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Identification and optimisation of evidence-based HCV prevention in Europe for young drug users at risk

Guidance for HCV prevention addressing young drug users

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Content

1	Basis of the guidance	3
2	Scope of the guidance	4
3	Reaching young drug user up to the age of 30	5
4	Key strategies for HCV prevention targeting at young people who use drugs	6
1.	Key strategy: Early education and information	6
2.	Key strategy: Increase knowledge	6
3.	Key strategy: Increase “Blood Awareness“	7
4.	Key strategy: Targeted brief interventions for HCV prevention	8
5.	Key strategy: Easy access to drug use equipment	10
6.	Key strategy: Encourage to get tested for HCV	11
7.	Key strategy: Care and treatment for those infected with hepatitis C	12
5	Considerations for implementation	13
6	Conclusion	14
	References	16

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1 Basis of the guidance

The guidance for HCV prevention targeting at young drug users takes into consideration the different findings achieved within the present European project. In particular the following results are taken into account:

- The results of the overview on existing national guidelines for HCV prevention;
- The recommendations given by local experts during the interviews and local conferences;
- The findings from the interviews with young drug users who reported to be negative for HCV;

In addition, the guidance is built upon available evidence for effective interventions for HCV prevention. Evidence for effective HCV prevention has been compiled in a number of recent reports. In fact, a systematic review of scientific evidence for HCV prevention was conducted within the present European project (Zurhold & Schmidt, 2012), but also by the European Centre for Disease Prevention and Control (ECDC) and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). These two organisations provide two extensive reports on evidence for needle and syringe programmes and other interventions for preventing hepatitis C, HIV and injecting risk behaviour (ECDC & EMCDDA, 2011b), and on drug treatment for preventing hepatitis C, HIV and injecting risk behaviour (ECDC & EMCDDA, 2011c).

With respect to HCV prevention some main guidelines have been developed in the last two years. Thus, the EMCDDA provides guidelines for testing HIV, viral hepatitis and other infections in injecting drug users (EMCDDA, 2010), and the Correlation working group established key messages for HCV prevention based on evidence and experiences of practitioners (Correlation working group on Hepatitis C, 2011). Further there is a guidance for the prevention and control of infectious diseases among people who inject drugs (ECDC & EMCDDA, 2011a). This guidance defines seven key interventions covering the provision of injecting equipment, vaccination, drug treatment, testing, infectious disease management, health promotion and targeted delivery of services. As regards young drug users there is only one specific guideline which is from Australia: the guidelines for hepatitis C education targeting young people who inject drugs (Queensland Alcohol and Drug Research and Education Centre, 2005).

As drug injecting represents the main risk for acquisition of an HCV infection (Cornberg et al., 2011), the recent guidelines primarily focus on people who inject drugs. However, a variety of

behaviours and living conditions such as polydrug use and imprisonment (Vescio et al., 2008) have been found to be an important further risk to become infected with hepatitis C. Whether the age of the drug users has an influence on acquisition of HCV remains unclear. While in some studies a higher age turned out to be a risk factor for HCV (Backmund, Reimer, Meyer, Gerlach, & Zchoval, 2005), other studies identified young drug users with a history of injecting drug use of less than one year as those being at increased risk for an HCV infection (Hagan et al., 2007). The interviews with young drug users – conducted in the present project – have shown that risk behaviour is rather low among injectors compared with people who smoke or sniff drugs. Accordingly this guidance is not limited to drug injecting but covers all practices of drug taking.

2 Scope of the guidance

For many years it was assumed that the successful prevention of HIV/AIDS will also - “naturally” - result in the prevention of hepatitis C. In the light of decreases in HIV prevalence but a remaining high prevalence for HCV among people who inject drugs it becomes obvious that combating hepatitis C infections requires specific prevention efforts.

The present guidance includes a selection of strategies for HCV prevention targeted at young people who use opiates, cocaine or amphetamines on a more or less regular basis. The selected strategies represent core interventions for this target group. The guidance aims to compile current knowledge regarding the most important aspects of interventions for HCV prevention for young people who inject, smoke or sniff drugs.

