Preventing suicide

A manual for case registration of suicide and attempted suicide

World Health Organization
Regional Office for the Eastern Mediterranean

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Contents

Introduction **5**
Why establish a register for suicide and attempted suicide? 5
Aims of the manual 6
Structure of the manual 7
Part 1. Case registration for suicides **9**
Step 1. Establish a coordinating committee 10
Step 2. Set up the infrastructure required for suicide case registration 11
Step 3. Train the work-team 14
Step 4. Disseminate resources for case registration 15
Step 5. Identify cases of suicide 16
Step 6. Register suicide cases (collect data) 20
Step 7. Input case registration data 28
Step 8. Store the case registration data 30
Step 9. Analyse the case registration data 31
Step 10. Use the case registration data 32
Part 2 Case registration for suicide attempts **33**
Step 1. Establish a coordinating committee 34
Step 2. Set up the infrastructure required for suicide attempt registration 35
Step 3. Train the work-team 39
Step 4. Disseminate resources for case registration 40
Step 5. Identify suicide attempts 40
Step 6. Register suicide attempt cases (collect data) 43
Step 7. Input case registration data 52
Step 8. Store the case registration data 55
Step 9. Analyse the case registration data 55
Step 10. Use the case registration data 57
Future directions **58**
References **60**

Annex 1. Example questionnaire for verbal autopsy 62
Annex 2. Example registration form for suicide mortality.....68
Annex 3. ICD-10 codes for international self-harm 70
Annex 4. Example registration form for suicide attempts.....71

Introduction

Why establish a register for suicide and attempted suicide?

Suicide is a major public health problem which accounts for approximately 1 million deaths globally every year (*1*). Over 60% of suicides in the world are believed to occur in low- and middle-income countries (*1*). However, there is a lack of information regarding the actual burden of suicide in these areas (*2*).

The lack of knowledge about suicide in low- and middle-income countries is thought to be connected to the non-existence or fragmented nature of suicide registration systems within these countries. For instance, in some countries, data on intentional self-harm may be included within an aggregate category of external injuries, which makes suicide difficult to distinguish from alternate causes of death, such as accidents or homicides. Or, data on suicide may only be partially available; for example, the sex of the individual may be recorded without information on the method of suicide.

It is estimated that the incidence of suicide attempts is 20 times or more that of completed suicide. A history of attempted suicide is an important indicator of future suicide attempts and of suicides. As such, the morbidity, financial toll and overall burden of disease associated with suicide attempts are substantial. However, registers for non-fatal suicidal behaviour ("suicide attempts" or "intentional self-harm") are virtually non-existent.

With incomplete or limited information, it is difficult to quantify the mortality, morbidity, financial toll and other societal ramifications associated with suicidal behaviour leading to suicide and non-fatal suicidal behaviour not being on the public health agenda.

Thus, countries benefit from identifying the population demographics that are most likely to attempt suicide through establishment of case registers of suicide and attempted suicide to:

- quantify the size of the problem
- identify the demographics most susceptible to suicidal behaviour
- reveal both risk and protective factors for suicidal behaviour
- reveal the most frequent means (methods) of suicide and intentional self-harm
- elucidate fatal and non-fatal suicidal behavioural trends over time
- provide valuable information to policy-makers, researchers and health professionals
- encourage and initiate research.

Establishment of a case register may be of interest to a range of stakeholders, including:

- government officials
- policy-makers
- researchers and scholars
- health professionals
- community groups
- organizers of national mortality registers
- international organizations
- general population.

Aims of the manual

This publication is intended as a manual on how to establish a registration system ("suicide register") for both fatal ("suicides") and non-fatal ("suicide attempts") suicidal behaviour. The extent to which suicides are registered may vary significantly between countries and also within subregions of a single country. In countries that have functioning civil registration systems, information on causes of death is compiled from individual death certificates, as recorded in civil registries. Such data, as collected through a compulsory and routine system, are invaluable for the assessment and monitoring of the health

status of a population and for planning prevention or intervention strategies (described further in Step 10). Around 120 countries report such cause-of-death data to WHO annually. This information may be found at: http://www.who.into/healthinfo/morttables. The majority of these countries are in the high-income group, Latin America and the Caribbean, and Europe and Central Asia. For countries without a functioning civil registration system, where death certificates may not be available, a verbal autopsy can be used to determine the cause of death of individuals.

This manual is intended for countries or subregions within countries that have nonexistent or fragmented and ineffective suicide and/or suicide attempt registers. However, the steps outlined may also be instructive to those countries with already established suicide registration systems. It may help improve, streamline or strengthen existent suicide registers by:

- improving standardization of registration procedures
- promoting more comprehensive and complete data collection
- guiding the process of scaling-up the registration system (e.g. from the subregions within a country to the national level)
- initiating implementation of case registration of suicide attempts, which may be excluded from the existing suicide register.

The goal of this manual is to provide step-by-step instruction on how to establish an effective and reliable registration system for fatal and non-fatal suicidal behaviour and monitor trends using standard recording practices and the International Classification of Diseases (ICD) in order to improve knowledge about the incidence and trends of suicide and suicide attempts at a national or subnational level.

Structure of the manual

The manual has two parts:

Part 1. Case registration for suicides.
Part 2. Case registration for suicide attempts.

Each part has 10 sequential steps which together address the following questions.

- What are the basic elements required to develop a suicide register?
- How are suicide, and suicide attempt, cases identified?
- How do you classify suicidal behaviour?
- How and where should cases be registered?
- How and where should the data be stored?
- How should the data be analysed?
- How may registration data be used?

Part 1

Case registration for suicides

Step 1. Establish a coordinating committee

Establishing a suicide register will require political commitment, managerial support and technical knowledge. Thus, it is imperative to assemble a coordinating committee – a group that will oversee and coordinate the establishment, implementation and maintenance of the suicide registration system.

Is there is an existing body or group that could take on the role of the coordinating committee? If not, then assemble the committee by including professionals with political, managerial and technical expertise.

Some potential candidates for the coordinating committee are:

- Ministry of Health representatives
- politicians
- hospital directors
- health system managers or experts
- other public health professionals
- senior medical doctors
- mental health experts
- social workers
- academics
- researchers in health-related disciplines (e.g. epidemiologists, biostatisticians, suicide researchers, sociologists)
- leaders from the private sector
- representatives from civil society organizations, including consumer and family associations
- other stakeholders with an interest in suicide prevention and advocacy.

The coordinating committee may vary in size (e.g. a single director, such as a minister of health, several health representatives from different districts, or alternatively a collection of medical doctors from all the hospitals that are participating in the registration system). Its size will be

dependent on country size, the time commitment of individual members, scope of the suicide register (e.g. if suicide cases will be registered in only one district, it will perhaps require a smaller coordinating committee compared to a register that covers an entire country).

Individual responsibilities of each committee member should be clearly defined. Responsibilities may be delegated based on expertise or may be divided by subregion of a country (e.g. a subset of committee members may be responsible for a specific district).

Step 2. Set up the infrastructure required for suicide case registration

This step involves the following sub-components.

a) Select a catchment area

The coordinating committee will need to decide on the area in which suicide cases will be registered. This is known as the catchment area.

The catchment area may encompass the entire country. Alternatively, due to limitations (e.g. financial, logistical or human resources) you may choose to register suicide cases within a smaller catchment area such as an individual province, district or subregion of a country.

If a smaller than national catchment area is selected, it is important that it meet the following criteria, outlined in the START study manual (*3*):

- well-defined and relatively stable (e.g. in terms of size and location); this will avoid subsequent suicide trend analyses from being biased by a significant variation in the recruiting area;
- representative of the country as a whole, in terms of demographics of the population and environment (e.g. socioeconomic context, sex distribution, crime rates, geography, etc.);
- receives information on as many cases of suicide as possible;
- has the infrastructure in place to appropriately record and store data.

