharmaceutical heroin (diamorphine) under supervision they are more likely to quit street heroin than their peers who are treated with methadone.

Unlike previous attempts at providing diamorphine, the NAC's approach involved supervised dosing at clinics that remained open every day of the week. They also developed a urine test to check whether participants were using heroin prescribed by the clinic or bought on the street.

The team ran a small pilot study which showed not only a major reduction in illicit heroin use and criminal activity but also enthusiasm amongst hard-to-treat addicts. A pledge to develop supervised heroin prescribing was included in the UK drugs strategy in 2002 and a commitment in 2008 to roll out supervised heroin treatment if the RIOTT trial reported good results.

In 2012, three mental health trusts in London, Brighton and Darlington were awarded Department of Health contracts to provide supervised heroin treatment to addicts who have not responded to conventional treatments.

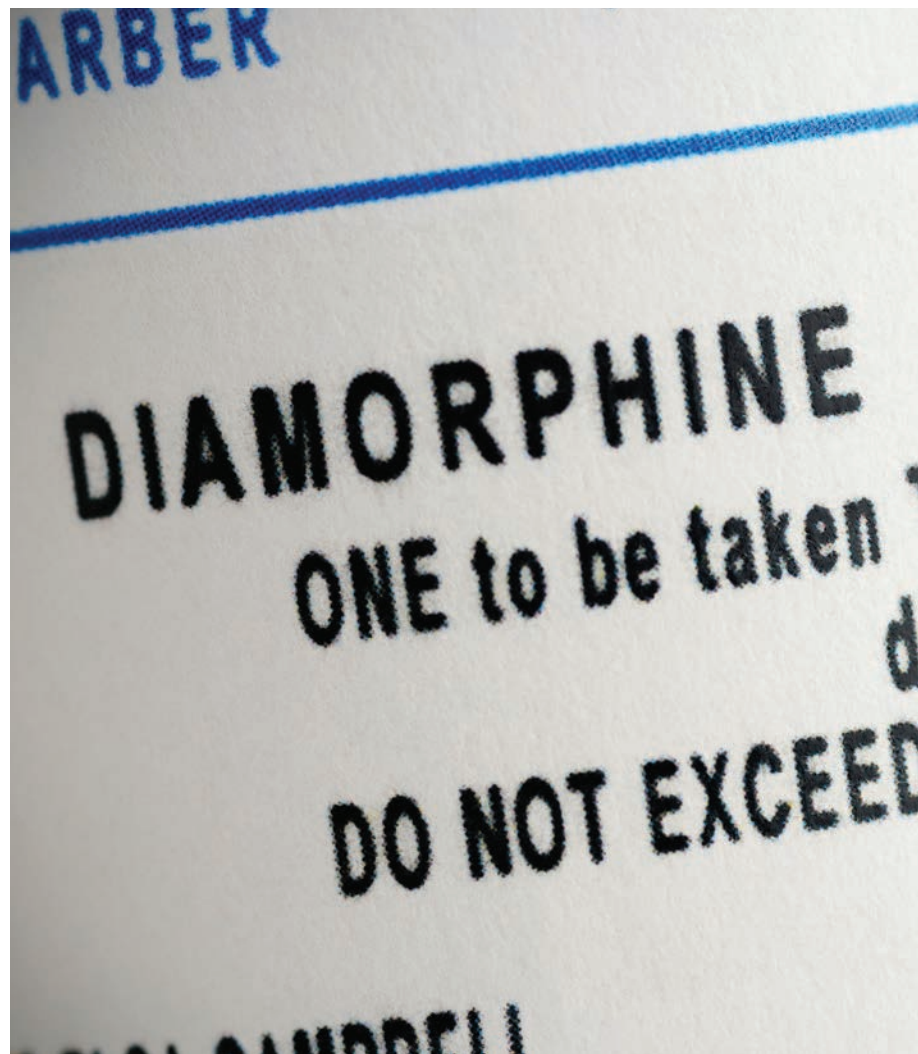
These clinics are more expensive to run than methadone clinics; however, an economic analysis by our researchers showed that they are cost-effective due to savings as a result of reduced criminal activity and health care costs.

The work has contributed to international evidence and services have been established in England, Switzerland, The Netherlands, Germany and Denmark.

Professor John Strang & Dr James Bell

### Making a difference

Our researchers showed that supervised medical heroin helps chronic heroin addicts quit the street drug and turn their back on crime, key evidence leading to the treatment being introduced in England.





#### Making a difference

Our research has informed England's national anti-stigma campaign, which is clearly showing a reduction in stigma and discrimination towards people with mental illness.

Photo Sue Baker, Director of Time to Change at a Roadshow event in Durham in 2010



## 20 TIME TO CHANGE: EVIDENCE FOR ANTI-STIGMA CAMPAIGNS

Institute of Psychiatry, Psychology & Neuroscience

Our research has shown that people with mental health problems are treated unfairly in almost all areas of their lives because of misconceptions, ignorance and fear.

But in England attitudes have improved. Since the start of Time to Change, a national anti-stigma campaign launched in 2007, people are now reporting less discrimination.

