

# Chapter II.

## Narcotic drugs

### A. Supply of and demand for opiate raw materials and opioids

52. Inadequate distribution of consumption of opioid analgesics is not the result of a lack of supply of raw materials and opioids. To the contrary, the Board has been concerned by an increase in the production of such substances without a corresponding increase in consumption, leading to a consequent increase in stocks.

53. Opiates consumed by patients for medical treatment are obtained from opiate raw materials (opium, poppy straw and concentrate of poppy straw). Adequate availability of opiate raw materials for the manufacture of opiates is therefore a precondition for ensuring the adequate availability of opiates used for medical and scientific purposes.

54. Pursuant to the 1961 Convention and the relevant resolutions of the Commission on Narcotic Drugs and the Economic and Social Council, the Board examines on a regular basis developments affecting the supply of and demand for opiate raw materials. The Board endeavours, in cooperation with Governments, to maintain a lasting balance between supply and demand. Global stocks of opiate raw materials should cover global demand for

about one year to ensure the availability of opiates used for medical and scientific purposes in the event of an unexpected decline in production resulting from, for example, adverse weather conditions in producing countries.<sup>32</sup>

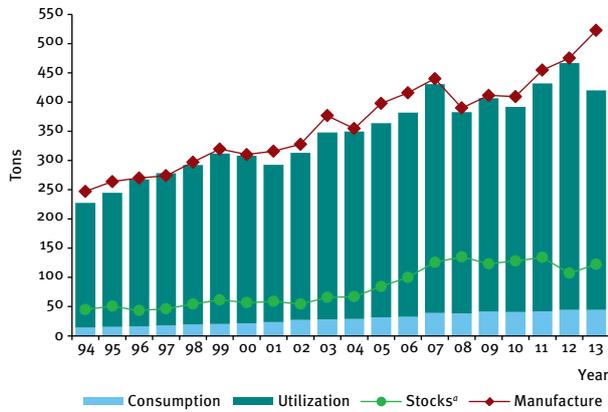
55. At the end of 2013, global stocks of opiate raw materials rich in morphine were sufficient to cover global demand for 14 months. Global stocks of opiate raw materials rich in thebaine were sufficient to cover global demand for 12 months. In 2014, the global production of opiate raw materials rich in morphine was greater than the utilization of those materials. The global supply (stocks and production) of opiate raw materials rich in morphine was fully sufficient to cover global demand.

56. Figure 1 presents data on the manufacture, stocks, consumption and utilization<sup>33</sup> of morphine during the period 1994-2013. Global manufacture of morphine doubled during that 20-year period, increasing from about 247.1 tons in 1994 to 522.6 tons in 2013, which was a further increase from the 475.3 tons recorded in 2012. Around 70 per cent of the morphine manufactured globally is converted into other narcotic drugs or into substances not covered by the 1961 Convention. The rest is used directly for medical purposes.

<sup>32</sup>*Report of the International Narcotics Control Board for 2014* (E/INCB/2014/1), para. 90.

<sup>33</sup> "Consumption" indicates the quantity of the drug to be consumed directly for domestic medical and scientific purposes, while "utilization" refers to quantity of the drug to be utilized for the manufacture of other drugs, preparations included in Schedule III of the 1961 Convention or substances not covered by the 1961 Convention.

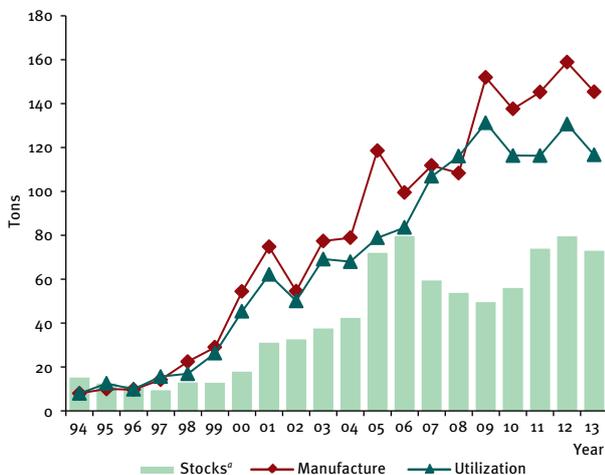
Figure 1. Morphine: global manufacture, stocks, consumption and utilization, 1994-2013



Source: International Narcotics Control Board.  
<sup>a</sup>Stocks as at 31 December of each year.

