European Monitoring Centre
for Drugs and Drug Addiction

EMCDDA

INSIGHTS

Internet-based drug treatment interventions

Best practice and applications
in EU Member States

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Internet-based drug treatment interventions

Best practice and applications in EU Member States

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10

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Contents

Foreword

Twenty years ago, it would have been hard to imagine that drug treatment could be provided via an electronic channel without direct personal contact between the therapist and the drug user. Even today, the idea of 'Internet-based treatment' for drug dependence provokes debate among professionals and the public. Nevertheless, we believe that it is timely to inform European decision-makers, health experts and the general public on the state of development of this new and complementary approach in the drugs field.

In contrast to many other topics we have covered in our Insights series, Internet-based drug treatment is still in its early days. The number of well-developed European programmes to help drug users is still very limited and evidence of their effectiveness is just starting to emerge. So we are not yet in a position to offer a well-founded and comprehensive review on this topic. Despite this clear limitation, we think it is appropriate to inform the reader about this new approach as the concept and initial results look promising and, in the future, healthcare professionals may well use Internet-based treatment as an additional tool to respond to drug dependence.

Indeed, offering treatment to drug users via the Internet could have a number of advantages: it could reach a group of young people whose pattern of drug use falls between experimental and problematic and who are currently not reached through any other channel. It could offer specialised services in rural areas where distances are too great to access drug treatment centres which are often concentrated in urban areas. It could also prove to be a cost-effective way of providing support to a larger number of clients than traditional treatment centres are able to offer, given their limited capacity and human resources.

Before we are in a position to make a final assessment of whether these targets really can be achieved, we will need more evidence on the efficacy of this novel approach. We will also have to determine, on the basis of evidence, the most appropriate target groups for this intervention. If future evidence supports the findings described here, Internet-based treatment could become an additional, large-scale option used to avoid, reduce or treat drug problems and drug dependence.

In the meantime, this overview provides a first insight into this innovative approach and allows the reader to consider whether Internet-based treatment is a feasible reality.

Wolfgang Götz
Director of the EMCDDA

Executive summary

Health and the Internet

The Internet needs no introduction. Its use has increased steadily in Europe over the past decade, to become ubiquitous. Its user base now embraces all generations — children, adolescents and adults. And Europeans increasingly use the Internet for obtaining information, for conducting business, for shopping and banking, or just for pure entertainment.

More recently, the Internet has established itself as a key medium for communicating information in the field of public health. In addition to basic sites for information provision on health, a number of clinical applications have been found for the web, featuring more complex and interactive health interventions and treatment programmes. Applications include, for instance, the treatment of mental health and motivational problems, panic disorders, depression, smoking cessation and problem alcohol use.

In the drugs field, professionals have recognised the potential of Internet-based programmes to deliver drug treatment programmes. There is a significant target audience for such interventions. Drug treatment demand has risen in the EU, particularly among young cannabis users and socially-integrated drug users. These people may feel ill-at-ease with 'traditional' treatment centres which target injecting drug users. This review aims to provide insights into the state-of-the-art of Internet-based drug treatment interventions — termed 'Internet-based DTIs' in this report — with a particular focus on Internet-based interventions developed in the EU for treating cannabis use disorders.

Defining Internet-based drug treatment intervention (DTIs)

For the purposes of this review, an Internet-based DTI is considered as a service that is distinct from more general websites about drugs and is strictly defined as 'an Internet-based programme that comprises a specially developed/adapted, structured and scheduled drug treatment intervention'. The programmes identified in this report are the outcome of a literature and Internet research for relevant Internet-based drug treatment interventions, together with a request to identify such programmes within the EMCDDA's Reitox national focal points.

Several existing Internet-based DTIs were found, designed for cannabis, cocaine and 'club drug' (e.g. ecstasy) users. Four of these are described in detail in this review. Three programmes were counsellor-guided, and one was a fully automated self-help programme. All four DTIs targeted young adults and adolescents.

Evaluation of the efficacy of programmes was only available for one programme, 'Quit the shit' (QTS), based in Germany. QTS was able to provide some proof of efficacy in the form of meaningful, quantitative preliminary data of a randomised controlled trial: 32 % of participants were reported as abstinent after completing the QTS programme, while data showed that retention rates — i.e. the rate of clients who completed the programme — from 42 % to 72 % could be reached. A second programme, the self-help programme in the Netherlands, is currently being evaluated, yet is based on a model which has already shown its efficacy for alcohol-related problems assumedly; this model might also be likely to have positive effects for drug-related problems. For the remaining two programmes, at the time of writing no evaluations were available for analysis, although evaluations of recently-started programmes were due to be published soon.

State of development and potential strengths of Internet DTIs

The evidence is currently far from sufficient to draw final conclusions on the effectiveness of the Internet-based DTIs, or to decide about adequate target groups. Nonetheless, there were a number of reasons to publish the results of this small study in the EMCDDA's Insights series. Experts, decision-makers and the European public can benefit from more information on this new approach.

Despite the need for further investigations and evaluation of existing Internet-based DTIs, the available data show promising results for further research and development in the EU. Strengths of Internet-based DTIs include potentially low maintenance costs for self-help programmes, the relative ease of transfer and translation/localisation of programmes for other EU Member States, and the attractiveness of Internet-based programmes for first-time treatment seekers, in particular adolescents and young adults (first-time treatment clients represented 78 % of those reported in the Quit the shit evaluation). On top of such benefits, generic strengths of the Internet as a medium for health communication might encourage further deployment of Internet-based drug treatment interventions within the European Union.

So this publication reports on work in progress, and invites clinicians and researchers to further develop applications as described below, while bearing in

mind the need at this stage for careful evaluation. Despite their limitations, the results of this small study suggest that Internet-based DTIs may prove a useful option to reach a population of drug users in need of support which are often not reached through traditional approaches. There is also some promise that approaches can be transferred at low cost between countries and across languages, on the basis of using a common technology and medium: the Internet.

Chapter 1: Background

Chapter 1: Background

The Internet as an interactive channel for health information

The Internet plays an important role in the daily life of the majority of European citizens. In March 2008, about 60 % of the European Union population was using the Internet, representing more than 290 million web users. By the end of 2007, Norway and the Netherlands were reported as first and second on the global ranking of web usage, with around 88 % of their populations online (http://www.Internetworldstats.com). The past two decades have seen the Internet grow enormously in both popularity and accessibility. For example, in Germany from 1997 to 2007, the rate of Internet users within the population grew from approximately 6 % to 60 %, with higher usage among adolescents and young adults (aged 14–29 years) (van Eimeren and Frees, 2007).

While entertainment is a major reason for web use, in particular for younger users, the main reason people use the Internet is to search for information (van Eimeren and Frees, 2007). A survey conducted by Andreassen et al. (2007) on citizens' use of e-health services in seven EU countries showed that more than half (53 %) of responding Internet users reported the Internet as an 'important' or 'very important' source of health information. More than a quarter (27 %) of users were engaged in self-help activities, and almost a third (30 %) had already interacted with health professionals or a web doctor using the Internet. Altogether, 71 % of Internet users already use the Internet for health purposes.

Confidentiality

Considerable research has sought to analyse the Internet as a source of health information (e.g. Morahan-Martin, 2004). Findings have provided diverse insights. One study suggests more patients look for information online before talking with their physicians (Hesse et al., 2005). Another suggests that a direct positive relation may exist between the use of the Internet and subjective health (Wangberg et al. (2007)). Some findings show that anonymity and confidentiality are deemed important by Internet users when approaching health professionals. Andreassen et al. (2007) observed that while 30 % of all Internet users already interacted with health professionals, only 7 % ever contacted their personal family doctor through that medium. Equal findings were reported by Dumitru et al. (2007), who showed

that 54 % of Internet users have interacted with health professionals they had not met face-to-face, while only 10 % ever approached their family doctor via the Internet. Amongst the reasons given by respondents for not approaching the family doctor via the Internet, the main concern, reported by 82 % of surveyed Internet users, was concern about confidentiality, followed by a preference for face-to-face contact and simply a lack of such services. Thus, confidentiality and/or anonymity play an important role when interacting with health professionals via the Internet. Additionally, information gathering may be considered as among the most important uses of the Internet for health purposes.

Availability and coverage of interventions

Given its popularity and impact, the Internet is already widely — and justifiably — used as a medium for universal prevention campaigns. Research has shown, for example, how personally-tailored information compares favourably to standardised 'one-fits-all' brochures (Bull et al., 1998; Lilja et al., 2003; Tobler et al., 2000; De Vries and Brug, 1999). The Internet, with its interactive character, is well-suited to such personalised methods of information and knowledge transfer. Further factors render the Internet an attractive delivery platform for both prevention and intervention programmes (Griffith et al., 2006): Internet-based programmes can be made available around the clock. Users mostly can accomplish the intervention at their own pace, when and where they want. Once developed, automated programmes need little maintenance effort and are widely accessible to a huge online population with almost no additional costs per user. Clients who are physically immobile and groups living in isolated areas, can be reached easily because distance does not prevent clients from reaching Internet-based services. Peer support can be offered with a limited risk of cross-infection, and the anonymity offered by the Internet provides low-threshold access for stigmatised clients. If a programme is offered for free, inequalities of access to health services may be overcome and wider forms of Internet-mediated communication — e.g. e-mail or chat — provide more possibilities for (personal) interactivity. Internet-based mental health programmes are not only perceived as efficient and effective, but also as a tool to provide care to people in rural settings where specialised medical care would only be available at a considerable distance (Griffiths and Christensen, 2007).

Not all of these generic factors may apply to every Internet intervention, yet the Internet is still able to offer strong arguments as a delivery medium, even if it delivers only some of its benefits. For instance, the Internet is universal, so a socially well-

integrated person who does not live in a remote area, but who is merely reluctant to approach traditional therapy, might also be attracted to an Internet-based intervention. Even if a programme is only offered as a fee-paying service and is not based on complete anonymity, it will still offer several of the generic advantages (accessibility, interactivity, etc.) of Internet-based interventions.

Internet-based treatment related to tobacco, alcohol and psychiatric disorders

Given such benefits, various Internet-based interventions have been developed around the world. These include applications for the treatment of chronic headaches (Devineni and Blanchard, 2004), insomnia (Strom, Petterson and Andersson, 2004), depressive symptoms (Warmerdam et al., 2007), childhood anxiety (Spence et al., 2006), panic disorders (Klein et al., 2006; Shandley et al., 2008), fear of public speaking (Botella et al., 2008), to reduce women's risk for osteoporotic fractures (Drieling, Ma and Stafford, 2007) and for delivering nutritional education (Oeneme, Brug and Lechner, 2001). A great number of Internet-based interventions are those dealing with smoking cessation and alcohol consumption (Walters, Wright and Shegog, 2006; Riper et al., 2007; Blankers et al., 2007; Copeland and Martin, 2004). While these programmes differ widely — in their design, duration, means of communication and methods of delivery, etc. — most of these Internet-based interventions are based on cognitive behavioural therapy (CBT) and psycho-education, and most have already proven their efficacy.

Research has shown that Internet-based treatment interventions, particularly those for alcohol-related disorders, may reach certain populations otherwise not reached by traditional counselling or treatment facilities (Postel et al., 2005; Lieberman and Huang, 2008). Lieberman (2005) compared an Internet sample which represented a potential non-traditional treatment group to a sample which was treated in traditional substance abuse programmes (Miller and Tonigan, 1996; Project MATCH Research Group, 1997). A higher rate of women accessed the website, while age and years of formal education were similar between groups. Internet users had a higher rate of employment than people in traditional treatment. While comparability of these groups is limited, the results indicate that females and clients in employment might be better reached through the Internet-based channel, when compared with traditional treatment services.

The development of Internet-based treatment and e-medicine as a whole is still only beginning and well-evaluated programmes are rare. A Canadian Research Group working with Farvolden investigating the 'usage and longitudinal effectiveness of a web-based self-help cognitive behavioral therapy program for panic disorder', stated that there is 'little data regarding the patterns of use and effectiveness of freely available web-based interventions outside the context of controlled trials.' (Farvolden et al., 2005). Focusing on a broader topic of research, Ritterband quotes the International Society of Internet Interventions by pointing out that 'As of early 2006, there were over 25 randomised controlled trials of Internet-based mental health interventions.' While the feasibility of Internet health interventions in general has been well validated, only recently has efficacy become a more established aspect of programmes (Ritterband et al., 2006).