With minimum resources, or to get started (e.g. in a pilot project), suicide cases could be registered in sentinel sites (e.g. a single medical centre) initially.

b) Establish a work-team

The coordinating committee will have to recruit a number of individuals who will be responsible for the actual registration of suicide cases ("data collection"), data input and subsequently data analysis. Suitable candidates are those with a background or knowledge in either medicine, public health, or have access to suicide cases and/or have an interest or expertise in suicidal behaviour. These include:

- doctors
- nurses
- other primary care personnel
- psychologists
- mental health and general health workers
- medico-legal authorities
- social workers
- coroners
- mortuary or funeral staff
- police or administrative staff within police departments
- researchers in health-related disciplines (e.g. epidemiologists, biostatisticians, suicide researchers, sociologists)
- academics
- those employed at relevant nongovernmental or community organizations
- data entry personnel
- data analysts (e.g. biostatisticians, academics, other public health professionals or members of the coordinating committee itself).

This list will vary depending on the country or catchment area selected. The responsibilities and roles of each individual in the work-team

should be well defined. Individuals in the work team may have multiple roles (e.g. involved in both data collection and data entry).

c) Generate the case registration form

The committee will need to draft a case registration form. All of the items that need to be included in the form are presented in Step 6. A template of this form is also available in the WHO booklet *Preventing suicide: a resource for suicide case registration* (*4*). This form is the primary tool in collecting information about suicide cases. It outlines the minimum basic, essential information required to register a suicide case.

The coordinating committee should carefully go through the form and make sure that the items listed are pertinent to their country or catchment area. Some of the items might require entries specific to the country or subregion within a country. For example, the location where the body was found – insert entries into the form that are country or catchment area-specific. Translate the case registration form into a local language or dialect as required.

d) Decide on the specifics of case registration

The coordinating committee will need to decide on the following.

- Will the suicide case be registered using a written copy ("hard copy") of the case registration form? Or will the data be directly entered into an electronic version of the form?
- When should the case be registered?
  - Immediately after a suicide case is identified (using the criteria that will be outlined in Step 5)?
  - When all information is available (e.g. when all items in the form are available)?
  - If case registration occurs immediately after the identification of a suicide death, it is likely that not all the information is available. For example, it could take some time to establish the method(s) of suicide as this may involve an autopsy,

toxicological analysis, etc. In this case, the coordinating committee will need to decide on:
  - whether to enter partial information
  - how to identify incomplete or pending cases.
- Where will the data be entered?
  - Will the data be entered locally (at the site of where the hard copy of the form was filled out)?
  - If so, are the resources available for entering and compiling data (e.g. computers, required software, data entry template, internet access)?
  - Or will the hard copies of the completed forms be sent to a centralized location for data entry?
  - If so, how often will the data at local data collection sites be sent to the centralized location (e.g. monthly or after 50 cases are registered)?
- Where will the data be stored?
  - Will the data be stored locally?
  - Although copies of the data will likely be stored locally, as outlined in Steps 7 and 8, ultimately all the case registration data will be complied into a master data file at a centralized location.
  - Thus, a system needs to be in place for transferring data in either written or electronic form to this central data storage location. It needs to be determined how often the data at local data collection/storage sites will be sent to the centralized location (e.g. monthly or after 50 cases are registered).

Step 3. Train the work-team

The next step is for the coordinating committee to provide the work-team with detailed information on how to identify and register suicide cases. This involves educating the work-team on Step 5 to Step 8 of this manual. At the end of the training session, the work-team should be well informed on:

- how to identify suicide deaths (Step 5)
- how to collect data (Step 6)
- how and when to enter the data (Step 7)
- how and where to store the data (Step 8).

Additionally, the coordinating committee may also decide on training the work-team on:

- how to analyse the data (Step 9)
- how to use the data (Step 10).

The work-team should also be informed about who to contact in case of questions or queries regarding case registration. For example, one or several members of the coordinating committee could act as a liaison between the coordinating body and the work-team. Their contact information should be available to all members of the work-team.

Step 4. Disseminate resources for case registration

In this step, the committee will ensure that the work-team has all the required resources in order to collect and store the data.

The work-team must have copies of the case registration form, or know where to access the form. For example, there could be a central database or website through which copies of the form could be obtained, or hard copies of the form could be mailed out upon request.

If the team cannot directly enter the data into an electronic database, it needs to be informed where to send a copy of the completed written version of the case registration form so that the data can be entered elsewhere. In this regard, a centralized data entry and/or storage location would be desirable.

The team needs access to necessary equipment, such as computers, software (e.g. spreadsheet, word processor, statistical analysis programs), a photocopier, scanner and/or fax machine.

If a sample data entry template (refer to Step 7) has been compiled, this should also be made easily available to the team.

Step 5. Identify cases of suicide

In this step, the coordinating committee and, perhaps more important, the work-team will familiarize themselves with the tools required to correctly identify suicide cases. The ability to accurately differentiate cases of suicide from other causes of death is critical in establishing reliable mortality registration practices.

For the purposes of this manual, suicide is defined as:

"an act which results in death, in which the deceased, knowing or expecting potentially fatal outcomes, had initiated and carried out the act with the purpose of bringing about wanted changes" (*5*).

This definition implies that there are four main characteristics associated with fatal suicidal behaviour (*5*):

- outcome – the act has a fatal outcome (death)
- responsibility – the act was initiated, carried out or planned by the deceased
- awareness – the fatal outcome was known or expected by the deceased
- intention – the act had the purpose of bringing about wanted changes.

In order to establish whether a death was due to suicide, two key factors need to be discerned:

- did the deceased intend to die?
- was the death self-inflicted?

If there is a high level of evidence suggesting that the answers to the above questions are "yes", then the death is likely due to suicide.

The method of death is one of the first pieces of information to examine when identifying possible suicide cases. Often this is approached based on exclusion principles, or the so called NASH system (*6*), in which a death is either due to:

- natural causes
- accident
- suicide
- homicide.

A doctor can usually classify natural deaths, while cases of accident, suicide and homicide often require additional investigation around the circumstances of the death.

Sometimes suicide deaths can be confused with accidental deaths (e.g. when drug overdose leads to death). Because of this, it is often necessary to ascertain additional evidence that a death is by suicide.

Some additional sources of evidence may come from: (*7*)

- pathological and toxicological investigations – medical personnel attribute the underlying cause of death as self-inflicted through forensic examination;
- police or coronial inquiries – which find that the person died due to self-inflicted injuries;
- psychological and medical history – previous knowledge of the state of mind of the deceased which indicates that the circumstances of death were self-inflicted (e.g. mental disorders or suicidal ideation), such as:
  - alcohol and/or drug abuse
  - evidence of chronic pain or severe terminal illness
  - evidence of acute emotional distress at the time of death
  - depression
  - bipolar disorder
  - psychosis
  - suicide attempts

  - thoughts or plans of suicide
  - social isolation;
- verbal statements made by the deceased person which indicated that the cause of death was self-inflicted;
- written evidence indicating that the death was by suicide;
- method and circumstances of death (e.g. that suggest the death was self-inflicted rather than accidental, natural or due to homicide).

Where death certificates are lacking, a verbal autopsy can be used *(8,9,10)*.

What is a verbal autopsy?

The verbal autopsy is a method used for determining an individual's cause of death and cause-specific mortality fractions in populations without a complete vital registration system. Verbal autopsies consist of a trained interviewer using a questionnaire to collect information about the signs, symptoms and demographic characteristics of a recently deceased person from an individual familiar with the deceased, usually family members.