57. Until the 1990s, thebaine, the other main alkaloid obtained from opium poppy, was manufactured mainly from opium; since 1999, it has been obtained primarily from poppy straw. Thebaine may also be obtained through the conversion of oripavine or from semi-synthetic opioids, such as hydrocodone. Thebaine itself is not used therapeutically, but it is an important starting material for the manufacture of a number of opioids, mainly codeine, dihydrocodeine, etorphine, hydrocodone, oxycodone and oxymorphone (all of which are controlled under the 1961 Convention) and buprenorphine (which is controlled under the 1971 Convention). Global manufacture of thebaine has increased sharply since the late 1990s, as a consequence of the growing demand for oxycodone and other drugs and substances that may be derived from it (see figure 2).

Figure 2. Thebaine: global manufacture, utilization and stocks, 1994-2013

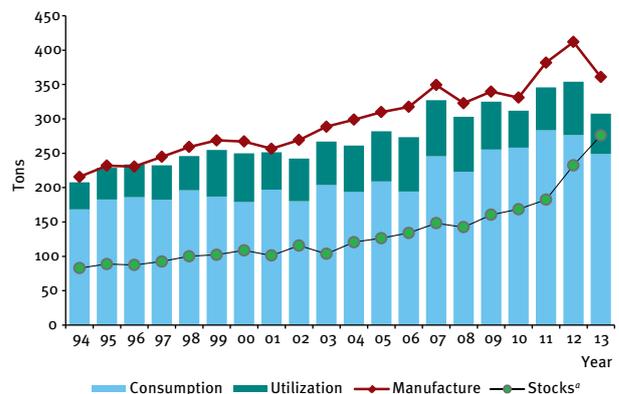


Source: International Narcotics Control Board.  
<sup>a</sup>Stocks as at 31 December of each year.

58. The information available to the Board indicates that global production of opiate raw materials rich in thebaine exceeded global demand in 2014. Total stocks of opiate raw materials rich in thebaine were sufficient to cover global demand for about one year. The plans of producing countries indicate that global production of opiate raw materials rich in thebaine will be slightly less than global demand in 2015. Total stocks of opiate raw materials rich in thebaine are therefore expected to decrease. The global supply (stocks and production) of opiate raw materials rich in thebaine will continue to be sufficient to fully cover global demand.

59. Codeine is a natural alkaloid of the opium poppy plant, but most of the codeine currently being manufactured is obtained from morphine through a semi-synthetic process. There has been an increase in the cultivation of the opium poppy variety that is rich in codeine and in the manufacture of concentrate of poppy straw rich in codeine, which is used for the extraction of codeine. Global utilization of concentrate of poppy straw rich in codeine amounted to 24.6 tons in 2013, which is a fraction of the amount of morphine used. Codeine is used mainly for the manufacture of preparations in Schedule III of the 1961 Convention, while a smaller quantity is used for the manufacture of other narcotic drugs, such as dihydrocodeine and hydrocodone. The trends relating to global manufacture, consumption, utilization and stocks of codeine during the period 1994-2013 are shown in figure 3.

Figure 3. Codeine: global manufacture, stocks, consumption and utilization, 1994-2013

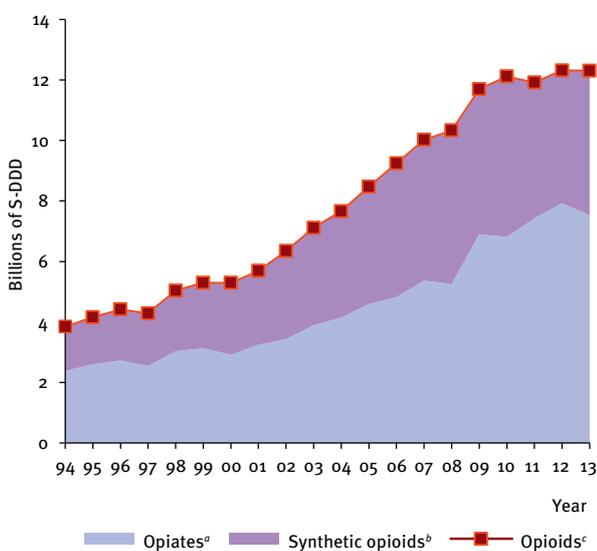


Source: International Narcotics Control Board.  
<sup>a</sup>Stocks as at 31 December of each year.