Our researchers have been involved in planning and evaluating the programme with the charities Rethink Mental Illness and Mind. In a 2008 survey, 91 per cent of people with mental health problems said they had experienced discrimination on at least one occasion; in 2011, that number had fallen to 88.2 per cent; by 2013, the survey showed significant reductions within several life areas, including social life and securing a job.

The annual Viewpoint survey uses the Discrimination and Stigma Scale (DISC), a purpose-built questionnaire that was developed and validated by our researchers. It is one of the many tools our researchers have produced to evaluate Time to Change.

Our research has informed many Time to Change activities. It showed that one of the most effective ways to reduce stigma is through personal contact with someone who has a mental illness. Therefore, the initial phase of the campaign focused on activities bringing people with and without mental illness together. Personal testimonies have also been central to anti-discrimination training for medical students and educational professionals.

In 2011, the UK Government committed to working actively with Time to Change in its mental health strategy, using Time to Change evaluation activities and scales to monitor discrimination and stigma. Our evaluation methods are now used internationally including in Canada, Wales, The Netherlands, Denmark and Sweden.

Dr Claire Henderson, Professors Graham Thornicroft & Diana Rose

# 21

Institute of Psychiatry, Psychology & Neuroscience

## PROTECTING THE WELLBEING OF CHILDREN IN CARE

There are an estimated 89,000 looked-after children and young people in the UK.

Developed and evaluated by our researchers, the Strengths and Difficulties Questionnaire (SDQ) is an easy-to-use, reliable, short questionnaire to help identify children who may need specialist help because they have mental health problems or emotional difficulties. The SDQ has been used by local authorities since 2008 to screen every child aged from four to 16 who has been in their care for longer than a year. The information collected is sent to Government as part of an annual statistical return about looked-after children.

The inclusion of routinely collected SDQ results in the regular returns was first recommended following four Government-commissioned landmark surveys that identified the large number of children in care who potentially need support from mental health services.

The surveys, carried out between 1999 and 2003 by the Office for National Statistics and led by our researchers, used the SDQ to show that young people and children in care are nearly five times more likely to have mental health and/or emotional problems than children being brought up by their own families.

The results helped put the mental wellbeing of looked-after children firmly on policy-makers' agendas.

Since then, annual SDQ scores have helped local authorities monitor the effectiveness of the services they offer to support the mental welfare of children and young people in their care. The scores also help professionals decide whether an individual child or young person needs to be referred to specialist mental health services.

Researchers, parents and health and social care professionals can download the SDQ in many different languages, free of charge.

Professor Robert Goodman

### Making a difference

A simple questionnaire developed by our researchers is now used by local authorities across the UK to monitor the mental health of children in care and ensure they get the support they need.





#### Making a difference

Our researchers were among the architects of a bespoke talking therapy for chronic fatigue syndrome, which is now one of two treatments recommended in the UK.



# 22

Institute of Psychiatry, Psychology & Neuroscience

## CBT FOR CHRONIC FATIGUE SYNDROME

Chronic fatigue syndrome (CFS) affects approximately 250,000 people in the UK. The profound and disabling exhaustion isn't alleviated by rest, and other symptoms can include joint and muscle pain, headaches, disturbed sleep and short-term memory problems.

People might initially develop the fatigue as a result of an illness, such as a virus, or after a period of stress. But once triggered, the fatigue is maintained by other factors, including some coping styles.

When we first piloted cognitive behaviour therapy (CBT) for CFS in 1991 there were no established treatments for CFS.

CBT for CFS encourages people to gradually build up and resume regular daily activities; to identify and plan how to deal with triggers that might make symptoms worse; and to learn how to manage and reduce the symptoms.

We developed a version of the specialised therapy for young people that involves the whole family. Family-based CBT is routinely offered to 11 to 18-year-olds diagnosed with CFS. For them, the consequences of CFS are dire, impacting on education, and physical and social development as a result of long periods out of school.

The choice between rest and activity as a treatment for CFS has often been at the core of a controversial debate. Our researchers were involved in the landmark PACE trial which showed that CBT and Graded Exercise Therapy (GET, also recommended by NICE) for CFS were more effective and more cost-effective than adaptive pacing therapy – where people balance rest with activity – or specialist medical treatment.

One year after a course of CBT or GET, a fifth of people had recovered and were able to partake in life without significant fatigue.

**Professor Trudie Chalder**

## FAMILY INTERVENTION FOR PSYCHOSIS

‘Family intervention’ helps people who have schizophrenia stay well – and can also make a difference to the wellbeing of their relatives.

Our research over 30 years has shown that family intervention results in less relapse or admission to hospital. We led the first ever trial of family intervention for schizophrenia in the UK in 1982.

During these sessions, the person with schizophrenia is encouraged to talk to their family and explain what sort of support is helpful – and what makes things worse.

Family intervention can improve relationships within the household because therapists encourage family members to listen to each other and openly discuss problems and negotiate potential solutions.

Family therapists make sure relatives have all the information they need about schizophrenia so they can better understand the symptoms that can influence someone’s behaviour.