A review of studies on computer- and Internet-based interventions for smoking behaviour published between 1995 and August 2004, identified 19 studies that used automated systems for smoking prevention or cessation. These studies varied widely in methodology, intervention delivery, participant characteristics, follow-up period, and measurement of cessation. Of eligible studies, nine (47 %) reported statistically significant or improved outcomes at the longest follow-up, when compared with a control group. Few patterns emerged in terms of subject, design or intervention characteristics that led to positive outcomes. The 'first generation' format, where participants were mailed computer-generated feedback reports, was the modal intervention format and the one most consistently associated with improved outcomes. The review's authors stated there was a need for studies which would identify whether certain patients are more likely to benefit from such interventions than others, and which pharmacological and behavioural options can best promote cessation (Walters, Wright and Shegog, 2006).

Looking at a group of problem drinkers, Riper et al. (2007) studied exactly this question: which types of client might profit most from an intervention? The intervention under study, 'Drinking Less', was a free access, interactive web-based self-help intervention without therapist guidance, for problem drinkers who wanted to reduce their alcohol consumption. The programme was based on cognitive-behavioural and self-control principles. In a pragmatic randomised trial, 261 participants were analysed with respect to the differential effects of gender, education, Internet use competence, alcohol consumption, prior treatment and participants' expectancies. Although female and more highly-educated users

appeared slightly more likely to derive benefit from the Drinking Less intervention, none of the parameters studied had a strong effect on treatment outcome. The intervention was therefore viewed as well-suited for a heterogeneous group of problem drinkers.

Postel et al. (2008) conducted a study to assess systematically the methodological quality of randomised controlled trials (RCTs) concerning e-therapy for mental health problems. Two reviewers independently assessed the methodological quality of the RCTs, based on common criteria for the methodological quality assessment as recommended by the Cochrane Back Review Group's literature search result of 14 RCTs on e-therapy for mental-health problems. The quality of these studies, however, was assessed as generally low and concluded that e-therapy may be promising but evidence at the time of review was not convincing.

Internet-based treatment related to illicit drugs

Internet-based interventions related to alcohol and smoking behaviour only started to be developed less than 10 years ago (see figure 1). As the previous chapter has shown, the evidence of efficacy of these approaches is growing slowly, as well as a better understanding of where, when and for whom such interventions might be adequate. However, given the early stage of development in this field, we cannot reach conclusions on interventions related to illicit drugs. Instead, we must look at the literature base relating to interventions for licit psychotropic substances and try to draw conclusions on the basis of common mechanisms in addiction development and treatment that may be relevant across alcohol, tobacco and illicit drugs. And there remains a need for applications for Internet-based treatment of illicit drug disorders to be discussed and researched independently, with any conclusions being compared to emergent research findings for both illicit and licit substances.

The accessibility of Internet-based interventions may be one attraction of interventions targeted at users of illicit drugs: the majority of drug users have access to the Internet (Cunningham et al., 2005). Furthermore, epidemiological data show higher cannabis and 'party drug' (cocaine, ecstasy, etc.) use among young adults, a population which also shows higher Internet use. Again, this is another argument for encouraging tailored Internet-based drug treatment interventions for this specific population (Copeland and Martin, 2004).

Figure 1: Example of an alcohol-related website in the Netherlands
Source: The Trimbos Institute (http://www.drinktest.nl). Last accessed on 23 January 2009.

Between 2003 and 2006, an average of 22 % of 15–64-year olds in Europe reported using cannabis at least once in their life (lifetime prevalence), making cannabis the illegal substance most frequently used in Europe (EMCDDA, 2008). In Germany, 17 % of the population aged 18–24 reported having consumed cannabis in the last 12 months and more than one third of people (39 %) in the same age group reported using cannabis at least once. Additionally, it is estimated that 7.5 million young Europeans (aged 15–34) have tried ecstasy, and it can be assumed that around two million Europeans have used cocaine in the last month.

According to the latest data from the EMCDDA Statistical bulletin (EMCDDA, 2008b), new treatment demands are still principally registered for heroin treatment, but from 2002 to 2006 treatment demand doubled for cannabis and almost doubled for cocaine treatment, while at the same time demand for heroin treatment decreased by 25 %. Every fifth (21 %) treatment demand and 28 % of all new demands for treatment, reported cannabis as the primary drug. According to EMCDDA data, virtually all cannabis clients start using the drug before the age of 20. Additionally, a large number of young problematic cannabis users outside treatment are likely to exist, as they are reluctant to approach conventional treatment centres which provide adult-oriented and opioid-oriented services. It should be noted that currently in Europe, there is a general lack of services dedicated to young, socially integrated problem cannabis users (EMCDDA, 2008a).

Thus, there is strong potential for Internet-based harm-reduction and prevention programmes targeted at young populations. Internet-based drug treatment interventions, however, that are designed for users of illicit drugs remain less common and few controlled studies have been published (Copeland and Martin, 2004).

This review aims to provide an overview of the state-of-the-art in Internet-based drug treatment interventions in the European Union. It lists existing Internet-based drug treatment interventions in EU Member States as reported by the EMCDDA's Reitox national focal points, providing a number of more detailed examples of the several kinds of drug treatment websites. The term 'Internet-based drug treatment intervention' is clarified early in the publication, in order to specify what is actually considered as a treatment intervention within the review. Existing programmes, which could be labelled as examples of 'good practice', are described in detail, including a description of their design, concept and implementation, target groups and theoretical underpinning. The outcomes of any existing evaluations or relevant

studies are also presented as well. Common differences, similarities and possible future extensions of Internet-based drug treatment interventions are analysed, as well as problematic issues concerning the provision of those programmes and the use of the web as a medium for communicating health content. Finally, the conclusion discusses any possibilities to enhance the provision of Internet-based drug treatment within the European Union.

Chapter 2: Methods

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Defining an Internet-based DTI

A plethora of different types of drugs websites exists online: informational, counselling-focused, 'drug self-tests', phone/e-mail/chat contact with a counsellor, etc. So a clear definition of 'Internet-based drug treatment interventions' (Internet DTI) is required: only by restricting our scope can we differentiate existing websites and justify selecting a number of them for further commentary.

For the purposes of this review, an Internet-based DTI is defined as 'a specifically elaborated or adapted, structured and scheduled drug treatment intervention, offered in and communicated over the web'. An Internet DTI should have a specified conceptual background, a defined timeframe, and be comparable to existing 'traditional' treatment offerings. Naturally, this report also provides a wider overview of existing Internet-based drug interventions, and so brief descriptions of several types of existing drug-related websites are also included.

Note the use of the word 'intervention'. A 'treatment intervention' is different from the (long-term) concept of treatment, being both briefer and focused on specific, structured preventive outcomes. To illustrate how the definition applies, two examples of a service that do not count as an Internet DTI are useful. A one-time counselling service delivered via the Internet, even if the counsellor may potentially have contact with the client more than once is not a DTI, because it lacks the clear, sustained concept, schedule and structure of an Internet DTI. A second example might be smoking cessation or alcohol-related programmes. These are not included in this review because they relate to licit, not illicit drugs (although some may be mentioned within the description of other treatment interventions). Examples of such interventions are described in Chapter two.

Differentiating between a 'website' and a 'programme'

In this report, use of the term 'programme' refers to the Internet-based drug treatment intervention itself. 'Website' mostly refers to the website in which the programme is embedded. As all programmes could be regarded as separate parts of the related website, a brief description of the website and the operating organisation is included to provide some contextual background within each description of the Internet-based DTI.

Methodology used for collecting data

A survey of the Reitox network

The authors of the study approached the EMCDDA's Reitox network of national focal points to collect verified information about the existing Internet-based drug treatment interventions within EU Member States and other Reitox reporting countries.

Thirty national focal points (NFPs) were contacted via e-mail ([1]). In an initial mail, the researchers explained the objective of the review and outlined the definition, described above, of 'Internet-based drug treatment intervention'. Recipients were asked to describe the current state-of-affairs with regards to Internet-based DTIs in their country. To be able to collect comparable data from all Reitox national focal points, the researchers attached a PDF questionnaire to the e-mail which could be filled in on-screen. The questionnaire contained the question:

'Are you aware of Internet-based drug treatment interventions (regarding websites which offer Internet-based drug treatment intervention) in your EU member country or, respectively, your Reitox Member State?'

If any programme was known, the NFPs were asked to provide basic information about the programme (name of the programme, URL, initiation year, target group, contact person, etc.).

A timeframe of two weeks was set for the NFPs to respond. Reminder e-mails were sent after this period if no response was received. A third reminder e-mail was sent to all non-responding NFPs without any attachments, to try to assure that the e-mail did not end up in any spam filters. The survey of the NFPs took place from mid-April until mid-June 2008.

Literature and Internet research

During the survey of the NFPs a parallel research was conducted, using well-known databases (Pubmed, ISI Web of Knowledge) and Internet search engines (Google) to search for relevant studies, programmes and websites on the subject. Search terms such as 'Internet-based', 'web-based', 'treatment', 'programme', 'drug', 'cocaine', 'cannabis', amongst others, were combined to cover existing sources of information.

([1]) The number of NFPs results from the number of EU Member States (27), two candidate countries (Turkey, Croatia) and the Reitox member, Norway. The focal point of the European Commission was not included in our survey.

Additionally, any websites mentioned in the National reports of the NFPs were included. The websites found were further analysed regarding any relevant programmes which corresponded to our programme definition.

Research on programmes

The programmes and websites reported by the NFPs, together with those revealed as potentially relevant through the Internet and literature research, were contacted for further information. To obtain further information, the same technique as with the NFP survey was used. An e-mail with attached PDF questionnaire was sent, asking for further information regarding the initiation date, target group, duration and any existing evaluations, annual reports etc. of the programme. If the programme seemed at the end of this process to match the criteria of an Internet-based DTI, it was considered for a detailed description within the review. Further personal contact was established where needed, for a more detailed description of the implementation, structure and theoretical background.

Chapter 3: Findings

Chapter 3: Findings

This chapter covers the information about Internet-based DTIs collected during the research described in Chapter 2. Information provided by the NFPs is presented in an overview. Following the definition of Internet-based DTIs, a selection of four valid programmes is presented, together with a detailed description, complemented by brief descriptions of several additional websites which did not meet the specified criteria.

From the 30 contacted NFPs, 26 valid answers were received (response rate: 87 %). Four countries did not respond to the survey (Spain, Malta, Norway and Ireland). Six countries (Germany, Denmark, Netherlands, Poland, Finland and the Czech Republic) mentioned the existence of known Internet-based DTIs, and submitted data about one or several known Internet-based drug treatment interventions (Table 1).

Table 1: Responding NFPs and response on the existence of an Internet-based DTI			
Member State	**Institution, Organisation**	**Name**	**Existing DTI***
Belgium	Scientific Institute of Public Health	Marc Roelands	NO
Bulgaria	National Focal Point on Drugs and Drug Addiction	Momtchil Vassilev	NO
Czech Republic	National Focal Point on Drugs and Drug Addiction	Barbora Orlikova	YES
Denmark	National Board Of Health	Maria Winther Koch	YES
Germany	DBDD c/o IFT München	Tim Pfeiffer-Gerschel	YES
Estonia	National Institute for Health Development	Kaire Vals	NO
Ireland			-
Greece	University Mental Health Research Institute	Manina Terzidou	NO
Spain			-
France	OFDT	Jean-Michel Costes, Eric Janssen	NO
Italy	Presidenza del Consiglio dei Ministri	Silvia Zanone	NO
Cyprus	Cyprus Monitoring Center for Drugs and Drug Addiction	Maria Savvidou	NO
Latvia	Public Health Agency	Sandra Perkone	NO

Table 1 continued			
Lithuania	Lithuania Drug Control Department Lithuanian National Focal Point coordinator	Ernestas Jasaitis	NO
Luxembourg	Ministère de la Santé - Direction de la Santé – AST	Simone Schram	NO
Hungary	National Focal Point	Orsolya Varga	NO
Malta			-
Netherlands	Trimbos Institute	André van Gageldonk	YES
Austria	Gesundheit Österreich GmbH	Marion Weigl	NO
Poland	National Bureau for Drug Prevention	Artur Malczewski	YES
Portugal	Institute on Drugs and Drug Addiction	João Goulão	NO
Romania	National Antidrug Agency	Madi Surugiu	NO
Slovenia	National Focal Point	Mercedes Lovrecic; Andreja Drev	NO
Slovakia	General Secretariat of the Board of Ministers for Drug Addiction and Drug Control	Lucia Kissova; Eleonora Kastilová	NO
Finland	- A-Clinic Foundation - Stakes - Elämä On Parasta Huumetta ry	- Tiia Ruokosalo - Elina Kotovirta - Ilmo Jokinen	YES
Sweden	Swedish National Institute of Public Health	Bertil Pettersson	NO
England (UK)	United Kingdom Focal Point on Drugs Department of Health	Gail Eaton	NO
Croatia	Office for Combating Narcotic Drugs Abuse of the Government of The Republic of Croatia	Hrvojka Lausic	NO
Turkey	TADOC	Mustafa Pinarci	NO
Norway			-

*as stated by the national focal point.