Research has shown that most people are initiated into the use of illegal drugs in their adolescence, at the age of 15 to 19. They usually show up in drug services a couple of years later, and according to practitioners many of them are already infected with HCV at this time. Consequently HCV-preventive messages should be given earlier. However, low-threshold services which attract most of the active drug users often exclude those below the age of 18 (for instance drug consumption rooms and NSPs). Prevention strategies are needed which are provided as early intervention, before drugs are taken on a long term basis and before an infection with the hepatitis C virus usually takes place.

The leading questions for a guidance addressing young drug users are:

- Where to approach young people who use drugs regularly?
- What is the adequate type and content of prevention messages for this group?

The Australian guideline for young injectors emphasised that there is “no one size fits all approach to preventing hepatitis C among young people” (Queensland Alcohol and Drug Research and Education Centre, 2005). The present guidance is limited to interventions which are considered as most important for HCV prevention and which commit to harm minimisation.

The guidance is addressed to a wide range of professionals who either have a role in hepatitis C prevention or who are educators contributing to enhance the capacity of young people to take responsibility for their health and wellbeing. The guidance is mainly designed to address community drug services and youth services, but might also be relevant for the juvenile criminal justice system and other closed settings.

3 Reaching young drug users up to the age of 30

Research indicates that the highest rates of recent hepatitis C infections occur among drug users aged up to 30 years, with transmission mainly related to the sharing of injecting drug use equipment (Queensland Alcohol and Drug Research and Education Centre, 2005). According to EMCDDA data almost half of the injectors are HCV-positive after the first two years of injecting drug use. For effective prevention of HCV the major challenge is to approach drug users as early as possible. As young people who use drugs and engage in risk behaviour belong to a hard-to-reach population, accessing them requires pathways beyond specialist drug and health services. This is notably the case as vulnerable young drug users may be reluctant to access drug and healthcare services, possibly because of the lack of knowledge about services and what they offer or due to mistrust.

To reduce hepatitis C infections among young people one task is to increase their access to services which are relevant to their lives and address them in a way that is appropriate to their needs. To identify and contact young people who use drugs a variety of strategies can be implemented (Queensland Alcohol and Drug Research and Education Centre, 2005):

- Advertise in places the target group accesses through media, websites (facebook), printed material;
- Engage young people who use the service to draw their friends in, and encourage word-of-mouth advertising of the service;
- Develop networks with other services to increase referrals between services, and to know names, faces and principles of other services;

Networking involves a broad range of services such as youth clubs, education, outreach, services for homeless people, and specialist services such as harm reduction and testing and treatment services and the criminal justice system. Professionals in these fields should

be competent in raising awareness of hepatitis C and provide basic information and advice (Correlation working group on Hepatitis C, 2011).

4 Key strategies for HCV prevention targeting at young people who use drugs

For the HCV prevention targeting at young people who use drugs seven key strategies are defined. In general, for each key strategy it is important, that adequate prevention methods and materials are used which are clear, precise and easy to understand for this specific target group.

1. Key strategy: Early education and information

Early education and information that enhances young people's awareness and understanding of transmission of the hepatitis C virus is an essential part of any prevention. In particular for those at risk of engaging in drug risk behaviour such as injecting, early education is especially important. Hepatitis C education is best if targeted at young people when or before they initiate injecting (Queensland Alcohol and Drug Research and Education Centre, 2005). Experiences from practitioners show that injecting practices which have been developed are often difficult to change. Young people who use drugs should be provided with information about risks associated with sharing all injecting equipment such as spoons, filters, water and tourniquets, as well as needles and syringes.

Education and information should not only be limited to HCV risks related to drug use but include also risks related to other sources of casual blood contact. Young people need to be informed about the possible hepatitis C transmission through tattooing and body piercing, and sharing of toothbrushes and razors (Correlation working group on Hepatitis C, 2011; Queensland Alcohol and Drug Research and Education Centre, 2005).

The aim of early education is to enable young people to access balanced, relevant and meaningful information to make their informed decisions. Information given to reduce harm needs to be relevant to the culture of young people and provided in a way they understand.

