Heroin assisted treatment in Canada: an answer to the overdose crisis?

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Experience from 3 clinics in Vancouver, Canada

23 June 2021

Sacred Circle by Dylan Thomas

We acknowledge that we gather on the traditional, ancestral, and unceded territories of the Coast Salish Peoples, including the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and Səl̓ílwətaʔ/Selilwitulh (Tsleil-Waututh) Nations.

Disclosures and conflicts

- None to report

Video

Acknowledgements

- Study participants
- Frontline workers at the Crosstown clinic
- Research team
- Partners, past and present:
  - Eugenia Oviedo-Joekes PhD
  - Vancouver Coastal Health
  - Canadian Institutes of Health Research
  - InnerChange foundation
  - Michael Smith Foundation for Health Research
  - University of British Columbia
  - Center for Health Evaluation and Outcomes Science
  - Canada Research Chairs Program
  - BC Ministry of Health
- Also:
  - Health Canada and its many divisions
  - PHC/UBC Research Ethic Board
  - Data and Safety Monitoring Board
  - Community Advisory Board

Background

- Opioid use disorder is a chronic relapsing disease.
- Oral agonist treatment with long-acting opioids (e.g. methadone, buprenorphine, SROM) works, however not for everyone, or all the time.
- Clinical evidence from Canada and European studies indicates that medically prescribed injectable DAM (diacetylmorphine, the active ingredient in heroin), is an effective, feasible and safe treatment approach.
- No single treatment is effective for all individuals, diverse treatment options are needed, including psychosocial approaches and pharmacological treatments (WHO guidelines on opioid dependency treatment).

NAOMI


Diaphin 10 g i.v.
Injektionslösung
Pulver auflösen mit 93 ml Aqua ad inject.
(=> 100 mg/ml; 10 %)
Trockenampulle bei Raumtemperatur
die rekonstituierte Lösung im Kühlschrank
und vor Licht geschützt aufbewahren
Lösung 2 Wochen haltbar
Wirkstoff: Diacetylmorphin Hydrochlorid
entsprechend Diamorphin 8,71 g
Zur klinischen Prüfung bestimmt
Omnifix

Summary of the evidence Diacetylmorphine: Cochrane Review 2012

- Eight randomized clinical trials involving 2007 patients.
- If all the studies comparing heroin provision in any conditions vs. any other treatment are pooled the direction of effect remain in favour of heroin.
- Adverse events were consistently more frequent in the heroin groups
- Retention, reduce street drug use, illicit activities, possibly mortality.
- Patient profile: those not benefiting (i.e., continue using street heroin whether retained or not) from oral MMT (or suboxone)

Cost-effectiveness of diacetylmorphine versus methadone for chronic opioid dependence refractory to treatment

- CMAJ study compared heroin to methadone in preventing relapses to illicit opioid use
- diacetylmorphine more effective and less costly than methadone among people with chronic opioid dependence refractory to treatment
- better outcomes at lower overall cost
- diacetylmorphine dominates methadone (in the population continuing illicit opioid use)
- Bohdan Nosyk PhD,et.al.***CMAJ* 2012. DOI:10.1503/cmaj.110669**

SALOME rationale

- Health Canada denied compassionate access for diacetylmorphine in May 2008:
  - *"In the course of reviewing your request, we determined that there are other options (i.e., marketed drugs) that we would consider alternative to diamorphine at this time".*
- The injectable side of the clinic closed and patients were transferred to oral methadone. PHC kept the site open.
- NAOMI provided hydromorphone to 25 participants (to test for heroin metabolites in urine):
  - blinding was not broken;
  - almost identical treatment effect compared to diacetylmorphine (however, study not powered to test this hypothesis).
  - Similar profile that diacetylmorphine
  - Licensed opioid in Canada for analgesia

SALOME

- Tested the ***non-inferiority*** of hydromorphone compared to diacetylmorphine for long-term opioid dependence in a double-blind Randomized Clinical Trial.
- Non-inferiority trials are designed to test treatments that offer ***ancillary advantages*** over those that have shown to be effective in previous superiority studies.
- Ancillary advantage of hydromorphone: is currently ***licensed*** for analgesia.

