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## What is eSBIRTeS.

**'eSBIRTeS' is an innovative European project in which Emergency Departments (EDs) use a SBIRT (Screening, Brief Intervention and Referral to Treatment) to deliver an early intervention to poly drug users at risk for developing a substance use disorder.**

This project was build on assumptions based on existing knowledge about the use of SBIRT, on-line self help modules, the setting of emergency departments, and the teachable moment for poly drug using clients in EDs. However, never before have all these assumptions been brought together in one project, studying the possible outcomes of a self administered screening instrument, brief intervention and referral to treatment that is initiated to suspected (poly) drug using clients in EDs.

**eSBIRTeS is funded by the European commission, DG Justice, Freedom and Security. The project is coordinated by VAD (association for alcohol and other drug problems, Belgium) in cooperation with the Centre for Public Health, Liverpool John Moores University (UK), Eötvös Lorand University (ELTE) (Hungary), IREFREA (Spain) and the Trimbos Institute (The Netherlands).**

Based on an extensive literature review, an electronic tool for Screening, Brief Interventions and Referral to Treatment (eSBIRT) for individuals presenting at EDs with problems related to (poly) drug use has been developed. The intervention was administered via iPad or Laptop in the emergency department. The tool functions to bridge the gap between primary prevention efforts and more intensive treatment for persons with serious substance use disorders and consists of three major steps:

1. screening using the ASSIST questionnaire as developed by the World Health Organization (<http://assist.esbirtes.eu/en/assist>);
2. free access to an online self-help module for cannabis, GHB and/or cocaine (<http://dash.esbirtes.eu/english>)
3. referral to treatment services for those identified as requiring more extensive treatment with access to specialised care.

## SBIRT?

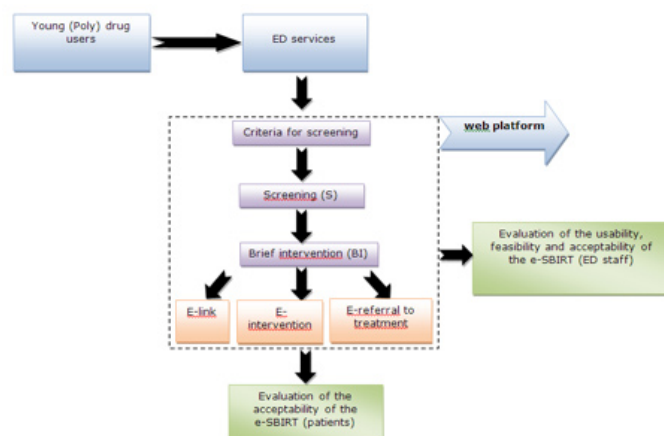
SBIRT stands for Screening, Brief Intervention and Referral to Treatment and is likely to have a large public health effect. SBIRT is a comprehensive, integrated approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as for those who are at risk for developing them. SBIRT is based on public health principles and procedures, and is designed to reduce health problems associated with the misuse of psychoactive substances. An important function of SBIRT is to bridge the gap between primary prevention efforts and more intensive treatment for persons with substance use disorders (Babor et al., 2007).

## Background

- Rates of substance use of patients in the ED range from 4% to 47% (Cunningham et al., 2009).
- Often there is more than one drug involved in the drug related ED attendances (West et al., 2008).
- Many clients in treatment programmes with problematic use of recreational drugs have had previous attendances in EDs (Maxwell & Spence, 2005).
- ED SBIRT can take advantage of teachable moments when people can make a clear connection between their unhealthy use and their need for emergency treatment (Williams et al., 2005).

This suggests that the ED is an important entry portal into the medical care system. The ED is also an important part of the continuum of care and a critical link to both primary and specialty care. Furthermore it is an ideal setting for early intervention with young adults, which may prevent serious and long-lasting consequences (Burke, O'Sullivan & Vaughan, 2005; Cunningham et al., 2009).

