MEDICINE AND THE MEDIA

How the media helped ban mephedrone

Misinformation in the media helped politicians push for the criminalisation of the "legal high" mephedrone last year despite a lack of evidence of harm, reports **Jeremy Sare**

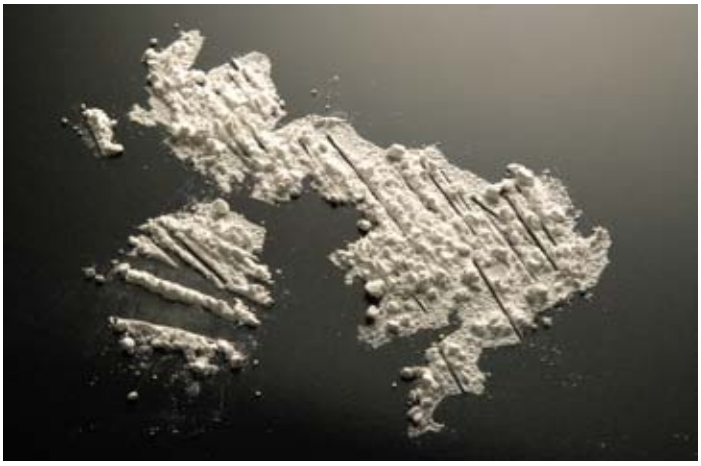
Despite a dearth of evidence about mephedrone's toxicity, the media have reported several young people dying after taking the previously "legal high," which was being sold as plant food. Rebecca Cardwell, aged 19, was "confirmed as the first official victim of the banned clubbers' drug meow-meow [mephedrone]" in the London free sheet *Metro* in October 2009. Unfortunately she was not the first to be awarded that dubious honour.

The media led the campaign for the government to ban mephedrone and did not cease sensational reporting until the ban was achieved. Eighteen months ago few people had heard of mephedrone, yet in a matter of weeks the country's collective panic was raised, partly at least by the newspapers. In April, just before the general election, the then home secretary, Alan Johnson, "illegalised" mephedrone before its actual harms were fully known.

It was reminiscent of the media campaign against ecstasy in the late 1980s. Editors presented a bewildering world beyond parents' reach in which the nation's youth were being drawn into a labyrinth of addiction, violence, sex, and insanity. The *Sun* sensationally ran a story quoting a report from Durham police in March: "One individual states that after using it [mephedrone] for 18 hours his hallucinations led him to believe that centipedes were crawling over him and biting him. This led him to receive hospital treatment after he ripped his scrotum off."

At a press conference in March called by Humberside police after the deaths of two young men in Scunthorpe, Detective Chief Inspector Mark Oliver, senior investigating officer, said, "We have information to suggest these deaths are linked to m-cat [mephedrone]" (www.guardian.co.uk/society/2010/mar/17/three-arrested-suspected-mephedrone-deaths).

It was fair to assume that excessive drink and drugs were to blame, but then uncertainty began to grow in the press about whether the specific drug taken had been the stimulant mephedrone (a white powder) or the heroin substitute and depressant methadone (a green liquid). It was possible that the dead men had made that mistake themselves. The BBC reported, "Police believe they had been drinking and had also taken another drug, the heroin substitute methadone" (http://news.bbc.co.uk).



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Humberside police reportedly warned, "We would encourage anyone who may have taken the drug or knows somebody who has taken the drug to attend a local hospital as a matter of urgency." Whatever the police's information was at the time of the deaths, the toxicology tests carried out weeks later showed no traces of mephedrone.

Many news articles during that period contained falsehoods, including the story of 180 pupils in a Leicestershire school skipping classes because of the effects of the drug (www.dailymail.co.uk/news/article-1256330/Meow-Meow-180-pupils-school-sick-taking-legal-party-drug.html). A spokeswoman I spoke to in April from Leicestershire County Council described these reports as "not recognisable as any school in the county." The cumulative "evidence" also included the death of Gabrielle Price, aged 14, from Worthing. A postmortem examination and other tests "established that death resulted from cardiac arrest following broncho-pneumonia which resulted from a streptococcal A infection," according to Sky News.

