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## Untreatable or just hard to treat?

### Results of the Randomised Injectable Opioid Treatment Trial (RIOTT)

Press Briefing 15 September 2009

#### Introduction

The headline results from RIOTT are made public today 15 September 2009 at the Royal College of Physicians. Details of the findings are set out below. RIOTT is the first randomised controlled trial in the UK to compare injectable opiate treatment (injectable methadone and injectable heroin) delivered in new medically supervised injecting clinics to optimised (high quality) oral methadone for severely entrenched and 'hard to treat' heroin addicts.

The RIOTT trial has been coordinated by the National Addiction Centre which was developed by the Institute of Psychiatry, Kings College London, and South London and Maudsley NHS Foundation Trust (SLaM). Both organisations are part of King's Health Partners, one of the UK's five Academic Health Sciences Centres. The research was funded by the Big Lottery through the charity Action on Addiction in partnership with the National Treatment Agency who have funded the supervised injecting clinics on behalf of the Government.

The RIOTT trial took chronic heroin addicts who, despite active treatment, were still continuing to inject heroin most virtually daily. These entrenched heroin addicts were then randomised to treatment with either supervised injectable heroin, supervised injectable methadone or optimised oral methadone.

Three supervised injecting clinics have been established in England in recent years and these are the sites for the trial, - in London (SLaM – established October 2005), Darlington (began September 2006) and Brighton (began September 07).

The three Trusts where the three sites/clinics are located are: South London and Maudsley NHS Foundation Trust, Tees, Esk and Wear Valleys NHS Foundation Trust and Sussex Partnership NHS Trust.

The RIOTT clinical trial is led by Professor John Strang and his team based at the National Addiction Centre, King's Health Partners (which should be referenced in any description of his role, and in picture captions).

## Key points

### About the trial

- This treatment was for a select group of heroin addicts –
  - entrenched heroin addicts who have repeatedly been found to fail to benefit from existing treatments
  - existing clients who despite receiving oral methadone maintenance treatment were continuing to inject street heroin almost every day.
- These supervised injecting clinics provide intensive treatment
  - providing a prescription of injectable heroin and injectable methadone injected under strict medical supervision
  - with a high level of psychological and social support to address health and life issues
- The trial compares injectable heroin and injectable methadone delivered in supervised injecting clinics with high quality conventional treatment (oral methadone).

### The key findings from RIOTT based on raw data are

- This trial shows that it is possible to engage and retain in treatment some of the most entrenched hard-to-treat heroin addicts for whom previous treatment, rehabilitation and prison appear to have had little beneficial impact. These are existing clients who despite receiving oral methadone maintenance treatment were continuing to inject street heroin almost every day
  - All groups achieved good retention
  - Better retention in the injectable heroin group (88%) compared to 81% in the injectable methadone group and 69% in the oral methadone group.
- The trial has achieved very positive results in terms of the primary outcome measure – reduced use or abstinence from ‘street’ heroin. There was a reduction in street heroin use amongst all 3 treatment groups at six months.
- The most pronounced reduction was seen in the injectable heroin group
  - Three quarters responded well by substantial reduction in the use of ‘street’ heroin.
  - Of these, three quarters (or around 60% of the total group) remained largely abstinent allowing for no more than two lapses in drug testing during a three month period.
  - A quarter of those who reduced (almost 20% of the total group) were totally abstinent from street heroin. This is remarkable in a group for whom daily illicit use while in treatment was the norm.
- For the injectable methadone and oral methadone groups, the achievements were much more modest. About a third were no longer using street heroin regularly, although very few of these were totally abstinent from street heroin.
- There was an almost immediate benefit just 6 weeks into treatment and this benefit was maintained throughout the six-month period of study for each patient
- The degree of effect of the treatment was greatest in the injectable heroin group, followed by injectable methadone and optimised oral methadone.

- Optimised oral methadone showed greater success than predicted, perhaps due to the high intensity of engagement provided by regular attendance and psychosocial support. At the same time the injectable methadone group performed less well than predicted, though still with a positive effect.
- The amount of money spent on street drugs reduced in all treatment groups.
- The biggest reduction was seen in the heroin group.
  - Clients were spending an average of just over £300 a week on drugs before entering RIOTT treatment (despite already being in active treatment) and this reduced to an average of just under £50 a week at 6 months.
  - This was as a result of (a) substantial numbers who became 'crime-abstinent', and also (b) substantial reduction in the extent of criminal activity of those who were still criminally involved.
  - The total spending for the whole heroin group (approximately 40 people) translates as reducing from nearly £14,000 spent a week prior to entering RIOTT which then reduced to under £2,000 at 6 months.
- Across the board there was a dramatic reduction in self-reported crime.
  - Prior to entering RIOTT treatment over half of the clients in each treatment group were committing crime and were committing a mean number of between 20-40 crimes in the past 30 days.
  - At six months, the proportion committing crimes in each group more than halved and the mean number of crimes committed in the past 30 days reduced to between 4 -13 – less than a third of previous levels.
  - The actual number of crimes committed drastically reduced by two thirds in each group. For example, those in the heroin group were committing a total of 1731 crimes in the 30 days prior to entering RIOTT treatment and after 6 months, this fell to 547 crimes (a reduction of 1,184 crimes per month).
- Prior to entering RIOTT treatment, around three quarters of each group were using crack. It has been thought that crack use might increase amongst clients receiving injectable opiate treatment (perhaps as compensatory other drug use; or perhaps due to more available cash). However, this was not the case and at 6 months the proportion using crack had reduced across all treatment groups as had the amount used.
- It is important to remember that these clients were existing service users and already receiving oral methadone treatment prior to entering RIOTT. Their levels of street heroin and crack use, money spent on drugs and criminal activity were occurring whilst receiving conventional treatment. It is all the more remarkable that such benefits have been made with the RIOTT treatment but in particular with injectable heroin.
- There were improvements in physical, mental health and social functioning across all treatment groups over the 6 month period.
- The cost of producing positive results in this 'difficult to treat' group is around £15k per patient per year. These are the most severe 5% of the heroin using population, many of whom are typically committing a high level of crime to fund their addiction. By comparison the typical cost of prison is £44k a year per person, not to mention many other costs to society, so 'do nothing' is not a cost effective option.