## Process plan



**Figure 1. Process plan eSBIRTeS.**

After being treated for their acute health problems, all patients meeting the eligibility criteria (see figure 2) are approached by ED nurses and invited to complete the ASSIST screening tool using the iPad/laptop. Based on the ASSIST scores a client is assigned to one of three different risk levels for the target substances, resulting in three different pathways for the patient:

- low risk: clients receive an email with their results and a link to local/national drug information website(s).
- moderate risk: clients receive an email with their results and a link to the on-line Drugs and Alcohol Self Help module (DASH), our team developed.
- high risk: clients receive an email with their results and are encouraged to find professional help via an online alcohol and drug specific referral guide. Those who are not motivated for referral to treatment can choose to be directed to the self help module (DASH) after all.

## Drug and Alcohol Self Help (DASH)

The Drug and Alcohol Self Help module supports drug users who would like to stop or reduce their drug use. Clients referred to the module, receive an email with a personal login for the self help module. First, the module helps users to decide whether they would like to change their use by testing their motivations and encouraging them to list pros and cons of using drugs. A user then sets personal goals and the module subsequently facilitates in monitoring drug use and provides tailored feedback. The module supports behaviour change by offering several exercises on preventing relapse and information on drug use and risks or harms involved. After 6 weeks the module sends the user an evaluation form to evaluate their progress and to set new goals if needed.

### Criteria for screening

Within the confines of an ED it is often not feasible to screen every patient. Therefore our team developed a set of criteria for ED staff to increase the chances of approaching those clients with the highest prevalence of alcohol and drug misuse. These criteria are based on age, language, timing (of ED attendance) and symptoms or complaints.

Some clients were too intoxicated, aggressive or not able in general to cooperate in the ED. Those clients were provided with a wristband with a URL and a unique login code on it. With this code, clients had the option to complete the screening at home.

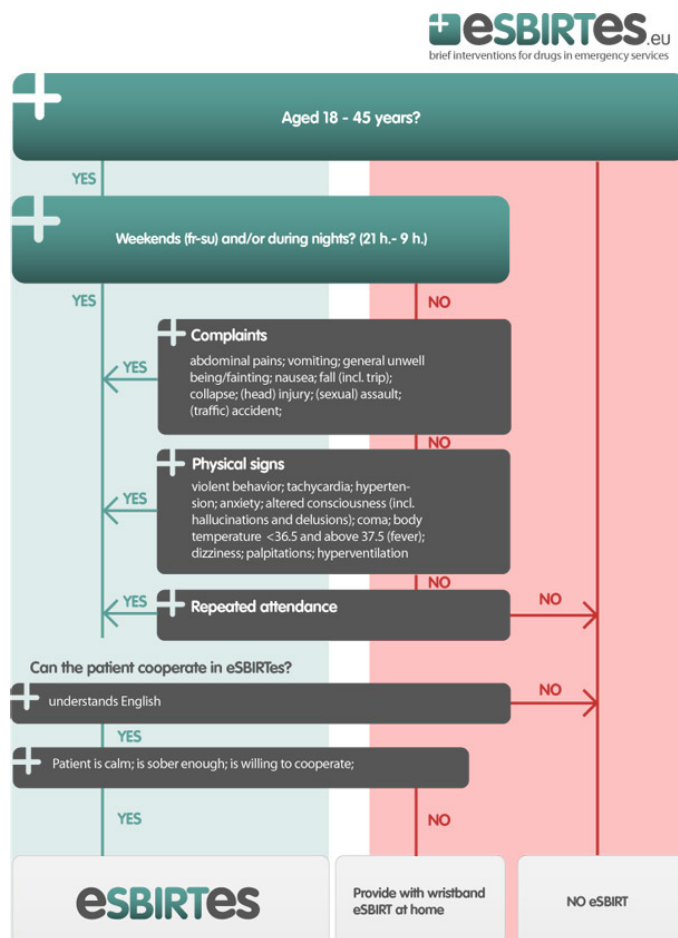


Figure 2: flowchart criteria for screening.

