



**15TH NATIONAL
CONVENTION
ON STATISTICS**

03-05 OCTOBER 2022

*Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority*



Measuring SDG Indicator 3.4.2 – Suicide Mortality Rate in the Philippines

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Measuring SDG Indicator 3.4.2 – Suicide Mortality Rate in the Philippines

Background

- This presentation contains mentions of *suicide, self-harm, mental health issues, and other potentially-triggering references.*
- If you or someone you know is experiencing emotional distress, contact the National Mental Health Crisis Hotline.



CRISIS
HO+LINE
National Center for Mental Health

Kumusta ka?
Tara, usap tayo!

1553 Luzon-wide
landline toll-free

GLOBE / TM Subscribers
0966-351-4518
0917-899-8727
0917-899-USAP

SMART / SUN / TNT Subscribers
0908-639-2672

#HandangMakinig

f ncmhcrisis hotline v ncmh hotline

Image Source: DOH

Objectives of the Study



Review International Methodologies for
Estimating Suicide Mortality Rate



Develop the framework for measuring
Suicide Mortality Rate



Estimate SDG 3.4.2 using data from the
Civil Registration System



Recommend implementation workflow for
the proposed methodology



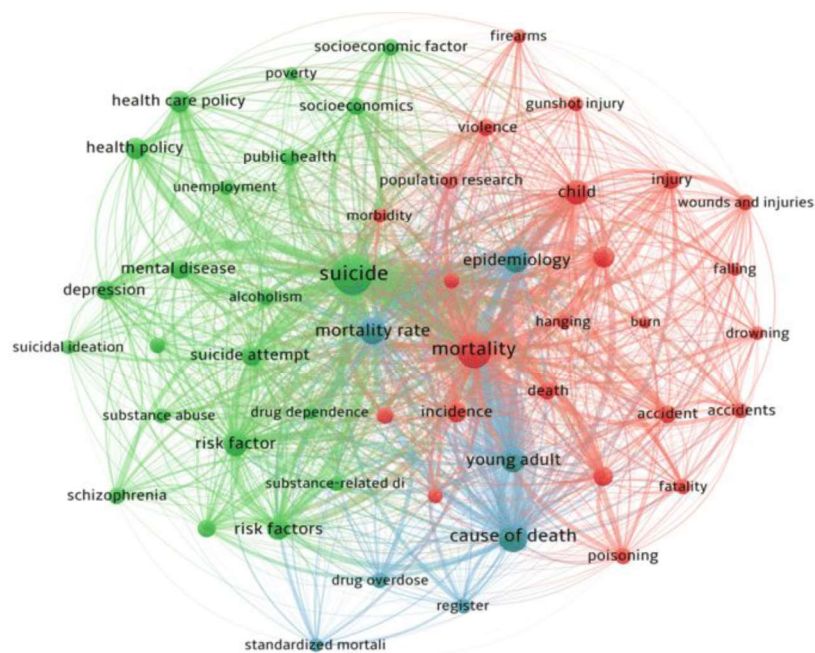
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Background



Key Topics Surrounding Research on Suicide Mortality

•Suicide

- Suicide is a fatal, intentional, self-inflicted injury with the intent to end life
- It is a major contributor to global premature mortality
- 77% of global suicide deaths occurred in low to middle income countries
- Suicide is the fourth leading cause of death among 15-29 year-olds worldwide, making it a serious public health issue

Background



- **Goal 3: Ensure healthy lives and promote well-being for all at all ages**
 - Target 3.4. By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
 - **SDG 3.4.2. Suicide mortality rate**
 - *The Suicide mortality rate is defined as the number of suicide deaths in a year, divided by the population, and multiplied by 100,000*
 - SDG 3.4.2 is considered a **Tier III Indicator in the Philippines**

