

ADDICTION LIVES: WAYNE HALL

[PHOTO]

Addiction Lives records the views and personal experiences of people who have especially contributed to the evolution of ideas in addiction science. To suggest an interviewee, send a statement of up to 50 words summarising the person's exceptional contribution to the field to the Addiction Lives Editor: Prof Virginia Berridge, Centre for History in Public Health, London School of Hygiene and Tropical Medicine, 15-17 Tavistock Place, London WC1 H 9SH, tel +44 (0)207 927 2269, email Virginia.Berridge@lshtm.ac.uk.

INTERVIEW SUMMARY BY VIRGINIA BERRIDGE

Wayne Hall came into the addictions research field in 1988 when he was appointed Deputy Director of the newly established Drug and Alcohol Research Centre at the University of New South Wales.

He had been working as a researcher in psychiatry and mental health after a first degree in applied psychology and a PhD in experimental psychology and had been in a teaching position with not much opportunity for research. He was strongly discouraged from moving into the addictions field by his mentors in mental health as the field was virtually non-existent in Australia. Psychiatry did not see addiction as part of its business in Australia and largely still does not.

The research centre he joined was headed by Nick Heather whose work was on alcohol. The heroin epidemic in Australia and the advent of HIV/AIDS meant that the government wanted research on drugs. Initial work was on the treatment of heroin dependence, methadone maintenance and heroin overdose deaths and drivers of that. It was an exciting time to be in the field as there had been little work in Australia up to until then and everything they did was new. There was both federal and state funding for the work. They produced a defence of methadone maintenance which John Strang, the interviewer, remarks was circulated to the British committee looking at treatment effectiveness.

Work also developed on cannabis. This originated in a commission from the Federal Minister of Justice who wanted clear advice on a national response. They were commissioned to do a review of health effects but discovered that nothing much had been done since 1983. So they reviewed more recent work and the cannabis work expanded and grew in length. It was accessible to a general audience. One of his aims has always been to write for a broader audience than his peers.

The cannabis work then formed part of a WHO report in 1997 and this led to much further commissioned work. Initially there was little interest in the subject in the US but since the 1990s and citizen initiated referenda, there has been much interest in his work. One of the problem with those sorts of debates is that the debate is very partisan. His work has tried to weave a way through that, to acknowledge both sides of the debate and also to point to the evidence needed to make judgements about whether the changes have been a good or bad thing.

Another area where this approach was called for was work for WHO, funded by the Swiss government, producing an independent appraisal of the Swiss heroin trial. This was a difficult task. The Swiss researchers were struggling in a very difficult political environment. The original trial design had collapsed because the control group had just disappeared and so the results had severe limitations. His report wanted to acknowledge this without saying that the trial had been a mistake. So in the end they were not popular with anyone involved.

They also looked at cohorts and mortality, drawing on work which had been done by Jerry Jaffe and groups at Chicago in the late 1960s and 70s. He also drew on work on lung cancer mortality and has always looked out for what is going on in neighbouring fields and what can be learnt.

Continued support for the Centre came from senior civil servants in the Commonwealth Department of Health. He persuaded them to fund a national survey of mental health and wellbeing and to insist that drug and alcohol dependency be included in that. The results confirmed high rates of prevalence of comorbidity between mental disorders and drug and alcohol dependence and had a big impact on the government agenda.

The Centre had become an attractive place to work for junior staff with some talented younger people. But Wayne Hall was finding the policy and bureaucratic aspects of his job less enjoyable and so applied and was appointed to head a centre at the University of Queensland looking at the ethical implications of the Human Genome project. It was a risky manoeuvre and he found it easier to get research funding on the ethical implications of the genetics and neuroscience of addiction.

He discusses involvement in policy which can be an uncomfortable compromise. Evidence is not the sole arbiter of which policies are implemented. Part of this involvement was his membership of the International Narcotics Control Board. The time commitment there was too great so he stepped down after two years.

He discusses the expansion of the field in Australia and also the influence of overseas contacts in particular, the influence of Griffith Edwards after Wayne Hall's first visit to the National Addiction Centre in 1991. His group also looked to the US and, through WHO, worked with the Europeans, Swiss and Germans.

He has always looked for new ideas and one area of current interest is in waste water epidemiology, working with environmental toxicologists.

LINK TO FULL INTERVIEW, CONDUCTED BY SIR JOHN STRANG, ON THE SOCIETY FOR THE STUDY OF ADDICTION WEBSITE:

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ANNOTATED BIBLIOGRAPHY

Mattick, R. P., Hall, W. Are detoxification programmes effective? *Lancet* 1996; 347: 97-100.

In this paper, we reviewed evidence on the impact of detoxification on drug use and made very clear that detoxification is not a treatment for drug dependence but a prelude to it.

Strang, J., Darke, S., Hall, W., Farrell, M., Ali, R. Heroin overdose: The case for take-home naloxone - home based supplies of naloxone would save lives. *British Medical Journal* 1996; 312: 1435-6.

This paper made the case for take away naloxone distribution to prevent opioid overdose deaths. Just under 20 years later this is now standard policy in most developed countries, including the USA.

Hall, W., Solowij, N. Adverse effects of cannabis. *Lancet* 1998; 352: 1611-6.

This was an invited paper on the adverse effects of cannabis prompted by work undertaken for WHO. It has been widely cited as was a 2008 update also published in the Lancet.

Ward, J., Hall, W., Mattick, R. P. Role of maintenance treatment in opioid dependence. *Lancet* 1999; 353: 221-6.

This paper reviewed the evidence on the effectiveness of maintenance treatment for opioid dependence and explained how to deliver this treatment safely and effectively. It was based on a well-received book on methadone treatment written by Ward, Mattick and Hall.