Participants' profile

"Long-term injection opioid users who are not sufficiently benefiting from available therapies"

- Opioid Dependence as confirmed by DSM IV diagnostic criteria;
- 19 years of age or older;
- At least 5 years of opioid use;
- Injecting opioids regularly in the past year;
- At least two episodes of opioid addiction treatment (methadone maintenance, detoxification, residential care, etc.), including one or more episodes of substitution treatment;
- Poor physical, psychological, mental or psychosocial functioning;

SALOME patients and the chronic nature of opioid dependence

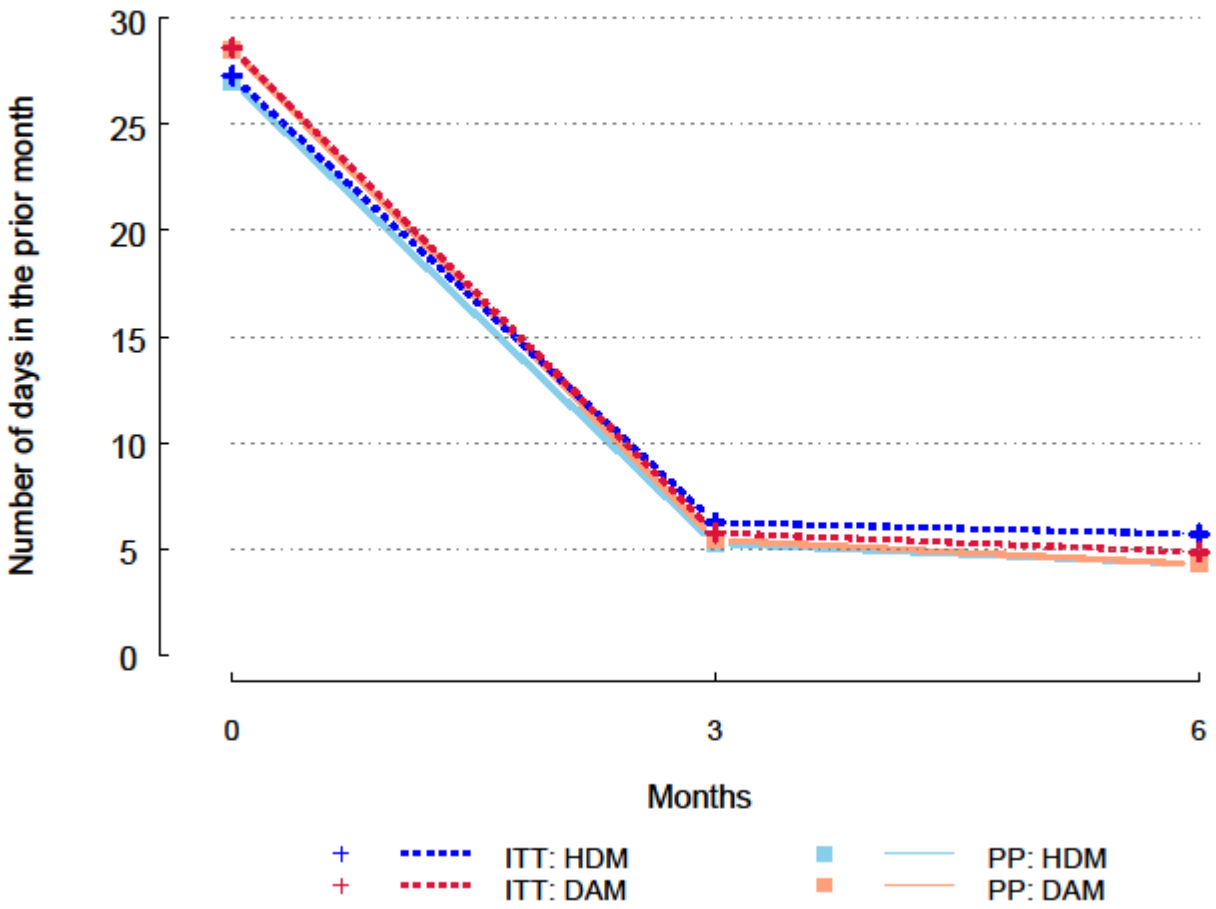
Baseline Characteristics	Total n= 202 Mean ± SD/n (%)
Age	44.3 ± 9.6
Age start using heroin	24.8 ± 8.7
Years injecting heroin in life	15.4 ± 9.4
Months abstinent of street opioids in lifetime	21.9 ± 40.2
Number of Methadone Maintenance Episodes in life	5.1 ± 3.4
Years receiving Methadone in life	4.8 ± 4.7
Months abstinent while receiving Methadone or Suboxone	7.1 ± 19.4
Times attempted outpatient withdrawal	5.6 ± 7.6
Times attempted residential treatment	2.2 ± 3.5
Ever accessed outpatient counselling	127 (62.9)