2. Key strategy: Increasing knowledge

Sound knowledge of the risks of hepatitis C transmission and of prevention strategies is vital to empower young drug users to make informed decisions. An interactive method to enhance knowledge about HCV risks and its prevention is to make use of a "quiz" in terms of a

hepatitis C knowledge questionnaire. Such a quiz was part of the questionnaire conducted among drug users in the European project (for further details see: www.zis-hamburg.de/uploads/tx_userzis/HCV-questionnaire_on_drug_use_risks.pdf). The questionnaire consists of 23 questions with 11 questions related to the transmission of HCV, seven questions related to adequate strategies to avoid an infection with HCV, and further five questions about knowledge on HCV treatment. A similar questionnaire was applied in the pilot project for brief interventions for HCV, conducted in Berlin and evaluated by the CIAR (Zurhold, Schmidt, & Reimer, 2011). The evaluation showed that the quiz was highly accepted by drug users, and considered as a “fun” way to check and enhance their knowledge. In particular the knowledge questionnaire turned out as a very suitable instrument to identify existing myths about hepatitis C, and to provide facts during discussions between professional and drug users about the results of the questionnaire.

There might be other methods than a quiz to increase young people’s knowledge about hepatitis C transmission, symptoms, progression of chronic infection, and effectiveness of prevention practices.

3. Key strategy: Increasing “Blood Awareness“

Blood awareness means to increase the understanding that blood on surfaces and objects might have the potential of transmitting infections. Blood awareness is a central topic for the prevention of the spread of blood borne viruses. It aims at behaviours to avoid accidental as well as intended contact with blood through promoting attention for individual risks and engagement in essential hygiene measures where blood may be present (Correlation working group on Hepatitis C, 2011). The awareness message should answer the question how the transmission of blood-borne viruses can be prevented in usual drug use situations. These messages have to consider the usual situations and risks the individual faces, and be delivered in an appropriate language and by adequate means of communication in order to empower young people to minimise risks and adopt a healthier life.

Australia gives an example of how blood awareness can be communicated. Here, the Western Australia Department of Health has developed the website “Get The Facts” which provides an online support for young people. The website includes educational material designed specifically for young people, using a range of creative approaches to disseminate information on sexual health, blood borne viruses, and drugs and alcohol (www.getthefacts.health.wa.gov.au/2/125/1/blood_aware.pm).

4. Key strategy: Targeted brief interventions for HCV prevention

As there are various opportunities for the transmission of the hepatitis C virus - such as sharing of syringes, sharing of injecting equipment (filter, water), though surfaces, lighters etc. – the prevention of HCV requires differentiated interventions. Even though brief behavioural interventions are not proved to be effective as stand-alone interventions, their effects are promising when combined with further interventions. In fact, brief interventions are often implemented within harm reduction programmes (Zurhold & Schmidt, 2012).

In the following, four different types of brief interventions are described which are specifically relevant to young people who inject, smoke or sniff drugs.

Risk reduction counselling

Within the Berlin pilot project on HCV prevention a number of brief interventions have been developed, tested and evaluated (Zurhold, et al., 2011). All interventions followed a manual and were provided by trained staff to clients of low-threshold services (drug consumption rooms, NSP). With regard to risk reduction a brief counselling interview of 5 to 10 minutes has been developed which is focused on risks related to drug use, tattoo, piercing and household objects.

By interactive means of discussion and cards illustrating possible risks and prevention strategies the drug users' awareness and knowledge for recent HCV risk behaviours are reviewed. Myths such as "being on the safe side if not injecting" or statements such as "always using own drug use equipment" as well as lack of knowledge on risk related to household objects are identified. In particular periodic risk taking such as reusing injecting equipment or sharing crack pipes becomes topic of discussions. The arrangement of cards illustrating risks and cards illustrating preventive behaviour promotes a better understanding of risks and actions reducing risk behaviour.

Interactive interventions for hygiene and safe drug use

During the Berlin pilot project manual-guided interactive intervention for hygiene and safer drug use have been developed and evaluated (Zurhold, et al., 2011).

One of these brief interactive interventions consists in training for effective hand washing as a method to enhance awareness for the need of hygiene. The training in hand washing requires water, a demalux-light and a fluorescent lotion. The client has to apply the lotion completely on both hands, and wash the hands afterwards. Whether the hand washing was effective is controlled by means of light as areas still covered with fluorescent lotion indicate

inefficient hand washing. The participants are then provided with essential information on hygiene and techniques of effective hand washing.

