

## **STATUS REPORT**

### **March 2008**

The North American Opiate Medication Initiative (NAOMI) is a CIHR-funded scientific study that is examining innovative ways to treat addiction as a medical condition. The NAOMI study should not be confused with supervised injection sites.

The NAOMI study aims to determine whether the provision of medically supervised injectable, pharmaceutical-grade heroin benefits people suffering from chronic opiate addictions who have not benefited from other treatments. Participants are randomized between two arms of the study: the injection arm and the oral methadone arm, which serves as the control. Studies such as the NAOMI trial are critical in investigating further treatment options for people who live with heroin addiction. Ultimately, the evidence gained through the study will be added to a larger pool of information that policy and decision makers can use to make decisions that are evidence-based.

There have been similar studies done in other jurisdictions, including Switzerland, Germany and the Netherlands, that indicate that chronic heroin addicts who participated in a trial where they received controlled doses of heroin under supervised care, along with drug treatment showed improvements in physical and mental health, reduced their illicit drug use, participated in less crime, stayed in treatment longer and improved their social functioning. The recently released results from the German study not only saw an improvement in the health status of heroin addicted people who received heroin under medical supervision, but also a reduction in crime rates and other socio-economic costs to society. The findings of the German study support the research results of the Netherlands and Switzerland, as well as innovative and ongoing studies and programs in Spain and Britain. The intention of the NAOMI project is to evaluate the effectiveness and applicability of these experiences in a North American setting.

### **CIHR Funding**

This study is in keeping with CIHR's mandate in the "creation of new knowledge and its translation into improved health for Canadians" -- in this case, investigating whether heroin-assisted treatment can produce benefits for long-term, treatment-resistant opiate dependent individuals as well as public health. In 2002, the Clinical Trials Review Committee of the CIHR assessed the scientific merit of the NAOMI study and decided to fund this study on the basis of its outstanding scientific value.

As a result, the project received \$8.1 million of funding from CIHR in 2002 and the current end date of funding for the study is in 2009. Researchers are expected to use existing funding to complete the study treatment phase, follow-up and data analysis. Renewals and additional funding do not appear to be required for the scope of the project as outlined in the research protocol.

### **The Research and Status Update**

Participants are randomly assigned to three different groups: the control group who will receive oral methadone maintenance treatment, an experimental group who will receive prescription heroin and a small group who will receive injection hydromorphone (dilaudid), which is a medically available potent opioid. The hydromorphone group will be used to help validate the reported use of illicit heroin beyond what is prescribed in the study. This is the double-blinded

element of the study, as researchers, clinic staff and participants do not know whether any given participant is receiving heroin or hydromorphone. Preliminary data shows that from those receiving dilaudid, none suspected it was not heroin.

For all individuals in the study, addiction medicine physician specialists monitor their individual prescription throughout the study, and social workers assist with access to community resources, including addiction treatment, housing and job training. Clinic staff guide all those ready towards treatments that get them off drugs altogether. After the study, participants receiving injection medication are aided through a three-month transition period, and then monitored by the research team for up to two years to determine the study's longer-term outcomes.

NAOMI was to originally run in three sites: Vancouver, Montreal and Toronto. Currently, the study is running in two sites (Vancouver and Montreal), the cities that have the largest heroin addicted populations in Canada. The Toronto clinic site that the research team was planning to use was occupied by another project, causing delays in construction and ultimately making it unavailable for the NAOMI study within an appropriate timeframe. As such, the Toronto site of the project could not be included.

Enrolment began early 2005 in Vancouver, followed six months later by Montreal. Overall, recruitment was steady, and gained momentum over time. NAOMI closed enrolment in Vancouver and Montreal in the spring of 2007 with 192 participants in Vancouver and 59 in Montreal – divided between the injection group and the oral methadone group. The last of the participants will complete the treatment phase of the study in June 2008.

In 2006, the NAOMI team received final Health Canada and subsequent ethics approval to revise the sample size of the study to a target of 253 participants. This was on recommendation and approval from an independent Data Safety and Monitoring Board. Such a change is not uncommon in a scientific study. The final enrolment total of 251 will allow for an appropriate statistical significance that answers the researchers questions.

To be eligible for the study, participants must be 25 years or older, must have chronic opiate addiction (at least 5 years of addiction) and must have tried opiate addiction treatment at least twice in the past without success. Thus, the study is aimed towards the most severely affected individuals who have not benefited from conventional treatment options.

Participants in the study receive the injectable drug for a maximum of 15 months. The end of 12 months through to 15 months is included as a transition or weaning off phase. Participants are supported by social workers, physicians, nurses, and drug counselors to transition into the appropriate treatment of their choice - be it methadone maintenance, abstinence or other available programs.

At this time NAOMI is not expecting to release preliminary results. The research team expects to release results in late 2008 once all of participants have completed the treatment phase of the study. Although not yet official, some outcomes are already obvious, such as treatment retention at the end of a 12-month period: approximately 50% and 85% in the oral and injection arms respectively. What can be stated at this point is that the treatment appears to be extremely safe. It is also noteworthy that there have been neither security problems nor any evidence

whatsoever of neighborhood disruption in either city. An important aspect of the study is a full health economic assessment of the incremental cost-effectiveness of medically prescribed heroin. The Dutch and German studies both suggested that the increased cost of heroin therapy was more than offset by the increased savings in health and criminal justice costs. The NAOMI study will formally assess whether this therapy is cost-effective in the Canadian setting.

### **Approval of the Trial**

There are currently only two sites authorized in Canada for this clinical trial: Vancouver and Montreal.

Health Canada completed a review of the proposed physical security measures and procedures to be put in place by the researchers at the sites to ensure the safety of staff and participants. Researchers obtained approval by the Therapeutic Products Directorate in Health Canada to conduct the clinical trials with heroin.

### **Heroin Use in Canada:**

In Canada, there are approximately 60,000 to 90,000 people addicted to illicit opiates such as heroin. Chronic, untreated opiate addiction is associated with overdose, infection risks and epidemics, loss of regular social functioning, drug-related crime and drug acquisition crime, and extensive costs to the public health, welfare and criminal justice systems. Research estimates that the societal costs of an untreated heroin addiction exceed \$45,000 per person per year. While methadone maintenance therapy (MMT), the current standard of care, is effective in some cases, many long-term, higher risk patients do not respond to or benefit from this standard treatment.