Out of these six countries, there were in total 13 indications for potentially relevant programmes (shown in Table 2). Further research about the received websites revealed that seven of them did not meet the specifications of an Internet-based DTI, while one programme with two different names was stated twice and another programme was not yet available. Accordingly, out of these 13 initial indications, it was finally concluded that four programmes matched the criteria of an Internet-based DTI (see Table 2).

Table 2: Reported Internet-based DTIs of the responding national focal points

Member State	Programme(s) mentioned	URL	Initiation date (programme) [1]	Internet-based DTI? [2]	Detailed description included in review
Germany	Quit the shit	http://www.drugcom.de	2004	Yes	Yes
Denmark	SMASH	http://smash.name	2006	No	No
Netherlands	JellinekLive Online Behandeling Cannabis (Treatment Online)	www.jellinek.nl/hulp/content.php?i=89	2008	Yes	Yes
	Cannabis Onder Controle	www.cannabisondercontrole.nl	2008	Yes	Yes
	Grip op gras	www.gripopgras.nl	2008	Yes	See Cannabis Onder Controle
	Wat wil jij met wiet	www.watwiljijmetwiet.nl	-	N/A [3]	No
Poland	Internet Counselling Center	www.narkomania.org.pl	2004	No	No
Finland	Päihdelinkki – AddictionLink	http://www.paihdelinkki.fi	1997	No	No
	Voimapiiri (Power Circle)	http://web10334.web1.kuulalaakeri.fi/	2007	No	No
	Mobiilivinkki, the mobile advice	http://www.eoph.fi/en	2005	No	No
England	Transfer of Cannabis Self-Help in progress (Know Cannabis and Talk to Frank)	http://knowcannabis.org.uk/ http://www.talktofrank.com	2004	Yes	Yes
Czech Republic	Drogová poradna SANANIM (Drug counselling website)	http://www.drogovaporadna.cz	2001	No	No
	Prevence zneužívání syntetických drog (Prevention of use of synthetic drugs)	http://www.extc.cz	2001	No	No

(1) If applicable.
(2) See definition of Internet-based drug treatment intervention.
(3) Data not available.

The research for URLs published in the National reports had already revealed almost all of the relevant programmes mentioned in NFP responses. One programme was found in the National report of the United Kingdom which was not submitted specifically as an existing Internet-based DTI by the corresponding NFP. However, this currently autonomous programme was reported as due to be integrated in another existing website (Talk to Frank and Know Cannabis Self-help). Furthermore, the Dutch NFP sent several previously unknown programmes, of which 'Wat wil jij met wiet' was not yet available at the time of writing and is not included in the further analysis. In general, all programmes and websites found within the research were analysed with regard to the definition of Internet-based drug treatment intervention. If not all of the aspects of an Internet-based drug treatment intervention were applicable, the programme or the website was not considered for a detailed description.

Due to the diversity of languages within the 30 Reitox reporting countries, a complete and complementary web search for existing programmes could not be conducted. However, the search for published literature conducted via Pubmed and ISI Web of Knowledge did not reveal any relevant publications concerning additional programmes within the EU.

From the responses of the Reitox NFPs and the research of URLs mentioned in the National reports, a typology of existing drug-related offerings on the Internet was created. This categorisation helps to better understand the rationale of Internet-based drug treatment interventions, and to differentiate existing websites. All websites found during the research correspond approximately with one of the following types, which are subsequently described in brief, with a detailed description of those websites that provided embedded Internet-based DTIs:

- websites providing embedded structured interventions (see Websites with embedded Internet-based interventions, below);

- websites complementary to other services (websites providing information, websites providing contact possibilities, websites providing mobile phone services; see Additional websites).

Websites with embedded Internet-based interventions

Some websites act as containers for Internet-based drug treatment interventions offering partly extensive drug- or dependence-related information, knowledge tests and games, while others just briefly explain the content of the embedded programme

and offer virtual drug consumption self-tests. A common feature of all these sites was the availability of a structured treatment intervention. These interventions can be differentiated into two types:

1. Structured, pre-tailored self-help programmes without scheduled contact with a counsellor.

These programmes are fully automated, self-contained and are provided free-of-charge. Use of the programme is anonymous. Participants work with several virtual tools or modules, have access to certain information, and navigate through the programme on their own. Interactive feedback is generated based on the data entered by participants. Newer versions additionally provide contact with other users via an integrated forum, thus creating a kind of a virtual self-help group (see the detailed description of Know Cannabis Self-help and the corresponding programmes of JellinekMentrum under Know Cannabis Self-help, below).

2. Structured programmes which include scheduled contact with a counsellor.

In comparison with the self-contained, automated programmes, participants of these programmes have regular contact with counsellors. Communication via the Internet is arranged and scheduled in different ways (e.g. one-to-one chat sessions, message boards). The frequency of contacts between counsellor and participant varies, as does the recommended duration of these interventions. These counsellor-assisted programmes often work with modules and tools that are comparable to the self-help programmes. Unlike the self-help interventions, however, most but not all of these counsellor-assisted programmes are charged (i.e. they charge a fee for use). Accordingly, they are not offered anonymously and require a minimum age. For examples of these programmes, see the descriptions of JellinekLive Online Behandeling Cannabis (Treatment Online Cannabis), Cannabis Onder Controle and Quit the shit, under their respective titles in the text.

Know Cannabis Self-help

Organisation: HIT and JellinekMentrum

URL: http://knowcannabis.org.uk/selfhelp.htm

Type of programme: free self-help programme without scheduled contact to counsellor

Initiation date (month/year): 12/2004

Target group: 'Any potentially hazardous, harmful and dependent cannabis users.' (Campaign target audience: Young people aged 16–24 years)

Recommended/scheduled duration of the intervention: 4–6 weeks

Number of participants in 2007: 1 558

Country: United Kingdom (UK)

Language: English

Contact: Professor Pat O'Hare (HIT)
          patrick.ohare@gmail.com

Short description

The free 'Know Cannabis Self-help' programme is based on browser-integrated, interactive tools, which are supposed to help the participants gain insight into their cannabis consumption behaviour. Based on data entered by the participants, the programme delivers a detailed presentation of consumption-related aspects in the participants' lives, combined with information material ('Fact sheets') including advice on how successfully to change or stop cannabis consumption.

Background

The knowcannabis.org.uk website was originally launched in the summer of 2004 as part of a UK campaign aimed at communicating the harms and risks of using cannabis regularly. This campaign consisted of information leaflets, posters, radio adverts and the Know Cannabis website, and was delivered by HIT, a UK social enterprise committed to reducing the harm caused by drug and alcohol use in communities. The website was further promoted during a UK-wide governmental communication campaign from December 2004 until May 2005. Since the end

of the campaign, HIT has continued to provide the free self-help programme, and promotes the website and the self-help programme in the UK in cannabis-related brochures, booklets, flyers, amongst other formats.

Figure 2: Know Cannabis home page

The self-help programme embedded in the knowcannabis.org.uk website was developed by the Dutch organisation JellinekMentrum and is also available in a slightly newer version on their website in the Dutch language, alongside other free self-help programmes for alcohol, cocaine, gambling and smoking. These programmes are all based on the same concept and design, and some are available as counsellor-guided versions (including a chat module), as described in the next section.
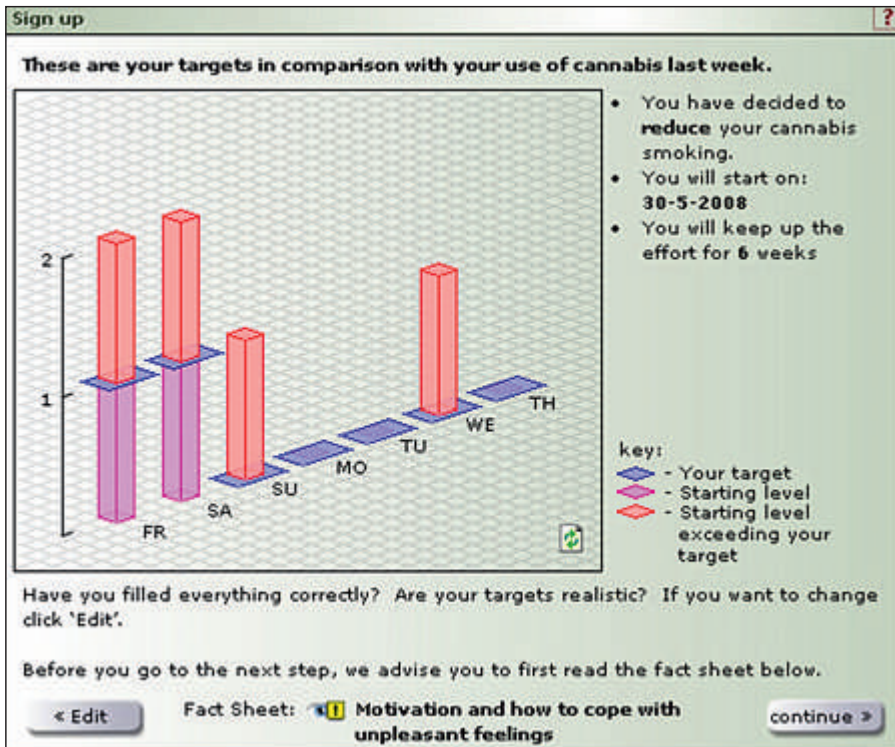
Figure 3: Know Cannabis registration

Registration

All self-help participants need to pass through a five-step process of registration, where data which is important for the later use of the programme tools is collected. The user first creates a personal account entering a login name and a password, optionally his sex, age, place of residence and e-mail address.

The participants determine in step two how much cannabis they have consumed in the last seven days. In step three, the personal pros and cons of using cannabis and of stopping or cutting down are defined in a balance sheet. This should help the user to actually decide in step four whether their goal is to stop, reduce or control their consumption. This goal (e.g. the aspired consumption rate) is shown as a graph in relation to the actual consumption in the last seven days. Before proceeding to

the next step, the participants are advised to read a 'Fact sheet', which provides information on how to cope with feelings of craving. Finally, participants select and specify personal steps and behavioural patterns which are supposed to help to stop or reduce the use of cannabis. The programme suggests some examples ('I will spend more time with friends that don't use cannabis', 'Every day, I will read through my advantages of smoking less cannabis') and participants are motivated to select the suitable proposed steps and to create their own.

After the registration is completed, participants can log in on the 'Know Cannabis' website with their user name to access the actual programme.

Programme

The aim of the self-help module is then to offer participants the possibility to gain insight into their own substance use behaviours and to assist them during their attempt to change these behaviours. Thus, the programme offers a variety of tools that are supposed to help the user to control or stop the consumption of cannabis.

Craving and smoking diary

The main part of the programme is the 'Craving and smoking diary' where everything related to cannabis in the daily life of the participant is frequently recorded: the times and situations in which a strong urge to use cannabis (craving) appeared, the times cannabis was actually used, the people which were around at this time, relevant feelings and thoughts, etc.

Personal feedback

This collected data can be viewed in a formatted design on a 'Results page', where tables and graphs point out, for example, when and in what context craving appeared, when and where cannabis was consumed. This algorithmically-generated feedback, based on the registered cannabis consumption in comparison with the previously set goal, inner states and contexts, helps the participants to gain insight into their consumption behaviour and helps to analyse and recognise hazardous or difficult situations, relevant thoughts, and successful strategies to prevent smoking.

Relapse prevention and emergency plan

Participants additionally create a personal 'Relapse prevention plan', which is a personal list of potentially difficult situations and specific ways to deal with them.