### Training

Prior to piloting the implementation of the esBIRTeS at four EDs (two in Belgium, two in Hungary), a staff training programme was conducted for staff working in participating hospitals to improve their knowledge and confidence in intervening with recreational drug users and direct them in the process of introducing the intervention.

The training session aimed to contribute to the development and reinforcement of skills and competencies

- in identifying the appropriate clients for inclusion in the project;
- motivating clients to make use of the computer based screening facility and self help module;

- improving the IT skills of the staff members directly working with clients belonging to the target group.

To support staff with knowledge on recreational partydrugs, a factsheet was developed.

## Implementation

Due to a very difficult climate concerning data protection in the NHS in the UK, ethical approval could not be obtained in time to implement the project in UK hospitals. Consequently, eSBIRTeS was implemented in the EDs of two hospitals in Belgium (AZ St Maarten hospital, Duffel and AZ Groeninge Kortrijk) and two hospitals in Hungary (Péterfy Sándor Utcai Kórház, Budapest and Kaposi Mór Oktató Kórház, Kaposvár) only, for a period of two months between 01/07/2012 and 31/08/2012. After these initial two months, the pilot period was extended in Belgium until 30/09/2012. In total 54 nurses/doctors were trained to cooperate in the implementation of the online SBIRT.

The tool was also piloted at four major festivals. At Sziget festival in Hungary (6th-13th August), a researcher from the project conducted the intervention within the first aid tent alongside psychologist volunteers. At Tomorrowland (27-29/07), The Qontinent (10-12/08) and Supersonic (8-9/09) in Belgium, individuals presenting at first aid tents were given a wristband that invited them to log in and complete the screening at home.

## Results

### Impressions by the ED staff

After questioning the ED staff before and after training and after the implementation period, substantial differences in the behaviour of the ED staff members in the two countries were noticed. In Belgium the staff members were more willing to cooperate than in Hungary. In Hungary the staff itself was not properly motivated and the way they looked at the problem was not really helpful in getting more clients involved. This is partly the result of the current drug policy situation in Hungary; drug issues are not on the policy agenda at all. However, Hungarian staff viewed

the training more positively (useful and interesting). Belgian staff may have 'seemed' enthusiastic but more than half felt that the training did not provide them with specific knowledge and skills, many said the intervention was difficult to carry out, 65% disagreed with the intervention being useful in the ED and 70% said that the ED should not continue to implement the intervention in the future.

Whilst some respondents did feel that the intervention was useful to have in the ED and was of benefit to the clients, the general consensus among participating staff at all four hospitals was that the intervention should be carried out by specific dedicated personnel in a separate assigned space that is easily accessible but quiet and private. Staff simply felt that they did not have the time nor resources within their EDs to support the intervention themselves.

Generally it seemed that staff was unable to see the value or applicability of the intervention in terms of potential impact on longer-term health service engagement and demand, and consequently on their own working lives, resulting in a negative impact on the perceived acceptability and usability of the intervention.

We found that there was a big difference between the perception of the project partners and the ED staff concerning the usefulness and the feasibility of the eSBIRT. The culture in EDs is one focusing on treating symptoms. Adding extra task and responsibilities is extremely hard to establish, especially towards the target group of (poly) drug users.

## Results from clients

According to the ED staff most clients that were administered to the screening tool cooperated well. Only a small minority did not.

**Table 1: Hospital attendees and recruitment to the eSBIRTeS intervention**

| Hospital / Event   | Eligible hospital attendees* | Number of attendees screened | % screened | Number of wristbands allocated |
|--------------------|------------------------------|------------------------------|------------|--------------------------------|
| Duffel             | 979                          | 39                           | 4.0        | 7                              |
| Kortrijk           | 1,085                        | 174                          | 16.0       | 30                             |
| Budapest           | 535                          | 12                           | 2.2        | 32                             |
| Kaposvar           | 51                           | 8                            | 15.7       | 1                              |
| Sub Total          | 2,650                        | 233                          | 8.8        | 70                             |
| Belgian festivals  | -                            | -                            | -          | 140                            |
| Hungarian festival | -                            | 3                            | -          | 3                              |
| <b>Total</b>       |                              | <b>236</b>                   |            | <b>213</b>                     |

