

Treatment of Adolescent Heroin Dependence: The End of an Era

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In the 1990s, Ireland had the youngest population of heroin dependent patients in Europe.¹ At that time problems were largely confined to Dublin, and within Dublin use was concentrated in specific areas of very significant deprivation.^{2,3} At the peak of the heroin epidemic in 1996, there were over 180 adolescents (under 18) presenting for addiction treatment in Dublin annually with a heroin use disorder.¹ Given that addiction services had been developed with adults in mind, the National Drug Treatment Centre established the Young Persons Program (YPP) in 2000, in recognition of the very different needs of these young patients. The authors, both child & adolescent psychiatrists, arrived into the service a few years later.

The first National Drug Strategy (NDS), was launched in 2000 and this consolidated the move away from abstinence focused treatment which had begun in the 1990s and endorsed treatment approaches which were based on harm reduction principles. While opioid agonist treatments (OAT), such as methadone and buprenorphine, had become a central component of treatment for heroin dependent adults internationally, their use in adolescents was less established.

Treatment on the YPP was provided by a multidisciplinary team.⁴ Over the years there was input by disciplines such as clinical psychology, nursing, project workers, social work, family therapy and psychiatry. Assessment involved efforts to gain understanding of the individual patient's psychological, social, developmental and medical needs. A care plan was then developed to address the identified needs, focusing on the most acute needs in the short term. Use of OAT formed a central part of treatment, typically commenced with a period of maintenance in mind, but occasionally as part of a brief detoxification regime.⁴ As research into the use of OAT in adolescents was scant, we actively sought to add to the evidence base by reporting upon treatment outcome in our patient group.

Comorbid mental health problems occurred frequently. Treatment of these problems was largely via psychosocial interventions.⁽⁵⁾ Individual therapy was provided by a counsellor or clinical psychologist. Psychotropic medication was also used in about 20% of cases. While there had been almost no scientific literature examining improvements in mental health among heroin dependent adolescents treated in such a context, we found significant improvements in depressive and anxiety symptoms during the first few months of treatment.⁵

As for treatment progression, many patients did cycle in and out of treatment, perhaps exiting after a planned detoxification or dropping out and then returning months later.⁴ The final exit route from the YPP was transfer to the adult treatment program in 39% of cases, drop out in 32% of cases, imprisonment in 8% and 22% left after completion of a planned detoxification. For those who exited after a planned detoxification, the median period of treatment was four months (Inter-quartile range 7 weeks to 19 months). Rather than rush into detoxification, we

sought to work with the patient, and their family, to bring about stability in many aspects of their lives, seeking to build a scaffolding of support around the young person in order to maximise the likelihood that they would sustain abstinence.

A core goal of treatment is reduction, and ideally cessation, of heroin use. Our examination of this outcome indicated that patients did incrementally reduce heroin use over the first year of treatment, half being fully abstinent from heroin by the twelfth month of treatment.⁶ There was however, less evidence of significant reductions in use of other substances. The most commonly used other substances in this patient group were benzodiazepines and cannabis. Cocaine use was a negative prognostic factor for the minority who used it.⁶

While we sought to support our young patients in making changes to their own lives, it seems that bigger and more important changes were occurring outside the walls of the YPP. The incidence of adolescent heroin dependence declined relentlessly. There was a 94% drop in the incidence of treated opioid use disorders in 15 to 19-year-olds from 1996 to 2014.⁷ The latest data from the Central Treatment List indicates that there has been no recent reversal in that downward trend, the number in that age range on OAT in March 2019 being 95% less than that in March 2009.³ Internationally, there also seems to be a pattern for heroin use to spike dramatically, only to then fall away, this being seen also in Switzerland, Netherlands, England and Italy.⁸