To be prepared if a relapse occurs, participants are supposed to construct an 'Emergency plan', which specifies how to deal with such a situation and how to prevent further relapse.
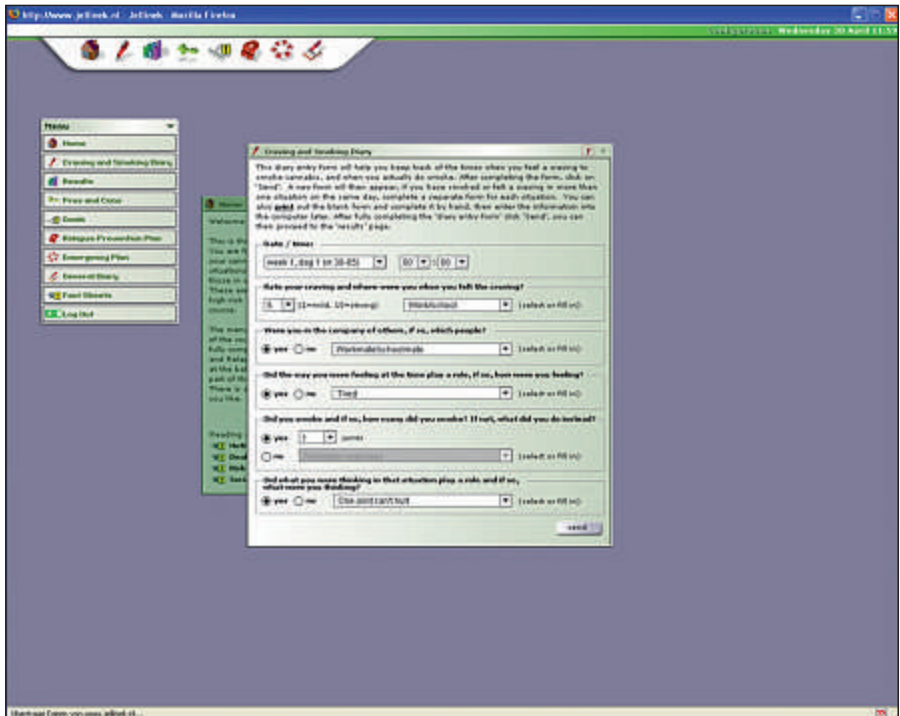

Figure 4: Know Cannabis programme

Information

Integrated in the self-help modules are additional links to further information (called 'Fact sheets') about specific topics. Here, participants will find information about social pressure, dealing with craving and risk situations, motivation and unpleasant feelings, and coping with relapses.

Personal diary

To reflect on acquired knowledge and skills, participants are motivated to write in their personal online diary.

The recommended participation in the programme is about four to six weeks. Frequent use of the tools, e.g. the Craving and smoking diary, during this period allows the user to develop a detailed insight into his or her cannabis use, to change behaviours and to achieve the desired specified goals.

Theoretical background

The Know Cannabis Self-help is based on cognitive-behavioural principles (cognitive behavioural therapy, CBT). The actual aim is harm reduction. The self-help programme is designed as a tool targeted especially at cannabis users who would not seek the advice of traditional treatment or counselling facilities, and refers to self-help manuals based on cognitive principles. However, the information available on the Know Cannabis website, as well as the tools of the self-help programme itself, could be equally used as a tool in face-to-face contacts between practitioners and their clients.

Evaluation

No evaluation reports for the Know Cannabis Self-help are published, but we received some data from the authors about the use of the programme:

As shown in Table 3, in 2006 the knowcannabis.org.uk website had 33 464 visitors, an average of 2 788 visitors per month. 1 419 users completed the registration process of the self-help module, while 125 participants (8.8 %) completed the programme and participated during at least 28 days.

In 2007, the number of users increased by 58 % to 52 801 which is a monthly average of 4 807 visits; with 1 558 users signed up for the self-help programme, which indicates an increase well below the percentage for the overall number of visitors. The percentage of users who completed the programme was relatively stable between 2006 and 2008.

Table 3: Usage of the Know Cannabis programme			
Year	Visitors	Participants signed up	Participants completed (%)
2006	33 464	1 419	125 (8.8)
2007 (change vs. 2006)	52 801 (+58 %)	1 558 (+10 %)	138 (8.9)
2008	To be updated	To be updated	To be updated

Further information

Current plans are to integrate the content of the Know Cannabis website, including the self-help module, into the previously-described 'Talk to Frank' website of the UK government's drug advice service. This would probably increase the number of visits due to the degree of popularity of the FRANK website.

In 2007, the Dutch organisation JellinekMentrum, developers of the Know Cannabis Self-help module, published evaluation data about a comparable Internet self-help programme for problem drinkers in the Netherlands (Blankers et al., 2007): Interestingly, according to the login data, 40 % of the activity in the self-help programme took place before and after working hours, and an additional 27 % during the weekends, thus, times when a traditional treatment centre would not have been available. The statistics indicate that these services are used at those times of the day when people tend privately to use the Internet.

Out of 3 386 participants of the alcohol self-help programme, 64 % (2 021) did not return to the programme after their registration. 31 % returned to the programme and participated for an average of 18 days but did not complete the programme. Only 5 % actually completed the programme and participated for at least 28 days (compared to almost 9 % completing the Know Cannabis programme). However, for problem drinkers this evaluation showed a significant reduction of alcohol consumption during and after participation in the self-help programme.

Links:

http://www.knowcannabis.org.uk
http://www.hit.org.uk
http://www.hit.org.uk/campaigns.asp?id=43
http://www.jellinek.nl/
http://www.jellinek.nl/zelfhulp/cannabis/

JellinekLive Online Behandeling Cannabis (Treatment Online Cannabis)

Organisation: JellinekMentrum

URL: http://www.jellinek.nl/hulp/content.php?i=89

Type of programme: fee-based programme including scheduled contact with a counsellor

Initiation date (month/year): 04/2008

Target group: 'Cannabis users who want to reduce or stop smoking'. Minimum age, 18 years.

Recommended/scheduled duration of the intervention: 10 weeks

Number of participants in 2008: 61 (from 04/2008 until 12/2008)

Country: Netherlands

Language: Dutch

Contact: Mr Roel Kerssemakers   Mr Matthijs Blankers (Research)
          rkerssemakers@jellinek.nl   m.blankers@amc.uva.nl

Brief description

The 'Therapy Online Cannabis' programme (TOC), which began in May 2008, is based on several interactive tools that are presented on a personal website. These tools help participants to gain insight into, and to change, their personal cannabis consumption behaviour. Within the 10 weeks of the programme, seven personal one-to-one chat sessions with a counsellor are conducted. Additionally, participants have access to an integrated forum. Participation in the programme is subject to a fee, but this is refunded through healthcare insurance. The programme is thus not offered anonymously.

Background

JellinekMentrum started to develop several Internet-based self-help programmes in 2003. In 2004, the cannabis self-help programme was successfully translated and integrated into the UK 'Know Cannabis' website (see Know Cannabis Self-help, above). Since 2007, these free, fully automated and anonymous self-help

interventions for alcohol-, cannabis-, cocaine- and gambling-dependent clients have been unified under the name JellinekLive. Until now, updated and slightly different versions of the self-help programmes (now allowing contact with other participants via a forum) are accessible on the Jellinek website in the Dutch language.

The core of the 'Therapy Online Cannabis' (TOC) programme is identical to the previously-described Know Cannabis Self-help. However, the TOC programme is based on the newer version of the self-help programme described above, and thus has a slightly different design and a more elaborated concept, and offers additional personal contact to a counsellor via a chat function. These latter contacts with a counsellor are charged.

Figure 5: JellinekMentrum home page

Registration

Alongside the new design, the new version of the programme brings with it several significant changes. During the registration process, participants already have access to, and are asked to read through, more reading assignments. Participants of the TOC programme must also register with complete personal data (e.g. name, address, etc.) and costs arising from the counsellor-guided intervention are partly paid by health insurance. On the personal website, a task is presented every week on a welcome screen and participants now have access to an integrated forum, allowing them to communicate with other participants. However, no fundamental changes were made concerning the main structure of the programme, thus, only a brief description of the content is given based on the information of JellinekMentrum.

Programme

The first phase of the programme involves the registration of cannabis consumption, clear goal setting, and identification of personal risk situations (e.g. a smoking and craving diary, relapse prevention). A second phase is the receipt of automated feedback, generated with the data registered in the personal craving and smoking diary. The third phase is to acquire skills and knowledge on coping with craving, peer pressure, motivation and assessing risk situations. This is done via several reading assignments and is supported by the use of a personal diary. The fourth and last phase is the support of social contacts via the integrated forum. Participants can discuss their experiences concerning their attempt to stop or reduce cannabis consumption, withstand tempting situations, online help, etc. Thus, an online self-help group is created in which participants can motivate and advise each other.

While all of these tools/modules are available within the new versions of the free and anonymous self-help programmes of JellinekMentrum, the TOC programme includes an additional chat module.

A treatment within the TOC programme includes seven personal one-to-one chat sessions of 30 to 40 minutes with a Jellinek counsellor. In these chat sessions, homework assignments and experiences of the participants are discussed and participants are motivated to enhance their attempts to reduce or stop their cannabis consumption.

Figure 6: TOC programme — main screen

Theoretical background

The TOC programme is based on cognitive behavioural therapy (CBT) and motivational enhanced training (MET). As these approaches are used in JellinekMentrum's traditional treatment programmes as well, the online programmes, especially those including the personal chat sessions, resemble to a great extent the evidence-based treatment process used in conventional face-to-face treatment.

Evaluation

An ongoing evaluation study is being carried out, but as the programme was launched only in May 2008, data is not yet available. Between the starting date of TOC, 15 April 2008 and 31 December 2008, 438 people filled out an initial 'screening' test, based upon which 209 were invited for the online cannabis treatment. The 229 people who were not invited were given advice and contact information for other treatment options by Jellinek/Arkin. The main reason for not inviting them was (mental and/or physical) comorbidity to an extent above what is considered as acceptable for this type of online treatment by JellinekMentrum. From the invited 209 people, 61 subscribed to receive treatment. Of these 61 people, 45 actually received treatment as intended.

Further information

Based on the same concept as the TOC programme specified above, Jellinek offers an online treatment for people who want to reduce or stop their alcohol use. The JellinekLive 'Online Behandeling Alcohol' was introduced in December 2006 and had received 160 participants in 2007 (260 since initiation). The programme also includes seven chat sessions of 30 to 40 minutes and takes 10 weeks. A randomised controlled trial study for this programme (and the self-help online alcohol) started in June 2008.

As mentioned earlier, Jellinek also offers free, substance-specified self-help programmes without any involvement of counsellors for alcohol, cannabis or cocaine users. The alcohol self-help programme was initiated in 2003 and was revised and re-launched in an updated version in December 2006. The cannabis and cocaine programmes in their actual version were launched in August 2007. So far, the cannabis programme has had 1 933 participants and the cocaine programme was used by 847 participants. The self-help programme for alcohol was taken up by 2 875 participants during 2007. As mentioned in the previous

section, an evaluation study has been carried out for the alcohol self-help programme (Blankers et al., 2007).

Links:

http://www.jellinek.nl/hulp/content.php?i=89 (Cannabis treatment)
http://www.jellinek.nl/hulp/content.php?i=59 (Alcohol treatment)
http://www.jellinek.nl/zelfhulp/cannabis/ (Cannabis self-help)
http://www.jellinek.nl/zelfhulp/coke/ (Cocaine self-help)
http://www.jellinek.nl

Cannabis Onder Controle

Organisation: Brijder verslavingszorg (part of ParnassiaBavo Groep)

URL: http://www.cannabisondercontrole.nl

Type of programme: fee-based programme including scheduled contact with counsellor

Initiation date (month/year): 01/2008

Target group: 'Cannabis users with a stable social network, living conditions and/or employment; users aged 18 years or older without immediate psychiatric problems. Most of which have no previous contacts with addiction treatment.'

Recommended/scheduled duration of the intervention: 3 months

Number of participants in 2008: 687

Country: Netherlands (NL)

Language: Dutch

Contact: Mr Niels Bregman
          Niels.Bregman@brijder.nl

Short description

The 'Cannabis Onder Controle' Programme (COC) is a three-month training programme with the focus on increasing participants' capabilities to cope with craving, to eventually decrease or to stop the consumption of cannabis. Participants are guided by their counsellor through several treatment sessions, and use interactive tools which are communicated via a personal website. Contact with the counsellor is established approximately four times a week on a personal message board. The treatment concept and design of COC was adopted, and is used for Internet-based DTIs aiming both at alcohol and 'party drug' abuse. Participation in the programme is subject to a fee and is not offered anonymously.

Background

Brijder verslavingszorg (Brijder Drug Rehabilitation) which offers Cannabis Onder Controle is a drug treatment organisation which operates 60+ in- and outpatient

facilities in the Netherlands. Brijder is part of the 'ParnassiaBavo Groep', which unites several Dutch health-related facilities and organisations.

Figure 7: COC home page

Registration

During the registration process, an evaluation of the current participants' situation is conducted (age, gender, education, occupational status, physical and psychological problems, etc.). Participants reporting critical data (e.g. use of medication, suicidal tendencies) are contacted via mail or phone, prior to the beginning of the programme.