Objectives of a verbal autopsy

The verbal autopsy assessment provides data and resources that will be the basis for rapid and effective field assessment of population-level causes of death. The goals of the verbal autopsy assessment are to:

- find out the causes of death that have occurred in the study site in the past two years;
- find out whether the death registered is suicide.

Method

The verbal autopsy questionnaire is designed to identify all major causes of death among adolescents and adults (i.e. starting at the age of

15 years), including deaths related to pregnancy and childbirth. See Annex 1 for an example.

The verbal autopsy questionnaire contains both common elements and sections (or modules) appropriate to both the age and sex of the deceased. The common elements include a "general information" module, and questions that relate to some causes of death and certain generalized signs and symptoms. The "general information" module – the first page of each section – contains key identifying and sociodemographic information, and data fields necessary for the management of completed forms. It suggests standard contents that identify and record:

- a unique ID, for which the verbal autopsy questionnaire has been completed;
- the date, place and time of the interview, and the identity of the interviewer;
- key characteristics of the respondent;
- the time, place and date of death;
- the name, sex and age of the deceased;
- the cause of death and events leading to death according to the respondent;
- history of previously known medical conditions;
- history of injury or accident;
- treatment and health service use during the period of final illness;
- data abstracted from death certificates, antenatal or maternal and child health clinic cards, or other medical records and relevant documents.

It is important to note that factors related to suicide death will likely differ according to the cultural and social contexts and may thus be different between countries and even within a single country.

Tools which may be helpful in identifying suicidal deaths are presented in the references section of this manual. These include:

- questionnaire for possible use by persons appointed to certify death, by Rosenberg et al., 1988 (*7*); also available in the START study manual (*3*);
- decisional flow chart to assess death by suicide (START study manual [*3*]).

Step 6. Register suicide cases (collect data)

In this step, members of the work-team will register suicide cases using a case registration form (which may have been adapted to the specific context within a country or subregion of a country, as mentioned in Step 2 above). See Annex 2 for an example.

This case registration form represents the minimum essential information that needs to be collected. Each piece of information recorded in the form is termed an "item". (Note: item numbers below refer to the example in Annex 2.)

General rules for filling out the form are as follows.

- Only record information that is present on the death certificate, case notes or verbal autopsy, or stated directly by the participants (staff, data collectors, family members of the deceased).
- Fill in "999" for information that is unknown.
- Fill in "888" for information that is not applicable; for example, if the deceased only used one method of suicide, then the items regarding the second method of suicide (Items 3.1 and 3.2) would not apply to the circumstances, and should be coded as "888".

The form aims to gather information in five domains as follows.

1. Suicide case identification

Case number

Assign the suicide case being registered a unique identification number called the "case number" (e.g. first case to be registered could be assigned case # 001). Case numbers also help maintain anonymity and allow for easy tracking of the suicide case. Develop a system of case number assignment that avoids the duplicate use of any case numbers (e.g. use a system that indicates which case numbers have already been assigned).

Each subregion within the country or catchment area may autonomously assign case numbers. However, as will be described in Step 7, these cases from the specific subregion within the country or catchment area, will then be pooled and compiled in a master file, in which a unique master identification number will be assigned to ensure that although there may be repeated use of case numbers within subregions of the country, there will not be any duplication at the master level.

Case name

This information can only be recorded if permission to identify the individual has been obtained (e.g. from family members or legal representatives), and should be deleted when compiled into the master file.

If permission is granted, insert the full name of the deceased in the following format: Last name/First name.

The case name may be obtained from the death certificate, case notes, medical staff, coronial report, family members, legal representatives, or other staff on site.

Date of case registration

Fill in the date on which filling in of the case registration form was first initiated, in the following format: Day/Month/Year.

Country

Fill in the name of the country in which the suicide case is being registered.

Catchment area of registration

If applicable, fill in the name of the subregion within the country, district, province or medical centre that composes the catchment area (refer to Step 2 for the definition of this term).

If unsure of the official name of the catchment area, refer to the coordinating committee.

Residential address

Fill in the complete home address of the deceased.

Make sure to include:

- house or flat number
- street name
- city name
- state, district or province name (if applicable)
- postal code (if applicable)
- country name.

This information may be found in the medical or police report, death certificate, or ascertained from family, friends or other members of the work-team.

2. Demographic information

Sex

Fill in whether the deceased was male, female or "other" (e.g. transsexual).

This information may be obtained from medical, coroner or police records or from family members.

Date of birth

Fill in the date of birth of the deceased in the following format: Day/Month/Year.

This information may be obtained from medical, coroner or police records or from a civic registry.

Age

Fill in the age of the deceased at the time of death.

This information may be obtained from medical, coroner or police records or from a civic registry. Alternatively, it can be directly calculated from the deceased's date of birth (Item 2.5.1).

3. Context of the body when found

Date found

Fill in the date that the deceased was first found, in the following format: Day/Month/Year.

This information may be determined from medical, coroner or police records, from family members or from other service providers, depending on where the body was found.

Day of the week found

Fill in the day of the week that the body was first found. If not readily available, this information can be determined using the "date found" information (Item 2.6).

Time found

Fill in the time that the body was first found, using the 24-hour clock format. For example, 6 am would be written as 0600, while 6 pm would be written as 1800.

Using the 24-hour clock to indicate time will prevent confusion regarding whether the time refers to morning or afternoon hours (if not explicitly indicated).

Location found

Here you are presented with several choices of location, based on the most likely places where suicide may have occurred (e.g. railway tracks, home). These choices were likely adapted in Step 2 to be country or catchment area-specific.

Select the location that best describes where the body was first found. If none of the choices presented adequately describe the location, select "other" and specify.

Description of the location

In the given space describe the location where the body was found in an explicit and descriptive manner.

Include unique characteristics of the location that may be related or pertinent to the suicide.

4. Circumstances surrounding the death

Date of death

Fill in the date of death as indicated on the official medical, coroner or police reports, in the following format: Day/Month/Year.

Day of the week when died

Fill in the day of the week on which the suicide occurred. If not readily available, this information can be determined using the "date of death" information (Item 2.10.1).

Time of death

Fill in the time of death, using the 24-hour clock format.

This information may be obtained from medical, coroner or police reports.

Suicide method used

Indicate the method used to commit suicide using the International Classification of Diseases (ICD) codes (http://www.who.int/classifications/icd). The ICD code can be found on death certificates and hospital records.

What is the ICD?

The ICD is recognized by WHO as the international standard diagnostic classification for all general epidemiological and health management purposes. It is used to classify disease and other health problems as recorded on health and vital records (e.g. death certificates and hospital records) (*11*). It is currently in its tenth version (ICD-10). Coding in the ICD includes both actual causes of mortality, as well as the determining factors which led to the death.

The ICD groups suicide in Chapter 20 "External causes of morbidity and mortality" as "intentional self-harm" (codes X60 to X84). For example, if patient X committed suicide by cutting their wrists using a knife, this would correspond to code X78 in the ICD. The entire list of relevant ICD codes can be found in Annex 3.

Inaccurate recording in the ICD

A noted problem is the miscoding of suicide under alternate ICD-10 codes, such as "event of undetermined intent" (codes Y10 to Y34), or "accidental deaths" (several relevant V, W, X and Y codes, e.g. X40 to X49: "accidental poisoning").

These inaccuracies affect the quantification of the total burden of suicide in a country and can have negative implications for the design, implementation and evaluation of suicide prevention strategies. Interpretation of the ICD rules may also affect data accuracy and reliability. As such, care needs to be given to ensure that the correct ICD codes have been assigned.