Further, drug specific brief interventions have been developed which consist in short targeted stimuli to attract the drug users' interest in risk reduction related specifically to injecting, smoking or sniffing. Smoking and sniffing of cocaine is promoted as an alternative for injecting. Main arguments for smoking and sniffing include: no direct blood contact, as an alternative if no sterile injecting equipment is available, for vein care and to prevent overdoses.

After verbal information the drug users receive written material which fits into a pocket and includes a brief description of the advantages of smoking or sniffing instead of injecting. In addition the material contains either sniffing equipment or foil for smoking. With support of pictures practical instructions are presented on how to make a pipe for smoking and how to use the foil for sniffing.

Safer injecting

Young injecting drug users implement a range of strategies to minimise the transmission of hepatitis C. Despite, the strategies used to avoid hepatitis C are either not consequently practiced or are partly inadequate due to their perception and interpretation of hepatitis C risks (Queensland Alcohol and Drug Research and Education Centre, 2005; Zurhold & Schmidt, 2011). Consequently young injectors need to be enabled to relate blood-borne virus prevention and harm reduction messages to their usual injecting behaviour. For this purpose they require interventions in safer injecting which are relevant to their usual injecting situations, and which are easy to remember and thus short and interactive.

One example for an interactive mode of learning safer injecting is the video recording used by the staff at the Sydney Medically Supervised Injecting Center. This approach is used to illustrate harm reduction messages to each individual drug user and to facilitate training in safer injection (Treloar et al., 2008).

Break the Cycle

Young drug users may have limited knowledge of how to prepare and use drugs through non-injecting routes of administration. In particular young people who experiment with injecting should be provided with information about other forms of drug taking. One recommended approach to promote alternatives to injection is the "break the cycle" programme, developed in the United Kingdom by Neil Hunt and Gary Stillwell and adopted in a number of countries since then. This programme aims to assist practitioners working with

people who inject drugs, to support their clients in moving away from injecting. Materials of the break the cycle programme are based on the assumption that initiation to injecting is closely associated with seeing other injecting, joining discussions about injecting, and having someone who gives them their first injection. The brief intervention and the respective materials are addressed to injectors, and designed to prevent the initiation to injecting. In this respect participants are supported to identify strategies that help injectors to avoid or refuse initiation requests, and to use opportunities to discuss alternatives to injecting in order to reduce harm.

Brief interventions should be tailored in language and methods to young people who use drugs to allow them to benefit from the information received in terms of practicing safer drug use behaviour. From research of the Berlin pilot project it has been found that a combination of verbal explanation, visual demonstration and interactive prevention messages (games, cards, quiz etc) are more attractive to drug users and raise their attention for the messages. Furthermore the evaluation of the pilot project clearly showed that prevention messages need to be repeated regularly as the transition of knowledge into practice needs time and refreshment of knowledge.

5. Key strategy: Easy access to drug use equipment

An easy access to drug use equipment is a key measure to minimise the spread of viral hepatitis and HIV among people who inject drugs. Access to and high availability of services providing sterile needle and syringes and other clean injecting equipment (spoons/cookers, filters, water for injection, acidifiers, and dry and alcohol swabs) is essential for preventing infectious diseases. In order to encourage a shift from injecting to sniffing as well, foil should be provided along with an explanation of how to use it.

Among young people initiation of injecting is often unplanned and sterile injecting equipment is not at hand at this time. As a result this could lead to first experiences of sharing equipment and therefore potential contact with blood-borne viruses. In particular young drug users might also be too shy to access equipment at drug services (Queensland Alcohol and Drug Research and Education Centre, 2005).

As the main risk factor for acquiring hepatitis C and HIV is the sharing of needles, syringes, and other drug preparation and injection equipment, sufficient legal access to clean drug injection equipment free of charge is the main intervention to reduce sharing and reuse of needles and syringes (Correlation working group on Hepatitis C, 2011; ECDC & EMCDDA, 2011a). The distribution of sterile needles, syringes and paraphernalia promotes health and

safer consumption. However, drug users should be provided regularly with information regarding this prevention strategy in order to enhance their awareness for consequent safer use behaviour. In addition, safe disposal of drug use equipment is vital, and explanations of how this can be done have to be given to drug users.