The costs of the programme are partly paid by health insurance. The exact charge for the participant cannot be reported here. However, due to the involvement of the insurance and to avoid legal problems concerning any permission of parents,

participants need to be over 18 years of age, and have to provide their full name and address amongst other personal data. Thus, the COC treatment programme is not provided anonymously.

Programme

After registration, participants have access to a personal website. During the three-month programme, the counsellor guides them through and gives access to certain intervention/training modules. These modules are accessible via menu items on the participant's personal website. The content is communicated via their personal web page and is adapted by the counsellor to the specific needs, i.e. the personal situation of participants.

Figure 8: COC programme — communication screen

Counsellor and participant use a message board for communication, thus no fixed appointments have to be made. Accordingly, no real-time/direct contact between the counsellor and participant is provided. However, this allows participant (and counsellor) to choose a feasible time to use the COC programme.

Contact with participants is established by the counsellor approximately four times a week. Replies to participants' requests or messages are given within two days. Communication via the message board is used to motivate the participant and to communicate the further content of the COC programme. Participants have access to the following modules/topics:

1. Diary (registration of craving)

Participants' craving moments, cognitions and emotions at the time of craving, and applied methods to encounter the craving are registered. This is done in a built-in application (diary) of the participant website.

2. Pros and cons comparison

To be able to develop the best personal approach of stopping or controlling substance use, the personal pros and cons of continued cannabis usage, and the pros and cons of quitting or reducing the use of cannabis are compared.

3. Development of a personal treatment plan

Participant and counsellor put together a treatment plan for the rest of the programme. The personal goal is defined and a first self-control intervention to apply in craving situations is formulated.

4. Risk analysis

Together with the counsellor, an analysis of situations which are connected with substance use, thoughts related to drug use or craving is conducted. Using the information from the registration process and the diary, an inventory of all high-risk situations is developed.

5. Working with risk situations

In order to learn how to deal with risk situations, the participants must confront themselves with those situations analysed in step 4. For each risk in the risk analysis, one or more potential solutions are sought. Thus, participants learn how to deal, for example, with craving and social pressure.

Figure 9: COC risk analysis

6. Cognitions

In this module, participants learn how to deal with dysfunctional cognitions and how to formulate helping cognitions.

7. Emergency plan

A plan containing all necessary steps to recover from a lapse or relapse is constructed. The counsellor controls which sessions are available for the participants, thus controlling participants' processing through the COC programme. Some of the sessions above include specific homework for participants.

In addition to the contact with the counsellor, all active and former participants have access to a forum where they can exchange their experiences. This is accessible for an unlimited time period and no interventions by any COC counsellor are conducted within the forum.

Theoretical background

The training modules used in the COC programme are adapted from the so-called 'lifestyle interventions': CBT protocols viewed as state-of-the-art treatment for substance abuse in the Netherlands, and which are used in traditional addiction treatment provided by Brijder. The message board communication set-up is used to apply motivational interviewing (Miller and Rollnick, 2002), which is the basis of the regular treatment programmes as well. The use of a message board for personal communication avoids problems with missed chat appointments and allows for flexible planning for both participant and counsellor, as a message can be posted when needed or as desired. At the same time, a message board restricts communication even more, becoming even less similar to face-to-face communication.

Within the programme steps and tools, several specific methods are used. For example, to formulate the personal goal in step 3 (Development of a personal treatment plan), SMART criteria are used, meaning the goal has to be specific, measurable, achievable, realistic and timely.

Evaluation

After three and six months, participants receive an e-mail asking them to elucidate their current situation in a short questionnaire. An ongoing evaluation study is carried out. As the programme was just introduced in 2008, a first evaluation

report of 'Cannabis Onder Controle' will be available in 2009. In 2008, COC had 687 participants, of which 88 completed the treatment and 96 are at the time of writing, still in treatment. The remaining participants did not complete the programme.

Further information

The similar programmes 'Drugs Onder Controle' initiated by Brijder in the middle of May 2008, and 'Alcohol Onder Controle', are working with the same concept. Both share the same structure and aim to assist users consuming drugs in recreational settings (e.g. cocaine, ecstasy), and problem alcohol users with controlling and changing their behaviours. This also applies to the 'Grip Op Gras' website which adapts the content of Cannabis Onder Controle to college-aged students.

The ParnassiaBavo Groep additionally offers Internet-based treatment interventions for people with depression, panic disorders and eating disorders, amongst others, on their PsyQ Website.

Links:

http://www.cannabisondercontrole.nl
http://www.gripopgras.nl
http://www.brijder.nl/
http://www.psyq.nl/
http://www.parnassiabavogroep.nl/
http://www.drugsondercontrole.nl
http://www.alcoholondercontrole.nl/

Quit the shit

Organisation: Federal Centre for Health Education (BZgA)

URL: http://www.drugcom.de

Type of programme: free programme including scheduled contact with counsellor

Initiation date (month/year): 08/2004

Target group: Adolescents and young adults who want to stop or reduce the consumption of cannabis.

Recommended/scheduled duration of the intervention: 50 days

Number of participants in 2008: 483

Country: Germany

Language: German

Contact   Ms Evelin Strüber (BZgA)
           evelin.strueber@bzga.de

Short description

The free and anonymous 'Quit the shit' programme aims to help cannabis users to stop or reduce the consumption of cannabis. The main element is a personal diary where participants register everything related to their cannabis use for a 50-day period. Weekly written feedback is given by a personal counsellor. Complementary personal one-to-one chat sessions are conducted before and after the programme. Additionally, participants can use the daily public chat or e-mail to contact a counsellor.

Background

The Quit the shit programme (QTS) is embedded in the informational/prevention website drugcom.de of the Federal Centre for Health Education (BZgA). Drugcom was introduced in 2001 and offers information on licit and illicit drugs alongside several knowledge tests and consumption test ('Check your drinking', 'Cannabis check'). The drugcom website itself had approximately 900 000 visits in 2007.

The QTS programme was introduced in August 2004 and was organised centrally until summer 2006. Since then, about 12 different treatment facilities in Germany are taking care of the QTS participants. So far (August 2004 until 2008), QTS has had over 1 500 participants.

Registration

Users can access the programme via the drugcom website. The registration process starts with a brief explanation of the programme, its components and legal notices (e.g. on data security). It includes a self-evaluation test, which elucidates the actual cannabis consumption behaviour of the participant (days of consumption in the last 30 days, daily amount of joints/bongs, etc. during the last seven days, times of cannabis use on a typical day, amount of cannabis consumed during the last month, use of other drugs).

Similarly, participants' motivational status and their psychological well-being are assessed. The participants have to agree or disagree to several statements (e.g. 'I unsuccessfully tried to stop my consumption of cannabis several times.'), they rate reasons to change the consumption (e.g. '…to gain control of my life.') as well as several risk situations (e.g. 'I use cannabis when I feel depressed'). Participants stating that they have no intention to change their cannabis use are excluded from the programme on this point.

After this evaluation, participants create a personal username and password. The participant must register with an e-mail address (e.g. a free anonymous webmail account) to later confirm their registration. Participants then choose one of several offered appointments for an initial chat session with a QTS counsellor. The appointment usually occurs in the seven days following registration. If no appointment is selected within four weeks following the registration, the account is deleted.

Programme

During the initial 50-minute one-to-one chat session with the QTS counsellor prior to the beginning of the 50-day programme, relevant aspects to chat about include: the current life situation of the participant; motivation and patterns in the use of cannabis; reasons to reduce or quit the consumption; personal risk situations; personal resources and control strategies; prior attempts to change their use of

Figure 10: Quit the shit, embedded in the drugcom website

cannabis and the definition of personal goals (for example, to stop or to reduce the consumption of cannabis, etc.).

Following the initial chat, the counsellor activates the participants' account. Participants then can log in on the drugcom website where they can re-read their initial situation and their personal goal, both of which were defined in the initial chat. During the programme, every participant is accompanied usually by the personal QTS counsellor who already conducted the initial chat session.

Diary

The main element of the QTS programme is a personal diary. Participants are asked to write down everything which is cannabis-related in their daily life (e.g. situations in which they consumed cannabis, reasons to consume, quantity, cannabis-related thoughts and feelings, problems with craving, etc.). If participants are successful in avoiding consumption of cannabis, they are asked to briefly explain their personal strategy.

The QTS counsellor has access to this information and writes a weekly feedback message, giving hints/advice how to deal with certain problems.

Information

Another important resource for participants during the programme is the information material offered on the drugcom website. Several texts inform participants about cannabis addiction, behaviour change, control strategies, how to deal with craving and risk situations, etc. Participants are addressed in the initial chat and the feedback messages to read these texts.

Final chat

After 50 days in the programme, participants undergo a final one-to-one chat session with the QTS counsellor to discuss their personal progress, further plans and steps to make after finishing the programme. Thus, the change in consumption (as related to the pre-defined goal), successful coping strategies and ways to adhere to consumption-related aims in the future are addressed. If needed, further support possibilities (local counselling services, psychotherapy) are communicated or arranged.

quit the shit // mein tagebuch

das programm	wissenswertes	anmeldung
mein persönliches ziel	häufig gestellte fragen	login
mein tagebuch		

mein 50-tagebuch

Das Tagebuch dient dazu, alle Dinge, die mit dem Kiffen zusammenhängen, täglich zu notieren. Auch oder gerade wenn du nicht gekifft hast, sind Einträge sinnvoll. Vielleicht hast du es geschafft, in einer Situation, in der du normalerweise kiffst, zu widerstehen. Es kommt nicht darauf an, unbedingt jeden Tag etwas einzutragen, aber jeder Tag, der im Zusammenhang mit dem Kiffen für dich von Bedeutung ist, sollte in diesem Tagebuch festgehalten werden.

Du kannst dir hier ein Bild davon machen, wie das Tagebuch aufgebaut ist und beispielhafte Einträge eines fiktiven Teilnehmers (Nick, 17, männlich) anschauen. Für angemeldete User ist das persönliche Tagebuch geschützt. Nur die Berater/innen von quit the shit und du werden deinen persönlichen Bereich lesen können. Durch einen Klick auf einen Tag gelangst du in die Tagesansicht.

weitere Hinweise zur Bearbeitung des Tagebuchs

	Mo. 7.7.	Di. 8.7.	Mi. 9.7.	Do. 10.7.	Fr. 11.7.	Sa. 12.7.	So. 13.7.
Hast du gekifft?	ja	nein	ja	nein	ja	ja	nein
Rückmeldung vom Beratungsteam	Hallo Nick, erst mal ein großes Lob für dich. Du hast geschafft, von sieben Tagen drei Tage nicht zu kiffen und an zwei Tagen, jeweils nur einen Joint zu rauchen. Außerdem warst du an einigen Tagen sehr aktiv und						

Figure 11: QTS diary — consumption during an actual week

Sample QTS chat session

Counsellor	Hello, welcome to quit the shit! We are in the private chat now. I'm R., I'm a psychologist and therapist. We have about 50 minutes for our chat. How come you signed up for the programme?
Participant	I anonymously contacted the charity (Caritas) and they send me here.
Counsellor	All right. I'm glad you're here. Are you already informed about our programme?
Participant	I've checked the homepage and I think it's a super project and the possibilities (chat counselling etc.) are great.
Participant	I want to and I need to stop taking drugs and I think I'm in good hands here.
Counsellor	Thanks! So, what's the goal you want to reach within the programme?
Counsellor	You want to stop completely?
Participant	Well, good question … Isn't there only 1 and 0 when you do drugs?
Participant	It's really strange when I think about never ever smoking a joint again.
Counsellor	No, not necessarily. But sometimes it's really reasonable to stop completely, but first and foremost you have to stand up for your own goal.
Counsellor	Maybe we should talk about where you stand right now, etc. and talk about your goals later.
Participant	What do you mean by where I stand now?
Counsellor	Actually you smoke 2 – 4 joints daily, mostly during the day or in the evening, right?
Participant	That's right. When the occasion allows it.
Counsellor	What do you enjoy when you smoke a joint?
Participant	The easiness, the relaxation, the sex afterwards.
Counsellor	Calming down, relaxing after an exhausting day?
Participant	You could say that. However, I don't like what comes afterwards. The confusion, the fatigue, to be down …
Counsellor	What do you do for a living?
Participant	I'm a freelance web designer.
Counsellor	That sounds interesting! You could judge our website from a professional point of view …
Participant	I really like it.
Participant	I could do that :-)
Counsellor	So you're quite happy with your job. That's good.
Participant	It's going well and it's enough for the butter on the bread.