Supporting someone with schizophrenia can be a stressful job and family members can feel anxious and worried, but also ashamed and isolated because of the stigma associated with mental illness. Therapists can help them realise these feelings are normal, and help them move from exhausted and defeated to feeling that things can improve.

The 1982 results, and the results of three other studies carried out by our researchers, were included in the evidence used to inform 2009 and 2014 NICE treatment guidelines about schizophrenia.

A manual detailing how to deliver family intervention for psychosis was published in 1992 and updated in 2002. In addition, the website [www.mentalhealthcare.org.uk](http://www.mentalhealthcare.org.uk) was created for families and carers.

Professor Elizabeth Kuipers

### Making a difference

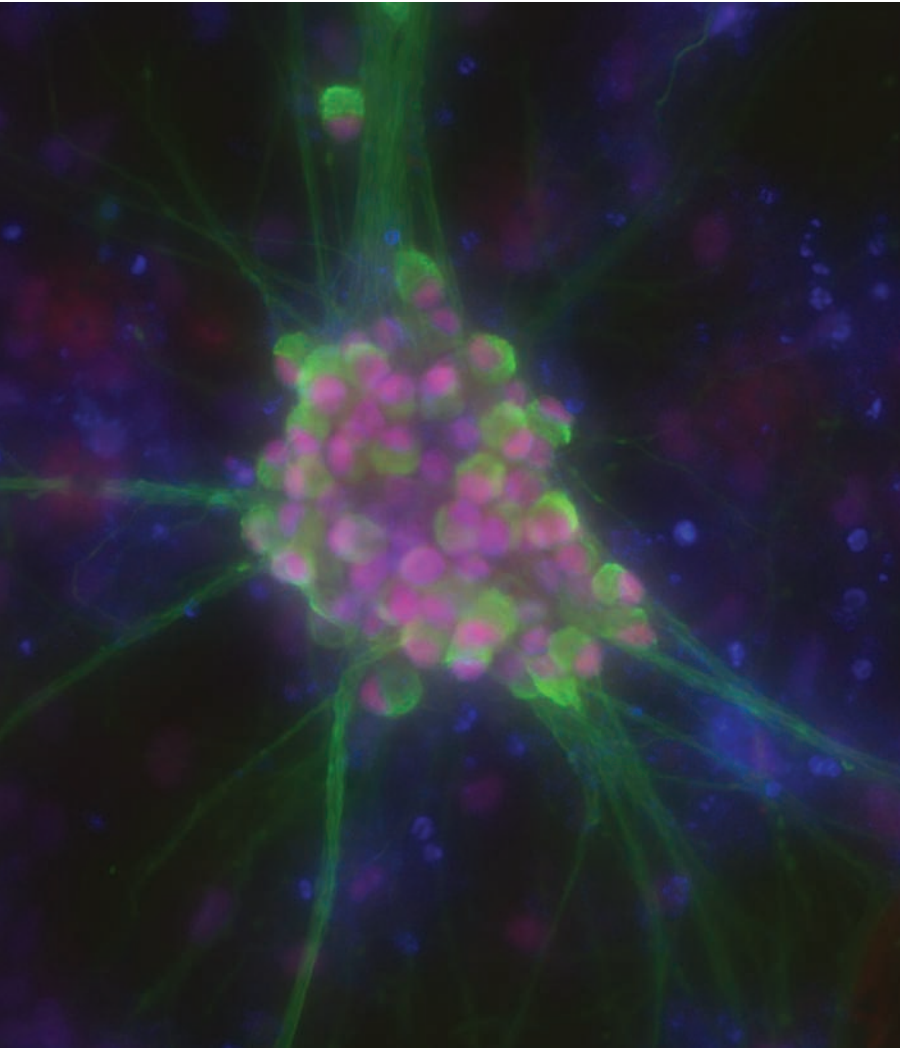
**Our researchers ran the first ever trial of family intervention for schizophrenia in the UK – now a recommended treatment for people with psychosis in the UK.**



#### Making a difference

**Our researchers developed diagnostic tests that led to the first child being born free of the genetic mutation which causes motor neurone disease.**

**Image** In ALS/MND motor neurones, like the one in the image, degenerate causing the muscles they control to weaken and waste away.



## 24 GENETIC TESTING FOR MOTOR NEURONE DISEASE

Institute of Psychiatry, Psychology & Neuroscience

Every day, almost 400 people around the world are diagnosed with amyotrophic lateral sclerosis (ALS), the most common form of motor neurone disease. Our researchers have identified genes that, when mutated, cause some types of this progressive and fatal condition.

Our researchers identified ALS-causing FUS and TARDBP genes, discovered mutations on SOD1 – and were the first to identify the location of C9orf72. Diagnostic tests are now available in laboratories around the world that can reveal whether someone carries a mutated version of the gene and therefore has an increased risk of developing ALS. They can also confirm diagnosis and inform treatment plans.

Our researchers have worked with Guy's and St Thomas' NHS Foundation Trust to develop 'pre-implantation genetic diagnosis' (PGD) for ALS caused by a mutation on the SOD1 gene. This allows people who carry a mutated gene the opportunity to avoid passing it on to their children.