Source: UNSD and WHO

Related Literature: Global Methodology

WHO-Recommended Methodology



Source: UNSD and WHO

Related Literature: Global Methodology

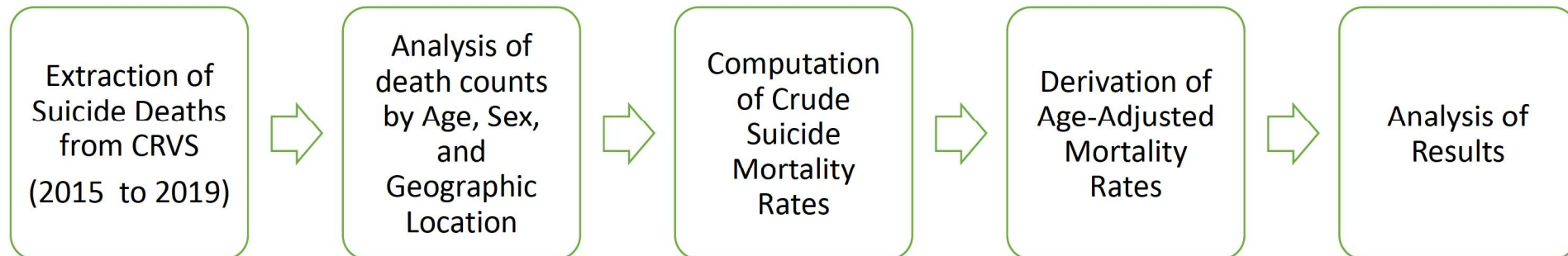
Formula for Computing SDG 3.4.2

$$\text{Crude Suicide Mortality Rate} = \left(\frac{\text{Number of suicide deaths in a given year}}{\text{Total Population in the given year}} \right) \times 100,000$$

- Age-adjusted mortality rates are commonly used in comparing mortality rates, since it eliminates the bias of age in the structure of populations being compared
- Use of direct age standardization is preferred because it uses actual data. It is a weighted average of age-specific rates for each of the populations to be compared.

Source: UNSD and WHO

Measuring SDG 3.4.2 in the Philippines



Formula for Computing SDG 3.4.2

$$\text{Crude Suicide Mortality Rate} = \left(\frac{\text{Number of suicide deaths in a given year}}{\text{Total Population in the given year}} \right) \times 100,000$$

Source: UNSD and WHO

Methodology: Data Source

- The preferred data source for measuring suicide mortality is death registration systems with complete coverage and medical certification of cause of death (COD), coded using the international classification of diseases (UN, 2021).
- The Philippines is one of about 80 countries that have good quality vital registration data that can be used directly to estimate suicide mortality rates (WHO, 2021).
- Philippines: CRVS – Civil Registration and Vital Statistics Database (2015 to 2019)



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Methodology: ICD Codes Classified as Suicide

Code	Description	Code	Description
X60	Self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics	X73	Self-harm by rifle, shotgun and larger firearm discharge
X61	Self-poisoning by and exposure to antiepileptic, sedative hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified	X74	Self-harm by other and unspecified firearm discharge
X62	Self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	X75	Self-harm by explosive material
X63	Self-poisoning by and exposure to other drugs acting on the autonomic nervous system	X76	Self-harm by smoke, fire and flames
X64	Self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances	X77	Self-harm by steam, hot vapours and hot objects
X65	Self-poisoning by and exposure to alcohol	X78	Self-harm by sharp object
X66	Self-poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapours	X79	Self-harm by blunt object
X67	Self-poisoning by and exposure to other gases and vapours	X80	Self-harm by jumping from a high place
X68	Self-poisoning by and exposure to pesticides	X81	Self-harm by jumping or lying before moving object
X69	Self-poisoning by and exposure to other and unspecified chemicals and noxious substances	X82	Self-harm by crashing of motor vehicle
X70	Self-harm by hanging strangulation and suffocation	X83	Self-harm by other specified means
X71	Self-harm by drowning and submersion	X84	Self-harm by unspecified means
X72	Self-harm by handgun discharge	Y87	Sequelae of Self-harm, assault and events of undetermined intent

Source: UNSD and WHO

Results

Table 1. Suicide Statistics

Statistics	2015	2016	2017	2018	2019
Age at Death					
Minimum	7	5	9	5	9
Maximum	90	98	98	92	89
Mean	36.08	35.89	36.25	35.10	34.47
Percentage of Suicide Deaths					
Among 10-39 years old	2.28	2.14	2.21	2.74	2.62
Total Deaths	0.45	0.42	0.44	0.51	0.46

Suicide Death Counts

- Average age among suicide victims ranged from 34.47 to 36.25
- Suicide accounted for around 0.5% of total deaths from 2015 to 2019