Counsellor	You already mentioned what you don't like when you smoke a joint. Feeling down, confusion.
Counsellor	Are there other negative aspects?
Participant	Right, you back out of everything, you want to be alone … you don't want to do anything at all.
Counsellor	Do you have more disadvantages crossing your mind?
Participant	Hmm … decreasing concentration, you can't enjoy anything and you think that life is only nice when you are stoned.
Counsellor	Are these the reasons you want to reduce your consumption or is there anything else?
Participant	It's as well really expensive and you lose a lot of time with that stuff.
Counsellor	How come you contacted the charity?
Participant	I wanted to quit and I couldn't achieve it, that's why I contacted professionals.

Figure 12: Daily QTS/drugcom chat — Excerpt of an initial chat session of quit the shit — approximately the first 15 minutes (grammatical errors have not been completely removed during translation).

Additional contact

In addition to the contact with the counsellor via the diary or via e-mail, all participants have the possibility to join the daily drugcom-chat, which is conducted by a QTS counsellor and available during two hours in the afternoon on every working day. Accordingly, all former Quit the shit participants can access the chat room to address their concerns to a QTS counsellor, even after finishing the 50-day programme. After completion of the programme, the diary is still accessible even though participants cannot add any new entries.

Theoretical background

The QTS programme is primarily based on self-monitoring and self-regulation. The theoretical foundation is 'social learning theory' (Kanfer, 1986) and a 'solution-focused strategy' (de Shazer, 1988; Berg and Miller, 1992). Within the feedback and the chat sessions, 'motivational interviewing' (Miller and Rollnik, 2002) is applied.

Evaluation

The Quit the shit programme is evaluated on an annual basis. The reports (in German) are available for download on the drugcom website. Additionally, a

randomised controlled trial (RCT) was conducted and data about the participants and the programme's efficacy will soon be available. The RCT started in December 2006 and was completed in the autumn of 2008. In the study, different measures of cannabis consumption (quantity, frequency, consumption-related self-efficacy) and psychological well-being (life satisfaction, anxiety, mood) were compared between programme participants and a control group of untreated individuals who were likewise motivated to take part in Quit the shit.

For the trial, individuals who registered with Quit the shit were randomly assigned to the intervention or to a control condition. At the beginning of the registration questionnaire, both groups were informed about the conducted study and the associated possibility of not being able to take part in the programme. Individuals assigned to the control condition could not proceed any further in the programme after registering, i.e. they could not take part in the initial chat of Quit the shit or use the online diary. However, they still were free to use other counselling services of drugcom (counselling via open chat or e-mail). The follow-up survey was conducted three months later, via an online questionnaire.

For the purposes of this publication, a sub-group of clients was analysed which had finished their follow-up before the end of September 2008. Altogether, N=246 individuals had taken part in both assessments. In order to control for the reception of other professional support, 64 study participants had to be excluded afterwards. Thus, the data of 182 individuals was analysed. Of those, N=89 received the intervention, whereas N=93 had been assigned to the control condition.

Participants of the ongoing study (N=182) were mostly male (69 %) and had an average age of 25 years (SD=7; range: 15–54 years). An average consumption of 19.7 grams during the last 30 days was registered before the trial and participants were consuming at an average of 25 out of the last 30 days (SD=6.2). More than 90 % of the participants could be diagnosed as cannabis dependent (as specified in DSM IV) during the registration. For 78 % of the participants, QTS was the first attempt for seeking professional help.

Slight, but not significant differences in the control group (N=89 in control condition) and intervention group (N=93 in QTS programme) could be detected, as well as between those participants in the trial and the average participants of QTS which were not included in the study.

For example, while usually 42 % of QTS participants complete the programme, 72 % of the RCT-participants in the intervention group (thus participating in QTS) did so. Traditional outpatient cannabis treatments in Germany show similar retention rates. Thus, 44 % of cannabis clients who used the service of traditional counselling bureaux at least twice in 2007, terminated the intervention regularly (Deutsche Suchthilfestatistik, 2007) (²). However, due to the strong heterogeneity of traditional outpatient cannabis treatments (e.g. huge variation in the degree of structure and duration), a comparison of the retention rates between QTS and interventions in traditional counselling bureaux is rather difficult. Additionally, participants in the RCT were slightly higher educated than the average QTS participant (with 64 % of the RCT participants having completed higher education, compared with 53 % of those QTS participants not taking part in the study).

As illustrated in Table 4, Quit the shit participants (assigned to the intervention group) significantly reduced their monthly amount of consumed cannabis (22 g on registration date vs. 7.8 g at a three-month follow-up), as well as their days of consumption in the last 30 days (from 26 to 10.5 days).

Table 4: Preliminary results of the Quit the shit RCT					
Measures of RCT	**Control group (Waiting group)**		**Intervention group (QTS-Programme)**		
	Registration	Follow-up	Registration	Follow-up	
Consumption (grams in last 30 days)	17.5	**16.9**	22	**7.8**	**
Consumption days (out of last 30 days)	24.5	**20.6**	26	**10.5**	**
Abstinence (in %)	-	**5.4**	-	**32.6**	**
Consumption-related self-efficacy (DTCQ-8)	45.9	**42.6**	46.4	**61.5**	**
Anxiety (STAI-T)	51.2	**47.5**	50.5	**41.2**	**
Depression (ADS-K)	19	**15.3**	18.9	**12.0**	*
Life satisfaction (SWLS)	19.1	**20.6**	19.2	**21.8**	°

Additionally, QTS participants enhanced their consumption-related self-efficacy (DTCQ-8; Sklar and Turner, 1999) decreased their anxiety level (STAI-T; Laux et al., 1981) and had better scores in depression (ADS-K; Hautzinger and Bailer, 1983)

(²) http://www.suchthilfestatistik.de/ambulant.htm (last accessed on 12 February 2009).

and satisfaction-with-life scales (SWLS; Schumacher, 2003). A significant difference between the control and intervention group could be detected for all of these factors, except life satisfaction. The abstinence rate for the intervention group at a three-month follow-up was 32.6 % (compared with 5.4 % in the control group).

A comprehensive publication on the basis of the full sample will be available in the second half of 2009.

Further information

Current plans are to transfer the QTS programme to France. First appropriate steps have been taken, but no further pertinent information is available yet.

Links:

http://www.drugcom.de
http://www.bzga.de

Additional websites

This chapter describes the other types of websites found during our research, and gives brief descriptions of those websites reported by the NFPs which we did not classify as Internet-based DTIs.

Informational websites

These websites follow the basic idea of the Internet itself, i.e. offer information, be it information about the substances itself, their effects and possible harms, advice about safer use, epidemiologic data for certain countries, addresses of treatment centres or treatment methods and so forth. These websites offer essential information for drug users, relatives and friends, as well as for professionals. Home pages of traditional treatment facilities, projects or clinics would meet these criteria, as well as preventive websites of federal agencies, information websites created by user groups, etc. Understandably, no websites of this category were reported by the NFPs as Internet-based DTIs.

However, some of these websites offer drug-related 'games' or tests, mostly aiming to give insight into personal drug consumption behaviour, to test drug-related knowledge and/or to change perceptions of drugs and drug use. Alongside these tests or within the informational context of the website, advice can often be found about behaviour change, first steps to stop or control consumption, together with advice about possible harmful consumption of other substances, e.g. alcohol. Thus, some of these tools could possibly play a role in changing a person's drug-related behaviour and beliefs.

Websites with provided contact channels

Some of these informational websites offer additional contact with counsellors or therapists. If no contact is offered, users will often find links to other websites, where they can get in touch with professionals. Nearly all websites with contact possibilities again offer additional drug-related information, although the amount and quality of information differs widely. Contact to counsellors is established via phone, e-mail or chat modules.

The availability of telephone hotlines varies, from a 24-hour-service to several hours on certain days. Some websites offer different numbers, thus different experts give advice on certain topics (medical advice, legal advice, etc.).

If an e-mail support channel exists, some websites guarantee a response within a certain timeframe (e.g. within 48 hours during working days). To guarantee an anonymous contact, some sites integrate a form to send any request directly via the web page. A personal code is used to log in to the page to read the answer or the answers are anonymously posted in a public forum. Using this method of communication, no e-mail account is needed by the client.

If available, public chat sessions are offered mostly on pre-defined days at certain times (e.g. every Thursday at 2 p.m. for approximately two hours; on working days from 3 to 5 p.m., etc.). Some websites have chat rooms integrated directly on their site while others use external browser-integrated software/services. At the time of writing, personal chat via instant messenger software (e.g. MSN, Skype, ICQ, etc.) was not yet offered.

Our research revealed a lot of websites offering counselling services (e.g. via e-mail), contact via telephone, self-assessment tests and/or informational content. Those kinds of websites are mostly mentioned in national reports as well. However, they do not meet the definition of 'Internet-based drug treatment interventions' as specified. They may be especially elaborated, certainly communicated over the Internet and counselling services may even have a specific theoretical background. However, a clear structure and schedule of an elaborated treatment intervention is missing (for example, a clearly defined programme comprising parts or steps, a timeframe with scheduled contacts, etc.). Nevertheless, these websites are a very important approach for people who are looking anonymously for further advice or information. In particular, all of these sites are important in that they not only intend to reach drug users, but also to reach their help-seeking relatives and friends. The websites and programmes reported by the NFPs as Internet-based DTIs, but which on investigation did not meet the specified criteria, were mostly of this type.

For example, in the Czech Republic, the drug counselling website Drogovaporadna.cz offers free, anonymous online counselling alongside information on several drugs. The site, designed for drug users as well as for their relatives, friends, teachers and professionals in the drug field, received 2 989 queries in 2005 (Mravčík et al., 2006). Users can post their request into a forum on the website and will usually receive an answer within 2–3 days. If needed, further requests can be sent. The enquiries were mostly made by drug users (990 queries), parents and other relatives (431 queries), and partners (252).

The Polish counselling website Narkomania.org.pl submitted detailed information about the enquiries made on their counselling website, which allows an insight into their user group.

In 2007, Narkomania received 1 789 questions directed to a psychologist (63 %), psychiatrist (30 %) and a lawyer (7 %). Most of these enquiries were made by women (74 %) and by users aged between 16 and 34 years (69 %). While 63 % of the enquiries came from users' relatives, partners and friends, only a third of the clients were drug users. The rest were people not connected directly to problems with drugs (7 %). Most questions were asked about drugs in general (33 %), cannabis (22 %), combined substances (16 %) and amphetamines (15 %).

An even greater amount of enquiries received the British Talk to Frank helpline (FRANK, http://www.talktofrank.com). According to their 2004–06 review, in the six-month period from October 2005 to March 2006 the website has had more than 3.5 million visitors. In the same period, nearly 17 000 e-mails were received and FRANK accomplished approximately 9 900 calls from young people and more than 5 000 from parents.

Established in 2004, FRANK replaced the UK National Drug Help Line. Drug users, their parents, friends, etc. can contact the free helpline via phone or send an e-mail via the website to receive advice. The helpline and website are widely advertised on postcards, stickers, in TV and radio advertisements and through a variety of campaign activities. On the Talk to Frank website, users can choose to add FRANK to their instant messenger programme contact list. The automated service (a computer script) then delivers information about drug-related topics. Plans are to integrate a fully automated self-help programme in the web page of Talk to Frank. This programme, which at the time of writing (June 2008) was available only via the separate, autonomous Know Cannabis website, is described in detail in Chapter 4, under Technical implementation and design, alongside the other known Internet-based drug treatment interventions.

Websites providing mobile phone services

Other services frequently reported by the NFPs as Internet-based DTIs were those using mobile phones to communicate their content. One example is the free Danish SMASH programme (http://www.smash.name) which uses Short Message Services (SMS) to deliver its content, thus is not really Internet-based. However, the registration is conducted via the SMASH website where further information

about the programme can be found. The 'Restart' programme aims, for example, to help cannabis users to stop or reduce their consumption. For a 36-day period, participants receive 68 pre-defined information messages (via SMS), aiming to help participants to specify their personal goals, overcome feelings of craving, analyse risk situations, etc. Alongside the Restart programme, SMASH offers several other SMS services such as Hashfacts, an SMS pack containing 40 messages over 21 days, delivering cannabis-related information. An evaluation report was published in Danish and is available on the SMASH website for download.

SMS is also used well by the Finnish A-Clinic Foundation within their Voimapiiri (Power Circle) programme (http://web10334.web1.kuulalaakeri.fi/), though no further information about the content of the programme was made available. The power circle programme is embedded in and linked to the Phaidelinkki (addiction link) website (http://www.paihdelinkki.fi/) which offers general information concerning several addiction-related topics, substance-specific information, several tests (e.g. WHO AUDIT-Test), contact possibilities and self-help advice to cut down or stop, for example, the participant's alcohol consumption. Interestingly, the most important tools used in the later described Internet-based DTIs are also referred to here (such as registration of consumption in a diary, specific goal setting), but are not yet integrated into a structured programme. According to the A-Clinic website, the services offered via the Internet are used by over 50 000 people every month.