The technique involves genetic testing of an embryo created through in-vitro fertilisation: only embryos free from the genetic mutation are implanted in the womb. It was successfully used for the first time in the UK at Guy's Hospital in 2013 when a baby boy was born free of the mutated gene that his mother carries.

Discovering the genetic causes of inherited ALS can also help researchers understand more about the molecular mechanisms of the disease. Our research has shown, for example, that the proteins encoded by a mutated version of the FUS and TDP-43 genes are toxic to motor neurones. Identifying genetic mutations, and understanding the mechanisms, and how the disease develops, at a molecular level will ultimately enable the development of new and effective therapies.

**Professors Chris Shaw, Ammar Al-Chalabi, Corrine Houart, Sarah Guthrie, Chris Miller & Drs Safa Al-Sarraj, Jean-Marc Gallo & Frank Hirth**



# 25

Institute of Psychiatry, Psychology & Neuroscience

## REDUCING RISKY BEHAVIOUR IN RETURNING TROOPS

Armed Forces personnel are twice as likely to die on the road as civilians, and around 2.5 times more likely to report alcohol misuse.

Our research has led to the development of specific post-deployment interventions for service personnel in order to mitigate the impact of deployment on driving behaviour and alcohol use. The interventions have been provided to up to 20,000 personnel returning from deployment.

A third of the British troops who died in 2005 were killed in road traffic accidents. Our researchers found that the more traumatic events personnel had witnessed, the more likely they were to take risks when driving. They then worked with the British Army on a hard-hitting road safety video *The Grim Reaper*, where the final message is 'Drive carefully – you're tough but you're not invincible'.

The six-minute film has been shown to all UK military personnel returning home from tours of duty in Iraq and Afghanistan since 2007. In 2013, only 17 per cent of service personnel who died were killed in road traffic accidents.

Since 2007, not only have the number of deaths in road traffic accidents fallen, but our research has also shown that fewer servicemen and women say they are taking risks on the road.

To target alcohol misuse, our researchers led a trial of the post-deployment mental health resilience training programme Battlemind during decompression. In the USA, troops who had Battlemind training were less likely to develop post-traumatic stress disorder back at home. In the UK trial, whilst Battlemind did not help prevent mental health problems, it did result in personnel being less likely to be binge drink four to eight months later.

As a result, the alcohol-related section of Battlemind was incorporated into UK post-deployment briefing.

Professors Nicola Fear & Neil Greenberg

Making a difference

**Our research has informed post-deployment interventions for service personnel in order to reduce risky driving behaviour and alcohol use.**

Photo A still from *The Grim Reaper* video



#### Making a difference

**Our researchers helped prove the efficacy and cost-effectiveness of early intervention services for psychosis, which have now been widely developed across England.**



# 26

Institute of Psychiatry, Psychology & Neuroscience

## EARLY INTERVENTION SERVICES FOR PSYCHOSIS

Early intervention services aim to give young people, and their families, comprehensive help, treatment and support when they first experience the symptoms of psychosis. This includes information to help them make sense of what's happening, cognitive behaviour therapy, family therapy and medication, if needed.

The pioneering Lambeth Early Onset Team (LEO) was one of the first services of its kind. It was launched as part of a research project to assess the success of a specialist early intervention service. Available for extended hours, seven days a week, the LEO team provided therapies and support specially adapted to young people, as well as advice about accommodation, benefits, employment and education.

Our researchers showed that young people who were referred to the specialist service had a better prognosis than those treated by their local community mental health team (CMHT). After 18 months, people referred to LEO were more likely to have returned to work or study, maintained or rebuilt good relationships with family and friends, and were more likely to be taking medication regularly, than those offered conventional support from a CMHT.

An economic analysis also showed that the overall costs of the early intervention service were lower than the costs of standard CMHT care, mainly as a result of fewer admissions to hospital.

At the end of the trial, LEO became a mainstream service run by the South London and Maudsley NHS Foundation Trust, and the trial is cited in a NICE guideline which recommends that early intervention services be offered to everyone experiencing a first episode of psychosis.

When LEO was first set up, there were just two early intervention teams in England caring for about 80 young people. Between July and September 2012, more than 21,000 people were treated by early intervention teams operating throughout the country.

**Professors Tom Craig, Philippa Garety & Philip McGuire**

# 27 Institute of Psychiatry, Psychology & Neuroscience

## DIAGNOSING AND TREATING DEPRESSION IN PALLIATIVE CARE

About 470,000 people die every year in England and, on average, 355,000 of them need palliative care (help and support to live well and with dignity until their death).

Almost one fifth of people receiving palliative care also experience depression which can exacerbate the symptoms of life-threatening, incurable conditions.

In collaboration with the Cicely Saunders Institute at King's, our researchers produced the first ever clinical guideline to help palliative care professionals recognise depression and organise appropriate treatment – not just in the UK, but across Europe.