Results

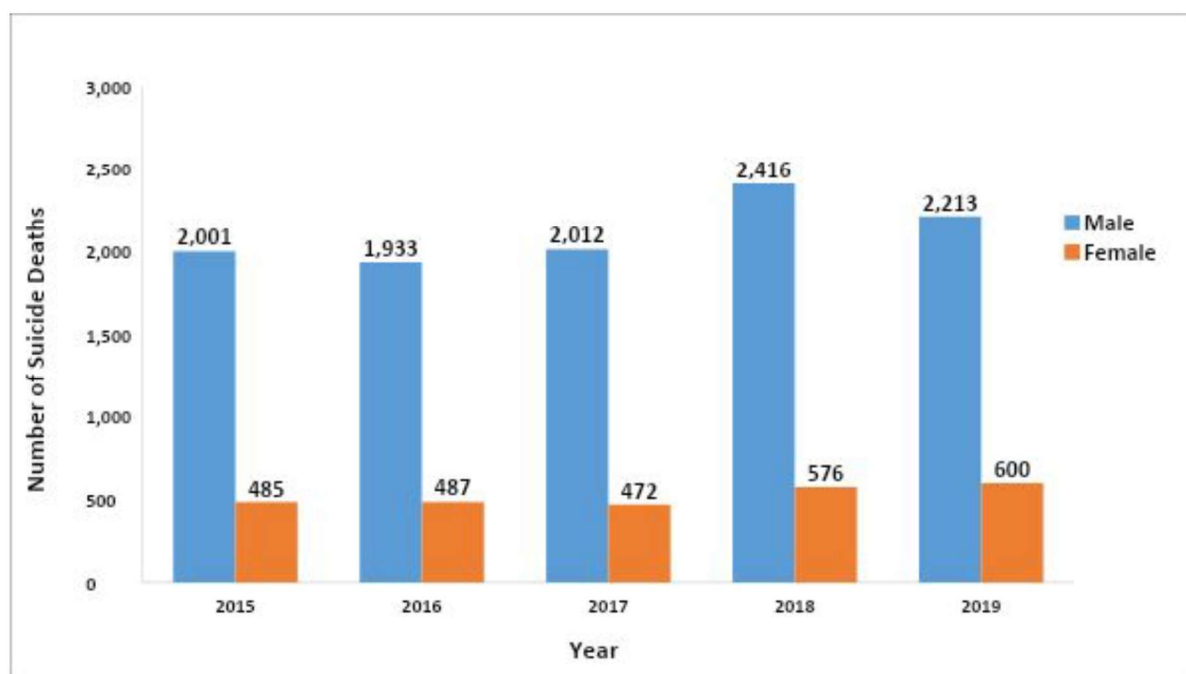


Figure 1. Number of Suicide Deaths by Sex

Suicide Death Counts

- Suicide deaths increased substantially in 2018
- The number of male suicide deaths is about four times the number of female suicide deaths