Description of suicide method

In this section, explicitly describe the details of the suicide method, based on what is stated in medical, coronial and police reports.

Second suicide method used

If a second means of suicide was used. For example, if the previously mentioned patient X cut their wrists, but also overdosed on narcotics, then the X62 ICD code would be inserted into this entry as the second method used.

Description of second suicide method used

In this section, explicitly describe the details of the suicide method, based on what is stated in medical, coronial and police reports.

5. Evidence for suicidal death

Is there written evidence indicating suicide?

Establish whether there was a suicide note, e-mail or any other written declaration from the deceased indicating the intention to commit suicide or intentionally harm themselves.

This information can be determined from police reports or from the people in the deceased's life such as family, friends or co-workers.

Description of written evidence

Explicitly describe the content of the written evidence. Specifically include the statements that indicate the death was intentional. If possible, directly quote from the written document.

Was there verbal evidence indicating suicide?

Determine whether the deceased had made a verbal statement indicating that they intended to commit suicide.

This information may be listed in the police report or may be obtained from family, friends or co-workers of the deceased.

Description of verbal evidence

Describe, in as much detail as possible, what the deceased verbally stated in the past that indicated the intention to commit suicide or self-harm.

Step 7. Input case registration data

If possible, enter data locally into a computer database which will then be passed on to the centralized station. If this technology is unavailable, then data should be directly passed to a centralized station for entry and storage.

The coordinating committee may provide the work-team with a data entry template in order to standardize and facilitate data input (e.g. a spreadsheet file with rows or columns available for direct entry of data from the case registration form).

There are several considerations when entering the data.

a) Standardize input procedures

Each registered case and its associated case number (e.g. case 001) must occupy one row of the database.

Each item in the case registration form should be assigned a variable name, and each variable should occupy one column in the data file.

- A variable is defined as the characteristic (or item) you are recording, such as the sex, date of death, age of deceased, location where body was found.

- Variables should be assigned names that are concise (or abbreviated) and that can be easily interpreted. For example "date of birth" can be given the variable "DOB".
- The names of some variables such as "age" or "sex" may not require alteration.

b) Ensure data quality

Data should be periodically checked to ensure that they are correct, systematic and do not have missing fields.

Some common checking mechanisms include:

- checking for duplicate cases (the same case entered twice): sort cases in the database on a monthly basis by case number or name and ensure that there are no duplicates;
- systematic checking – randomly check 5% of all entered cases on a monthly basis to ensure that all cases have been entered properly;
- double-checking the database with a back-up copy (explained further in Step 8) of the electronic database and with individual hard copies of the cases.

c) Create a master file

Although data may be entered locally at the various data collection sites (e.g. all hospitals within a catchment area) a final master file should be created and maintained at a centralized location. This master file will contain the case registration data from all the data collection sites encompassing the entire country or catchment area.

Each registered case in the master file will be given a unique master identification number. Thus, in the master file, each registered case will have two identification numbers:

- the case number, which was assigned when the case was first registered at the local level;

Note: since case numbers will be autonomously assigned by each local subregion within the country or medical centre, there may be duplicate use of case numbers when cases from many subregions within the country or medical centres are pooled.

- the master identification number: this number will avoid confusion due to case-number overlap (refer above) as each case will have this second unique identification number.

The master identification number will keep track of how many cases have been registered in the entire country or catchment area and will prevent confusion due to the potential overlap or duplicate use of case numbers from the different data collection sites.

Those responsible for this master file (likely those that are part of the coordination committee) must be in charge of compilation, verification, maintenance and ensuring security of this master file.

Step 8. Store the case registration data

Electronic files containing the suicide register data should be password protected or secured in some other way.

Save a back-up copy of the electronic version of the data files on an external hard-drive or to a secure network. The back-up copies should be maintained and updated regularly. Back-up copies should also be kept secure.

Original written versions (hard copies) of the registration form should be kept in a safe and secure location.

Photocopies or scanned versions of the original hard copies should be made. These copies should also be well secured and kept organized (e.g. ordered alphabetically) so they may be easily found if required.

Step 9. Analyse the case registration data

Use statistical methods to analyse case registration data. Statistical software can be used for analysis purposes.

Below are examples of the types of analysis that can be conducted using the data in the case register:

- absolute number of suicides (within a given year, nationally or in a subregion within a country);
- rates of suicide:
  - per 100 000 population (i.e. divide the number of suicides in a country or catchment area by the population of the country or catchment area, and then multiply by 100 000).
  - for males
  - for females
  - among specific age groups (e.g. 15–24, 45–64 years)
  - the following frequencies related to suicide may be calculated:
    - most frequent method of suicide used
    - most common location for suicide to occur ("location of death")
    - correlational analysis – examine which of the variables measured correlate the strongest with increased suicide rates
    - percentages of suicide (e.g. what percentage of all suicides are committed by males versus females).

The outcomes of the analysis can be published and disseminated in order to summarize and clearly highlight the findings from the suicide register.

Ways in which the data can be communicated include:

- articles in peer-reviewed journals
- annual reports
- health pamphlets and brochures, which may be made available at health centres, schools, work-places (and other country-specific locations, based on the findings of the analysis)

- newspaper or magazine articles
- television appearances (e.g. news, talk shows)
- radio shows
- local gatherings or rallies.

Step 10. Use the case registration data

The statistics obtained from analysing the case registration data (Step 9) may be used for many important purposes, including:

- targeted prevention campaigns
- advocacy
- increasing awareness
- drawing media and public attention to the severity of the problem
- petitioning for increased funding
- guiding policy and legislation pertinent to suicide prevention
- evaluating trends of fatal suicidal behaviour
- monitoring the effectiveness of suicide prevention and intervention strategies.

Part 2

Case registration for suicide attempts

Step 1. Establish a coordinating committee

Establishing a suicide attempt register will require political commitment, managerial support and technical knowledge. Thus, it is imperative to assemble a coordinating committee – a group that will oversee and coordinate the establishment, implementation and maintenance of the suicide attempt registration system.

Determine whether there is an existing body or group that could take on the role of the coordinating committee. For instance, if there is already an established (fatal) suicide register in the country, then the coordinating committee for the suicide register may act as the main organizing body for the suicide attempt register as well.

If an organizing body does not already exist, then assemble the committee by including professionals with political, managerial, and technical expertise.

Some potential candidates for the coordinating committee are:

- ministry of health representatives
- politicians
- hospital directors
- health system managers or experts
- other public health professionals
- senior medical doctors
- mental health experts
- social workers
- academics
- researchers in health-related disciplines (e.g. epidemiologists, biostatisticians, suicide researchers, sociologists)
- leaders from the private sector
- representatives from civil society organizations, including consumer and family associations

- other stakeholders with an interest in suicide prevention and advocacy.

The coordinating committee may vary in size (e.g. a single director such as a minister of health, several health representatives from different districts, or alternatively a collection of medical doctors from all the hospitals that are participating in the registration system). Its size will be dependent on country size, time commitment of individual members, scope of the suicide register (e.g. if suicide cases will be registered in only one district, it will perhaps require a smaller coordinating committee compared to a register that covers an entire country).

Individual responsibilities of each committee member should be clearly defined. Responsibilities may be delegated based on expertise or may be divided by subregions within a country (e.g. a subset of committee members may be responsible for a specific district).

Step 2. Set up the infrastructure required for suicide attempt registration

This step involves several sub-components.

a) Select a catchment area

The coordinating committee will need to decide on the area in which suicide attempt cases will be registered. This is known as the catchment area.

The catchment area may encompass the entire country. Alternatively, due to limitations (e.g. financial, logistical or human resource shortage) you may choose to register suicide attempts within a smaller catchment area such as an individual province, district or subregion within a country.