In cooperation with the A-Clinic Foundation, the Finnish NGO EOPH (Elämä On Parasta Huumetta Ry, which means 'Life tastes better without drugs') developed the free Mobiilivinkki (The Mobile Advice) service which uses SMS to provide opening hours and addresses of, for example, mobile healthcare services within the capital region of Helsinki. EOPH (http://www.eoph.fi/en/) additionally conducts health education and substance abuse prevention in schools, distributes preventive mobile phone games and offers Internet chat rooms for addiction-related topics, amongst others.

Chapter 4: Outline of European Internet-based DTIs

Chapter 4: Outline of European Internet-based DTIs

The DTIs analysed in more detail

Table 5 provides an overview of the DTIs which are analysed in more detail below. These four DTIs target very similar groups with respect to age and problem behaviour, but only half of them accept clients below the age of 18. Three programmes include scheduled contacts with a counsellor, the duration of the intervention ranges from four to 12 weeks.

Table 5: DTIs analysed				
Programme	Know Cannabis Self-help	JellinekLive Online Behandeling	Cannabis Onder Controle	Quit the shit
Cost	Free	Fee-based	Fee-based	Free
Scheduled contact with counsellor	No	Yes	Yes	Yes
Initiation date	12/2004	05/2008	01/2008	08/2004
Target group	Any potentially hazardous, harmful and dependent use of cannabis	Cannabis users who want to reduce or stop smoking	Cannabis users in a stable situation without immediate psychiatric problems	Persons who want to stop or reduce the consumption of cannabis
Age (years)	16–24	18+	18+	Adolescents and young adults
Duration (weeks)	4–6	10	12	7
Number of participants per year	1 558 (2007)	61 (2008) (8 months)	687 (2008)	483 (2008)
Country	UK	NL	NL	DE

Concept and theoretical background

Similarities between the different DTI programmes described in the present report can be observed. Most notably, all programmes are based on cognitive behavioural therapy (CBT). Indeed, the programmes are more-or-less structured or can be

individualised, but whether self-help based or counsellor-guided, all programmes proceed through identical steps:

- participants can define their own goal (reduce/stop consumption);
- they learn to asses their own consumption (amount, situations, pros and cons);
- how to deal with craving (unpleasant feelings, etc.);
- how to identify risk situations and how to deal with them (e.g. say 'no', stay away from drug-taking friends, etc.).

Finally, by applying this knowledge, participants are made more able to control or stop their consumption. The main tool during the programmes is the use of a personal diary for the registration of all relevant aspects of consumption and behavioural change. In addition, all programmes offer information about drugs and addiction in general. Those programmes that work with personal feedback by counsellors use certain methods of motivational interviewing to further motivate participants to proceed with the programme and to achieve their goals.

Target groups

In terms of recognising similarities in the main structure of the programmes, it appears that the specified target groups do not really depend on the design of the programme but on the model of cost absorption: Those programmes (co-)financed by health insurance require a minimum age of 18 years (TOC, COC), while the free QTS programme does not include any such age restrictions. However, all programmes in general aim to attract mainly young participants. As self-help programmes allow the participation of any users, no restrictions apply, and again the main target groups are young adults and adolescents.

Technical implementation and design

While all programmes, to a large extent, have the same theoretical background and a comparable structure, many differences in the design and technical implementations can be found, especially with regards to details.

In terms of design, three out of the four programmes (Know Cannabis Self-help, Therapy Online Cannabis, Cannabis Onder Controle) communicate their content via an extra screen (for example, in a separate browser window), while the Quit the shit programme is directly embedded in the primary drugcom home page and is simply

presented in the 'main frame' of the website. However, its chat module is presented in an extra window.

In general, the JellinekMentrum programme's (self-help, TOC) main screens are presented in a more colourful, graphical way, when compared with other programmes. Additionally, they use graphs to show participants the amount of cannabis they consume. The JellinekMentrum design is similar to a windows-style operating system design, while the QTS and COC programmes look more like web-based applications (for example, forums, discussion boards, web-based mail clients, etc.).

In addition to the visual design of the programmes, several further aspects differ. For example, due to their different styles of feedback (human or computer-generated), the programmes offer participants a variety of ways to report and record their consumption (more complex, less complex). While self-help and TOC (using generated feedback) use a great variety of pre-defined variables to record each relevant situation in the smoking and craving diary, QTS participants, for instance, describe each situation in their own words.

Methods of communication

The main difference between the programmes is their different approach to communication with participants. All widespread forms of Internet communication are used. One can differentiate here between synchronous and asynchronous methods: While synchronous one-to-one chat sessions are used in the TOC, an asynchronous personal message board determines communication between counsellor and participant in COC. A hybrid model is used in the QTS programme, with an initial and a final one-to-one chat session, plus personal feedback in a message-board style during the programme.

The frequency of contact varies, as does the nature of contact. TOC participants conduct seven 40-minute chat sessions within the 10 weeks of the programme. COC counsellors establish contact in the message board approximately four times each week for 12 weeks (three months). QTS includes two obligatory 50-minute chat sessions, and a weekly feedback for approximately 7 weeks (50 days) (see Table 6).

Certain aspects must be considered with regards to these contacts. Participants of TOC receive, for example, additional computer-generated feedback based on their craving and smoking diary, thus the chat sessions do not constitute the only form of

feedback. At the same time, the postings in the COC message board are presumably less extensive and more in a dialogue form than the weekly written feedback of the QTS counsellors. While COC and TOC offer a forum where participants can exchange their experiences, QTS does not offer such a service but instead a free public chat room supervised by a counsellor, available for two hours each working day.

The aspects described above, as well as some advantages and disadvantages of the used communication methods, are shown in Table 6. Pros and cons can be further discussed, but as long as no direct comparison is carried out in a controlled study, it is not possible to decide which methods, or even what programme, could claim to be better or more efficient.

Table 6. Outline of communication methods in Internet-based DTIs

Programme	Specifications	Advantages (of method)	Disadvantages (of method)
Chat (TOC)	7 chat sessions (30/40 minutes) 10 weeks Additional generated feedback Additional forum	Personal, direct, real-time communication As close as possible to a conventional dialogue Misunderstandings can be clarified right away Questions can be asked and answered, problems can be addressed directly Free, spontaneous associations are written Forum as virtual self-help group	Several fixed appointments needed Less freedom for participants to structure their own proceeding Lack of chat-experience (e.g. slow writing speed, etc.) could lead to problems No time for well thought-out messages
Message-board (COC)	Message board contact approximately 4 times a week 12 weeks (3 months) Additional forum	No chat appointments needed High degree of freedom for counsellor and participant Continuation of the communication in desired moments Well-thought messages possible Re-reading of whole communication possible Forum as virtual self-help group	Lack of interactivity No spontaneous reactions Misunderstandings within the messages cannot be cleared right away Current problems or issues may differ from those posted in the forum two days ago

Table 6: continued			
Combined method (QTS)	Initial and final chat sessions (50 minutes)	Initial chat session to elucidate current situation in synchronous personal communication	Lack of direct communication, interactivity during main part of programme
	Weekly feedback	Feedback given for a whole week, over several situations	Current problems may differ from those addressed in the weekly feedback
	7 weeks (50 days)	Just two fixed chat appointments needed	
	Additional chat available	Additional daily contact via chat possible Participants can choose how much contact is wanted	

Dimensions, evidence and efficacy

The actual level of implementation differs widely. Two (TOC, COC) of the three programmes offering scheduled contact only started in 2008, thus were not able to present extended data. However, the data available shows that Therapy Online Cannabis reported 61 participants in its first eight months and aims to reach at least 150 participants in a year; Cannabis Onder Controle already had 687 participants applying for treatment in its first year (according to their declaration). The only long-established programme, Quit the shit (established in 2004), reported around 483 participants for 2008. More than 1 500 participants had signed up for the automated Know Cannabis Self-help in 2007.

Concerning numbers of participants, it is important to differentiate between the number of users signing up for a programme and the numbers of participants finally completing the programme. Available data for the Know Cannabis Self-help shows that only about 9 % actually completed the programme and participated for at least 28 days. This attrition rate is presumably due to the low threshold access at the beginning, as not even a valid e-mail address had to be entered, or a real name. One could expect higher retention rates for non-anonymous programmes, subject to a fee. However, even free and anonymous programmes such as QTS have shown that it is possible to achieve a fairly high retention rate of 42 %, i.e. two out of five participants who actually complete the 50-day programme.

Internet-based DTIs should finally not be valued by their number of participants or their retention rate. The final outcome of any controlled study should be precise data about the programme's efficacy. Thus, information is required concerning, for example, how many participants finally significantly reduce their cannabis consumption, or finally do stop using cannabis, for how long they achieve their goals, etc. Treatment Online Cannabis, as well as Cannabis Onder Controle, are conducting evaluation studies of their programmes and JellinekMentrum (the provider of TOC) is conducting a randomised controlled trial of their comparably designed Therapy Online Alcohol programme. However, at the time of writing, the only programme actually providing such precise data is the Quit the shit programme, with preliminary results of a randomised controlled trial showing encouraging and promising results which will probably contribute to the further development and the popularity of Internet-based drug-treatment interventions.

With regards to best practices, all programmes were based on evidence-based traditional treatment methods and manuals, and tried to apply and communicate these methods within the Internet medium. This is done in a more or less standardised way, with different approaches reaching appreciable proximity to traditional methods (e.g. chat sessions copying traditional treatment sessions). Thus, presumably all programmes have the potential to help participants to reach their self-determined goal.

Due to their relative similar treatment design and preliminary results of the Quit the shit RCT, Internet-based DTIs suggest that it is a promising treatment approach for a group of clients which is often hard to reach and treat by more traditional means. However, it cannot be determined here whether any details in design, conceptualisation, application of fees, or methods of communication could lead to a significant difference in efficacy. Accordingly, all programmes could be regarded as 'good practice'. However, the only programme which has already proved its efficacy in a controlled study, and thus could be labelled as evidence-based, is the QTS programme. Furthermore, both the Know Cannabis Self-help, and the self-help programmes of JellinekMentrum could also be considered by proxy as 'best practice' since other studies have shown the efficacy of similar self-help programmes for problem alcohol use (Blankers et al., 2007).

The need for further research is obvious, especially since every single programme still needs to prove its own efficacy. However, with the limited data already available, several evaluation studies in the pipeline, and the advantages of the

Internet as a medium for health prevention and communication, there are already strong arguments for the further development and deployment of Internet-based drug treatment interventions within the EU.

Chapter 5: Discussion

Chapter 5: Discussion

Methods

Despite the double strategy through Internet searches and through the Reitox national focal points that was used for the collection of programmes, there is no guarantee that the present research revealed all existing European programmes. However, the overview presumably includes the most relevant Internet-based DTIs operating within the EU at the time of writing. The findings of the survey carried out among the national focal points corroborated the Internet and literature research to a great extent. As several programmes were just starting during the writing of this review, however, there may be more programmes available soon (e.g. the Dutch 'Wat wil jij met wiet' programme).

For a better comparison, and due to their similarity, the detailed descriptions of Internet-based DTIs in this report focus on programmes for cannabis users. However, several programmes offer similar or almost identical versions of the described programmes, for example, cocaine or party-drug users (e.g. ecstasy).

The definition of Internet-based DTIs and, accordingly, the selection of programmes described here, was based on the research interest of this review and the need to differentiate between other existing Internet-based approaches. As stated before, one could define Internet-based drug treatment intervention from a much wider perspective, and thus include more and different services, depending on the research interests. For the purposes of this review, the definition worked out perfectly, as comparable programmes were found, which reflected justified and clearly-defined selection criteria and offered some first insights into the efficacy of these programmes.

Aspects of the programmes

As described above, the overall concepts underpinning all programmes identified in this review can be considered as similar. However, as these programmes and their surrounding conditions are complex structures, several aspects have to be considered when comparing Internet-based DTIs. Most of these aspects are mentioned within the earlier descriptions of the programmes, but were not further addressed in the latter outline and comparison: for example, the executive organisation; whether the programme is subject to a fee; how a programme is promoted and so forth.

