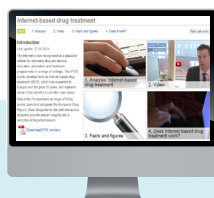European Monitoring Centre
for Drugs and Drug Addiction

PERSPECTIVES ON DRUGS
Internet-based drug treatment

Alongside recent changes in prevalence levels and patterns of illicit drug use, European countries have also seen parallel developments in the methods used to deliver interventions. With the Internet playing such a significant role in EU citizens' lives, especially among young people, it is not surprising that it is increasingly being recognised as a plausible vehicle for delivering drug education, prevention and treatment programmes. The benefits it offers as a mechanism for service delivery include its global reach, its potential to access user groups not currently addressed by specialist drug services, and the possibilities offered by providing therapeutic input in the 'comfort' of participants' homes.

This analysis focuses specifically on Internet-based drug treatment (IBDT), an intervention that has expanded rapidly in Europe over the past decade. It aims to categorise and chart the latest developments in the implementation of this mode of treatment, including the progress being made in programme evaluation and development of a robust evidence base (see 'Does Internet-based treatment work?').

What are Internet-based drug treatments?

There are a variety of different websites available that provide help for people using licit and illicit substances. These range from the purely informational through to fully developed treatment programmes. IBDTs can be defined as specifically elaborated or adapted, structured drug treatment interventions, offered on and communicated over the Internet, possibly involving therapist interaction. These treatments typically have a defined schedule and time frame; consequently, websites that offer a one-time chat with a counsellor and self-assessment applications do not constitute IBDTs (EMCDDA, 2009). Most IBDTs utilise established psychosocial intervention approaches such as cognitive behavioural therapy, motivational interviewing and relapse prevention theory.

An Internet-based drug treatment typology

One way of differentiating IBDTs is through the level of computerised automation they utilise. Following these simple

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criteria, three main types of IBDTs can be identified: self-help based programmes, counsellor-guided programmes, and complementary treatment programmes.

Self-help based programmes are fully automated online, are typically free of charge, and do not contain any automatic contact with a counsellor. Generally, participants pass through a process of registration, where the data needed to run the programme is collected. This information can include personal drug consumption, whether the participant's goal is to stop or reduce use, and how they plan to achieve this goal. Once they have registered, participants work with virtual tools and navigate through the programme on their own. The main module is generally a diary where the participant records daily drug-related activity. This covers details such as times and situations where they experienced cravings, times the drug was actually used, the people around them at this time and relevant feelings and thoughts. Interactive feedback is then generated by an algorithm based on the information entered by participants. This feedback aims to help participants to gain an insight into their consumption behaviour. It seeks to help them recognise and analyse risky or difficult situations and identify successful strategies to prevent drug taking. Additionally, participants create a personal 'relapse prevention plan'. As add-ons to the programmes, integrated forums are sometimes available that allow users to interact with each other, thus creating a virtual self-help group. In addition, programmes usually offer information about drugs and drug use. These programmes generally last between four to six weeks. A four-week online self-help programme was launched in Hungary in 2010, called Kannabiszpont.hu. It had 760 registered users by the end of 2013, and included a smartphone application to facilitate access to and use of the programme.

A second type of IBDT programme features scheduled online contact with a counsellor in addition to an automated programme. Participants in these counsellor-guided interventions have regular counselling sessions via the Internet or telephone. These interactions may take place in one-to-one chat sessions or through message boards. The frequency of contact between counsellor and participant can vary, as does the duration of these interventions. Counsellor-assisted programmes often utilise modules and tools that are similar to the self-help programmes, such as the personal diary and the interactive computer-generated feedback. However, unlike the self-help interventions, most but not all counsellor-assisted programmes require payment of a fee. Programmes like this are currently available, for example, in the Netherlands and Germany.

A third category of IBDT (one that has recently been introduced across the Netherlands) incorporates both automated Internet and face-to-face components. These complementary treatment programmes involve participants

completing assignments online, and also meeting regularly in person with a counsellor or other medical practitioner. The treatment is individually tailored and utilises different online treatment modules, which focus on, for example, giving up or reducing alcohol, cannabis or cocaine use. The modules contain information, assignments and exercises aimed at developing self-control, coping with craving and preventing relapse.

All three types of IBDT programme are based on a set of psychosocial interventions, geared towards changing participants' drug-use behaviour. These treatment modalities, to varying degrees, focus on increasing participants' insight into their drug use, building motivation, managing cravings, developing coping strategies and interpersonal skills, encouraging lifestyle changes and improving relapse prevention strategies.

A new way to engage clients?

Growth in the availability and use of the Internet has fundamentally changed the way drug treatment can be offered. It has extended the reach and geographical coverage of programmes into areas where physical treatment facilities are rare, such as rural communities. IBDTs, in particular automated self-help based programmes, are capable of treating more users as they are not subject to traditional capacity limitations and do not require appointments. This allows immediate support, removes waiting times and increases services' potential to reach greater numbers of those seeking help than would otherwise be possible. Given the absence of face-to-face contact with a medical practitioner, however, fully automated self-help based programmes are not appropriate for treating all drug problems. Nevertheless, these IBDTs do provide valuable assistance to individuals whose drug use does not require medical assistance and who for whatever reason are unable or unwilling to seek traditional treatment. Counsellor-assisted programmes have been found to be equally effective in establishing the essential components of a working counselling relationship, such as building a therapeutic alliance (Murphy et al., 2009). While IBDTs cannot completely

Facts and figures

The global telemedicine market has grown from $9.8 billion in 2010 to $11.6 billion in 2011, and is expected to expand to **$27.3 billion in 2016**.