If a smaller than national catchment area is selected, it is important that it meet the following criteria (outlined in the START study manual [*3*]):

- well defined and relatively stable (e.g. in terms of size and location) this will avoid consequent suicide attempt trend analyses from being biased by a significant variation in the recruiting area;
- representative of the country as a whole, in terms of demographics of the population and environment (e.g. socioeconomic context, sex distribution, crime rates, geography);
- receives information on as many cases of suicidal attempts as possible;
- has the infrastructure in place to appropriately record and store data.

With minimum resources or to get started (e.g. in a pilot project), suicide cases could be registered in sentinel sites (e.g. a single medical centre) initially.

b) Establish a work-team

The coordinating committee will have to recruit a number of individuals who will be responsible for the actual registration of suicide attempts (data collection), data input and subsequently data analysis.

Suitable candidates are those with a background or knowledge in either medicine or public health, or have access to suicide attempt case information, and/or have an interest or expertise in suicidal behaviour. These include:

- hospital emergency room personnel
- physicians
- nurses
- psychiatrists

- other primary care personnel
- police or administrative staff within police departments
- other emergency response personnel
- emergency medical technicians
- community health workers
- psychologists
- social workers
- data entry personnel
- counsellors
- data analysts (e.g. biostatisticians, academics, other public health professionals or members of the coordinating committee itself).

This list will vary depending on the country or catchment area selected. The responsibilities and roles of each individual in the work-team should be well defined. Individuals in the work-team may have multiple roles (e.g. involved in both data collection and data entry).

c) Generate the attempted suicide case registration form

The committee will need to draft the attempted suicide case registration form. This form is the primary tool in collecting information about suicide attempts. It outlines the minimum basic but essential information required to register a suicide attempt. All of the items that need to be included in the form are presented in Step 6. This form may be modelled using the template suicide registration form available in the WHO booklet *Preventing suicide: a resource for suicide case registration* (*4*).

The coordinating committee should carefully go through this form and validate that the items listed are pertinent to their country or catchment area. Some items might require entries specific to the country or subregion within the country. For example, the location of attempted suicide – insert entries into the form that are country or

catchment area-specific. Translate the case registration form into a local language or dialect as required.

d) Decide on the specifics of case registration

The coordinating committee will need to decide on the following.

- Will the suicide attempt case be registered using a written copy (hard copy) of the case registration form? Or will the data be directly entered into an electronic version of the form?
- When should the case be registered?
  - Immediately after a suicide attempt case is identified or only when all information is available?
  - For example, if there is uncertainty as to whether the incident was due to self-harm ("possible" attempted suicide), then additional investigatory processes may be required (e.g. toxicological analysis, follow-up interviews with the attempter and his/her family and friends, etc.).
  - In this case, the coordinating committee will need to decide on whether to enter partial information into the form, and if so, how to identify incomplete or pending cases.
- Where will the data be entered?
  - Will the data be entered locally (at the site of where the hard copy of the form was filled out)?
  - If so, are the resources available for entering and compiling data (e.g. computers, required software, data entry template, internet access, etc.)?
  - Or will the hard copies of the completed forms be sent to a centralized location for data entry?
  - If so, how often will the data at local data collection sites be sent to the centralized location (e.g. monthly or after 50 cases are registered)?
- Where will the data be stored?
  - Will the data be stored locally?

- Although copies of the data will likely be stored locally, as outlined in Steps 7 and 8, ultimately all the case registration data will be complied into a master data file at a centralized location.
- Thus, a system needs to be in place for transferring data in either written or electronic form to this central data storage location. It needs to be determined how often the data at local data collection/storage sites will be sent to the centralized location (e.g. monthly or after 50 cases are registered).

Step 3. Train the work-team

The next step is for the coordinating committee to provide the work-team with detailed information on how to identify and register suicide attempts. This involves educating the work-team on Step 5 to Step 8 of this manual. At the end of the training session, the work-team should be well informed on:

- how to identify suicide attempts (Step 5)
- how to collect data (Step 6)
- how and when to enter the data (Step 7)
- how and where to store the data (Step 8).

Additionally, the coordinating committee may also decide on training the work-team on:

- how to analyse the data (Step 9)
- how to use the data (Step 10).

The work-team should also be informed about who to contact in case of questions or queries regarding case registration. For example, one or several members of the coordinating committee could act as liaisons between the coordinating body and the work-team. Their

contact information should be available to all members of the work-team.

Step 4. Disseminate resources for case registration

In this step, the committee will ensure that the work-team has all the required resources in order to collect and store the data.

The work-team must have copies of the suicide attempt case registration form, or know where to access the form. For example, there could be a central database or website through which copies of the form could be obtained, or hard copies of the form could be mailed out upon request.

If the team cannot directly enter the data into an electronic database, it needs to be informed where to send a copy of the completed written version of the case registration form so that the data can be entered elsewhere. In this regard, a centralized data entry and/or storage location would be desirable.

The team needs access to necessary equipment, such as computers, software (e.g. spreadsheet, word processor, statistical analysis programs), a photocopier, scanner and/or fax machine.

If a sample data entry template (refer to Step 7) has been compiled, this should also be made easily available to the team.

Step 5. Identify suicide attempts

In this step, the coordinating committee and, perhaps more important, the work-team will familiarize themselves with the tools required to identify suicide attempts. The ability to accurately differentiate cases of intentional self-harm from other causes of harm is critical in establishing a reliable and accurate suicide attempt register.

For the purposes of this manual, a "suicide attempt" is defined as "an act of non-fatal suicidal behaviour, with or without injuries resulting from it, using a method that would usually lead to death" (*12*); also presented in the START study manual (*3*).

It is a non-habitual act with a non-fatal outcome that the individual, expecting to die or taking the risk of dying or to inflict bodily self-harm, initiated and carried out the act with the purpose of bringing about wanted changes ([*5*], based on the WHO/EURO Multicentre Study on Parasuicide, 1986).

The above definition implies that the characteristics associated with suicide attempts are based on (*12*):

- responsibility – the act (leading to harm) was initiated, carried out or planned by the attempter;
- awareness – a fatal outcome of the act was known or expected by the attempter;
- intention – the act had the purpose of bringing about wanted changes.

Discerning the cause(s) or method(s) that resulted in the bodily harm is essential to determining whether a suicide attempt was made. The causes or method(s) of bodily harm can be organized into four main categories (based on [*6*]):

- natural or medical (e.g. as a result of an intrinsic physiological factor)
- accidental
- self-inflicted
- inflicted by another person or persons.

The following tools may be used by the work-team to discriminate between the four possible causes of bodily harm presented above ([*7*], outlined in the START study manual [*3*]:

- toxicological investigations – medical personnel attribute the underlying cause of bodily harm as self-inflicted through forensic and medical examination;
- police inquiries – which find that the person had the intention to die, and their bodily harm was self-inflicted;
- hospital/medical records;
- psychological and medical history or current state – knowledge of the attempter's state of mind, prior to, or after the suicide attempt, which indicates that the bodily harm was intended and self-inflicted;
- pertinent psychological and medical factors in the attempter's past that might indicate a suicide attempt, including:
  - past suicide attempts
  - current or past thoughts or plans for suicide
  - alcohol and/or drug abuse
  - evidence of chronic pain or severe terminal illness
  - evidence of acute emotional distress at the time of the attempt
  - depression
  - hopelessness
  - extreme agitation
  - violent behaviour
  - uncommunicative behaviour
  - social isolation
  - bipolar disorder
  - psychosis;
- verbal statements made by the attempter to indicate that the bodily harm was self-inflicted with the intention to commit suicide; this may include statements made prior to or after the attempt;
- written evidence indicating the attempter's intention to commit suicide or engage in self-harming behaviour;
- method and circumstances of the act that caused harm; e.g. that suggest the bodily harm was self-inflicted rather than accidental, natural or due to homicide, including acts that have a high chance of being fatal, such as:

- hanging
- drowning
- self-poisoning with car exhaust fumes
- jumping from a high place or in front of a moving vehicle
- stabbing to a vital body area (e.g. throat, chest or abdomen)
- gun-shot wound to a vital area
- self-poisoning that requires admission to an intensive care unit or is judged to be potentially lethal by a doctor (*12*).