- This is a scientific study. It is for policy makers to decide how the findings will be applied. The 2008 Government Drug Strategy recognises the potential of supervised injection under strict clinical supervision. It cites - “... rolling out the prescription of injectable heroin and methadone to clients who do not respond to other forms of treatment, subject to the findings, due in 2009, of pilots exploring the use of this type of treatment” (H.M. Government Drug Strategy, 2008).

### **Additional points**

- This has been a national randomised controlled trial in a supervised clinical setting which looked at – for the first time in the UK – the relative effectiveness of injectable methadone and injectable diamorphine compared to oral methadone.
- The trial focussed on treating a very small but significant number of existing service users who are entrenched users and ‘hard to treat’, and have not responded well to standard treatment options, often relapsing many times.
- Patients on the trial take medication under the supervision of trained medical practitioners. They cannot bring illicit supplies into the clinic or take prescribed doses out.
- This scientific study has tested whether this treatment is effective in reducing illicit heroin use, improving health and reducing criminal activity among a particular group of hard to treat heroin users. Research in Holland, Switzerland, Germany and Canada shows promising results in these areas.
- The social costs of heroin addiction to society and to individuals are many times greater than the cost of treatment, particularly in this hard to treat group. There is a range of research focusing on the social costs of drug-related crime, but there are other factors to take into account including the effects on individuals and their families, the loss of economic productivity and the costs to the benefits and criminal justice systems.
- The location of the clinic is confidential for reasons of security and patient confidentiality, as well as to avoid compromising the research ethics of the study
- The identity of patients engaged in the trial is also confidential
- The diamorphine used does not draw on existing NHS supplies. At the start of the trial, it was imported and licensed especially for research purposes; it cannot be used for any other purpose (such as palliative care). The multi-dose ampoules are more cost effective and suitable only for use in a clinical setting. More recently, the trial moved to using a British supplier when this became available at a affordable price.
- The relative costs of treatment including staffing – oral methadone about £5k p/a, diamorphine about £15k (may be reducible post pilot). Social costs of drug related crime, imprisonment etc many times higher to society, not to mention the benefits of treatment for users, their families and friends. Estimates vary but ... for this group, (estimated at between 5 and 10% of the opiate using population) cheaper forms of treatment are not cost effective, because they simply haven’t worked.
- The RIOTT trial has recruited 127 subjects into the trial, of whom 51 are from the SLaM clinic, 45 from the Darlington clinic and 31 from the Brighton clinic.
- Clients at each site are distributed across three treatment groups – with a total of 42 in the optimised oral methadone, 42 in the injectable methadone group and 43 in the injectable diamorphine group.
- All doses of injectables are supervised. There are absolutely no take-home injectable doses. Clients receiving injectable heroin attend typically twice daily, and those receiving injectable methadone typically once a day, every day. Initial engagement is for six months.
- An additional benefit of daily attendance and supervised medication is the development of closer relationships with staff, allowing more key worker sessions, including advice on general health and social support. Initial clinical impressions are positive.

- After six months, each client was fully assessed by their doctor and a clinical decision was made as to what treatment they go on to. Many of the clients in the trial are still receiving injectable heroin and to a lesser degree injectable methadone.

### **Notes to Editors**

**The National Addictions Centre, King's Health Partners** (NAC) seeks to improve understanding of addiction to drugs, alcohol and tobacco, and to develop effective preventative and treatment interventions. It is collaboration between researchers at the Institute of Psychiatry (IoP), King's College London and clinicians at South London and Maudsley NHS Foundation Trust (SLaM). Both SLaM and King's College London are partners in King's Health Partners. **Professor John Strang** is director of the National Addictions Centre, King's Health Partners. For more information or to arrange interviews please contact:

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**King's Health Partners** is one of five UK Academic Sciences Centres bringing together research, clinical practice, education and training across physical and mental health. King's Health Partners is a pioneering collaboration between King's College London, and Guy's and St Thomas', King's College Hospital and South London and Maudsley NHS Foundation Trusts. For more information, visit [www.kingshealthpartners.org](http://www.kingshealthpartners.org)

**Action on Addiction** is the only UK charity working across the addiction field in research, prevention, treatment, professional education and family support. Contact Rachel Silver, Head of Communications, tel 020 7793 1011, mobile 07974 983859 07825 620 130.

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