

## CO4.4: Teenage suicides (15-19 years old)

### *Definitions and methodology*

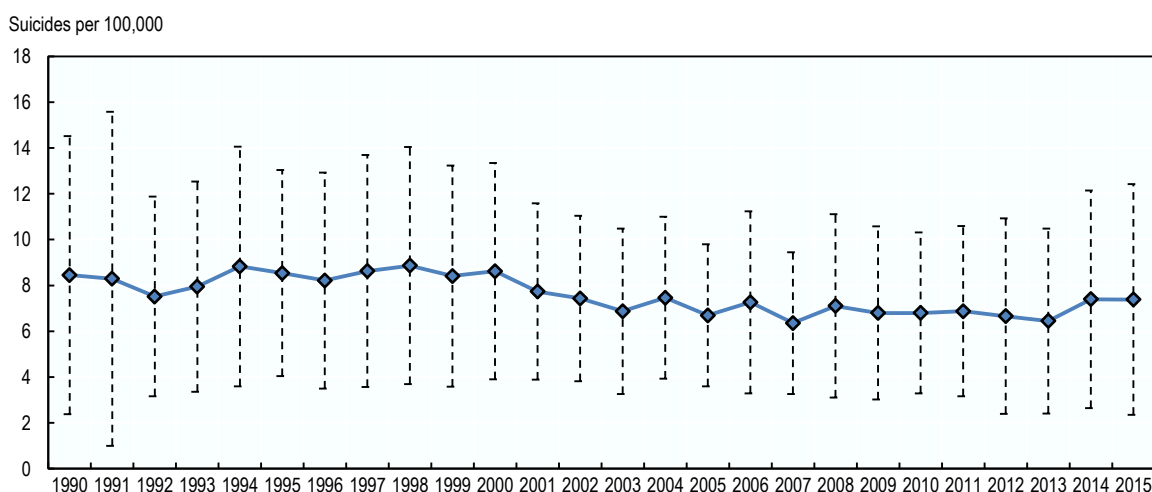
Teenage suicide rates are calculated as the total number of deaths due to ‘intentional self-harm’ among the population aged 15-19 years old in a given year, divided by the total population of 15-19 years old that year, and multiplied by a factor of 100 000. The result is expressed in units of suicides per 100 000 individuals (aged 15-19) per year.

### *Key Findings*

Teenage suicides rates have, on average, declined slightly over the past two decades or so (Chart CO4.4.A). While in 1990 there were, on average across the OECD, 8.5 suicides per 100 000 teenagers (15-19), by 2015 this rate had fallen to 7.4. Much of this decline occurred during the 2000s. Between 1990 and 1999 the OECD average teenage suicide remained fairly stable at around 8.4 suicides per 100,000, but this average fell across the 2000s before reaching a low of 6.3 per 100,000 in 2007. With the exception of 2008, the average rate remained lower than 7.0 until 2014, although it increased slightly in 2014 and 2015.

### **Chart CO4.4.A. Average trends in teenage suicides, 1990-2015**

Suicides by people aged 15-19 years old per 100,000 people aged 15-19, OECD-34 average with +/- 1 standard deviation, from 1990-2015