The Rosenberg Questionnaire (available in the START study manual [*3*] and the publication by Rosenberg et al. [*7*]) may aid the work-team in determining whether a suicide attempt was made. Responses to the items in the Rosenberg Questionnaire may require interviews with:

- the attempter
- family members of the attempter
- friends of the attempter
- medical professionals on staff.

Step 6. Register suicide attempt cases (collect data)

In this step, members of the work-team will register suicide attempts using the case registration form (which may have been adapted to the context specific to the country or subregion within the country as mentioned in Step 2 above). See Annex 4 for an example.

This case registration form represents the minimum essential information that needs to be collected. Each piece of information recorded in the form is termed an "item". (Note: item numbers below refer to the example in Annex 4.)

General rules for filling out the form are as follows.

- Only record information that is present in the medical records, police reports, other case notes, or stated directly by the participants (staff, data collectors, family or friends of the attempter).
- Fill in "999" for information that is unknown.
- Fill in "888" for information that is not applicable. For example, if the attempter only used one method of self-harm, then the items regarding the second method of self-harm (Items 3.1 and 3.2) would not apply to the circumstances, and should be coded as "888".

The form aims to gather information in five domains as follows.

1. Suicide attempt case identification

Suicide attempt number

Assign the attempter a unique identification number called the attempt number.

In this manual, we suggest issuing a new attempt number for every attempted suicide that is registered, regardless of whether the attempter being registered has made previous suicide attempts.

For example, the first suicide attempt registered could be assigned case #SA01, and the twentieth attempt registered would be #SA20. However, it may be that attempt number 5 and 10 (#SA05 and #SA10) were committed by the same individual. In Step 9 in the manual, it is described how to analyse information regarding number of attempts per individual attempter.

Inserting "SA" in front of the case number will identify this case as a suicide attempt, and may help distinguish attempt case numbers from case numbers being used for completed suicides if a suicide register is also present in the country.

Case numbers help maintain privacy and anonymity and allow for easy tracking of the suicide attempt case.

Develop a system of case number assignment that avoids the duplicate use of any case numbers (e.g. use a system that indicates which case numbers have already been assigned).

Each subregion within the country or catchment area may autonomously assign case numbers.

However, as will be described in Step 7, these cases from the specific subregion within the country or catchment area will then be pooled and compiled in a master file, in which a unique master attempt identification number will be assigned to ensure that although there may be repeated use of case numbers in subregions within the country, there will not be any duplication at the master level.

Attempter name or initials

This information can only be recorded if permission to identify the individual has been obtained (e.g. from the attempter, family members, friends or legal representatives), and should be deleted when compiled into the master file.

If permission is granted, insert the full name of the attempter in the following format: Last name/First name.

If the full name of the attempter may not be used, gain permission to record the initials of the attempter.

The attempter's name or initials will be a valuable tool to track the number and incidence of repeated suicide attempts made by any given individual. It also provides a mechanism by which data can be checked in order to prevent duplication of suicide attempt registration.

Date of registration

Fill in the date on which filling in of the suicide attempt case registration form was first initiated, in the following format: Day/Month/Year.

Country

Fill in the name of the country in which the suicide attempt is being registered.

Catchment area of registration

If applicable, fill in the name of the subregion within the country, district, province or medical centre that composes the catchment area (refer to Step 2 for the definition of this term).

If unsure of the official name of the catchment area, refer to the coordinating committee.

Residential address

Fill in the home address of the attempter.

Make sure to include:

- house or flat number
- street name
- city name
- state, district or province name (if applicable)
- postal code (if applicable)
- country name.

This information may be obtained directly from the attempter, family members or friends, medical records and/or police reports.

2. Demographic information

Sex

Indicate the sex of the attempter as male, female or "other" (e.g. transsexual).

This information may be obtained from medical or police records, or directly from interviews with the attempter or family or friends.

Date of birth

Fill in the date of birth of the attempter in the following format: Day/Month/Year.

This information may be obtained from medical or police records, or directly from interviews with the attempter or family and friends.

Age

Fill in the age of the attempter at the time of the attempt.

This information may be obtained from medical or police records, or directly from interviews with the attempter and/or family and friends of the attempter.

Alternatively, it can be directly calculated using the attempter's date of birth (Item 2.5).

3. Circumstances of the suicide attempt

Date of attempt

Fill in the date that the attempt was made, in the following format: Day/Month/Year.

This information may be determined from medical (emergency room admittance) records and/or police reports, interviews with other service providers and/or family, friends and co-workers of the attempter.

Day of the week of attempt

Fill in the day of the week that the attempt was made. This information can be determined using the "date found" information (Item 2.7).

Time of attempt

Fill in the estimated time that the attempt was made, using the 24-hour clock format. For example, 6 am would be written as 0600, while 6 pm would be written as 1800.

Using the 24-hour clock to indicate time will prevent confusion regarding whether the time refers to morning or afternoon hours (if not explicitly indicated).

Location of attempt

Here you are presented with several choices of location, based on the most likely places where suicide attempts may occur (e.g. home, near

a bridge or busy road). These choices were likely adapted in Step 2 to be country or catchment area-specific.

Select the location that best describes where the suicide attempt was made. If none of the choices presented adequately describe the location, select "other", and specify in the space provided.

Description of the location

In the given space describe the location where the attempt was made in an explicit and descriptive manner.

Method used in suicide attempt

Indicate the method used in the suicide attempt to inflict self-harm using the International Classification of Diseases (ICD) codes (http://www.who.int/classifications/icd).

The ICD code for the suicide attempt may be found in:

- medical (e.g. emergency room or clinic) records;
- may be coded directly using information ascertained from doctors, nurses, emergency personnel, other health workers, family and friends of the attempter, and the attempter him/herself.

Description of suicide attempt method

In this section, explicitly describe the details of the method used in the suicide attempt.

This information may be obtained from medical or police records, or from information provided by the attempter or family, friends, co-workers, or other individuals present at the scene.

Second suicide attempt method used

If a second means of suicide was used. For example, if an attempter cut their wrists (first method used, Item 3.1), but also intentionally overdosed on narcotics, then the X62 ICD code would be inserted into this entry as the second method used.

Description of second suicide attempt method used

In this section, explicitly describe the details of the suicide method.

This information may be obtained from medical or police records, or from information provided by the attempter or family, friends, co-workers or other individuals present at the scene.

4. Evidence indicating a suicide attempt was made

Is there written evidence indicating a suicide attempt?

Establish whether there was a suicide note, e-mail or any other written declaration from the attempter indicating the intention to commit suicide or intentionally harm themselves.

This information can be determined from police reports or from interviews with the attempter or family, friends, co-workers, etc.

Description of written evidence

Explicitly describe the content of the written evidence. Specifically include the statements that indicate the act of bodily harm was self-inflicted, with the intention of being fatal. If possible, directly quote from the written document.

Was there verbal evidence indicating a suicide attempt?

Determine whether the attempter made a verbal statement indicating that they had intended to commit suicide. This includes verbal statements either prior to, or after, the suicide attempt.

