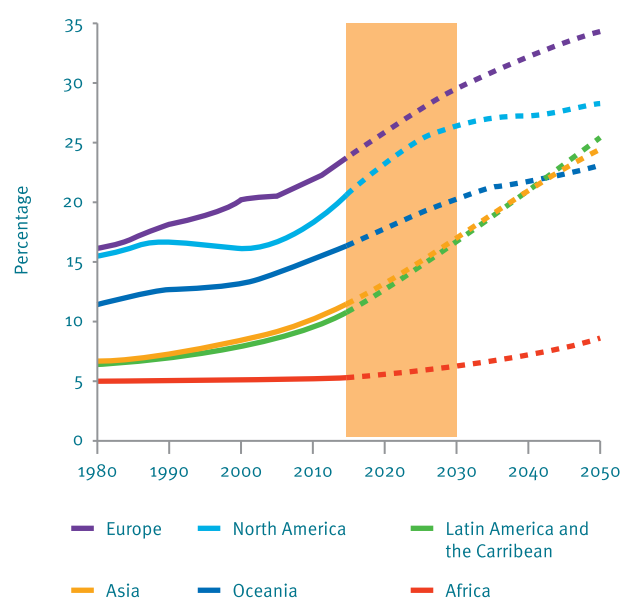


2. The use of benzodiazepines among older adults

270. According to the WHO Global Health Observatory, global life expectancy at birth has increased by six years since 1990. In 2013, the global population aged 60 years could expect to live another 20 years on average, 2 years longer than in the 1990s. Life expectancy at age 60 in high-income countries was six years longer than that in low-income and lower-middle-income countries. Furthermore, according to the Population Division of the Department of Economic and Social Affairs of the Secretariat, the percentage of the global population aged 60 and over increased from 8.5 per cent in 1980 to 12.3 per cent in 2015. This upward trend is expected to continue (see figure 1).

Figure 1. Percentage of the population aged 60 and over, estimated for 1980-2015 and projected to 2050



Ageing is not a disease

271. Ageing is by no means an illness. However, old age is often accompanied by illness. Illness affects older people more because it comes on top of changes in their health resulting from normal ageing. In older people, the distinction between healthy and sick is much more difficult to make, which increases the likelihood that they are overmedicated, undermedicated or medicated unnecessarily.

272. Older people often face isolation and loneliness. They often suffer from chronic illness and certain conditions associated with ageing such as Alzheimer's disease, anxiety, insomnia, depression and dementia, and comorbidity is common. Their sleeping patterns are different from those of younger people, and insomnia seems common among otherwise healthy individuals aged 65 and older, making them an attractive target group for manufacturers of sleeping pills. There are concerns that insomnia is being treated excessively as a result. This could be dangerous, as the elderly generally have more medical problems, and many of them take medications for more than one condition.

273. In most cases, the treatment of insomnia in older patients involves psychosomatic therapy and requires prescription drugs, in particular anxiolytics and hypnotics. Furthermore, given the demographic changes and the ageing of the population worldwide, the proportion of older patients undergoing surgery and therefore anaesthesia is increasing.

274. Pharmaceutical preparations containing benzodiazepines have been proved effective. Hypnotics, sedatives and anxiolytics are an essential part of health care, and they are prescribed worldwide to patients of all ages. Benzodiazepines have a wide range of indications; they are prescribed as hypnotics, sedatives, muscle relaxants and anxiolytics, as well as for pre-medication (prior to surgical procedures) and the induction of general anaesthesia. There are currently 35 benzodiazepines under international control, almost all of which are listed in Schedule IV of the 1971 Convention.

275. When they are well prescribed, benzodiazepines are considered relatively safe, as they are effective, fast-acting, have low toxicity and can be prescribed to patients of all ages. However, as with any medicine, their use also carries the risk of side effects and toxic reactions, particularly among the elderly. The elderly are more prone to adverse reactions because they tend to eliminate medication more slowly and for that reason often need lower doses.