60. Global demand for opiate raw materials rich in morphine and rich in thebaine is expected to rise in the future. It is anticipated that global demand for opiates

and opiate raw materials will also continue to rise. Figure 4 presents the global level of consumption of opiates and synthetic opioids, including buprenorphine and pentazocine, which are opioids controlled under the 1971 Convention, during the 20-year period from 1994 to 2013. To allow the aggregation of consumption data for substances having different potencies, the levels of consumption are expressed in billions of S-DDD.

Figure 4. Global consumption of opioids, 1994-2013



Source: International Narcotics Control Board.

<sup>a</sup>Including buprenorphine, an opiate controlled under the 1971 Convention.

<sup>b</sup>Including pentazocine, a synthetic opioid controlled under the 1971 Convention.

<sup>c</sup>Including opiates and synthetic opioids.

61. Over the past 20 years, global consumption of opioids has more than tripled. The consumption of opiates as a percentage of total consumption of opioids fluctuated between 62 per cent in 1994 and 52 per cent in 2006, rising again to 61 per cent in 2013. As a result, the share of synthetic opioids, which are used for the same indications as opiates, increased from 38 per cent in 1994 to 48 per cent in 2008, but declined to 39 per cent in 2013. Between 2010 and 2013, the ratio of consumption of opiates to synthetic opioids stabilized at about 60 per cent for opiates and 40 per cent for synthetic opioids. Throughout the period, the supply of opiate raw materials from which opiates were obtained was sufficient to cover increasing demand. It is expected that the demand for opiates will increase again in the future, while their share of the total

consumption of opioids may decline, owing to expected growth in the consumption of synthetic opioids.

62. Overall, the available data indicate that the amount of opiate raw materials available for the manufacture of narcotic drugs for pain relief is more than sufficient to satisfy the current level of demand as estimated by Governments. In addition, both production and stocks continue to increase.

## B. Availability of opioid analgesics

63. Opioid analgesics are essential medicines for palliation therapy.<sup>34</sup> They are prescribed mainly in relation to cancer, but palliation therapy is also needed for other health situations that require the management of pain (such as surgery and childbirth) and for chronic conditions such as cardiovascular diseases, chronic respiratory diseases, HIV/AIDS and diabetes.

64. Each year, around 5.5 million terminal cancer patients, 1 million end-stage HIV/AIDS patients and 800,000 patients with lethal injuries caused by accidents or violence, in addition to patients with chronic illnesses, patients recovering from surgery, women in labour and paediatric patients, are subjected to untreated or under-treated moderate to severe pain. All in all, WHO estimates that annually tens of millions of people are suffering without adequate treatment.<sup>35</sup>

65. It is estimated that, out of the 20 million people in need of palliative care at the end of their lives, about 80 per cent live in low- or middle-income countries.<sup>36</sup> According to the Worldwide Palliative Care Alliance, every year at least 100 million people worldwide would benefit from palliative care; however, fewer than 8 per cent of people in need of palliative care have access to it. According to the Harvard Global Equity Initiative-Lancet Commission on Global Access to Pain Control and Palliative Care, “the absence of palliative care also undermines efforts to improve human well-being, and

<sup>34</sup>World Health Organization, Model List of Essential Medicines, 19th list (April 2015, amended June 2015). Available from [www.who.int/medicines/publications/essentialmedicines](http://www.who.int/medicines/publications/essentialmedicines).

<sup>35</sup>World Health Organization, *Ensuring Balance in National Policies on Controlled Substances: Guidance for Availability and Accessibility of Controlled Medicines* (Geneva, 2011).

<sup>36</sup>Report by the secretariat of the World Health Organization on the strengthening of palliative care as a component of integrated treatment throughout the life course.