\* **Predicted number of eligible hospital attendees based on estimated number of daily attendances (hospital data) multiplied by 92-day intervention period in Belgium. Hospital data for actual number of attendees provided by Hungarian hospitals (over 62-day intervention period).**

All together 449 clients were selected for screening. 213 of them were allocated to a wristband with a unique code to log in at home and 236 were administered to the screening immediately in the ED. Of the 236 attendees screened at the hospitals, 142 (60.2%) were male, and 94 (39.8%) were female. Clients were aged between 19 and 45 years, with a mean age of 29 years. Complete ASSIST data was provided by 187 participants.

As expected, alcohol was the most commonly used substance among participants, with a large proportion of respondents indicating that they currently use alcohol. Although 19.8% of those screened were at moderate risk of experiencing alcohol-related harms over two thirds of respondents (69.0%) had a low risk of experiencing such harms. Although levels of current use of GHB, opioids, hallucinogens and inhalants were rela-

tively low, around one in six respondents (16.0%) reported having used sedatives in the past three months. This might be due to the fact that the patient did not understand the question (the ASSIST questions 'non medical use' of sedatives).

Of the 187 attendees completing the screening tool, 119 (63.6%) were given a moderate or a high risk score for at least one substance. A large proportion of these moderate or high risk users identify themselves as polydrug users, with 30.5% of all respondents receiving a moderate or high risk result for more than one substance and 6.9% for four or more substances.

28% (n=53) of the clients that completed the screening were given a moderate score on alcohol, cannabis, cocaine or GHB, unfortunately only few clients registered for DASH and none of them finished the program. It might be the case that

these clients do not perceive their alcohol or drug use as problematic or at least that they do not feel the need to start an online self help program. Further investigation is needed to find out what kind of reasons can be found behind their reluctance.

Due to problems in the data collection the assist data from the clients accessing the intervention via wristband entry were not stored. However, based on data from google analytics we can see that only 5 clients (2,3%) logged in with their unique code to [assist.esbirtes.eu/home](https://assist.esbirtes.eu/home). All of them were Belgian clients. 4 of them visited more than 10 pages and we can assume that they finished the questionnaire. These results clearly indicate that the drop-out for screening is much higher for wristband clients than clients who completed the screening directly at the hospitals.

8 weeks after completing the screening a follow up questionnaire was send to all respondents. Of the 11 ED attendees that responded to the follow-up questionnaire, nine (82.0%) indicated that they thought the ED was a suitable setting in which to ask about substance use, with eight (73.0%) reporting that they felt comfortable completing the screening in this setting. The remaining 3 (27.0%) respondents reported feeling a little uncomfortable.

On completion of the screening tool, three clients (27.0%) reported accessing the SHM and three (27.0%) the referral guide. Of the referral guide users, two individuals reported that they followed up on their suggested referral, with one 'very happy' and other 'happy' with their resultant progress in reaching substance use goals. One of the three SHM users reported that they felt the module was useful in helping them manage their substance use.

## Recommendations

Below is a summary of some of the most important recommendations for future implementation of, and further research into, this kind of online intervention in emergency or other health care settings.