Stopped or Reduced Illegal Activity

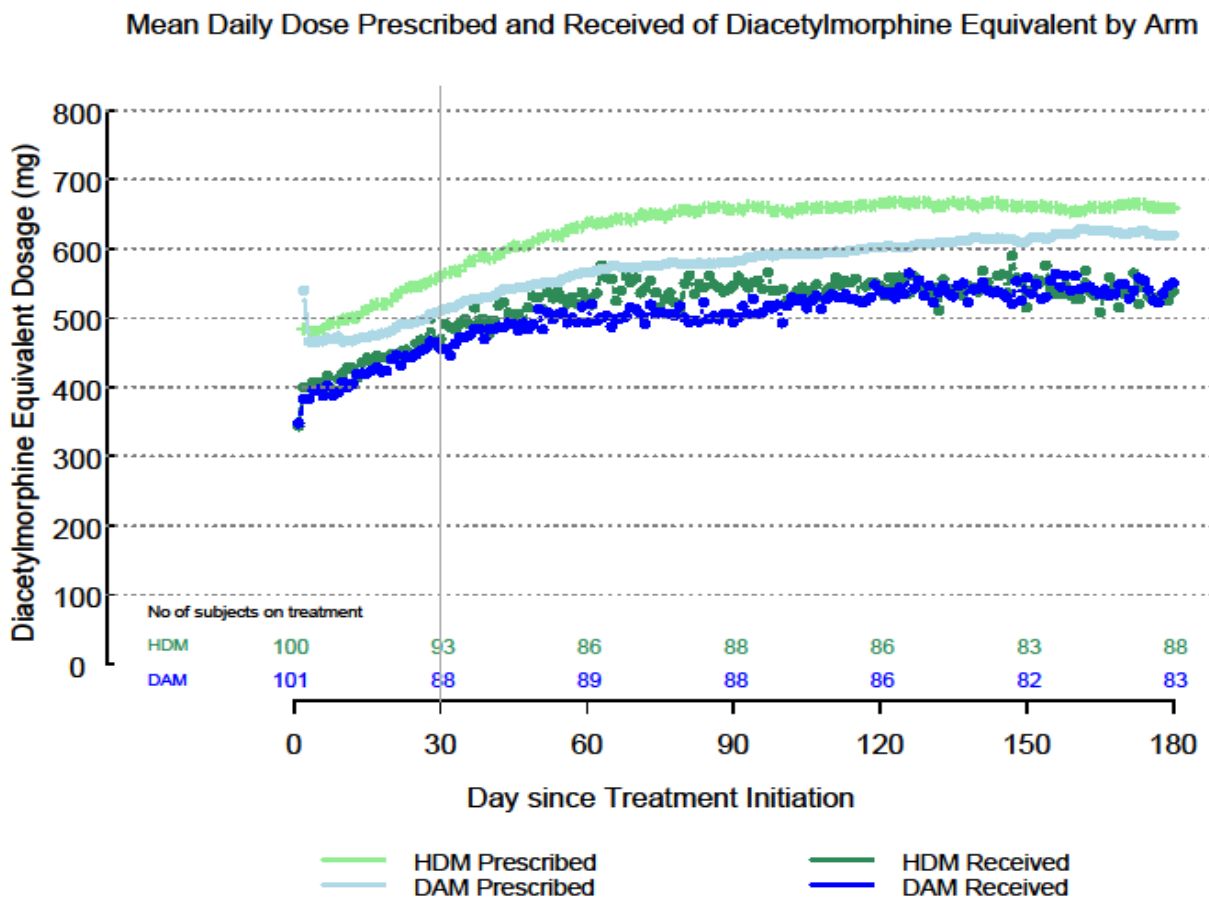
- *"Probably the most important [thing about iOAT] would be the medication, cause that stops the need for other things… not needing to go and buy street drugs, not having to go and do crime. Like I said, I always had charges, I was in and out of jail all the time." (N19)*

Kirsten Marchand, PhD, School of Population and Public Health, University of British Columbia