This information can be determined from police reports or from interviews with the attempter or family, friends or co-workers.

Description of verbal evidence

Describe, in as much detail as possible, what the attempter verbally stated about their intention to commit suicide.

Indicate whether the verbal statements were made in the past, after the attempt, or both.

5. Treatment and care of attempter

Date of attempter's first contact to health care system

Fill in the date that the attempter came into contact with a medical facility, such as an emergency room at a hospital, local clinic or a private practice.

Hospitalization

If the attempter was hospitalized after the attempt, circle "Yes".

If the attempter was not hospitalized after the attempt, circle "No".

This information may be obtained from medical/hospital records or from interviews with the attempter, family and friends, social workers,

counsellors or other health care professionals familiar with the attempter's case.

Length of hospitalization

Indicate for how many days the attempter was hospitalized.

Fill in "888" (not applicable) if the attempter was not hospitalized.

Referral

If the attempter received a referral from one medical service to another, circle "Yes".

If the attempter did not receive a referral, circle "No".

Referred from

Fill in who referred the attempter (e.g. attending doctor in emergency room).

Referred to

Fill in what service(s) the attempter was referred to (e.g. to a psychiatrist, psychologist or other medical service providers).

Step 7. Input case registration data

If possible, enter data locally into a computer database which will then be passed on to the centralized station. If this technology is unavailable, then data should be directly passed to a centralized station for entry and storage.

The coordinating committee may provide the work-team with a data entry template in order to standardize and facilitate data input (e.g. a spreadsheet file with rows or columns available for direct entry of data from the case registration form).

There are several considerations when entering the data.

a) Standardize input procedures

Each registered case and its associated case number (e.g. case SA001) must occupy one row of the database.

- Each item in the case registration form should be assigned a variable name, and each variable should occupy one column in the data file.
- A variable is defined as the characteristic (or item) you are recording, such as the sex or date of attempt.
- Variables should be assigned names that are concise (or abbreviated) and that can be easily interpreted. For example "date of birth" can be given the variable "DOB".
- The names of some variables such as "age" or "sex" may not require alteration.

b) Ensure data quality

Data should be periodically checked to ensure that they are correct, systematic and do not have missing fields.

Some common checking mechanisms include:

- checking for duplicate cases (the same case entered twice) – sort cases in the database on a monthly basis by case number or name and ensure that there are no duplicates;

- systematic checking – randomly check 5% of all entered cases on a monthly basis to ensure that all cases have been entered properly;
- double-check the database with a back-up copy (explained further in Step 8) of the electronic database and with individual hard copies of the cases.

c) Create a master file

Although data may be entered locally at the various data collection sites (e.g. all hospitals within a catchment area) a final "master file" should be created and maintained at a centralized location. This master file will contain the case registration data from all the data collection sites encompassing the entire country or catchment area.

Each registered case in the master file will be given a unique master attempt identification number. Thus, in the master file, each registered case will have two identification numbers:

- the case number, which was assigned when the case was first registered at the local level;
  Note: since case numbers will be autonomously assigned by each local subregion within the country or medical centre, there may be duplicate use of case numbers when cases from many subregions within the country or medical centres are pooled.
- the master identification number: this number will avoid confusion due to case-number overlap (refer above) as each case will have this second unique identification number.

The master identification number will keep track of how many cases have been registered in the entire country or catchment area and will prevent confusion due to the potential overlap or duplicate use of case numbers from the different data collection sites.

Those responsible for this master file (likely those that are part of the coordination committee) must be in charge of compilation, verification, maintenance and ensuring security of this master file.

Step 8. Store the case registration data

Electronic files containing the suicide register data should be password protected or secured in some other way.

Save a back-up copy of the electronic version of the data files on an external hard-drive or to a secure network. The back-up copies should be maintained and updated regularly. Back-up copies should also be kept secure.

Original written versions (hard copies) of the registration form should be kept in a safe and secure location.

Photocopies or scanned versions of the original hard copies should be made. These copies should also be well secured and kept organized (e.g. ordered alphabetically) so they may be easily found if required.

Step 9. Analyse the case registration data

Use statistical methods to analyse case registration data. Statistical software can be used for analysis purposes.

Below are examples of the types of analysis that can be conducted using the data in the case register.

- Absolute number of suicide attempts (within a given year, nationally or in a subregion within a country).
- Number of individuals contributing to the total number of suicide attempts.

Use the distinctive identification indicators in the registration form to identify the number of attempters that made suicide attempts in a given year. The unique indicators from the registration form include:

- name/initials of the attempter (if available)
- date of birth
- residential address
- a combination of the above items.

For example, if 50 suicide attempts are registered in a given year, it is possible that all the attempts were committed by 50 different attempters with each attempter making only one attempt. However, it may be that some attempts were committed by the same individual. For example, there could be 50 suicide attempts registered by 45 total attempters (in which 40 attempters made one attempt and 5 attempters made two suicide attempts each, in the given year).

- Average number of suicide attempts per individual.
  Calculate this by dividing total number of attempts by total number of attempters. For example, if you have 50 attempts made in a year and 45 attempters, on average each attempter made 1.1 attempts that year.
- Rates of suicide attempts:
  - per 100 000 population (i.e. divide the number of suicides in a country or catchment area by the population of the country or catchment area, and then multiply by 100 000);
  - for males;
  - for females;
  - among specific age groups (e.g. 15–24, 45–64 years).
- Frequencies related to suicide attempts:
  - most frequent method of suicide attempts;
  - most frequent location of suicide attempts.
- Correlational analysis – examine which of the variables measured correlate the strongest with increased suicide attempt rates.
- Percentages of suicide attempts (e.g. what percentage of all suicide attempts are committed by males versus females).

The outcomes of the analysis can be published and disseminated in order to summarize and clearly highlight the findings from the suicide attempt register.

Ways in which the data can be communicated, include:

- articles in peer-reviewed journals
- annual reports
- health pamphlets and brochures, which may be made available at health centres, schools, work-places (and other country-specific locations, based on the findings of the analysis)
- newspaper or magazine articles
- television appearances (e.g. news, talk shows)
- radio shows
- local gatherings or rallies.

Step 10. Use the case registration data

The statistics obtained from analysing the case registration data (Step 9) may be used for many important purposes, including:

- targeted prevention campaigns
- advocacy
- increasing awareness
- draw media and public attention to the severity of the problem
- petitioning for increased funding
- guide policy and legislation pertinent to suicide prevention
- evaluate trends of fatal suicidal behaviour
- monitoring the effectiveness of suicide prevention and intervention strategies.

Future directions

After the suicide and/or suicide attempt register has been established, it is important to have constant monitoring of the registration system.

This will involve effective communication between the coordinating committee and the work-team. At first, monthly meetings may be required so that the coordinating committee may obtain feedback from the work-team regarding which elements of the register are functional and effective, and which elements require improvement.

After receiving feedback from the work-team, both the coordinating committee and work-team will need to collaborate to identify, and then subsequently implement, the appropriate improvements to the register.

Changes to the registration system may include making the registration form more comprehensive so that it contains additional items, including more detailed information on:

- ethnicity
- marital status
- occupation
- education
- sexual orientation (e.g. homosexual, heterosexual)
- employment status at time of death
- medical history
- psychiatric history
- treatment for suicide attempts
- critical life experiences.

Development of a suicide and/or suicide attempt register is an iterative process that will require constant monitoring and alteration over time, despite it being functional and effective.

Increasing the scope of the register(s) to include the entire country (e.g. if previously the catchment area was only a small subregion within the country), and establishing a suicide and suicide attempt register in a country, or subregion within a country, might involve:

- increasing the size of the coordinating committee.
- recruiting more members to the work-team.
- improving training of the work-team.
- strengthening or further organizing data collection, storage and analysis procedures.