The guideline – *The Management of Depression in Palliative Care* – was developed as part of the European Palliative Care Research Collaboration (2006–2010) with the support of the European Commission. It enables clinicians to access and implement evidence-based knowledge quickly and easily.

Depression can increase people's distress and decrease their quality of life. Our research has shown that people who experience depression while they are receiving palliative care are more likely to have pain and more likely to wish for a speedy death.

Based upon the best available evidence and expert opinion, the guideline makes recommendations about how to screen for, diagnose and assess depression, and gives guidance on treatment, including advice about the choice of talking therapy and antidepressant medication. Research carried out by the team has shown that antidepressants are effective in these circumstances.

The guideline is available in German, French, Italian and Norwegian as well as English, and there is a summary for patients in the same five languages.

Professors Matthew Hotopf & Irene Higginson

### Making a difference

Our researchers produced the first ever clinical guidelines to help professionals across Europe to recognise and treat depression in palliative care.





### Making a difference

Our researchers helped demonstrate that 100mg of riluzole a day, now available on the NHS, can prolong the lives of people with motor neurone disease.



## 28 DRUGS TO PROLONG THE LIVES OF PEOPLE WITH MND

Institute of Psychiatry, Psychology & Neuroscience

Motor neurone disease (MND) is an umbrella term for a number of conditions caused when motor neurones, responsible for carrying electrical instructions from the brain through the spinal cord to the muscles, degenerate. When this happens, the muscles become weak and waste away, affecting movement, speech, swallowing and breathing.

Amyotrophic lateral sclerosis (ALS) is the most common type of MND and affects approximately 2,800 people in England and Wales at any one time. When someone is diagnosed with ALS, their average life expectancy is two to five years from when the symptoms first started.

An international trial led by our researchers showed that after taking riluzole (trademark Rilutek) for 18 months, people may have an extra two to three months before they die or need support for breathing via a breathing tube, or tracheostomy.

The researchers found the risk of death or tracheostomy after 18 months was 35 per cent lower for people who had taken 100mg of riluzole a day for this period of time.

The trial took place from 1993–95 and was led by pharmaceutical company Rhône-Poulenc Rorer and teams of researchers in France and the UK. It involved nearly 1,000 people with ALS, recruited from around the world, and determined the most effective dose of the medication.

The results influenced licensing authorities in the UK and abroad and, in 2001, the National Institute for Health and Clinical Excellence (NICE) recommended riluzole be prescribed on the NHS for people with ALS.

Professors Nigel Leigh & Ammar Al-Chalabi

## SCALING UP MENTAL HEALTH SERVICES AROUND THE WORLD

Our researchers took a leading role in a campaign to make treatment for mental health problems more readily available in every country in the world. Launched in *The Lancet* in 2007, the call led to several new initiatives, including the World Health Organisation's (WHO) Mental Health Gap Action Programme (mhGAP).

mhGAP aims to tackle the disparity between mental health services available and those needed, and resulted in WHO's first practical guidelines for frontline staff about treating depression, psychosis, bipolar disorder, epilepsy, dementia and other common mental health problems.

In many low-income countries, fewer than 10 per cent of people with mental health problems are treated. There are often just a handful of psychiatrists and in some countries there are no mental health specialists at all. WHO's guidelines are designed for non-specialist doctors and community health workers to give them the skills to identify and treat mental health problems using cost-effective psychological therapies and medication.

The mhGAP guidelines were translated into a dozen languages and sent to 194 UN member states. WHO has also produced training materials to support the guidelines and is now working with individual governments to adapt the guidelines to ensure they are relevant to different health systems, and to encourage governments to train primary care staff.

Through the Programme for Improving Mental Health Care (PRIME), our researchers are helping governments in South Africa, Uganda, Nepal, Ethiopia, India and Nigeria to put the mhGAP guidelines into practice.

In 2011, *The Lancet* ran a second series of articles looking at the impact of mhGAP – at least 60 countries were already training primary care staff and introducing changes to increase access to mental health treatment.

Professor Graham Thornicroft

### Making a difference

**Our researchers helped develop international guidelines for improving mental health care in developing countries, and are working with governments to put them into practice.**