Mobile NSPs and vending machines particularly seem to attract younger people with injecting drug use. Especially vending machines are always available and allow a highly anonymous access. On the other hand money or tokens are required to operate the machine. Consequently vending machines are an additional service complementing mobile or fixed services which regularly distribute or exchange drug injecting equipment.

Independent of the type of providing injecting equipment it should become a standard to provide low dead space syringes (LDS). Evidence from a range of experiments and studies indicate that the transmission of HCV and HIV due to syringe sharing can virtually be reduced if injecting drug users use low dead-space syringes (Ibragimov & Latypov, 2012; Zule, Bobashev, & International, 2009). These syringes are predominantly those with permanently attached needles, and in these syringe-needle combinations the needle hub is eliminated.

6. Key strategy: Encouraging young drug users to get tested for HCV

Among drug users who inject drugs HCV treatment uptake remains very low (1 % to 2 % of chronic hepatitis C cases). Accordingly a major challenge consists in identifying individuals with HCV before the development of significant clinical consequences (Wand, Iversen, Wilson, Topp, & Maher, 2012). Testing for hepatitis C is vital to determine whether an individual has been exposed to the virus, or has successfully cleared the virus from the bloodstream or has developed a chronic infection.

Up to now prevalence of testing for hepatitis C is still low, and the majority of people infected with hepatitis C is undiagnosed (Correlation working group on Hepatitis C, 2011). Obviously the willingness for testing is related to a perceived risk of a hepatitis C infection, rather than to a clear assessment of recognised risk factors. The literature suggests that a number of barriers may result in drug users not presenting for screening. According to the guidelines of the Queensland Alcohol and Drug Research and Education Centre (2005), young injectors do not want to get tested because they

- do not think they have been at risk,
- do not want to know the outcomes of testing,
- have concerns about confidentiality of testing, or
- do not wish to identify themselves as an injecting drug user.

Knowledge of HCV status through early testing can prevent the transmission of HCV and increases the likelihood of successful treatment. Testing should be offered on a voluntary and confidential basis, and with informed consent. Testing rates might be increased with offering rapid hepatitis C tests. While the guideline of the ECDC & EMCDDA (2011a) recommends routine testing (ECDC & EMCDDA, 2011a), Wand et al. (2012) promote additional non-routine screening for drug injectors as they might show multiple risk factors.

However, testing has to be accompanied by pre-and post-test counselling. If pre- and post-test counselling is undertaken effectively, testing is a good opportunity to provide information about strategies for HCV prevention, regardless of the test result. For young people testing could also serve to connect young people to drug and health services, and to enhance their awareness for health issues (Queensland Alcohol and Drug Research and Education Centre, 2005). Literature suggests that people who have been tested for hepatitis C tend to have a higher level of hepatitis C knowledge than those who have never been tested.

7. Key strategy: Care and treatment for those infected with hepatitis C

Following a positive hepatitis C test it is important that patients are offered all necessary support, as well as further assessment and, when appropriate, antiviral treatment. Recent studies have demonstrated clear clinical benefit of treatment for hepatitis C among people who inject drugs (ECDC & EMCDDA, 2011a). Benefits are also demonstrated for active drug users, and accordingly active drug use should not be an exclusion criterion for HCV treatment, as long as other clinical contraindications do not exist.

Treatment for hepatitis C treatment often does not begin immediately after diagnosis, and some people will not undergo this treatment at all. Hepatitis C does need to be monitored and the decisions related to whether or when to access treatment have to be considered on an ongoing basis. However, the drug users' needs and decisions have to be respected. At the same time they must receive support to maintain and improve their health independently of accessing treatment (Correlation working group on Hepatitis C, 2011; Queensland Alcohol and Drug Research and Education Centre, 2005). In particular drug users need advice on the management of the illness by means of information on effects of alcohol and drug use. Especially in young drug users reducing stigma related to their drug use and hepatitis C might increase their acceptance to enter psychosocial support, opioid substitution therapy or primary health care.

5 Considerations for implementation

Evidence and expertise from practitioners demonstrate that an effective prevention of hepatitis C targeting at people who use drugs is feasible and effective, if part of a holistic response and properly implemented. However, within the present guidance only some basic considerations for implementation are specified.

