

# MORTALITY DUE TO UNINTENTIONAL POISONING



## SDG Target 3.9

By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Indicator 3.9.3: Mortality rate attributed to unintentional poisoning

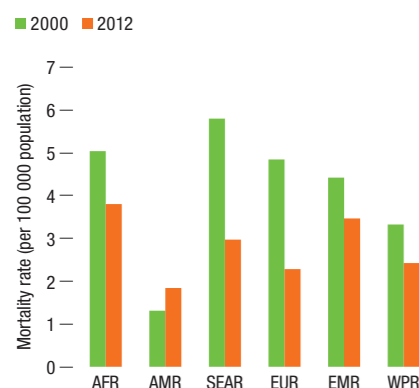
## SITUATION

Worldwide in 2012, an estimated 193 000 deaths were caused by unintentional poisonings.<sup>1</sup> In LMIC, pesticides, kerosene, household chemicals, carbon monoxide and drugs are common causes of poisoning. In high-income countries, substances involved mainly include drugs, carbon monoxide, and personal care and cleaning products in the home. Poisoning can also arise from environmental contamination, for example mass lead poisoning resulting from informal recycling or gold extraction, or from industrial emissions. Occupational exposures to heavy metals, pesticides, solvents, paints, cleaning substances, various vapours and gases, and other chemicals used in industrial production may also occur.<sup>2</sup>

## ACHIEVING THE 2030 TARGET

Globally, the mortality rate attributed to unintentional poisonings decreased by 34% between 2000 and 2012. The most important decreases during that period (of approximately 50%) were achieved in the WHO South-East Asia Region and the WHO European Region (Fig. A.16.1).

Figure A.16.1. Mortality rate from unintentional poisonings, by WHO region, 2000 and 2012



Safe storage, labelling and restricting access to hazardous chemicals and drugs, adequate information about product hazards, personal protection and limiting the use of medications to doses prescribed by health-care professionals all contribute to preventing unintentional poisonings. Other approaches include ensuring the availability and use of less-toxic and less-hazardous alternatives where possible, and, in occupational settings, the implementation of engineering controls and training.

The Strategic Approach to International Chemicals Management was adopted by the International Conference on Chemicals Management in 2006, with its overall objective being to achieve:

*...the sound management of chemicals throughout their life cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.*

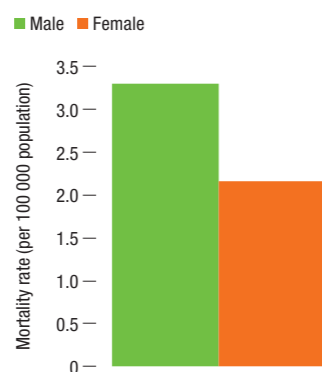
At its Fourth session in 2015, the Conference endorsed the overall orientation and guidance provided as a voluntary tool that will assist in the prioritization of efforts for achieving the above goal.<sup>3</sup>

Major obstacles to reducing the rates of mortality due to unintentional poisonings include the large number of chemicals available on the market – not all of which have been tested for toxicity or are covered by comprehensive regulations. The perceived lack of effective safer alternatives and lack of incentives to use them are further obstacles to reducing exposure to toxic chemicals. Many countries still lack the necessary regulatory and policy frameworks and institutional capacities needed to assess and prevent the negative health impacts of chemicals. More than half of WHO Member States do not have a poisons-information centre. A greater emphasis on prevention would also contribute to the more-effective management of chemicals and a reduction in poisonings.

## EQUITY

Globally, the highest mortality rates from unintentional poisonings occur in children under 5 years of age and adults over 55 years. The mortality rate is also 50% higher in men than in women (Fig. A.16.2). Higher levels of exposure in men may occur in occupational settings.