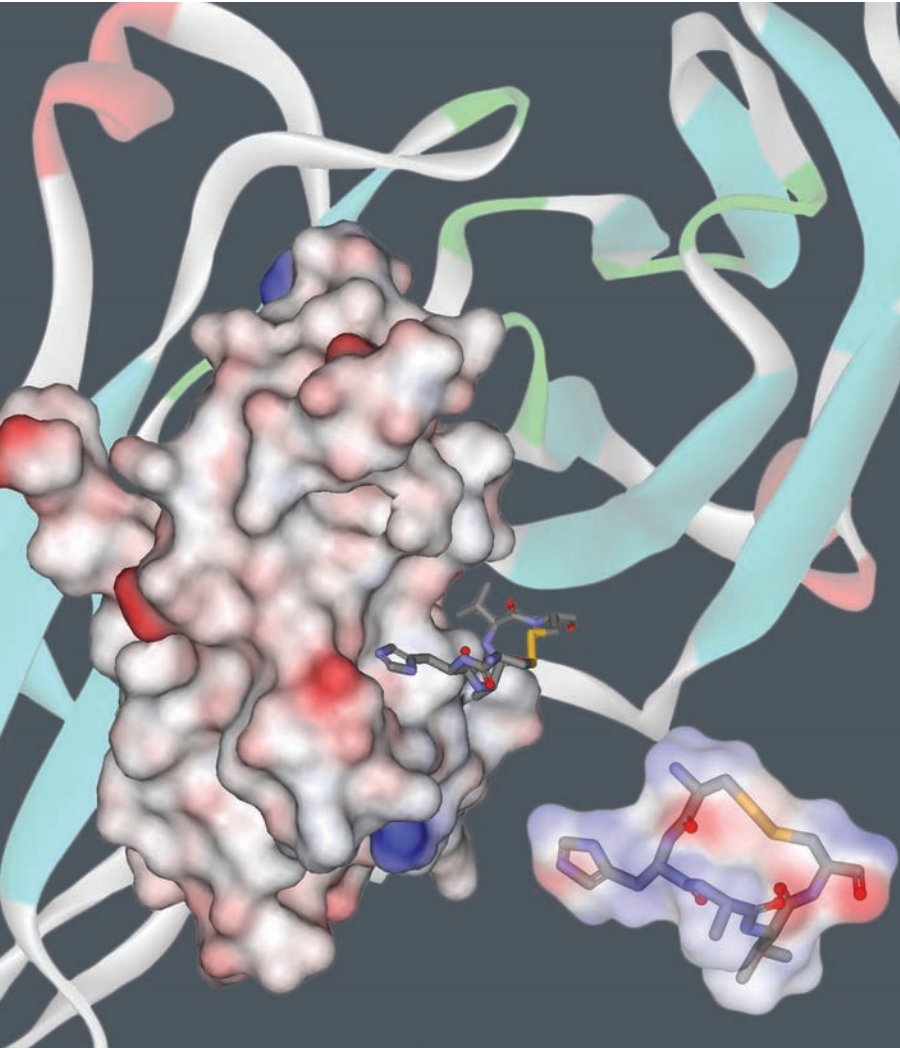
**Photo** One of our fieldwork studies looking at the impact of maternal depression in rural Ethiopia.



#### Making a difference

**Our researchers helped develop Exherin, a new drug that aims to help stop the spread of cancer and attack established tumours which is currently being trialled in the USA.**

**Image** Exherin interacting with the cancer protein



# 30

Institute of Psychiatry, Psychology & Neuroscience

## NEW CANCER DRUGS ACT ON NEURONAL PROTEIN

Exherin is a promising new cancer drug which aims to help stop the spread of cancer and attack established tumours. Developed in collaboration with researchers at the Wolfson Centre for Age-related Diseases, the drug works by stopping the activity of the protein N-cadherin. This protein supports the development of healthy cells during all stages of life but it can also help cancer cells move around the body and survive, and promote the creation of blood vessels that help tumours grow.

N-cadherin is found on the surface of many cancer cells and Exherin may therefore be useful for the treatment of all sorts of different cancers.

The research team developed laboratory procedures to measure the activity of N-cadherin and to screen and identify compounds that could block its function.

They showed that mimetic peptides – small chains of amino acids that mimic the activity of important constituent parts of N-cadherin – could impede the action of the protein. Exherin is a peptide composed of three amino acids.

The team worked in collaboration with researchers in Canada who launched Adherex Technologies to develop the new drug.

To date, trials of Exherin have shown the compound to be safe, well-tolerated and to have some benefit for patients who have melanoma or a solid tumour. An ongoing trial in the USA is testing the safety of Exherin on patients with secondary pancreatic and biliary tract cancers.

The research has opened up new opportunities for drug development, and researchers around the world are investigating the development of drugs that affect the action of N-cadherin and other proteins from the same family.

**Professor Pat Doherty & Drs Emma Williams & Gareth Williams**



# 31

Institute of Psychiatry, Psychology & Neuroscience

## NEW TREATMENTS FOR ANOREXIA

Three new treatments for adults with anorexia nervosa are being used in eating disorders services around the world. Developed by our researchers, the psychological therapies target personality traits and thinking styles that allow the symptoms of anorexia to flourish.

20 per cent of people with anorexia die prematurely as a result of their illness. These new treatments were informed by our research into why anorexia is so hard to treat, which showed that people with anorexia tend to be perfectionists, have obsessive compulsive traits and are anxious.

Cognitive remediation therapy (CRT) for anorexia, CREST (cognitive remediation and emotional skills training) and MANTRA (Maudsley Model of Anorexia Nervosa Treatment for Adults) mainly target people's cognitive and emotional characteristics rather than focusing on the content of their thoughts, or food and eating.

CRT and CREST are now an integral part of treatment on the eating disorders ward at the South London and Maudsley NHS Foundation Trust (SLaM). CRT and CREST gently introduce the possibilities of modifying thinking styles and managing emotions. The idea is that people are then more likely to engage in other therapies that focus on eating.