In the long term, a country may decide to:

- harmonize and link the suicide and suicide attempt registers if/once both are present in the country or subregion within the country;
- create a region-wide suicide and suicide attempt "observatory" to gauge prevalence, rates and risk factors of suicidal behaviour at the regional level (including many or all Member States in a given WHO region).

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Annex 1

Example questionnaire for verbal autopsy

Section 1. Details for respondent and deceased

Details of respondent

1. Name of the respondent: _

2. Relationship of the respondent with deceased:

- Wife/husband ☐
- Brother/sister ☐
- Son/daughter ☐
- Mother/father ☐
- Grandchild ☐
- Son-in-law/daughter-in-law ☐
- Brother-in-law/sister-in-law ☐
- Parent-in-law ☐
- Grandfather/grandmother ☐
- Other relative ☐
- Neighbour/no relation ☐
- Unknown ☐

3. Did the respondent live with the deceased during the events that led to death?

Yes ☐ No ☐ Unknown ☐

4. Respondent's age in completed years: _____ years

5. Respondent's sex: Male ☐ Female ☐

Details of deceased

6. Age in years: _____ years

7. Sex: Male ☐ Female ☐

8.A. For work does she/he have to live away from home?

Yes ☐ No ☐ Unknown ☐

8.B. If yes, how many months a year?

Less than one month ☐ One to three months ☐ More than three months ☐

9. House address of the deceased (include postal or area code) and other landmarks

_____
_____
_____
_____

10. How many years did the deceased live in this address? _____ years

11. Date of death: _____

12. Place of death: _____

- Home ☐
- Health facility ☐
- Other place ☐
- Unknown. ☐

13. What did the respondent think this person died of? (Allow the respondent to describe the cause of death in his or her own words.)

_____
_____
_____
_____
_____

Section 2. Past history of the deceased

14. Had a doctor EVER stated that the deceased had the following conditions?

Condition	**Yes**	**No**	**Unknown**
Hypertension	☐	☐	☐
Heart disease	☐	☐	☐
Stroke	☐	☐	☐
Diabetes	☐	☐	☐
Tuberculosis	☐	☐	☐
HIV/AIDS	☐	☐	☐
Cancer (write site in narrative)	☐	☐	☐
Asthma	☐	☐	☐
Epilepsy	☐	☐	☐
Other chronic illness (specify in narrative)	☐	☐	☐
Physical disability	☐	☐	☐
Mental illness	☐	☐	☐

(If you answer "Yes" to Physical disability or Mental illness, please specify.):

_____
_____
_____

15. Was the deceased taking any medications during the last two years? (Record up to three, in local language or English.)

_____
_____
_____

16a). Did the deceased smoke tobacco within the last two years?

Definite yes ☐ Definite no ☐ Unknown ☐

16b). If yes, how many cigarettes per day? _____ (in numbers)

17. Did the deceased drink alcohol within the last two years?

- Never ☐
- Two to three times a year ☐
- Four to five times a year ☐
- Every month at least once ☐
- More than two or three times a month ☐
- Every week ☐
- Every day ☐

For female deaths aged 15–49 ask the following questions

18a). Was she either known or suspected to be pregnant?

Yes ☐ No ☐

18b). Did she die within 42 days of delivery?

Yes ☐ No ☐

(If "Yes" to questions 18a) and 18b) do not complete narrative below.)

Written narrative in local language

19. Please describe the symptoms in order of appearance, doctor consulted or

details of hospitalization, history of similar episodes, enter the results from reports of the investigations if available.

_____

_____

20. Please describe the deceased's mental or psychological state in the last two weeks prior to their death.

_____

_____

21. Was the death registered?

Yes ☐ No ☐

(If yes, verify death certificate). Record cause of death from death certificate:

_____

_____

Provisional cause of death

According to death certificate: _____

According to respondent: _____

According to investigator: _____

Final cause of death

- Natural
- Accidental
- Suicide
- Homicide

Interviewer's name:

_____

Date (dd/mm/yy):

_____

Signature/impression

Respondent:_____

Interviewer: _____

Annex 2

Example registration form for suicide mortality

Date of case registration (Day/Month/Year): _ _/_ _/ _ _ _				Not applicable	Unknown
1.1 Country: _				888	999
1.2 Sample area (if applicable): _				888	999
2.1 Case name (if authorized): _				888	999
2.2 Case identification number (assigned): _				888	999
2.3 Residential address: _				888	999
2.4 Sex:	Male	Female	Transsexual	888	999
2.5 Date of birth (Day/Month/Year): _ _/_ _/ _ _ _ _				888	999
2.5.1 Age (in years) _ _ _ _ _ _				888	999
2.6 Date found (Day/Month/Year): _ _/_ _/ _ _ _ _				888	999
2.7 Day of the week found: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _				888	999
2.8 Time found (hhmm): _ _ / _ _				888	999
2.9 Date of death (Day/Month/Year): _ _/_ _/ _ _ _ _				888	999
2.10.1 Day of the week when died: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _				888	999

2.11 Time of death (hhmm): _ _ / _ _				888	999
2.12 Location found (*adapt to local context*):	Home _	Railway _	_ _ _	888	999
2.12.1 Description of the location: _				888	999
3.1 Suicide method used (according to ICD-10 codes): _				888	999
3.1.1 Description of suicide method: _				888	999
3.2 If more than one method was used, suicide method two (according to ICD-10 codes): _				888	999
3.2.1 Description of suicide method two _				888	999
4.1 Is there evidence of a suicide note or written intent to die? _				No	Yes
4.1.1 Description of evidence _				888	999
4.2 Did the deceased make a verbal statement indicating an intention to die?				No	Yes
4.2.1 Description of evidence _				888	999

Annex 3

ICD-10 codes for intentional self-harm

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

Annex 4

Example registration form for suicide attempts

Date of case registration (Day/Month/Year): _ _/_ _/ _ _ _				Not applicable	Unknown
1.1 Country: _				888	999
1.2 Sample area (if applicable): _				888	999
2.1 Case name (if authorized): _				888	999
2.2 Suicide attempt number (assigned): _ _ _ _ _ _ _ _				888	999
2.3 Residential address: _				888	999
2.4 Sex:	Male	Female	Transsexual	888	999
2.5 Date of birth (Day/Month/Year): _ _ /_ _ / _ _ _ _				888	999
2.5.1 Age (in years): _ _ _ _ _ _				888	999
2.6 Date of attempt (Day/Month/Year): _ _/_ _ / _ _ _				888	999
2.7 Day of the week of attempt: _ _ _ _ _ _ _ _ _ _ _ _				888	999
2.8 Time of attempt (Hour/Minute): _ _ / _ _				888	999
2.9 Location of attempt (adapt to local context):	_Home	_Railway	__ _	888	999
2.9.1 Description of the location: _				888	999

3.1 Method used in suicide attempt (according to ICD-10 codes): _ _ _ _ _ _	888	999
3.1.1 Description of suicide attempt method: _	888	999
3.2 If more than one method was used, suicide attempt method two (according to ICD-10 codes): _ _ _ _ _ _	888	999
3.2.1 Description of suicide attempt method two: _	888	999

5.1 Date of attempter's first contact to health care system (Day/Month/Year): _ _/_ _ / _ _ _ _	888	999
5.2 Hospitalization: _No _Yes	888	999
5.2.1 Length of hospitalization (Number of days): _ _ _ _	888	999
5.3 Referral: _No _Yes	888	999
5.3.1 Referred from: _	888	999
5.3.2 Referred to: _	888	999

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