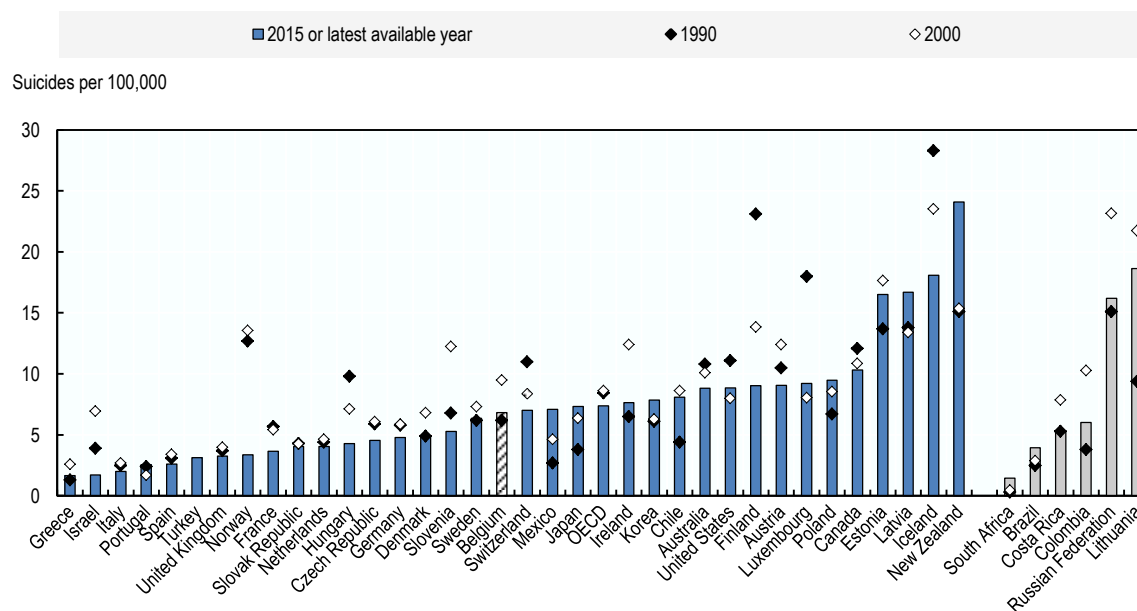
Note: The OECD-34 average excludes Turkey. When data are not available, they refer to the closest year available.

Source: [WHO \(2017\) WHO Mortality Database](#)

**Other relevant indicators:** CO3.5 Young people not in education or employment; CO4.3 Substance abuse by young people.

Chart CO4.1.B shows teenage suicide rates across OECD and OECD key partner countries in 1990, 2000 and 2015. In 2015, the highest teenage suicide rates were observed in Canada, Estonia, Latvia, Iceland, and New Zealand, with 10 or more suicides per 100 000 teenagers (15-19). By contrast, the countries with the lowest suicide rates were Greece, Israel, Italy, Portugal, and Spain, with less than 3 suicides per 100 000 teenagers.

**Chart CO4.4.B. Teenage suicides, 1990<sup>a</sup>, 2000<sup>b</sup> and 2015<sup>c</sup> or latest available year**  
 Suicides by people aged 15-19 per 100,000 people aged 15-19



Note: Due to small populations, suicide rates in Iceland and Luxembourg are likely to show high variability and outliers across the time series.

a) Data refer to 1992 for the Slovak Republic and to 1996 for South Africa.

b) Data refer to 2001 for Luxembourg and 2003 for the United Kingdom.

c) Data for Greece, Portugal, Israel, Luxembourg, Slovak Republic, Germany, Estonia, Denmark, Austria, Norway, Mexico, Japan, United States, Australia, Belgium, Chile, Poland, Finland, Latvia, South Africa, Brazil, and Costa Rica refer to 2014; data for Spain, Turkey, United Kingdom, France, Switzerland, Korea, Ireland, and Colombia refer to 2013, data for Italy, Canada and New Zealand refer to 2012, data for the Russian Federation refer to 2011.

d) The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

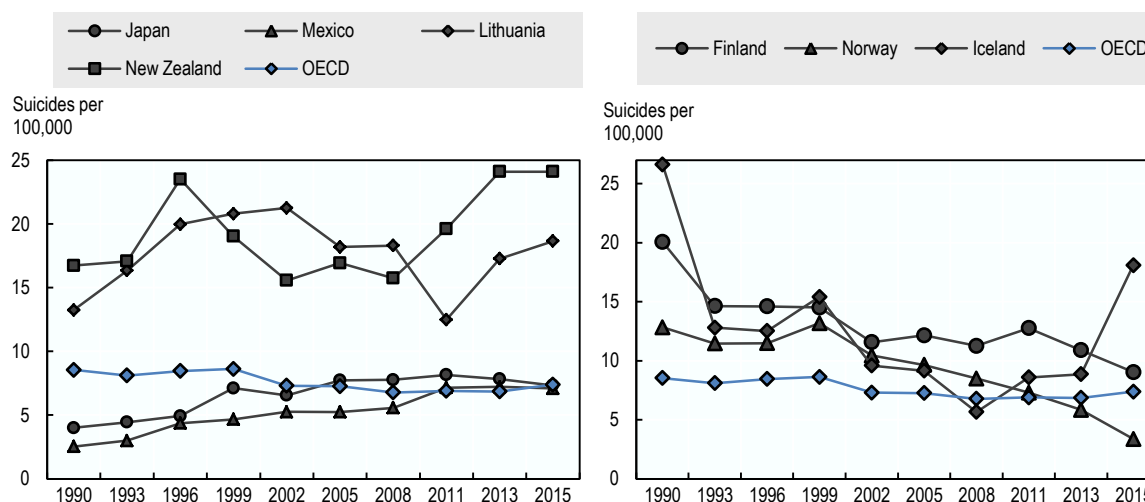
Source: [WHO \(2017\) WHO Mortality Database](http://www.who.int/mortality).