Total Street Acquired Opioid Use

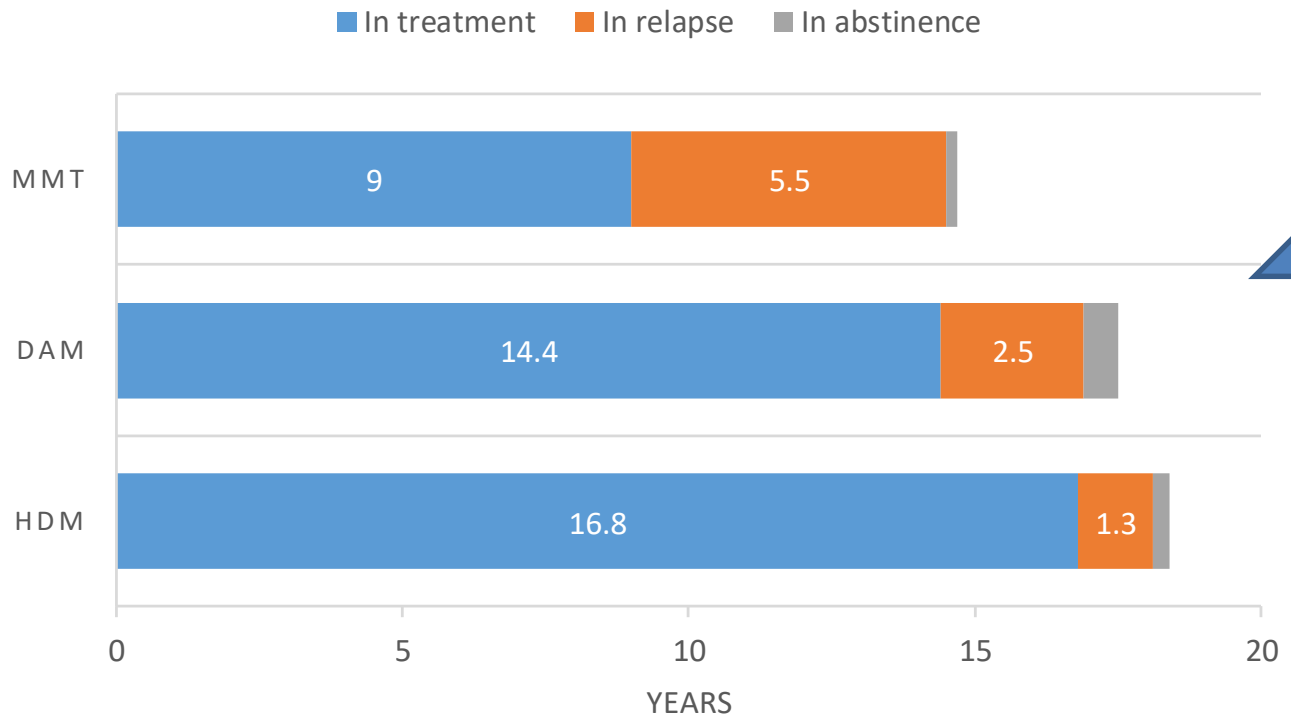


Mean daily dose prescribed and received of DAM equivalent by arm



Results – lifetime analysis model

Life years and QALYs

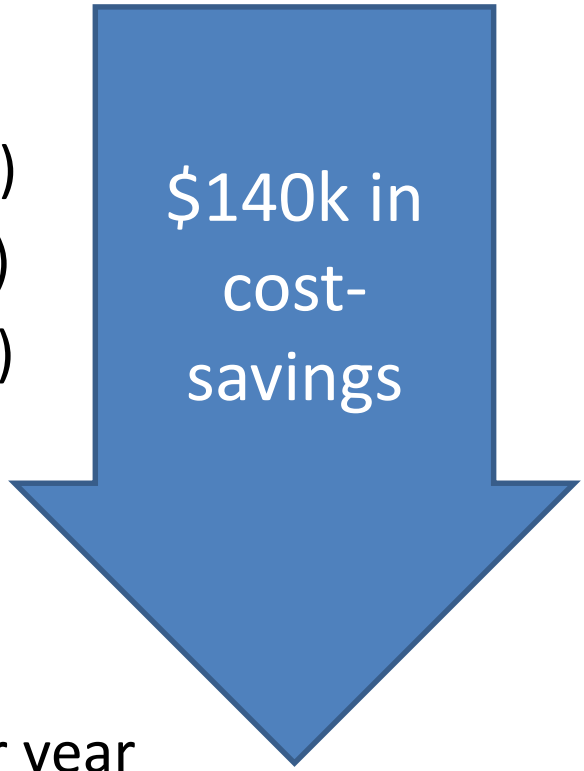


2-3 additional life years / ~1 additional QALY

Results – lifetime analysis model

Costs and cost breakdown

- Total costs
  - MMT: $1.15M (95%CI $0.71 to $1.84M)
  - DAM: $1.01M (95%CI $0.68 to $1.59M)
  - HDM: $1.02M (95%CI $0.72 to $1.51M)
- 90% attributable to savings in property and violent crime
  - DAM/HDM estimated to reduce 6 property crimes vs MMT (9 vs 15) per year



