

Summary of all presentations (Conference on psychoactive drugs sold in headshops and on line, Mullingar, Ireland. 26 January 2010)

Mr John Curran, T.D., Minister of State at the Department of Community, Rural and Gaeltacht with responsibility for the National Drugs Strategy opened a national conference on 'legal highs' on January 26 in Mullingar organised by the Regional Drugs Task Forces. Minister Curran said that he had expressed concerns about the sale of legal highs and their possible health hazards on numerous occasions in the last year. He asked the Minister for Health & Children, who has responsibility for the importation, exportation, production, supply and possession of a range of named narcotic drugs and psychotropic substances under the Misuse of Drugs Acts, to ensure that every effort is made to expedite the response to this issue through the early control of substances under that Act. He has asked the Department of Enterprise, Trade & Employment to examine issues relating to insurance and consumer protection.

Dr Jean Long, Health Research Board, presented a review of the availability of psychoactive drugs in headshops and on line across Europe. She said that more than 90 new psychoactive substances have been reported through the EMCDDA's early-warning system since its establishment in 1997. Until recently, phenethylamines (since late eighties) and tryptamines (in early nineties) accounted for a large proportion of notifications. However, since 2004, a much more diverse range of substances has appeared, among these are numerous piperazine compounds, cathinone derivatives, spice products as well as a heterogeneous mix of other substances. She reported that all countries in the EU had controlled the use of BZP, eight countries introduced controls on the use of synthetic cannabinoids (found in Spice) and countries were examining the issues pertaining to cathinone derivatives at present. She noted that there were reports that drug users were injecting some of the cathinone derivatives which may lead to local infections, blood-borne viral infections and deep venous thrombosis. One of the cathinone derivatives was implicated in two deaths in Sweden. Dr Long reported that the ingredients listed on the packages containing head shop drugs did not always match the ingredients found on forensic analysis and it was difficult to advise people about the use of such drugs when their exact chemical contents were not known. She also pointed out that some of these drugs contain synthetic substances.

Dr Bobby Smyth presented some of the known and probable health-related harms associated with psychoactive drugs sold in headshops. He said that 7% of young people attending adolescent addiction services in the South West of Dublin were using headshop drugs as part of a polydrug using cocktail. Dr Smyth reported that these drugs may become another gateway drug alongside alcohol and tobacco. He presented eight cases of individuals who had experienced adverse effects of headshop products such as anxiety, excessive aggression, paranoia, psychosis and hallucinations. A small number of these individuals had a previous history of mental illness. He said that it is likely that these drugs exacerbate mental illness and that these substances were likely to negatively affect brain development in adolescents. He highlighted that there were no quality control measures on the production, distribution or sale of these substances, and in the instances of adverse reactions, no one was accountable.

Mr Noel O'Connor highlighted that it was difficult to develop harm reduction strategies to deal with legal highs because the contents of each drug was not known or guaranteed. The substances were not rigorously tested in a controlled environment prior to selling them to the public. The ingredients were unfamiliar to the general population and it was difficult to find information on the products.

Dr Des Corrigan presented an overview of the products available in head shops, their ingredients and their effects. He said that it was common for head shops to use the Latin name of plants and chemicals in their list of ingredients. He said that a number of plants were used as stimulants and that there were many strong caffeine-based products on the market. In addition, he noted that many head shop drugs contain piperine, the main chemical in black pepper, which increases the ability of the body to absorb the drugs. He described the main psychoactive drugs sold in head shops and these are described below:

- One source of ephedrine, which is chemically similar to amphetamines, was available in Headshops. There are three sources of ephedrine: Ma Hung, *Sida Cordifolia* and chemical synthesis. *Sida Cordifolia* is found in several of the headshop products and is not controlled in Ireland. Ma Hung and synthetic ephedrine are only available in Ireland on medical prescription dispensed by a pharmacist. The producers of one of the ephedrine products state that they take no responsibility for any consequences associated with its use. Ephedrine can induce dependence, psychosis, high blood pressure and increased heart rate.
- A number of products contain the plant morning glory or Hawaiian Baby Woodrose, both of which contain LSA, a relative of LSD. The product titled 'Hawaiian Baby Woodrose Seeds' contain a warning 'not for human consumption'. The side effects of LSA and related chemicals include: apathy, tiredness, decreased psychomotor activity and feelings of unreality. LSA or Lysergamide is controlled under the Misuse of Drugs Act (MDA).
- *Salvia divinorum* (divine mint) contains chemicals called salvinorins which have a potency similar to LSD. Its use can lead to euphoria, feelings of levitation, out of body experience and, at high doses, uncontrolled delirium. The duration of its effects are short and the come down is quick and therefore severe. It can induce mental health symptoms such as paranoia and derealisation. It is used in the religious ceremonies of the Mazatec Shaman.
- There are three types of Hallucinogenic Cacti which contain mescaline. Mescaline from Peyote induces hallucinations as well as nausea and vomiting.
- Kratom, which contains mitragynine (an opioid agonist), is a leaf chewed in south-east Asia. The leaf is used as a stimulant at low doses and as a painkiller or sedative at higher doses. It can cause constipation, weight loss, dependence, psychosis and withdrawal symptoms. It is not controlled in Ireland.
- Piperazines such as, 1-Benzylpiperazine (BZP), Methylbenzylpiperazine, meta Chlorophenylpiperazine (mCPP) and 1-(4-fluorophenyl) piperazine are synthetic drugs with psychedelic and euphoric effects; the effects of piperazines mirror those of ecstasy. They are sold as an ingredient in recreational drugs known as 'Party pills'. 1-Benzylpiperazine (BZP) was banned in Europe in March 2008 and in Ireland in March 2009. Other forms of piperazine are not controlled in Ireland. BZP can lead to hyperthermia, high blood pressure, fast pulse, and convulsions.
- Spice products are a mix of innocuous herbs but six synthetic cannabinoids were detected in the various spice products sold across Europe. Synthetic cannabinoids were more potent than THC in natural cannabis. These may lead to a higher incidence of psychosis associated with cannabinoid use as they do not contain the natural anti-psychotic substances in natural cannabis. There is also potential for dependence. These products have been banned in eight countries across Europe.
- In 2009 six of the 13 new drugs contained cathinone which is a chemical stimulant found in the shrub Khat. Cathinones are related to amphetamines and ecstasy. Methcathinone (MCAT) Methylmethcathinone (Mephedrone), and Methedrone, derivatives of cathinone, are currently being sold online and in 'head' shops as 'legal highs' across Europe (including Ireland). These appear to be sold as bath salts or plant food. The contents listed on the package will contain the word, ketones. These compounds are advertised as a replacement for Charlie. Some users have reported injecting the bath salts. The use of these drugs can induce anxiety and paranoia. Reports say that its use can become compulsive and can create a state of psychological dependence. Mephedrone has been linked to two deaths in Sweden in 2008.