- It is likely that many of our clients attending the ED and classed as eligible for screening were not attending the ED with a drug related complaint. In this case there is no 'teachable moment' the intervention is aiming for. We recommend narrowing the criteria for screening. This would also make the implementation and screening process more manageable for the ED staff.
- Our results indicate that clients in the younger age categories are more likely to complete the screening than those in the older categories. The highest levels of current drug use are also seen within these younger clients (e.g. 18-25 years old). However, it may also be important not to neglect the 31-35 age group as 55.3% of these individuals, when screened, were moderate or high risk users.
- There is a need for research to explore where and when recreational drug users may be most receptive to both screening and intervention, and what the best approach is to successfully engage with and motivate these individuals. Key factors may include the location in which the intervention is being presented, the timing of the intervention in relation to the user's most recent consumption of drugs, or the type of person to whom users are most likely to respond positively (e.g. someone in a position of authority or someone they feel is more approachable or more like them).
- When staff are recruited for the eSBIRTeS training it is important for the head nurse or doctor to provide them with a realistic training preview, allowing the development of realistic expectations concerning



the purpose of the training, its learning outcomes, how the training will be delivered and what will be required of them as participants.

- It is important that participating hospitals have the organisational climate, channels and procedures to support a correct implementation. Good clinical leadership seems to be a crucial element for the implementation of this kind of intervention. Still we have to bear in mind that no unified method can be applied in different countries as the working culture and attitudes of the staff members may create different conditions for actual implementation.
- Implementation of electronic interventions is rather difficult in the hectic field environment that festivals characterize. We tried to overcome technical (wifi and computer) problems by handing out only wristbands and an additional information leaflet to clients in the emergency wards at festivals. Unfortunately we learnt in this project that only few clients were motivated to login to the screening tool when they were back at home.
- The ASSIST's scoring system should be adapted in a way that only those individuals who report current use of cannabis, cocaine, GHB or alcohol are actually referred to the SHM. In our trial all clients with a moderate risk score for the four targeted drugs were referred to DASH, even those who had not used substances within the last three months.
- A further limitation of using the ASSIST as a screening instrument is that it does not allow advice to be tailored to the individual. By asking additional items on completion of the screening questions, it may be possible to establish how motivated a person is to address their substance use, thus allowing ED staff to provide targeted brief motivational advice. Items such as the following may be suitable: 'How concerned are you about your substance use?' 'How motivated are you to change your substance use?'
- Although the eSBIRTeS project has seen the development of a potential useful tool for current drug users that are motivated to change their patterns or levels of use, the data gained from the staff suggest that EDs may not be the most suitable setting to approach these individuals, with this instrument. Other health care settings like GP's might offer better conditions (time and space) to trial online interventions like the one developed in this project. However, this is not the case when seen from the clients' perspective.

## Conclusions

In this project our team managed to develop on innovative electronic SBIRT targeting poly drug users in emergency services. After a pilot implementation period of two months in four hospitals we can conclude that the eSBIRTeS program is able to identify clients at high or moderate risk of developing problems related to their alcohol or other drug use. However, only few clients used the suggested brief interventions (self help or self referral to treatment) that we provided online. It is very likely that the type of drug users reached by this project – young poly drug users – have a limited awareness of the problems associated with substance use. Therefore ending up at the ED on a particular night out is considered as just an isolated and unrelated episode. We have to concede that recreational drug users are difficult to motivate to change their drug use, at least not in an opportunistic way as this project tried to establish.

Evaluation results from the cooperating staff suggested that even though the intervention was developed as an electronic tool and in a self administered way, the majority of the staff felt that they did not have the time or resources within their EDs to support the intervention themselves. Research in the differences between EDs in different countries and even

in different continents could provide insight to why these interventions are more accepted in one hospital than in another.

Emergency wards at music festivals seem to be an interesting alternative to EDs to target recreational drug users. However, we found that drop-out with this type of clients was extremely high. Only two percent of the clients we provided with a wristband and an additional information leaflet logged in to our intervention when they got back at home.

The self administered online ASSIST, as developed in this project is open for researchers for future adaptations and implementation in similar settings, in alignment with the coordinator of the project. The ASSIST and the DASH will be adapted according to the lessons we have learnt from this project. These tools will be used, in some of the partners countries, for further exploration in different settings and on different platforms trying to help clients that are at risk of developing substance related disorders.

More information on every aspect within the project as with the e-SBIRT that has been developed can be found on the website [www.esbirtes.eu](http://www.esbirtes.eu).