70 % of EU citizens use the Internet regularly and high-speed Internet access through broadband (fixed and wireless) covers **99.9 %** of EU citizens.

Internet-based drug treatments (IBDTs) can be defined as 'specifically elaborated or adapted, structured and scheduled drug treatment interventions, offered in and communicated over the web'.

IBDTs have a duration of between **4 and 12 weeks** in Europe, depending on the programmes.

IBDTs were introduced in **2004** in the EU, appearing initially in Germany and the United Kingdom.

replace traditional treatment, they can provide some users with the opportunity to establish a first contact with support services. This initial contact may then lead to face-to-face and regular support with a therapist, who might use these new tools to extend and augment treatment.

IBDTs in Europe tend to be substance specific, mostly addressing young people with cannabis-related problems and to a lesser extent with problems associated with the use of stimulants, such as cocaine. According to an evaluation report from the German IBDT Quit the Shit, for example, the age range of the programme participants is between 14 and 48 years.

IBDT programmes are still a relatively new addition to the set of potential health and social responses available for treating drug problems in Europe. To date, the literature on evaluations of this approach is sparse, although growing (see 'Does Internet-based treatment work?'). In addition, a number of limitations have been identified (e.g. Litvin et al., 2013). IBDTs may lead to higher attrition rates as participants may feel no obligation or pressure to continue their treatment due to the anonymity or the automated form of treatment delivery. Additionally, the need to pay fees for some IBDTs may discourage people, especially younger drug users, from accessing these programmes. Fee-paying programmes generally have age restrictions (participants

must be over 18) in place as most web-based payments are made through credit cards or may be covered by health insurances, which are often under their parents' names. The absence of a guarantee of full anonymity may also be a factor in discouraging some users from accessing IBDTs.

Conclusions

In the framework of the European Commission's e-Health Action Plan 2012–20, IBDTs are likely to be increasingly developed as an adjunct to traditional drug treatment services, offering a new way to engage with people experiencing drug problems. IBDTs take a set of tested psychosocial techniques for helping drug users and integrate them into a set of new delivery mechanisms. These web-based interventions provide new opportunities for reaching these populations and simultaneously expanding available access points to professional help in a cost-efficient way. While technologies and platforms to access these interventions, such as smartphones and tablets, are developing rapidly, anonymity and data protection related to transmitting information on drug consumption over the Internet remain genuine concerns. These issues will need to be fully addressed in any further development of these interventions in Europe.

Interactive element: video

Video explaining the internet-based drug treatment, available on the EMCDDA website: emcdda.europa.eu/topics/pods/internet-based-drug-treatment

Does Internet-based drug treatment work?

In recent years the number of published studies and systematic reviews on the effectiveness of Internet-based treatment has increased considerably although most of the evidence in the addiction field relates to alcohol and tobacco treatments. A recent review of the effectiveness of Internet-based treatment for addictions concluded that although more research is required to determine the comparative effectiveness of various Internet-based therapies and their components, this mode of delivery is effective in achieving positive behavioural changes among participants (Gainsbury and Blaszczynsky, 2011).

A meta-analysis of 92 published studies on Internet-based therapy further indicated that this modality, on average, is as effective or nearly as effective as face-to-face therapy (Barak et al., 2008). Several studies have specifically investigated the effects of Internet-based treatment for problems related to illicit drugs. Results from an Australian randomised controlled trial (RCT) on the effectiveness of a fully automated Internet-based treatment for cannabis use revealed that at week six of the programme the experimental group reported significantly fewer days of cannabis use during the past month, significantly lower past-month quantity of cannabis use, and significantly fewer symptoms of cannabis abuse, relative to controls. However, cannabis dependence symptoms and past-month abstinence did not differ significantly between groups (Rooke et al., 2013). Results from a German RCT showed that, three months after randomisation, participants in an Internet-based treatment with an online counselling group showed a significantly stronger reduction in cannabis use

than the control group who were assigned to a waiting list. Additionally, moderate to strong effects were found for the reduction of the frequency and the reduction of the quantity of cannabis consumed (Tossmann et al., 2011). A meta-analysis of 10 studies on the effectiveness of this approach in reducing the frequency of cannabis use revealed that the overall effect size was small but significant post treatment (Tait et al., 2013). There is limited evidence available regarding interventions addressing the use of other illicit substances; however, an RCT on the efficacy of Internet-based treatment for amphetamine-related problems is currently ongoing (Tait et al., 2012).

In summary, there is some evidence to suggest that Internet-based treatments can be effective in reducing cannabis use in the short term, but there are a range of limitations with many of the existing evaluation studies that limit the generalisation of results to other populations or to other substances. These include small sample sizes, high drop-out rates, lack of comparability between studies due to non-standardised technologies used and the absence of direct behavioural measures (e.g. urine tests) to help evaluate outcome measures (Gainsbury and Blaszczynsky, 2011). In order to address these methodological shortcomings, guidelines for designing and reporting Internet-based treatment research have recently been published to enable results across studies to be replicated, extended, compared and contrasted with greater ease and clarity (see Proudfoot et al., 2011; Litvin et al., 2013).

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