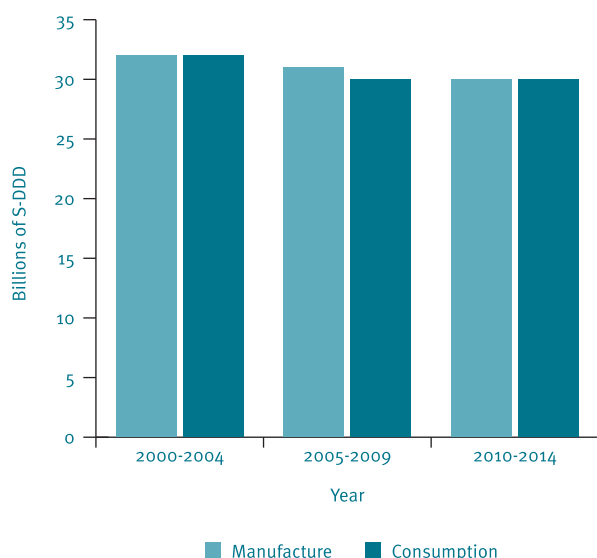
Overuse and unwarranted use

276. In the United States of America, people aged 65 and over make up about 10 per cent of the total population, yet they account for 30 per cent of medical prescriptions. The discrepancy is wider than the figures suggest, because the elderly are more sensitive to medication and therefore need less of it.

277. According to the information available to the Board, the overall manufacture of benzodiazepine-type sedative hypnotics and anxiolytics and their global calculated consumption in absolute terms have been stable in recent years. Since 2000, manufacture of these substances has stood at around 30 billion defined daily doses for statistical purposes (S-DDD) with consumption rates at similar levels, despite an increasing number of older patients (see figure 2).

278. Europe has traditionally been the region with the highest calculated average national consumption rates for benzodiazepine-type anxiolytics. In 2014, the United States, Brazil, Spain, Japan, France, Italy, Argentina, Germany and the United Kingdom (in descending order) were the largest consumers of benzodiazepine-type anxiolytics in absolute terms. Recently there have been reports from the United States about widespread overuse, under medical supervision, of psychoactive drugs among elderly people suffering from dementia.

Figure 2. Global manufacture and calculated consumption of benzodiazepines (anxiolytics and sedative-hypnotics)



Hazardous use

279. The debate about the use of benzodiazepines among older people is not new. Numerous studies on the consequences of unwarranted and chronic use among older adults have highlighted the risk of drug dependence.

280. A recent Japanese study showed that the prevalence of prescriptions for hypnotics and anxiolytics is disproportionately high among elderly patients. The study also showed that the simultaneous prescription of anxiolytics and hypnotics in high doses is common among patients suffering from sleep and/or anxiety disorders, that more than half of the prescriptions in question are issued by physicians, and that the long-term prescription of benzodiazepines is still widespread in spite of international clinical guidelines recommending benzodiazepine treatment to be limited to only a few weeks (two to four weeks).

281. The unwarranted prescribing and use of benzodiazepines by older patients is not harmless. A French study suggests that benzodiazepines are associated with an increased risk of dementia. The study found that patients over the age of 65 who start taking benzodiazepines had a 50 per cent higher chance of developing dementia within 15 years, compared to people who had never used them.

282. With an increased sensitivity to benzodiazepines and a slower metabolism, older patients are at high risk of developing delirium and cognitive impairment, and are more susceptible to falls and fractures. Moreover, long-term use of benzodiazepines is commonly associated with withdrawal syndrome.

Sensible use for better care

283. In its 2012 update of the Beers criteria for potentially inappropriate medication use in older adults, the American Geriatrics Association recommended avoiding all benzodiazepines in the treatment of insomnia, agitation or delirium. Furthermore, successful treatment discontinuation may result in improvement of cognitive and psychomotor function, particularly in older people.