MANTRA is the routine treatment for people referred to the outpatient clinic at SLaM. Patients meet with therapists for 20 to 30 weekly sessions that concentrate on thought processes, emotions, nutrition, accepting support from family members and motivation to get better.

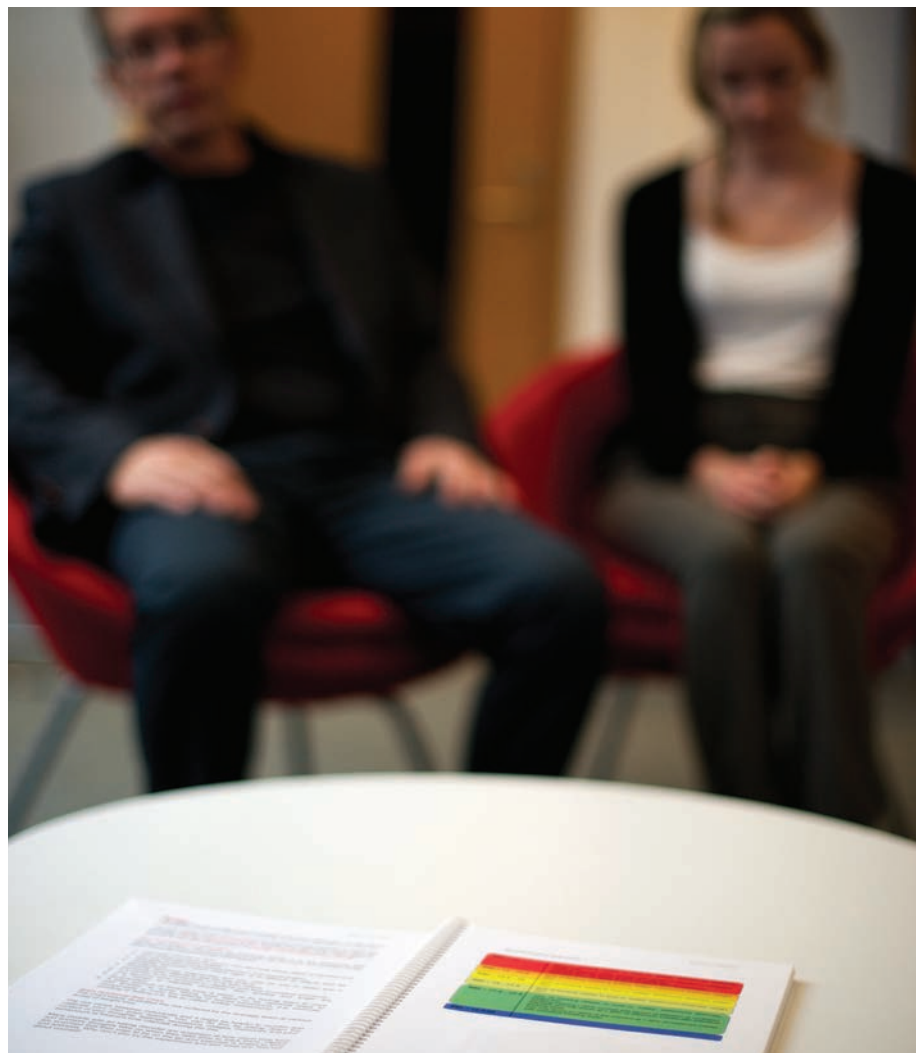
Our researchers have produced manuals detailing MANTRA, CREST and CRT for anorexia and organise regular CRT training. They have trained more than 700 therapists to use one of the three treatments in clinics, wards or research in the UK, Europe, Australia, the USA and South America.

Professor Ulrike Schmidt & Dr Kate Tchanturia

### Making a difference

**Our researchers have developed new treatments for adults with anorexia and trained more than 700 eating disorder therapists worldwide in delivering the interventions.**

**Photo** The Maudsley Model of Anorexia Nervosa Treatment for Adults encourages patients to accept support from family members.



#### Making a difference

Our research showing that antipsychotics for people with dementia often do more harm than good informed a successful campaign to reduce prescription rates.



## 32 Institute of Psychiatry, Psychology & Neuroscience REDUCING THE USE OF ANTIPSYCHOTICS IN DEMENTIA

Our research showed that antipsychotic drugs prescribed to control behavioural and psychological symptoms in dementia (BPSD) were largely ineffective, caused serious physical side effects, increased the risk of stroke and premature death, and potentially made the symptoms of dementia worse.

Our work informed a successful campaign to change prescribing practice. In 2009, the Government pledged to reduce the number of prescriptions for antipsychotics, and that care home staff should be trained to support people with BPSD without using medication. NICE now recommends not using medication to manage BPSD unless people are severely agitated.

Between 2008 and 2011, there was a 52 per cent reduction in the number of prescriptions for antipsychotics for people with dementia in England.

Our researchers have been involved in the production of guidance for health professionals about how to support people with dementia when they become agitated or aggressive, experience delusions and hallucinations, or start to wander – without using medication.