Results

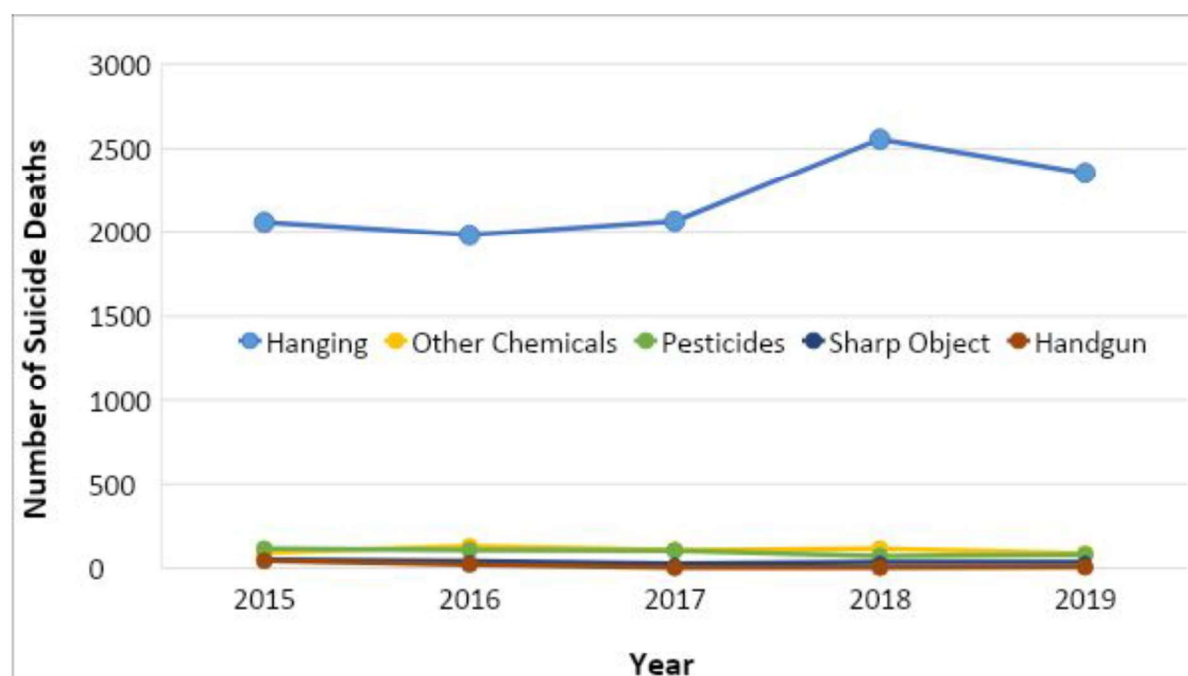


Figure 2. Number of Suicide Deaths by Method (Top 5)

Suicide Death Counts

- Hanging is consistently the most frequent method used in suicide
- For every five suicide deaths, four were caused by hanging



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Results

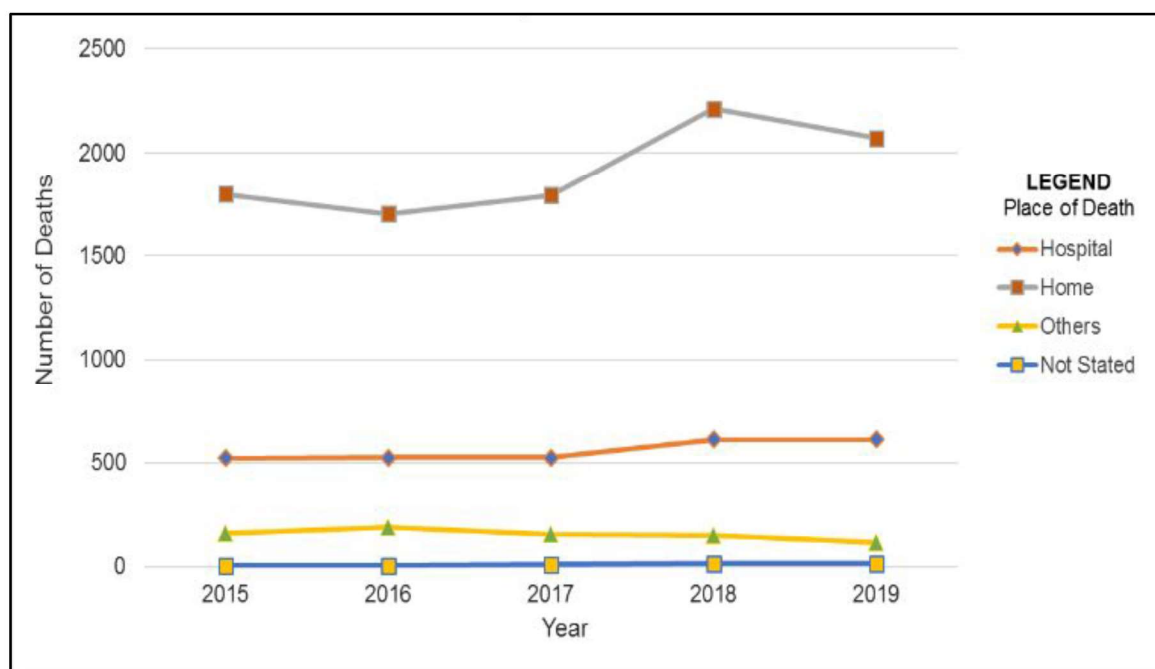


Figure 3. Number of Suicide Deaths by Place of Death

Suicide Death Counts

- Most suicide deaths occur at home
- Suicide deaths at home are usually certified by the local health officer based on the information provided by concerned parties, unlike in the hospital, in which a medical doctor is required to certify the cause of death