284. As already noted, the Board fully recognizes that hypnotics, sedatives and anxiolytics containing controlled benzodiazepines have been proved to be effective and are essential in medical practice and health care. **However, the Board calls on all Governments to be alert to adverse reactions and problems resulting from the misuse and overuse of benzodiazepines, particularly among older adults. INCB calls on the Governments concerned to adopt, where necessary, measures to prevent the over-prescription and misuse of sedative-hypnotics and anxiolytics containing benzodiazepines among older patient groups.**

285. To avoid the harmful side effects of benzodiazepines, Governments must ensure that health-care

providers carefully consider the risk-benefit ratio, safety, adverse drug reactions and the simultaneous use of other drugs before prescribing any medications containing benzodiazepines to older patients. Guidelines for clinical care and training should be made available to health-care providers, in particular in nursing homes and geriatric care facilities. Other measures may involve raising awareness of the risks associated with inappropriate use of benzodiazepines, targeting, in particular, family members of elderly patients, their caregivers, nursing staff and employees at residential facilities for the elderly.

3. New psychoactive substances

286. New psychoactive substances are a very heterogeneous group of substances that, in different forms, continues to grow in every region of the world. As at October 2015, the UNODC early warning advisory on new psychoactive substances, which monitors the emergence of new psychoactive substances as reported by Member States, had identified 602 unique substances, a 55 per cent increase from the 388 substances reported in October 2014.

287. As in the past, the most reported substances continued to be synthetic cannabinoids, which accounted for nearly 40 per cent of all the substances reported, and phenethylamines and synthetic cathinones, which together accounted for about one third of all substances. While the number of new psychoactive substances continues to grow, not all those substances become established substances of abuse. In fact, many may be encountered only once.

288. The definition of “new psychoactive substances” used for the purposes of the early warning advisory encompasses both synthetic and plant-based substances (such as khat (*Catha edulis*), kratom (*Mitragyna speciosa*) and *Salvia divinorum*), as well as substances with established medical uses (e.g., ketamine). What all new psychoactive substances have in common is not necessarily that they have recently been invented but that they have recently emerged on the market and have not been scheduled under the international drug control conventions.

289. INCB uses the same definition, except that it focuses on synthetic substances of abuse with little or no known medical or industrial use. The Board believes that these substances pose particular challenges, given the various possible modifications that can be made to them to circumvent existing legislation and the lack of knowledge about their health effects.

290. In the light of the number and transient nature of many of the new psychoactive substances, as has been previously noted,²² INCB is providing Member States with the infrastructure, known as Project Ion (international operations on new psychoactive substances) for real-time information-sharing on incidents involving new psychoactive substances (e.g., suspicious shipments, trafficking, or manufacture or production, for any new psychoactive substance), as well as follow-up between authorities of the countries concerned with a view to assisting investigations and devising practical solutions aimed at preventing those substances from reaching consumer markets. The task force on new psychoactive substances, which steers Project Ion activities, held two meetings in 2015.

291. Since the Board’s annual report for 2014, the global focal point network on new psychoactive substances for Project Ion expanded to 120 countries, in every region of the world. A special operation, Operation Postman, conducted in March and April 2015, focused on postal and express courier shipments containing non-scheduled synthetic new psychoactive substances. Forty-one countries worldwide participated, resulting in the communication of nearly 200 individual incidents involving some 70 different new psychoactive substances.

292. In December 2014, the Project Ion Incident Communication System (IONICS) was launched, a secure platform dedicated to the real-time communication of incidents involving suspicious shipments, trafficking, manufacture or production of new psychoactive substances. After just under one year of operation, in November 2015, the system had more than 170 users from 60 countries in all regions of the world (see map below). There have been more than 500 incidents communicated in as little as two days after the incident occurred. The majority of incidents involved synthetic cathinones (e.g., methylene, mephedrone, MDPV, 3-methylmethcathinone (3-MMC)), synthetic cannabinoids (e.g., APINACA), and phenethylamines (e.g., 2C-I-NBOMe).²³ Information communicated through IONICS has triggered follow-up investigations in countries of destination that led to significant additional seizures of new psychoactive substances, seizures of money and arrests of distributors.

²² E/INCB/2014/1, paras. 248-256.

²³ The difference in order of classes of new psychoactive substances compared with the early warning advisory on new psychoactive substances is due to differences in the user bases and the purposes of the two systems, focusing on, respectively, unique substances (reported to early warning advisory) and individual new psychoactive substance incidents (communicated through IONICS).