In collaboration with teams in Oxford and Newcastle, our researchers showed that the use of antipsychotics in care homes can be reduced dramatically if staff are trained to support residents, encouraging them to take part in hobbies and activities and helping them to form relationships.

A national trial of FITS (Focused Intervention Training and Support) in 106 care homes showed a 30 per cent reduction in the use of antipsychotics, and found that residents in homes with trained staff were more alert, active and communicative. FITS is now one of several training schemes available for care home staff.

**Professor Clive Ballard**

## ABOUT THE INSTITUTE

### Founding principles

- ♦ Treat mental illness with a view to sending patients back in the community
- ♦ Incorporate research into treatment
- ♦ Link education, research and care

**1896** Neuropathologist Dr Frederick Mott puts forward proposals for university level training in subjects related to psychiatry.

**1907** Psychiatrist Henry Maudsley bequeaths £30,000 to establish a mental hospital for voluntary patients close to the centre of London.

**1924** The Maudsley Hospital Medical School is officially recognised by the University of London.

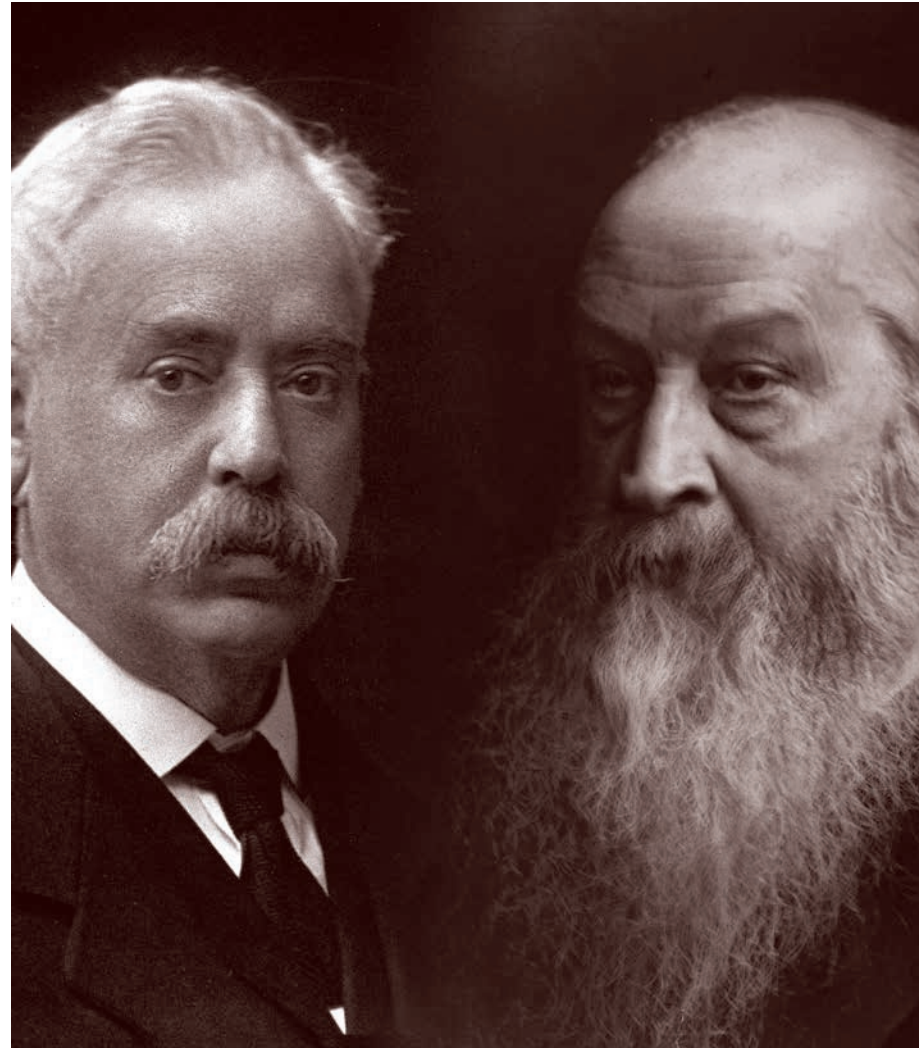
**1948** On becoming a founding member of the British Postgraduate Medical Federation we change our name to the Institute of Psychiatry.

**2014** To reflect the growing breadth of our research and education expertise and the changing way in which we now understand and treat mental health disorders and brain disease we become the Institute of Psychiatry, Psychology & Neuroscience.

### Today

- ♦ Europe's largest centre for research and education in psychiatry, psychology, basic and clinical neuroscience
- ♦ Over 300 academic staff and 2,000 employees and students
- ♦ Basic research through treatment development and implementation and on to health care and society
- ♦ Second in the world in psychiatry/psychology citations
- ♦ 11 of the world's most highly cited researchers
- ♦ Trains more psychiatrists and mental health professionals than any institution in the UK
- ♦ Part of King's Health Partners Academic Science Centre, comprising King's College London, Guys and St Thomas' and King's College Hospital NHS Foundation Trusts and South London and Maudsley

**Dr Frederick Walker Mott**  
**Dr Henry Maudsley**





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