Figure A.16.2. Global mortality rate from unintentional poisonings, by sex, 2012



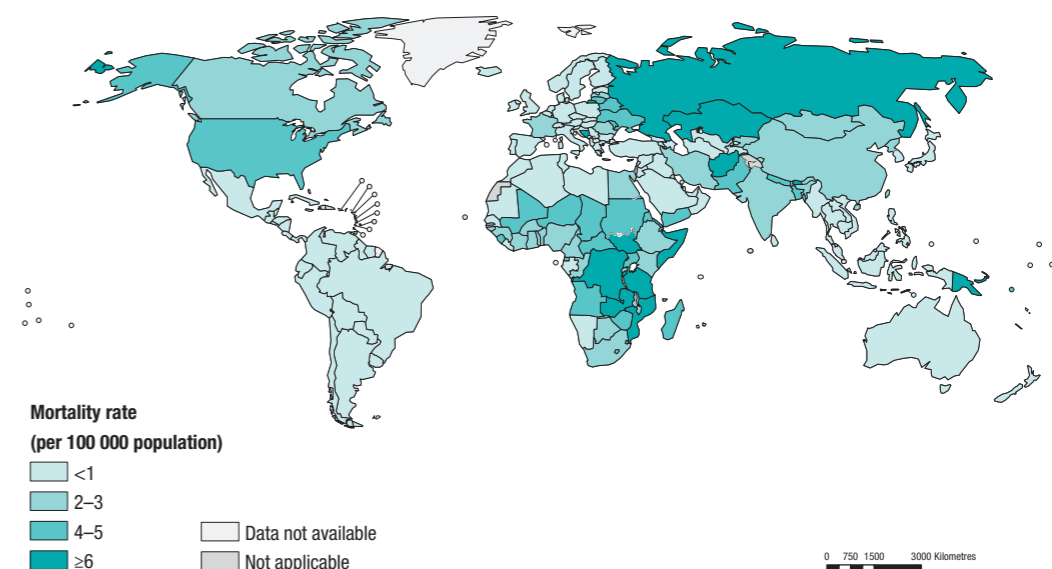
## DATA GAPS

National estimates of mortality due to unintentional poisonings are primarily derived from data collected in CRVS systems. In countries with high-quality CRVS systems, accurate registration of deaths from unintentional poisonings, and in particular distinguishing these from intentional poisonings, remains a challenge. Nevertheless, only around one third of deaths worldwide are recorded in civil registry systems with cause-of-death information based on medical certification. Alternative data sources may be used. As a first step, countries may set up sample registration systems using verbal autopsy to determine cause of death.

## REFERENCES

- 1 Unless otherwise noted, all mortality statistics shown in the text, table and figures are taken from: Global Health Estimates 2013: Deaths by Cause, Age and Sex, Estimates for 2000–2012. Geneva: World Health Organization; 2014 ([http://www.who.int/healthinfo/global\\_burden\\_disease/en/](http://www.who.int/healthinfo/global_burden_disease/en/)).
- 2 Preventing disease through healthy environments. A global assessment of the burden of disease from environmental risks. Geneva: World Health Organization; 2016 ([http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf?ua=1), accessed 3 April 2016).
- 3 International Conference on Chemicals Management. Fourth session. Meeting document SAICM/ICCM.4/6 ([http://www.saicm.org/index.php?option=com\\_content&view=article&id=525&Itemid=700](http://www.saicm.org/index.php?option=com_content&view=article&id=525&Itemid=700), accessed 3 April 2016).

Figure A.16.3. Mortality rate from unintentional poisoning (per 100 000 population), 2012<sup>a</sup>



<sup>a</sup> WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

Table A.16.1. Mortality rate from unintentional poisoning (per 100 000 population), 2012<sup>a</sup>

Region	Country	Mortality rate (per 100 000 population)					
AFR	Cabo Verde	0.3					
	Mauritius	0.3					
	Algeria	1.1					
	AMR	Brazil	0.1				
		Colombia	0.3				
		Costa Rica	0.3				
		EUR	Israel	0.1			
			Netherlands	0.2			
			Germany	0.3			
			EMR	Bahrain	0.4		
				Oman	0.4		
				Kuwait	0.5		
				SEAR	Thailand	0.1	
					Maldives	0.3	
					Sri Lanka	0.4	
					WPR	Philippines	0.2
						Singapore	0.2
						New Zealand	0.4

<sup>a</sup> WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.