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Results

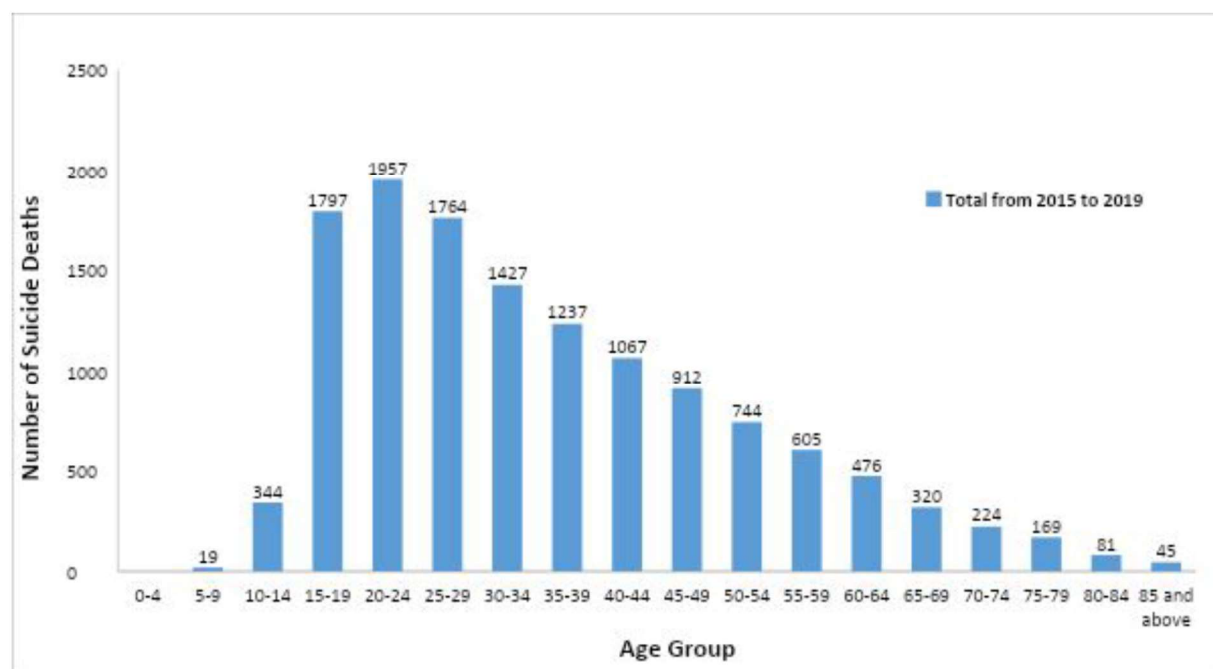


Figure 4. Number of Suicide Deaths by Place of Death

Suicide Death Counts

- Highest occurrence of suicide deaths for ages 20-24
- Substantial increase in number of suicide deaths starting at age group 15-19

Results

Table 2. Computed Crude Suicide Mortality Rates

Mortality Rate	2015	2016	2017	2018	2019
Total	2.465	2.360	2.385	2.829	2.622
Male	3.924	3.729	3.821	4.521	4.083
Female	0.973	0.961	0.916	1.101	1.130

Crude Suicide Mortality Rates for SDG 3.4.2

- The crude suicide mortality rates fluctuated from a low of 2.360 per 100,000 population in 2016 to a high of 2.829 in 2018.
- Crude Suicide Mortality Rates in Males are significantly higher than that of Females