Media coverage had linked mephedrone to several deaths, so the campaign switched to focus on why the government was not acting. Labour ministers allowed themselves to get caught up in the frenzy, reacting before facts could be fully checked. The BBC reported, "Lord Mandelson said the government would take 'any action that is justified to deal with this and to avert such tragic consequences occurring in the future.'" Keith Vaz, chairman of the Home Affairs Select Committee, also presented the facile solution that the drug should be made illegal as soon as possible. "Two teenagers died last week after taking mephedrone," Vaz was quoted as saying in reference to the Scunthorpe case. "I have urged the home secretary to act urgently on this issue and ban the drug immediately" (www.thisisleicestershire.co.uk/news/Leicester-East-MP-Keith-Vaz-calls-ban-legal-drug-mephedrone/article-1947876-detail/article.html).

Vaz was also reported as suggesting that the government's experts should be ordered to come to specific conclusions. "We need to say to the Advisory Council on the Misuse of Drugs, 'You have 28 days to ban this'" (www.dailymail.co.uk/home/moslive/article-1267582/The-Chinese-laboratories-scientists-work-new-meow-meow.html).

Home Office officials then began the process of making mephedrone an illegal drug, where possession could attract a prison sentence of up to five years. The Misuse of Drugs Act 1971 requires a new drug to be first assessed by the Advisory Council on the Misuse of Drugs. The council had just lost a substantial proportion of its scientific talent through resignations after the sacking of its chairman, David Nutt.

The council collated what data existed on the drug and concluded that there was enough of a case for its inclusion into the act as a controlled drug (http://drugs.homeoffice.gov.uk/publication-search/acmd/acmd-cathinodes-

report-2010). I used to work for the council and have intimate knowledge of all its reports produced since 2001, and the mephedrone report showed a marked decline in quality from previous studies. For example, no data on purity were available, and the epidemiology was in part based on an article for the magazine *New Musical Express*. Data on prevalence were derived from a survey conducted by the dance music magazine *Mixmag* and the number of hits on the www.talktofrank.com drug information website.

More members of the council (Eric Carlin and Polly Taylor) resigned in protest at being asked to be party to this. Carlin, former chief executive of the mental health charity Mentor UK, complained about the formulation of the report. "I really felt totally compromised and insulted by the process that we went through . . . We had little or no discussion about how our recommendation to classify this drug would be likely to impact on young people's behaviour," he is reported as telling Sky News. "He [Carlin] said the way in which the Home Secretary told the media too soon was 'entirely wrong' and 'morally corrupt,'" Sky reported.

By the time of the law change Home Office officials still had not replaced all the statutory members who had resigned, so the legal validity of the order could yet be successfully challenged. The urgency to strengthen the law because of the media's "evidence" undermined the credibility of the legal process and the players within it. Legislating without regard to the evidential process is foolhardy.

Mephedrone became a controlled drug on 16 April 2010, and what did that achieve? The websites selling it have closed, to be replaced by traditional dealer networks, where a range of more risky and adulterated substances is available. Adam Winstock and others said in an article in the *Lancet*, "Before the introduction of the legislation, users generally obtained mephedrone via the internet. Now they buy it from street dealers, on average at double the price." Two thirds of users are still taking the drug (*Lancet* 2010;376:1537). Almost a year on, mephedrone has proved a gateway to other legal highs—such as Ivory Wave—which to many drug users are more attractive than ecstasy and cocaine because of their price and purity.

The law on mephedrone may have changed and the media sated, but prevalence continues, albeit in a more harmful way. That is the nature of drug control in 21st century Britain. It was summarised by a former minister: "Drugs policy," he said, "is predominantly informed by incidents not evidence."