First of all it is essential that prevention messages are based on well-informed knowledge of the staff involved. They must be specifically qualified in educating drugs users in HCV relevant risk behaviour and adequate strategies to prevent an infection with HCV. Professionals such as health care providers and drug service workers who have a role in raising awareness among risk groups and encouraging testing and treatment need to be trained and qualified in these issues (Correlation working group on Hepatitis C, 2011). To work with young drug users, professionals must create 'young person friendly' services (Queensland Alcohol and Drug Research and Education Centre, 2005). This includes

- creating an atmosphere that reflects the interests of young people, and provides a friendly introduction to the service;
- allowing young people to know what to expect each time they access a service;
- ensuring young people and professionals have a shared understanding of rights and responsibilities, confidentiality and complaints processes;
- providing all relevant information through a variety of methods including verbal communication, brochures and posters etc., preferably in an interactive form in order to get them actively involved in prevention messages;

When discussing with young people, abbreviations, technical terminology and labels used by drug and health services should be avoided. Information given has to be up-to-date, youth friendly, detailed and easy to understand and changed regularly (Queensland Alcohol and Drug Research and Education Centre, 2005).

Settings such as probation services, juvenile prisons, youth services where vulnerable young people at risk appear need to open up to HCV prevention. For the implementation of a holistic prevention approach not only traditional settings like drug and treatment services should be engaged in HCV prevention but also institutions offering social care or health care. Accordingly HCV prevention could be embedded in routine vaccination for hepatitis A and B, in social services located in socially deprived areas, or in juvenile arrest. HCV prevention can also be delivered by peers as their messages might have a greater impact on young people with drug-related risk behaviour. If peer-delivered services are used, training, supervision and support are particularly important (ECDC & EMCDDA, 2011a).

With respect to implementation, all recent guidelines stress the importance of a multidisciplinary approach to address the complex range of needs of people at risk of an infection with hepatitis C. Such an approach includes comprehensive screening, diagnosis, counselling and health care for drug users (opioid substitution therapy, psychiatric services, infectious disease treatment (Correlation working group on Hepatitis C, 2011). Multidisciplinarity requires capacity building through networking in order to reduce the duplication of services and to use existing resources more efficiently (Queensland Alcohol and Drug Research and Education Centre, 2005). A further advantage of networking is to get new information and ideas, to get to know each other, and most importantly, that issues beyond the specific scope of an individual service can be addressed.

6 Conclusion

Within the present project a number of experts from drug and health care services emphasised the requirement for a national HCV strategy or action plan. A framework or action plan provides an effective and coordinated response from all levels of government, the community, voluntary organizations, the health sector, scientific and research communities and people affected by hepatitis C. Such a coordinated response is regarded as a prerequisite to the effective delivery of the key interventions for the prevention of HCV. From an expert point of view a national framework needs to define clear priorities with respect to target populations, targeted prevention programmes, trainings of staff, improvement of testing and treatment access.

Across Europe, the prison population is affected above average by infections with hepatitis and HIV. Experts interviewed in the present European project strongly recommended to improve HCV prevention in prisons (www.zis-hamburg.de/uploads/tx_userzis/Results_expert_interviews_local_conference_final_2012).

Prison settings provide both the opportunity and the need to deliver awareness, prevention, treatment and care. As part of the human rights prisoners should be able to access voluntary hepatitis C testing, including comprehensive pre- and post-test counselling and treatment if indicated (Correlation working group on Hepatitis C, 2011). Good practice examples for HCV prevention offered to prisoners are Catalonia and Scotland. In Catalan prisons a comprehensive hepatitis C prevention is implemented such as methadone maintenance, needle and syringe exchange programmes, and HCV testing. In all Scottish prisons specialist hepatitis C services are available, including testing, diagnoses and treatment for infectious diseases (The Scottish Government, 2008).

According to most recent knowledge none of the evaluated interventions is effective in terms of a single intervention to reduce the prevalence of HCV infections among people who use drugs. Consequently all recent guidelines recommend combining key interventions in order to establish a comprehensive prevention strategy which includes all types of services and settings. A combination of various prevention measures such as needle and syringe provision, HCV testing, drug treatment and behavioural interventions might achieve the maximum prevention effect (ECDC & EMCDDA, 2011a). With regard to young people who use drugs, creative and innovative prevention approaches are vital to engage them in risk reduction and a healthier lifestyle.

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