Results

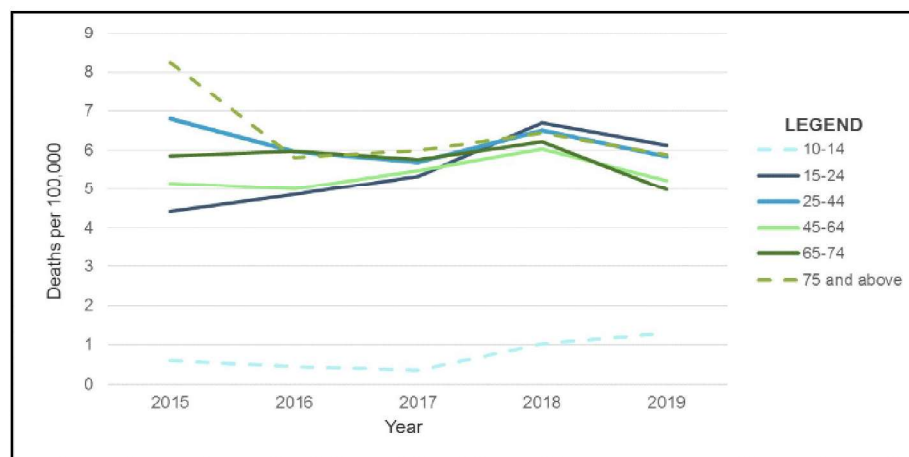


Figure 5. Crude Suicide Mortality Rate for Males by Age Group

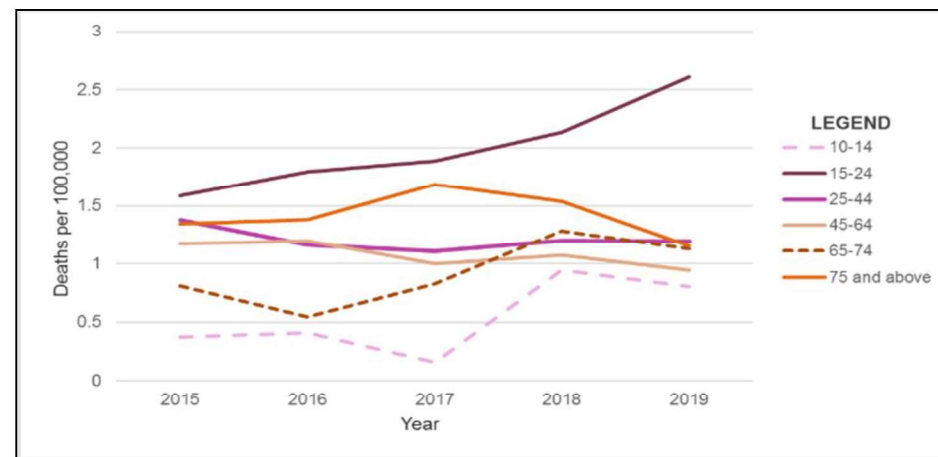


Figure 6. Crude Suicide Mortality Rate for Females by Age Group

Crude Suicide Mortality Rates

- Deaths from suicide are more prevalent in the 15-24 age group
- Suicide rates among males for 15–24 age group increased considerably from 2015 to 2018, by 2018, this age group had the highest number of deaths per 100,000 population

Results

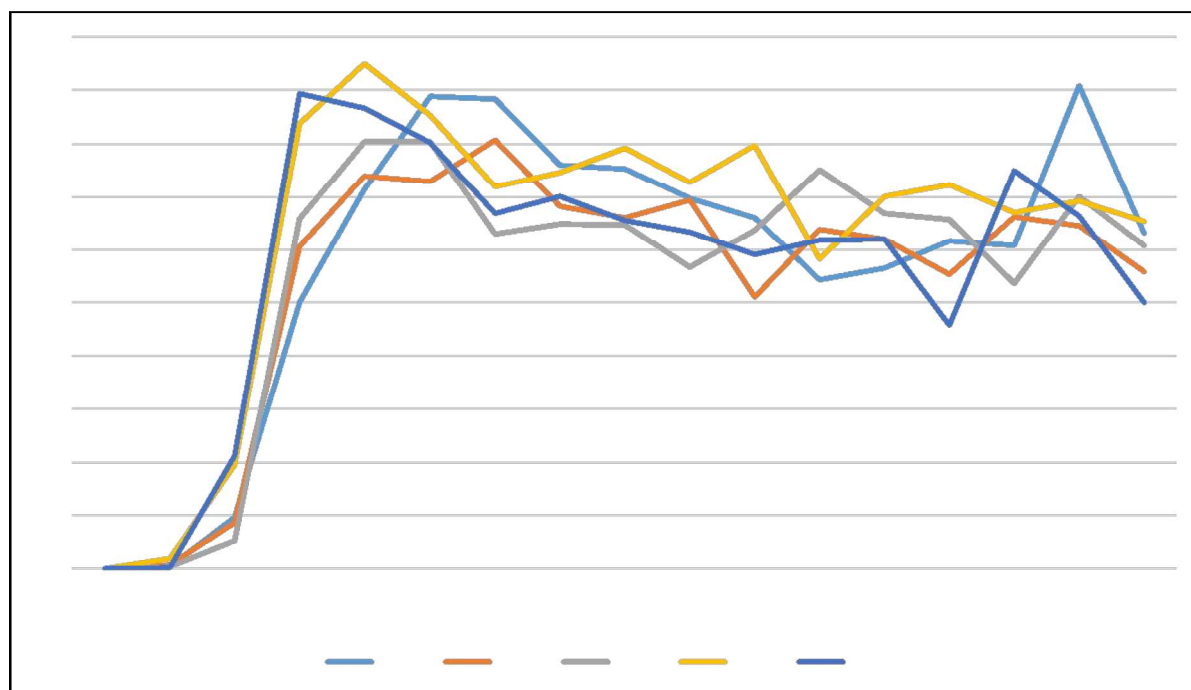


Figure 7. Crude Suicide Mortality Rates by Age Group

Crude Suicide Mortality Rates

- Steep increase in Crude Suicide Mortality Rates starting at age group 15-19 years old, across all years