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Competing interests: JS was in the secretariat of the Advisory Council on the Misuse of Drugs in 2002-4 and was then its head of drug legislation in 2004-6. He moved into another post in line with usual civil service procedure, first carrying out a review of drug classification. When that project was cancelled by the former home secretary John Reid in May 2006 he moved out of the Drugs Directorate and became responsible for a review of the management of child sex offenders. He left the Home Office in July 2007.

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LOBBY WATCH **Jane Cassidy**

The Work Foundation

What is it?

The Work Foundation describes itself as the "leading independent authority on work and its future." Yet, in what the *Guardian* newspaper described as "one of the bleaker economic portents of recent days," the think tank was declared insolvent and bought last year by Lancaster University. The move came after a winding-up petition citing a £27m (€32m; $44m) pension deficit was filed at the High Court in October.

The university said that all 43 jobs at the foundation were safe, including that of its executive vice chairman, Will Hutton, a former editor of the *Observer* newspaper.

Hutton was the think tank's chief executive from 2000 to 2008. He restructured what was formerly the Industrial Society, which had originally been set up in 1918 as a boys' welfare association to campaign for better workplace conditions.The part of the society dealing with workforce training was sold off for £23m, and the organisation was renamed to reflect its shift in focus to policy and research.

Hutton is now working on the government's inquiry into cutting the pay of the top ranks of the public sector, which will encompass the salaries of senior NHS staff. His reported salary of £180 000 a year at the think tank drew criticism from some quarters. The *Daily Telegraph*'s chief leader writer, David Hughes, noted that his work at the foundation at least gave him some insight into high salaries. Hughes quipped, "Perhaps it should have been called the Nice Work If You Can Get It Foundation." Since the sell off the think tank continues to operate from its Westminster headquarters.

What agenda does it have?

Influencing policy makers to push workplace health higher up the political agenda is a key aim. A new report by the foundation explored the challenge of working on a low income.

Research and policy debates have tended to focus on the effect of unemployment on people's health, it says, while similar problems among people on low pay have been neglected. Commissioned by Turn2us, a benefits and grants advice charity, the think tank looked at a number of concerns, including how employers could support staff members who experience financial difficulty or anxiety.

What does the government think of it?

Hutton was asked by the prime minister, David Cameron, and the chancellor of the exchequer, George Osborne, to conduct an independent review of fair pay in the public sector. His final report is expected in March. His remit was to investigate pay scales and make recommendations on how to ensure that no manager can earn more than 20 times the wage of the lowest paid member of staff.

Critics question the accuracy of this ratio. The Bureau of Investigative Journalism says that top public sector managers typically earn 10-12 times as much as their lowest paid staff. A higher ratio may therefore lead to higher wages rather than lower ones.

Where does it get its money from?

As a not for profit organisation, the foundation aims to earn money through advising, consultancy, sponsorship, and commissioned research. No accounts have been filed with the Charity Commission since 2008.

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REALITY CHECK **Ray Moynihan**

Overdiagnosis and the dangers of early detection

A new book calls for greater awareness of the potential harms of early diagnosis

How often it is in matters medical that the truth feels strange and counterintuitive, seduced as we are by so many false yet familiar assumptions: newer is better; widely used procedures are all proved; a registered drug must surely be a safe one. But perhaps the unhealthiest fallacy of all is the popular conviction that early detection is always for the best. A powerful new book from a team of Ivy League doctors claims that overdiagnosis is one of medicine's biggest problems, causing millions of people to become patients unnecessarily, producing untold harm, and wasting vast amounts of resources.

Over-diagnosed: Making People Sick in the Pursuit of Health (www.beacon.org/productdetails.cfm?SKU=2200) is written by three widely published researchers, Gilbert Welch, Lisa Schwartz, and Steve Woloshin. They're all based at the Dartmouth Medical School in New Hampshire and known for rigour and scepticism. All three are practising doctors and scientists and are well aware that in many, many cases early diagnosis can ameliorate suffering and extend life. But as the evidence makes clear, too often conditions are being "overdiagnosed": people are labelled with a condition that will never cause them symptoms or premature death. And, as the authors remind us, people who are the subject of overdiagnosis can never benefit from treatment, they can only be harmed.