Some countries have seen large changes in teenage suicide rates since the early 1990s. Chart CO4.1.C shows the four countries with the steepest increase in suicide rates since 1990, as well as the three countries with the largest decreases in suicide rates. Japan, Mexico, Lithuania and New Zealand have seen particularly large increases in teenage suicide rates since 1990s, although in the case of Lithuania rates have declined again slightly since the early 2000s. Notably, both Japan and Mexico began the period with relatively low rates well below the OECD average, but ended the period with rates at or around the OECD average. By contrast, in Finland, Norway and Iceland teenage suicide rates have fallen considerably over the past couple of decades. In Finland, for example, current rates are about half what they were around 1990, while in Norway rates have fallen by almost three-quarters. In Iceland, teenage

suicide rates has increased slightly in recent years but are still much lower than in around 1990. That said, due to the small overall population size, trends for Iceland should be interpreted with caution.

### Chart CO4.4.C. Trends in teenage suicides, 1990-2015

Suicides by people aged 15-19 years old per 100,000 people aged 15-19, selected countries, 1990-2015



Note: for presentation purposes, data points are three-year moving averages

a) The OECD-34 average excludes Turkey

Source: [WHO \(2017\), WHO Mortality Database](http://www.who.int/mortality).

### Comparability and data issues

Suicide rates are calculated using the World Health Organization (WHO) Mortality database. This database covers deaths registered in national civil registration systems, with the underlying causes of death coded by the relevant national authority. Underlying causes of death are defined as "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury" in accordance with the rules of the International Statistical Classification of Diseases and Related Health Problems (ICD) (see <http://www.who.int/classifications/icd/en/>).<sup>1</sup>

The International Statistical Classification of Diseases and Related Health Problems (ICD) provide a cross-national framework for the recording of the causes of death. Different countries use different WHO standard coding systems (ICD 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup>) at different times. For calculation purposes, the following causes of death were classified as suicides:

<sup>1</sup> For detailed information about ICD system, please refer to <http://www.who.int/classifications/icd/en/>

	ICD 8th	ICD 9th	ICD 10th
<b>Condensed data</b>	A147/B049 (suicide and self-inflicted injury)	B54 (suicide and self-inflicted injury)	1101/UE63 (intentional self-harm)
<b>Detailed data</b>	E950 - E959 (suicide and self-inflicted injury)	E950 - E960 (suicide and self-inflicted injury)	X600 - X840 (intentional self-harm)

The comparability of suicide data between countries could be affected by a number of reporting criteria, including: the establishment of a person’s intention to kill him or herself, the authority responsible for completing the death certificate, the need to carry out a forensic examination of the corpse, and possible provisions on the confidentiality on the cause of death. It is sometimes argued that stigmatisation may also affect the reliability of data on suicides. Suicide data should thus be interpreted with care, although comparability and reliability issues should not be exaggerated. Some studies conclude that despite reporting issues, suicide data are comparable across countries (Jougla et al., 2002).

Finally, in Iceland and Luxembourg the size of the population aged 15-19 is quite small compared to other countries. This means that suicide rates for these countries can vary sharply over time, as small changes in the absolute number of suicides in a given year can lead to large changes in the relative suicide rate. This sensitivity should be kept in mind when interpreting results for these two countries.

**Sources and further reading:** WHO mortality database (2017); Society at a Glance (2016); Jougla E, Pequignot F, Chappert JL, et al. (2002), «La qualite des donnees de mortalite sur le suicide» Revue Epidemiologie et de Sante Publique; Vol. 50, pp:49–62. ; Sainsbury P. and J.S. Jenkins (1982): "The accuracy of officially reported suicide statistics for purposes of epidemiological research", Journal of Epidemiology and Community Health, 36: 43-48.