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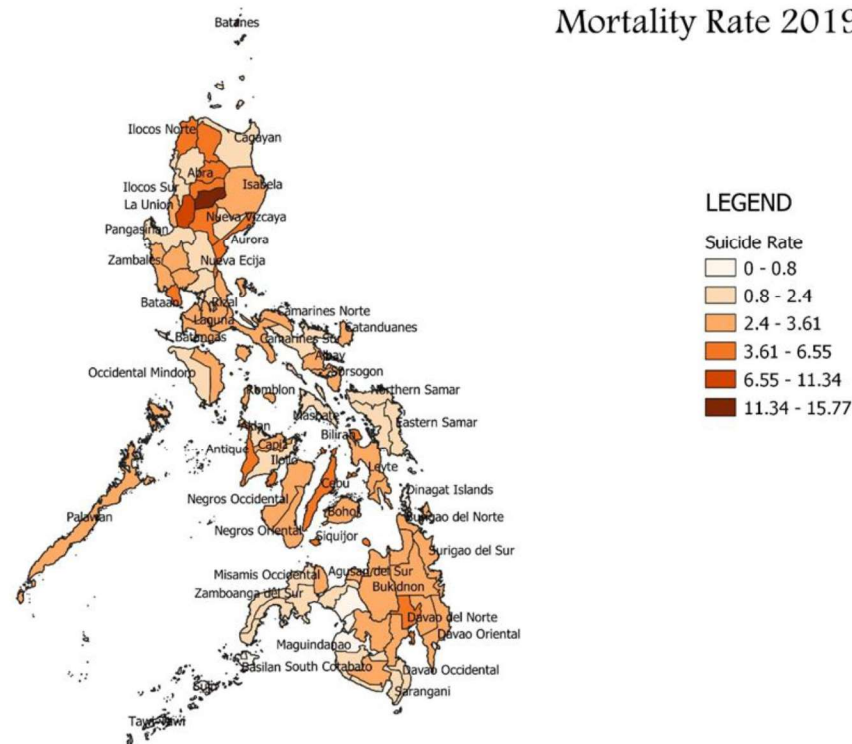
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Results

**Figure 8. Crude Suicide
Mortality Rate by
Geographic Location**

Crude Suicide
Mortality Rate 2019



Results

Table 3. Total Suicide and Undetermined Intent Cause of Death

Cause of Death	2015	2016	2017	2018	2019
Total Suicide	2,486	2,420	2,484	2,992	2,813
Total Undetermined Intent	5,981	5,858	4,982	3,830	3,629
Unspecified event, undetermined intent	4,404	4,487	4,037	3,203	2,590
Hanging, strangulation and suffocation, undetermined intent	867	966	529	251	577
Poisoning by and exposure to pesticides, undetermined intent	57	37	74	90	68
Poisoning by and exposure to other and unspecified chemicals and noxious substances, undetermined intent	62	37	57	79	56
Contact with sharp object, undetermined intent	96	30	50	38	47

Analysis of Deaths with Undetermined Intent

- Significant incidence of deaths with undetermined intent

Conclusions

- Suicide mortality rates in the Philippines are generally lower compared to the world's average
- Based on age-standardized rates computed for 2015-2019, the suicide mortality rate among males is about four times higher than that among females
- The suicide mortality rate of the 15–24-year male group has been steadily increasing from 2015 to 2018
- 72% of suicide deaths happen at home
- Method of 80% of the reported suicide is by hanging.

Recommendations

- Examining the effects of age, period, and cohort on suicide mortality rate will lead to better understanding and reducing the major cause of premature deaths.
- To improve the estimates of suicide mortality rate, procedures for redistribution of garbage codes have to be developed and implemented.
- Garbage codes must be reduced by studying them further and training medical officers on how to deal with situations that are likely to cause garbage codes.



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Thank you!



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