The best known example is probably prostate cancer. Concern has been widespread for years that mass screening programmes may cause many men to be given a diagnosis and treated unnecessarily, sometimes with highly invasive and harmful procedures. In one of many chilling statistics drawn from the literature on screening the book states that, in the best case scenario, "for every man who avoids a prostate cancer death, roughly fifty are over-diagnosed and treated needlessly." The number could be as high as 100.

Prostate cancer is also a powerful example of another wider problem: the weakness of commonly used tests such as the prostate specific antigen (PSA) test, which can uncover supposed "abnormalities" that result in great anxiety and further intervention but that may never develop into disease. From simple swabs to sophisticated, high tech diagnostics, we are constantly "seeing too much." To illustrate the problem *Over-diagnosed* cites examples where expensive scans can produce inaccurate diagnoses, which in turn create the potential for unnecessary gallbladder, knee, and back surgery.

As I and others have written, many of the big and costly medical conditions of our time are not in fact diseases but rather are risk factors portrayed as diseases. The widespread promotion of preventive drugs for high blood pressure, high cholesterol, high blood sugar concentrations, and low bone mineral density is costing vast amounts of public resources globally, despite doubts about whether this is money well spent (Järvinen T, Sievänen H, Kannus P, Jokihaara J, Khan K, "Pharmacological disease prevention: is it cost effective?" *BMJ*, forthcoming).

Over-diagnosed charts how the definitions of these so called diseases have changed in recent decades, with boundaries being widened and treatment thresholds being lowered, dramatically expanding the number of people classed as patients simply because they're at risk of future bad events. For example, broader definitions of high blood pressure brought a 35% jump in the number of people classed as sick, while a changed definition of high cholesterol meant that tens of millions more Americans became patients.

But, as people at lower risk are treated, the chances that those treatments will help them fall and the number of people you need to treat unnecessarily so as to help one person rises dramatically. As one graph in *Over-diagnosed* shows, if you treat people with severely high blood pressure for five years, the chance of preventing a bad event is almost 80%, thus you are helping almost everyone you treat. But for those with very mild hypertension the chance of benefit is closer to 5%, so 95% people are treated for five years without any benefit.

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This is Ray Moynihan's second *BMJ* column. His first can be found on bmj.com (*BMJ* 2011;342:c7233)

Another calculation estimates the value of taking lifelong drug treatment for mild or "near normal" osteoporosis. Only 5% of people with mild osteoporosis are saved from a fracture, so the other 95% are exposed to the potential harms of the drugs with no benefit. Given the side effects of popular osteoporosis drugs, which can include ulceration, osteonecrosis of the jaw, and atypical fractures, these figures are scandalous, adding weight to calls for a rethink of how we treat these conditions and why we target so many healthy people with "preventive" drugs.

However, any rethink will need renewal of the expert panels that write definitions and guidelines, to free them of financial ties to drug makers, because, says *Over-diagnosed*, "these decisions affect too many people to let them be tainted by the businesses that stand to gain from them."

A key theme here is the need to get better, clearer information to people—to get closer to the truth of the uncertainties around early detection and the potential harms of unnecessary treatment. Unlike so much promotion that passes for medical journalism, *Over-diagnosed* features success stories of patients who have explored the uncertainties and opted not to accept potentially unnecessary treatments.

Building processes for mandatory and meaningful informed consent into the very infrastructure of medicine could be a big win for people who don't want to become patients needlessly—but will likely mean a rather large loss for those who benefit from treating them.

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Competing interests: RM is the author of *Selling Sickness* and other books about medicalisation and has published articles with L Schwartz and S Woloshin.

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