For more information

ADDICTION

SSA SOCIETY FOR THE STUDY OF ADDICTION

Research Report

Cost-effectiveness of hydromorphone for severe opioid use disorder: findings from the SALOME randomized clinical trial

Nick Bansback, Daphne Guh, Eugenia Oviedo-Joekes, Suzanne Brissette, Scott Harrison, Amin Janmohamed, Michael Krausz, Scott MacDonald, David C. Marsh, Martin T. Schechter, Aslam H. Anis ✉, ... See fewer authors ^

First published: 28 March 2018 | https://doi.org/10.1111/add.14171

UBC

SALOME CONCLUSION

- In jurisdictions where **diacetylmorphine is currently not available** or for patients where it is contraindicated or unsuccessful, **hydromorphone could be offered as an alternative** within the supervised model of care.

- In a broader context, SALOME participants have provided **key evidence to support the supervised model of care**:
  - In a double-blind study, where participants did not guess the medication they were receiving beyond what is expected by chance, outcomes did not differ.

Politics and Policy

- siOAT = supervised injectable opioid agonist treatment
- Safe, effective, cost effective
- No controversy here folks

Crosstown Clinic

- Clinical program since 2014
- IOAT 95 - 8 Hydromorphone &
  87 Diacetylmorphine; 70% also take SROM
- Oral 40
- Indigenous 30%
- Gender: 72% Male & 28% Female
- Crosstown Team: nurses, physicians, nurse practitioner, dietician, social worker, clinic assistants, social workers

BC Declares Health Emergency

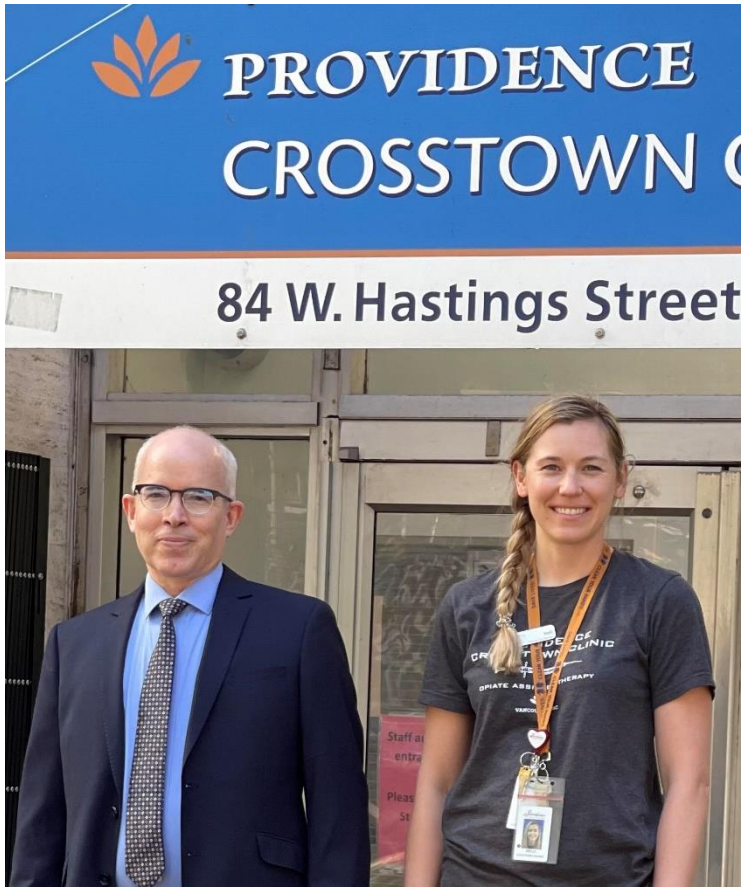
- On Thursday, April 14, 2016, BC's provincial health officer, Dr. Perry Kendall, declared a public health emergency in response to the rise in drug overdoses and deaths.

Optimism

siOAT (DAM & HDM) Conclusions

- Reduces mortality and is cost saving
- Is a treatment option for those who continue to use street drugs, with all the risks that entails – injecting-related infections and overdose.
- It substantially reduces people's need for street drugs, reduces crime and leads to more engagement with healthcare and allied services.
- In jurisdictions where diacetylmorphine (prescription heroin) in unavailable, hydromorphone may be an alternative.

Questions?



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