So the YPP closed its doors in September 2018 not for the usual reasons. It was nothing to do with funding cut-backs or staff recruitment problems. The closure occurred as the patients for whom it was designed two decades earlier had largely disappeared. While prevention was a key pillar of the NDS, we do not know exactly why adolescents ceased heading down the path of heroin use. Prevention initiatives occurred which focused upon supporting high risk youth via Local Drug Task Force projects. Qualitative research of young people in Dublin indicates that they came to view heroin extremely negatively. Even adolescents who report extensive polydrug use now view heroin with disdain.³ To explain similar observations in other countries, Musto suggested that the young become very wary of heroin after witnessing the damage it inflicts upon the preceding generation.⁸ The provision of prompt and accessible treatment also reduces the pool of active heroin users, thereby making it less likely that they in turn introduce other friends to use.⁸

It seems remarkable to us that the near elimination of new cases of adolescent heroin dependence has been so completely ignored in the ongoing discourse about drug policy in Ireland. Although it resulted in the closure of the YPP, this is of course a good news story. It provides evidence that our broad policy approach to drug use has had some very positive impacts. There have also been other forgotten achievements such as the sustained decline in problems related to new psychoactive substances following a robust legislative and policy response targeted at the head shops which sold those drugs in 2010.^{9,10}

While it is important to learn from past failures, we urge legislators, policy makers and the general public to pay equal attention to our past successes in the areas of treatment and prevention. Nihilism is unwarranted and unhelpful. Although there will always be new challenges such as the recent escalation in cannabis use disorders among youth, drug policy in Ireland is not nearly as broken as some are suggesting.

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Declaration of Conflicts of Interest:

Both authors worked at the Young Persons Program in the National Drug Treatment Centre. There are no other conflicts of interest to declare.

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References:

1. Smyth BP, O'Brien M. Children attending addiction treatment services in Dublin, 1990-1999. *European Addiction Research*. 2004;10(2):68-74. PubMed PMID: 15004450.
2. O'Kelly FD, O'Kelly CM. The natural history of injecting drug use: a 25-year longitudinal study of a cohort of injecting drug users in inner city Dublin. *Irish journal of medical science*. 2012 Dec;181(4):541-8. PubMed PMID: 22430070. Epub 2012/03/21. eng.
3. Saris A, O'Reilly F. A dizzying array of substances: an ethnographic study of drug use in the Canal Communities area. Dublin: Canal Communities LDTF. 2010.
4. Smyth BP, Fagan J, Kernan K. Outcome of heroin-dependent adolescents presenting for opiate substitution treatment. *Journal Of Substance Abuse Treatment*. 2012;42(1):35-44. PubMed PMID: 21940134.
5. Smyth BP, Ducray K, Cullen W. Changes in psychological well-being among heroin-dependent adolescents during psychologically supported opiate substitution treatment. *Early Intervention in Psychiatry*. 2016 Jan 23. PubMed PMID: 26800851. Epub 2016/01/24. eng.
6. Smyth BP, Elmusharaf K, Cullen W. Opioid substitution treatment and heroin dependent adolescents: reductions in heroin use and treatment retention over twelve months. *BMC pediatrics*. 2018 May 4;18(1):151. PubMed PMID: 29728088. Pubmed Central PMCID: PMC5936020. Epub 2018/05/08. eng.
7. Carew AM, Comiskey C. Rising incidence of ageing opioid users within the EU wide treatment demand indicator; The Irish opioid epidemic from 1996 to 2014. *Drug Alcohol Depend*. 2018 Nov 1;192:329-37. PubMed PMID: 30317161. Epub 2018/10/15. eng.
8. Nordt C, Stohler R. Incidence of heroin use in Zurich, Switzerland: a treatment case register analysis. *The Lancet*. 2006;367(9525):1830-4.
9. Smyth BP, James P, Cullen W, Darker C. "So prohibition can work?" Changes in use of novel psychoactive substances among adolescents attending a drug and alcohol treatment service following a legislative ban. *International Journal of Drug Policy*. 2015 Sep;26(9):887-9. PubMed PMID: 26139009.
10. Smyth BP, Lyons S, Cullen W. Decline in new psychoactive substance use disorders following legislation targeting headshops: Evidence from national addiction treatment data. *Drug and Alcohol Review*. 2017 Sep;36(5):609-17. PubMed PMID: 28419577. Epub 2017/04/19. eng.