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Monitoring Health for the SDGs

COUNTRY SUCCESS STORY FROM THE REPUBLIC OF KOREA
Preventing suicide in the Republic of Korea

In 2015, there were almost 800,000 suicide deaths, making suicide the second leading cause of injury death after road traffic injuries, and one of the leading causes of death overall (15). Some suicides are linked to depression—a mental health disorder estimated to affect 311 million people worldwide (34). Because of this link, suicide mortality was selected as one of the two indicators for SDG Target 3.4.

The importance of limiting access to means of suicide as an effective way of reducing suicide mortality was highlighted in the first-ever WHO report on suicide prevention in 2014 (33). A leading means of suicide in many parts of the world is self-poisoning with pesticides (36). The impact of access to pesticides on suicide rates was first identified in a 1995 study (37) that demonstrated both an increase in suicide mortality following the introduction of paraquat (a highly toxic herbicide) in Samoa in 1972, and a subsequent reduction in such mortality after its banning in 1981. Since then, further studies demonstrating the link between pesticide availability and suicide rates have emerged (38–40). A recent study of a proposed ban on pesticides in India concluded that such a policy would reduce health inequities by providing “higher protection to the poor relative to the rich” given the greater availability of pesticides in rural areas (41).

For many years, suicide mortality in the Republic of Korea has been high compared to other high-income countries and to the WHO Western Pacific Region in general (Figure 3.7) (15). According to WHO estimates the suicide rate in the Republic of Korea was 14.8 per 100,000 population in 2000, 34.1 per 100,000 in 2010 and 28.3 per 100,000 in 2015—a with the suicide rate among males in 2015 being 2.5 times higher than that among females.

Suicides by pesticides accounted for about one fifth of all suicides in the Republic of Korea during 2006–2010 (42). Efforts to control and minimize the harmful impact of pesticides in the Republic of Korea prior to 2011 had not had any meaningful impact as the pesticides that accounted for the majority of deaths were not adequately controlled. In 2011, the Republic of Korea cancelled the re-registration of paraquat and banned its sale in 2012. These actions resulted in an immediate and clear decline in pesticide-poisoning suicides, and contributed to a decline in overall suicide rates (Fig 3.8) (15, 42–44). The intervention appeared to reduce suicide rates among all population groups, including men, women, all age groups, and those living in urban and rural areas (42). More than half of the overall reduction in the suicide rate between 2011 and 2013 could be attributed to the paraquat ban. Notably, this was achieved without any impact on crop yield.

Given the magnitude of suicide by pesticide self-poisoning around the world, tens of thousands of lives could be saved every year should effective regulation of pesticides be enforced worldwide. Ensuring safer access to pesticides will require an intersectoral approach, including pesticide bans and other related policies, community interventions (45), improved health care (46), and training and surveillance activities. The successful approach taken by the Republic of Korea provides an encouraging model for other countries aiming to reduce suicide deaths.