Management of suicide and self-harm

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Description of condition and intervention

Global estimates indicate that more than 700,000 deaths every year are attributable to suicides. This is a preventable condition and a serious public health concern, given preventive efforts are encouraged at individual, community, and national levels. Reduction is suicide mortality is closely linked to United Nation's Sustainable Development Goals target 3.4 and World Health Organization's (WHO) mental health initiatives and WHO 13th General Programme of Work 2019-2023. Source: WHO 2021

We assess the effect and cost of the following intervention being analysed in FairChoices: DCP Analytical tool in this evidence brief.

Risk stratification, linkage to care and intoxication management

Intervention attributes

Type of interventions

Curative

Delivery platform

This intervention may be delivered as part of routine care services predominantly at health centre level.

Equity

In addition to considerations like cost-effectiveness and health systems factors, dimensions of equity can be relevant for priority setting. The opportunity for a long and healthy life varies according to the severity of a health condition that individuals might have, so there are inequities in individuals' opportunities for long and healthy lives based on the health conditions they face. Metrics used to estimate the severity of illness at an individual level can be used to help prioritize those with less opportunity for lifetime health. FairChoices: DCP Analytics Tool uses Health adjusted age of death (HAAD), which is a metric that estimates the number of years lived from birth to death, discounting years lived with disability. A high HAAD thus represents a disease less severe in terms of lifetime health loss, while a low HAAD represents a disease that is severe on average, causing early death or a long period of severe disability. It is also possible to estimate the distribution of HAAD across individuals with a health condition. FairChoices shows for each intervention an average HAAD value of the conditions that are affected by respective interventions that have health effects. Additionally, a plot shows HAAD values for around 290 conditions (Johansson KA et al 2020).

Time dependence

High level of urgency. Treatment outcomes may be highly affected by some hours of delay.

Population in need of interventions

Intervention taxonomy	Treated population and treated fraction	Affected population and affected fraction	Epidemiological Indicator
Risk stratification, linkage to care and intoxication management	0.14* (Lee YY et al 2021	0.14 (Lee YY et al 2021	Incidence of self-harm

*Pesticide self-poisoning makes up 110 000–168 000 (14–20%) of global suicides

Disease state addressed

Primary disease state addressed by this intervention is self-harm.

Intervention effect and safety

Table 1: Effect and safety of intervention

Effect of intervention		Certainty of evidence
Mortality (due to condition)	Assumed 90% reduction with the introduction of the intervention (expert opinion)	See appendix

Model assumptions

Table 2: Summary of model parameters and values used in FairChoices – DCP Analytical Tool

Category	Model parameter	Notes
Intervention	Risk stratification, linkage to care and intoxication management	
Cost calculation		
Treated population	Based on incidence of self-harm	Global Burden of Disease study 2019
Gender	Both male & female	
Age	10-99 years	
Treated fraction	0.14	Lee YY et al 2021
Effect calculation		
Affected population	Those with condition	
Affected gender	Both male & female	
Affected fraction age	10 to 99 years	
Affected fraction for mortality reduction for self-harm/suicide	0.14	
Comparison	No intervention	
Mortality Reduction	0.90	

Intervention cost

The average healthcare costs of treating pesticide poisoned and pesticide self-poisoned patients was estimated to be US$ 85.3 per patient in Sri Lanka, 2015 US dollars (Ahrensberg et al. 2019).

References

WHO 2021: Suicide worldwide in 2019: global health estimates. Geneva: World Health Organization;2021.

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Appendix

Literature Review for effectiveness & safety

This literature search is an example of Level 1 search for intervention inputs taken from DCP3 or generated in an ad hoc manner (e.g., quick google search found one study of cervical cancer screening cost-effectiveness that was used to create an effectiveness parameter for that intervention).

Management of suicide

FairChoices
DCP Analytic Tool

(DCP4 ID: MENTD06)
Cluster: Mental & substance use disorders

Level of evidence of efficacy studies:

1. low (expert opinions, case series, reports, low-quality case control studies)
2. moderate (high quality case control studies, low quality cohort studies)
3. high (high quality cohort studies, individual RCTs)
4. very high (multiple RCTs, meta-analysis, systematic review, clinical practice guidelines)