

## What the science shows, and what we should do about it (part 1)

**Professor David Clark starts to describe the main findings and recommendations from a major new book based on the views of America's leading clinicians and researchers of what treatment would look like if it were based on the best science possible.**

**Leading addiction scientists met in New Mexico in 2004** at a 'think-tank' conference to share research findings in their respective areas and discuss possible implications for treatment and prevention interventions. This conference resulted in a seminal book, which I will consider over the coming issues.

The participants in this meeting believe that while scientific research has revealed a great deal about the nature of substance use problems and how they can be prevented and treated, very little of this science has found its way into practice.

Moreover, they point out that following drastic cuts in financial support for already starved treatment and prevention efforts, the existing US intervention system is in dire straits.

Major gaps exist between what research has actually shown to be effective and what is actually practised in treatment settings. Services continue to be marginalised, stigmatised and isolated from the rest of the health care system. Consumers have very little reliable information to use in finding and selecting services, and judging their effectiveness.

Given these problems, the book editors pointed out that it is, 'not difficult to imagine starting over from scratch to envision a more compassionate, effective and cost-efficient intervention system'.

They draw together the wealth of scientific understanding from the range of topic areas considered to produce a set of ten cross-cutting principles, and then reflect on their implications with ten recommendations for interventions.

I will outline these important principles and recommendations in this and forthcoming Briefings, allowing you to mull over how relevant they are to reducing the suffering related to substance use problems in this country.

### **Principle 1. Substance use is chosen behaviour**

Substance use is a behaviour, chosen from among behavioural options. It is influenced by the same principles of learning and motivation that shape other forms of human behaviour.

Even when substance use becomes self-perpetuating it is not unique, as it shares common characteristics with other compulsive behaviours such as pathological gambling and overeating.

The willful-choice aspect of drug use is sometimes underplayed or denied (*eg* the disease model), in part due to efforts to inspire compassionate care rather than harsh and moralistic treatment of people with a substance use problem. This has resulted in conflicting public opinions of



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whether problematic use (addiction) to drugs and alcohol is, or is not, a matter of personal choice.

The science of recovery from substance use problems gives intentional change a prominent role. The scientists note: 'Most people who recover from drug problems do so on their own, without formal treatment. The stages and processes of such "natural" change are indistinguishable from those that occur with treatment, and are common across the spectrum of problem severity. In this sense, effective interventions facilitate and perhaps speed

natural change processes.'

Evidence also suggests that change often involves a kind of 'click', a decision, commitment, or turnabout. This is reflected in popular concepts such as 'hitting rock bottom' and experiencing a transformational turning point. Personal commitment appears to be a final common pathway towards change.

The authors sum up by saying that there is 'every reason to treat the individual drug user as an active participant, a responsible choosing agent, and a collaborator in... treatment interventions. Furthermore, there are myriad opportunities in society to trigger and promote self-change'.

### **2. Substance use problems emerge gradually and occur along a continuum of severity**

No-one sets out to become addicted to drugs. The process is gradual, starting with experimental use, moving on to more frequent use, and so on.

There is no signpost saying that someone has become addicted to, or dependent upon, drugs or alcohol. Addiction emerges as someone's life becomes more and more centred on drugs or alcohol. The diagnostic criteria for dependence and addiction are arbitrary cut-off points along a gradual continuum.

Society needs to be able to address problems with a wide range of severity. Interventions which are useful at one level of severity may be unhelpful or counter-productive at another level of the continuum. In general, it is easier to change behaviour in the earlier stages of substance use related problems.

### **3. Once well-established, substance use problems tend to become self-perpetuating**

One characteristic of addictive behaviours is that they become 'self-organising' and robust. Once established they can become particularly resistant to ordinary forces of persuasion, punishment and self-control. Addressing one aspect of this self-organising system is often ineffective.

There are a variety of routes into problematic substance use. It is important to understand for each individual what is maintaining their pattern of substance use, and what components need to be addressed in order to produce stable behavioural change.

One consistent theme is that an initial period of abstinence can be helpful in destabilising dependent substance use. [to be continued]

*Rethinking Substance Abuse: What the Science Shows, and What We Should Do about It.* edited by William R. Miller and Kathleen M. Carroll, Guilford Press, 2006