Money talks

How successful are attempts to incentivise service users towards better health? By **Max Daly**

The use of incentives to reward people for taking positive action, in the field of public health, is a relatively new and untested development in the UK.

One of the first trials took place in Tayside in Scotland in 2007. In an attempt to reduce the high numbers of pregnant smokers, the local NHS board offered women weekly grocery vouchers in return for stopping smoking. It was a success. Of the 450 women who took part in the scheme, a fifth had remained non-smokers throughout their pregnancy – twice the success rate of normal stop smoking services.

Since then, the use of financial incentives as part of a behavioural intervention to encourage people to positively change their behaviour, sometimes referred to as 'contingency management' (CM) or 'positive reinforcement', has been recommended by the National Institute for Health and Care Excellence (NICE) for use in addiction services. There have also been positive results from studies in the US where drug users have been offered rewards in return for abstaining from using opiates.

Now, a number of areas in the UK are running incentive-based programmes. Most have been set up to encourage drug users into services for addiction counselling and vital health treatment, such as potentially life-saving hepatitis B (HBV) vaccinations.

Becoming infected with HBV, as with other potentially damaging and potentially fatal viruses, is a serious risk factor for injecting drug users. The virus, which attacks the liver and can cause cirrhosis and cancer, affects 22 per cent of this population. An effective vaccination exists and is routinely offered to drug users who enter into drug treatment services.

To be fully protected against HBV, individuals need to complete their full course of at least 3 vaccinations. However, the less ordered lives of injecting drug users means that many do not complete the vaccination course and some become infected and seriously ill as a result. The 2010 Drug Strategy highlighted the treatment and prevention of blood borne viruses as a priority issue.

This appeared to be an ideal physical healthcare intervention in which to test whether financial incentives as part of a behavioural intervention might be effective in improving benefit.

A team of researchers and clinicians from King's College London, Imperial College London and University College London conducted a study, funded by the National Institute for Health Research, to assess whether financial incentives might improve completion of HBV vaccinations among drug users in treatment compared to no incentives. The results were published in *The Lancet* in April.

Twelve NHS drug clinics took part and were randomly allocated to one of three groups to provide either – HBV vaccinations with small fixed value financial incentives in the form of a £10 supermarket voucher, at each of the three vaccination appointments; HBV vaccinations with small escalating value financial incentives in the form of a £5 supermarket voucher at the first vaccination appointment, £10 at the next and £15 at the third; or HBV vaccinations with no financial incentive.

The vouchers were only given to people attending vaccination appointments on time and complying with the vaccination schedule.

"The study found remarkable improvements in completion of vaccination," Nicola Metrebian, joint lead author of the study and senior research fellow in the Addictions Department at King's College London, told the *New Scientist*.

While only nine per cent of those not getting incentives completed their vaccinations, 45 per cent of those getting the fixed-value voucher incentive and 49 per cent of those receiving the escalating-value voucher incentive completed their course of vaccinations. Furthermore, 80 per cent of those receiving vouchers who attended appointments, attended on time. This suggests financial incentives can improve healthcare efficiency by reducing missed appointments.

"Thirty pounds of vouchers (plus £90 vaccination costs) is a small sum when weighed against the healthcare costs of liver disease," said Metrebian. "Antiviral treatment for chronic hepatitis costs £3,000 to £10,000 a year and a liver transplant exceeds £50,000. Then there's the cost to the NHS of missed appointments."

Nicola Metrebian adds: "We have shown that financial incentives really can help encourage completion of HBV vaccination and we hope this intervention will be taken up routinely by service providers."

Metrebian says a separate, ongoing study conducted by the team is looking at whether giving a £10 shopping voucher to opiate addicts in treatment, each time they provide a clean urine sample, will have a similarly positive effect.

Eliot Albers, executive director of the International Network of People who Use Drugs (INPUD) said: "I am broadly in support of incentives in the context of HBV vaccinations. But as regarding clean urine – absolutely not. As we object to urine testing on principle, we can't support incentives in that context."

Erin O'Mara, editor of drug user magazine *Black Poppy*, says incentives can work "as long as drug users are viewed as people with the same need to have a good life as the rest of us".

O'Mara says that offering incentives for HBV vaccines are at the more "palatable end of the spectrum" in terms of selling the idea of incentives for drug users to the UK public. However, she adds: "Before injectors get abused for wasting public money, one would be wise to remember that incentives have

been around for years; for smokers, the obese, the young with STDs, and they are certainly worth further investigation and trials."

She says that experiments in the US whereby crack users were offered goods or money to make positive decisions appeared to work. "The US research did seem to have quite surprising results. It became clear that even entrenched addicts were able to make considered decisions and respond to incentives.

"It showed, of course, human nature. That when you have nothing to strive for, when your world seems empty or meaningless, a practical and immediate offer of support to get a foot back on the ladder with no judgments and no lengthy strings attached, can be most welcome. A positive moment for some in an often harrowing week of loss upon loss."

Indeed, the evidence from the US on the success of incentive programmes, with rewards ranging from methadone to shopping vouchers and lottery prize, is compelling.

"The scientific community in the US has been investigating the effectiveness of incentives in promoting therapeutic behavior change for many years," says Kenneth Silverman, Professor of Psychiatry and Behavioral Sciences at the Johns Hopkins University School of Medicine in Baltimore, Maryland. "Much of that research has focused on the use of incentives to promote abstinence from drugs in people who have long histories of drug addiction. Incentive interventions are among the most effective approaches to treating drug addiction of all the methods that have been studied."

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Silverman says the evidence shows that the bigger the incentives are, and the longer they are provided, the more effective they are in promoting long-term abstinence and preventing relapse.

His team has developed an incentive programme based on getting problem drug users into employment. Under the 'therapeutic workplace' programme, recovering drug users are employed and paid to work but are required to provide drug-free urine samples or take addiction medications to maintain maximum pay.

It's a no-brainer, according to Peter McDermott, a former drug user who sits on the steering committee for the HBV study. "There's substantial evidence to show that it works well – much more evidence than we have for pretty well anything aside from methadone maintenance. It's insane not to use it. Why would you spend a fortune paying outreach workers salaries to locate the hard-to-reach when you can have the same people beating down your door for a tenner a pop?"

Mike Ashton, in his *Findings* analysis of the evidence from a series of incentive studies, concludes that it can be effective, but there is a tendency for drug users to go back to their old habits once the studies have finished and the rewards have ended. He says that the best results come from the use of incentives in conjunction with counselling and the ability of people to be able to 'own' their decision-making.

"It would be a surprise indeed if offering often destitute patients housing, employment, money or goods, and the more despised among our population recognition and rewards, did not have powerful effects, at least while the contingencies are in place," points out Ashton. "Realising and making the most of this potential, while avoiding unintended consequences, is the task facing the researchers and clinicians who devise the programmes."

The economic reality, says O'Mara, is that the NHS has to constantly find new and innovative ways to save money and 'incentive' culture can only become more widespread, as you are spending small amounts in the short term to save much larger amounts further down the line.

"Quite frankly if anything backed by the evidence helps to encourage people to avoid ill health – and it is preventative medicine that will save us all in the end – then we should applaud it," says O'Mara.

"Health and healthcare is not a moral issue. It is about saving lives first and foremost and hopefully to educate as well. And if the bean counters and researchers can meet in the middle to provide new ideas to keep us aware and proactive about our health, then well done, we all win."

■ **Max Daly** is a freelance journalist