Andrews, G., Henderson, S., Hall, W. Prevalence, comorbidity, disability and service utilisation - overview of the Australian National Mental Health Survey. *British Journal of Psychiatry* 2001; 178: 145-53.

This paper reported the first survey of the mental health of Australians using a computerised diagnostic interview, a method that has become standard. A second survey was completed in 2007.

Darke, S., Hall, W. Heroin overdose: research and evidence-based intervention. *Journal of Urban Health-Bulletin of the New York Academy of Medicine* 2003; 80: 189-200.

This paper reviewed the epidemiology of opioid overdose and identified effective and cost-effective ways of reducing these deaths.

Gartner, C. E., Hall, W. D., Vos, T., Bertram, M. Y., Wallace, A. L., Lim, S. S. Assessment of Swedish snus for tobacco harm reduction: an epidemiological modelling study. *Lancet* 2007; 369: 2010-4.

This first estimate of years of healthy life smokers gained by quitting or using smokeless tobacco attracted international interest in policies to reduce the health burden of smoking.

Hall, W. D., Gartner, C. E., Carter, A. The genetics of nicotine addiction liability: ethical and social policy implications. *Addiction* 2008; 103: 350-9.

A comprehensive analysis of ethical and policy implications of genetic research on nicotine dependence, including screening for genetic susceptibility to nicotine and matching cessation methods with smokers trying to quit.

Hall W. (2010). What are the policy lessons of National Alcohol Prohibition in the United States, 1920-1933? *Addiction*, 105, 1164-1173.

This paper questioned the conventional wisdom about the effects of national alcohol prohibition in showing that it probably substantially reduced alcohol consumption in the USA, at the cost of creating a large alcohol black market with its attendant crime and violence.

Hall, W., Pacula, R. *Cannabis use and dependence: Public health and public policy*. Reissue of 1st (2003) ed. Cambridge: Cambridge University Press; 2010.

This book, coauthored with a leading RAND drug policy researcher, summarised international research on adverse health effects, cost and effectiveness of policies to prevent cannabis use or ameliorate its adverse effects. It continues to be cited in contemporary US policy debates about cannabis legalisation.

Carter, A., Hall, W. *Addiction neuroethics: The promises and perils of neuroscience research on addiction*. Cambridge: Cambridge University Press; 2012.

This book summarised analyses of the policy and ethical implications of genetic and neuroscience research on addiction. It earned a national research award for Adrian Carter in 2012.

Degenhardt, L., Hall, W. Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *Lancet* 2012; 379: 55-70.

This paper summarised global patterns of illicit drug use and harms arising from such use. It was first in a series of three articles on drug policy for the Lancet.

Hall, W., Prichard, J., Kirkbride, P., Bruno, R., Thai, P. K., Gartner, C., Lai, F. Y., Ort, C., Mueller, J. F. An analysis of ethical issues in using wastewater analysis to monitor illicit drug use. *Addiction* 2012; 107: 1767-73.

This paper introduced waste water analysis to the addictions field and discussed technical and ethical issues that may arise in its use in monitoring illicit drug use in the population.

Hall, W., Gartner, C. Should Australia reconsider its ban on the sale of electronic nicotine delivery systems? *Lancet Respiratory Medicine* 2014; 2: 602-4.

This invited article discussed the ethical issues raised by Australian policies that ban the sale of e-cigarettes and proposed ways in which these products could be sold to minimise their promotion to non-smoking young people.

Hall, W. What has research over the past two decades revealed about the adverse health effects of recreational cannabis use? *Addiction* 2015; 110: 19-35.

This paper reviewed how the evidence on the adverse health effects of cannabis has changed in the 20 years since I first reviewed the literature. It generated enormous media interest, most of it ill-informed thanks to the Daily Mail.

Hall, W., Carter, A., Forlini, C. The brain disease model of addiction: is it supported by the evidence and has it delivered on its promises? *Lancet Psychiatry* 2015; 2: 105-10.

This paper evaluated the evidence for and claims made by advocates of the brain disease model of addiction. It prompted a reply from the Directors of the US National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse.

Hall, W., Gartner, C., Forlini, C. Ethical issues raised by a ban on the sale of electronic nicotine devices. *Addiction* 2015; 110: 1061-7.

This paper analysed the ethical issues raised by the Australian policy of banning the sale of electronic nicotine devices, a policy advocated by leading public health figures in the USA.

Hall, W., Weier, M. Assessing the public health impacts of legalizing recreational cannabis use in the USA. *Clinical Pharmacology & Therapeutics* 2015; 97: 607-15.

This paper reviewed the literature on the effects of legalising medical uses of cannabis in the USA on adolescent and adult use and speculated about the likely health effects of legalising the recreational use of cannabis by adult

Hall, W., Patton, G., Stockings, E., Weier, M., Lynskey, M., Morley, K., Degenhardt, L. Why young people's substance use matters for global health. *Lancet Psychiatry* 2016; 3: 265-79.

This paper was one of a series of three papers on adolescent substance use and mental health. It summarised evidence on substance use as a major contributor to poor mental health and disease burden among adolescents and young adults. The other two articles summarised the epidemiology of substance use and substance use disorders in young people and reviewed evidence on the effectiveness of preventive and treatment interventions.

Hall, W. Renström, M., Poznyak, V., editors. The health and social effects of nonmedical cannabis use. Geneva: World Health Organization; 2016.

This was a major review of the evidence on the adverse health effects of nonmedical cannabis use undertaken for WHO. I led the production of a document summarising the findings of a large number of commissioned literature reviews on specific adverse health effects and the outcome of an expert meeting convened to consider the papers and arrive at a consensus view on the health effects.