One outstanding aspect may be the difference between paid and cost-free DTIs. Low-threshold access could be considered as one of the most important advantages of Internet-based DTIs. Those programmes subject to a fee would not meet this criterion, as a fast, easy and particularly anonymous and free (first) access cannot be offered. Observing and examining the offered services from a socially critical perspective, impressions of a two-class system may arise, where people with money to spend can afford a personal counsellor, while those not prepared to pay have to make do with an automated self-help programme (if available at all). Accordingly, from this perspective, providing free counsellor-guided Internet-based DTIs alongside free self-help programmes, would allow a free and more universal choice of the preferred DTI for all participants.

Those programmes subject to a fee, which were all situated in the Netherlands, are covered at least partially by health insurance. These programmes may benefit from potentially higher motivation of their participants due to the fee, as research results from psychotherapy indicate. However, when planning to establish an Internet-based DTI, questions of cost absorption should be discussed with regards to the specific target group, local conditions regarding legislation and the healthcare system, amongst others, and finally, a wider social responsibility to deliver healthcare to those in need.

A side-effect of individual payment for treatment, however, is a loss of anonymity. In principle, contracts between clients and treatment organisations are necessary, which — alongside the payment transaction itself — make it difficult, if not impossible to keep the person fully anonymous. For example, a key reason cited for imposing a lower age threshold of 18 for participants was the intrinsic loss of anonymity in cases where costs were covered by health insurance administrative requirements. Put more simply, for under-18s, parents would be required to sign payments on behalf of their children. Given the relatively low average age of cannabis users, this is a considerable restriction which could limit the potential of this type of intervention.

Many relevant factors again could not be determined or accounted for at all in our research. These include the training and experience of the counsellors, their personal method of (online) communication with participants, the amount of therapists or counsellors and treatment facilities working within the programme, aspects concerning the protection of privacy within the Internet, etc. All of these aspects

should be considered when developing or evaluating Internet-based DTIs but would go beyond the scope of this review.

No detailed information is available concerning the costs for developing and running the programmes described in this report. However, for the development of a new programme one could estimate an initial investment of at least EUR 50 000 to EUR 100 000. The running costs and development expenses for programmes will vary widely, depending on the kind and aspects of the programme. Thus, fully automated self-help programmes (for example, Know Cannabis Self-help) will apparently produce considerably lower running costs than counsellor-guided programmes. The costs of those counsellor-guided programmes again will be more affected, for example, by the amount of participants in the programme. With regards to the following limitations of Internet-based DTIs, a comparison of Internet-based programmes and traditional treatment would be difficult to conduct, in the cases where different target groups and populations are approached.

Limitations of Internet-based drug treatment interventions

While the advantages of Internet-based DTIs have already been addressed, several limitations and potential disadvantages should equally be considered. One of the biggest problems in confounding findings is the comorbidity of participants. Within the framework of an Internet-based DTI, the treatment of other dependencies or other mental health problems would be beyond the scope of a specified and narrow drug treatment intervention. Thus, it is particularly important for counsellors to know the limitations of a programme and to refer participants to further institutions, for example, traditional treatment centres or therapists, to provide appropriate treatment. These restrictions could be made equally clear to participants on the programmes' websites.

As it is a virtual medium, some treatment does not transfer well to the online world. Substitution treatment for opioid dependence, for example, cannot be delivered via the Internet, although additional support via the Internet is potentially feasible. The same restriction may apply for long-term substance users. Participants with a substantial chronic abuse of specific substances may not benefit from Internet-based DTIs, as the concept and design of all programmes does not appear to be tailored to the particular needs of this target group (e.g. detoxification). Such concerns are already specifically addressed by some Internet-based DTIs, with a clear focus on participants with a stable social network, for example, those with

stable living conditions and without immediate psychiatric problems (as stated by the Dutch TOC programme).

Analysing Internet-based health services in general, some criticism must be faced about using the Internet as a medium for health communication. For example, online communication cannot offer the specific and complex form of personal communication and assistance particularly needed in a therapeutic setting (especially for heavy problematic drug users). The lack of personal contact could probably increase existing problems, as potentially socially isolated people might participate in anonymous Internet-based services without improving their social situation (although those topics might be addressed by an online counsellor). Additionally, it might be difficult for participants to determine the reliability of an Internet counsellor or an Internet-based treatment in general. People with a lack of computer skills (or computer literacy), such as typing with a keyboard or using a computer in general, etc., would be generally excluded from Internet-based DTIs. Finally, Internet-based DTIs imply regular access to the Internet, preferably in a private context.

However, there is no need to enter into a general discussion of pros and cons within this specific analysis of the current development of Internet-based DTIs. Some aspects may already be resolved when accepting the limitations of a specifically-designed drug treatment intervention (for example, addressing Internet users as a target group, having approved/official organisations offering the Internet-based treatment, addressing problems of comorbidity and chronicity). Even if at the time of writing only the first randomised controlled trial for an Internet-based DTI in Europe was due to be published, the findings were already promising. Previously-published evaluations and the RCT of Quit the shit confirm the efficacy of the programme, and several more publications (of the Dutch TOC and COC) will further elucidate the potential of Internet-based DTIs. Accordingly, future discussion is likely to focus on the actual need for development and research in this specific field.

Scientific research on Internet-based drug treatment interventions

The provision of Internet-based drug treatment interventions in the EU could be considered as being in its infancy. However, with first programmes already established in 2004 and the development of other Internet-based treatments worldwide, knowledge in this specific field is growing steadily, and more counsellors are gaining experiences with online communication. However, as shown in this

review, a lack of evidence can still be observed, which is due to the fact that most of the programmes are new. With several publications soon to be awaited, further information about the efficacy of Internet-based drug treatment can be expected.

Concerning this forthcoming research, several aspects and limitations regarding the particularities of Internet-based drug treatment interventions must be considered. For example, due to anonymity and/or physical distance between participant and counsellor, drug tests would be difficult to conduct. Research must, in the absence of any research study that has shown results on the basis of drug tests, rely completely on self-reports, and research findings on the validity or self-reports are not conclusive. For example, a meta-analysis of interventions for another addictive behaviour — smoking — found false cessation rates declared by up to 30 % of participants when self-reports were compared to objective measures (Wu, Wilson, Dimoulas, Mills, 2006). Additionally, abstinent participants and those who achieved their personal goal, are probably more likely to respond to follow-up questionnaires, thus a higher abstinence rate could be produced if these aspects are not considered in calculations.

Interesting results could furthermore be revealed when investigating the differences between existing programmes. There may be a difference in efficacy because of the different communication methods used or the frequency and intensity of personal contact between counsellor and participant. Even the visual design of the programme and/or the perception of personal feedback may affect the outcome. Furthermore, while CBT forms a quite natural approach for the treatment in the Internet, as it is clearly structured and standardised, other methods and approaches may offer a functional means to deliver Internet-based DTI, too. As some organisations offer Internet-based drug treatment for substances other than cannabis, it would be important to gain specific data about the efficacy of Internet-based DTIs, such as for cocaine or party drug users, as these substances also affect a large number of EU citizens (EMCDDA, 2008a).

This field is progressing rapidly. Addiction science is witnessing a growth of publications in this area. A first conference on e-health is planned for autumn 2009. And the changing patterns of communication in everyday life repeatedly show that the Internet is becoming more dominant. So the emergence of Internet-based treatment for addiction can be seen as a logical step. The opportunities with respect to coverage, for example, have been described by Griffiths and Christensen (2007) for two Australian mental-health programmes. We should, however, not forget that

treatment programmes, assessments and tests in the past have been developed and evaluated in a face-to-face setting. While first results look promising, more research is needed to prove the efficacy of Internet-based approaches, to provide enlightenment about which target groups are suited or ill-suited to such approaches, to develop practical advice on ways to optimise an intervention and to validate the tests to which they are subjected.

Chapter 6: Future of Internet-based DTIs in the European Union

Chapter 6: Future of Internet-based DTIs in the European Union

Internet-based interventions do not aim to — and cannot fully substitute — traditional face-to-face treatment, which provides not only verbal but also non-verbal channels of communication. However, the programmes described here potentially offer services for a target group not otherwise reached by traditional counselling or treatment facilities. It can be assumed that there will be further growth in Internet-based DTIs in the European Union because up until now, only two European countries offer Internet-based DTI with scheduled counselling. Traditional treatment facilities mostly operate in certain local areas, while Internet-based DTIs have the benefit of being able to offer a drug treatment service with full national coverage.

With regards to the overall demand for treatment, especially for cannabis dependence, together with the wide availability of the Internet in Europe, it can be assumed that many countries could benefit from similar offerings. Internet-based DTIs may conceivably be easily translated and adapted for other EU Member States, as already shown by the JellinekMentrum programme, which successfully adapted its self-help programme for the UK website Know Cannabis. Current plans are to translate the counsellor-guided Quit the shit programme into French. Thus, a proliferation of Internet-based DTIs within the EU can already be observed. The attractiveness, particularly for first-time treatment seekers, as shown, for example, in the Quit the shit RCT (with 78 % of participants seeking professional help for the first time), shows that Internet-based DTIs can be regarded as important for early prevention, especially in the field of harm reduction. From an economic perspective, the presumed low maintenance costs particularly of self-help programmes and their assumedly easy translation, may offer further arguments for a wider deployment of programmes which are particularly relevant for another distinct target group, for example, participants not interested in personal guidance, but more in autonomy.

Finally, as a matter of course, the advantages inherent to the Internet as a medium for health communication (such as anonymous communication, wide and low threshold accessibility 24 hours a day, the high degree of freedom for participants, etc.), form further arguments for the deployment of Internet-based DTIs. The integration of Internet-based treatment interventions into traditional treatment facilities may further enhance the provision and efficacy of both treatment

approaches, as several communication channels could be combined into a treatment, tailored to the personal needs of each participant.

While many of the websites could potentially provide interactive help relying on expert-systems, artificial intelligence has not yet evolved large scale into health-related Internet sites. To date, most of the applications are still dedicated to the provision of information in conventional form. Future developments of technology may also offer opportunities to improve the quality of testing and help to better classify different groups of users with different treatment needs, on the basis of a more sophisticated collection and combination of information on their pattern of substance use and risk/protective factors.

Further potential may additionally be seen in the integration of mobile phones or multimedia content into the Internet-based drug treatment interventions. Broadband access to the Internet may allow the additional use of data-intensive multimedia content such as educational videos or animations, etc. Those programmes mentioned in Chapter 3, under Websites providing mobile phone services, may inspire the more complex use of both of the relatively new technologies, such as the Internet and the mobile phone. This is particularly appealing because today, almost every person owns a mobile phone and the Internet is increasingly becoming available via mobile phones, too. Therefore, the complementary use of SMS or specially-developed programmes/modules for use with mobile phones could be one of the future steps within the development of 'multimedia-based' (drug) treatment interventions.

The increasing number of Internet users, in addition to the already impressively high amount of young Internet users (aged 14–29) and at the same time, the use of the Internet for health purposes, especially for searching for information, show the relevance and potential of the medium in the field of health promotion. Europe is experiencing a high prevalence of cannabis use among young people, an increase in cocaine use among this population, as well as increasing treatment demand for these substances. So, the Internet-based interventions described in this report may offer, for these populations, access to treatment which, in a traditional form, might not be available or easily accessible. The advantages of such interventions, amongst them accessibility, low-threshold access and attractiveness for first-time treatment seekers, seem to outweigh specific disadvantages. More research is necessary to further strengthen the evidence basis for Internet-based treatment and to enable rational choices on the building blocks for such a programme. The preliminary evidence has already suggested the efficacy of such programmes,

as a complementary and additional resource in the broad field of drug therapy and prevention. Therefore, Internet-based drug treatment interventions will have an increasing relevance within the European Union. Caution must nonetheless be exercised in defining adequate target groups for Internet-based interventions and these approaches may not be the right choice for highly problematic cases, psychiatric or somatic comorbidity. For such cases, integration of Internet-based treatment into the structures of primary healthcare and drug care is necessary, which would allow for fast and easy referrals where needed.

The use of new technologies, such as the Internet, to access target populations are considered relevant by European decision-makers and this is reflected by the reference to Internet-based methods in national drug strategies. While many national drug strategies refer to the Internet as a relevant platform for communicating prevention messages, or informing users about the risks associated with illicit drug use (e.g. in France, Italy, Hungary, Portugal, Slovenia or the United Kingdom), only the German Drug Action Plan refers explicitly to Internet-based treatment, and mentions the Quit the shit programme. The newly-adopted EU Drug Action Plan 2009–12 motivates Member States, under its Objective 20, to develop new approaches and technologies in the area. This may encourage Member States to increasingly adopt this innovative method in the illicit drug treatment field in order to access hard-to-reach target groups. Ongoing research activities and publications under way, which have been mentioned in this report, will continue to contribute to such developments in the coming years and months.

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