# Suicide Prevention in the Western Pacific Region

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**Abstract.** This chapter draws on internationally available data to describe the epidemiology of suicide and self-harm in the World Health Organization (WHO) Western Pacific Region. It then describes the suicide prevention activities in the region, using in-depth case studies to highlight some key suicide prevention activities in certain countries/areas and the Global Survey on Suicide Prevention conducted in 2013 by the International Association for Suicide Prevention (IASP) and WHO. It demonstrates that there is considerable variability both between and within low and middle income countries and high income countries, both in terms of rates of suicide and self-harm and in terms of the preventive efforts that have been mobilised to address them. Adequate funding for suicide prevention efforts in the region should be a priority, as should the delivery of a range of suicide prevention approaches. Evaluation and monitoring efforts are also crucial.

**Keywords:** suicide, self-harm, Western Pacific Region

This chapter is concerned with suicide prevention in the Western Pacific Region. Approximately 1.8 billion people (over one quarter of the global population) live in this region (World Health Organization [WHO], 2016b). The WHO website lists 37 countries/areas in the region, 27 of which are regarded as independent member states (WHO, 2016b). Of these, 16 have populations of 300,000 or more. Table 1 provides details of each of these groupings, categorizing them according to World Bank income levels (World Bank, 2016).

The chapter begins by describing the extent of suicide and self-harm in the region. *Suicide* is defined as "the act of deliberately killing oneself" (WHO, 2014). *Self-harm* is used to refer to "intentional self-inflicted poisoning or injury which may or may not have a fatal outcome" (WHO, 2014). *Self-harm* is used synonymously with *suicide attempts* (which also may or may not be fatal). It is acknowledged that the former term includes acts where there is no intent to die, whereas, strictly speaking, the latter term refers only to acts where death is viewed by the person involved as the desired outcome (Silverman, 2016).

The chapter then moves on to its main focus, describing the suicide prevention activities in the Western Pacific Region. It does this in two complementary ways. The first is through an in-depth approach that highlights some key suicide prevention activities occurring in certain countries/areas in the region. The country/area case studies are based on the local knowledge of the chapter authors and/or reviews of the country-/area-specific literature. The second approach draws on the Global Survey on Suicide Prevention conducted in 2013 by the International Association for Suicide Prevention (IASP) and the WHO that sought responses from experts throughout the region. The case studies provide depth and the survey provides

**Table 1.** Countries/areas in the Western Pacific Region, by income level

| | Countries/areas | Independent member states | Independent member states with populations of 300,000 or more |
|---|---|---|---|
| Low and middle income | 1. American Samoa<br>2. Cambodia<br>3. China<br>4. Cook Islands<br>5. Fiji<br>6. Kiribati<br>7. Lao People's Democratic Republic<br>8. Malaysia<br>9. Marshall Islands<br>10. Micronesia (Federated States of)<br>11. Mongolia<br>12. Nauru<br>13. Niue<br>14. Palau<br>15. Papua New Guinea<br>16. Philippines<br>17. Samoa<br>18. Solomon Islands<br>19. Tonga<br>20. Tuvalu<br>21. Vanuatu<br>22. Vietnam | 1. Cambodia<br>2. China<br>3. Cook Islands<br>4. Fiji<br>5. Kiribati<br>6. Lao People's Democratic Republic<br>7. Malaysia<br>8. Marshall Islands<br>9. Micronesia (Federated States of)<br>10. Mongolia<br>11. Nauru<br>12. Niue<br>13. Palau<br>14. Papua New Guinea<br>15. Philippines<br>16. Samoa<br>17. Solomon Islands<br>18. Tonga<br>19. Tuvalu<br>20. Vanuatu<br>21. Vietnam | 1. Cambodia<br>2. China<br>3. Fiji<br>4. Lao People's Democratic Republic<br>5. Malaysia<br>6. Mongolia<br>7. Papua New Guinea<br>8. Philippines<br>9. Solomon Islands<br>10. Vietnam |
| High income | 23. Australia<br>24. Brunei Darussalam<br>25. Commonwealth of the Northern Mariana Islands<br>26. French Polynesia<br>27. Guam<br>28. Hong Kong<br>29. Japan<br>30. Macau<br>31. New Caledonia<br>32. New Zealand<br>33. Republic of Korea<br>34. Singapore | 22. Australia<br>23. Brunei Darussalam<br>24. Japan<br>25. New Zealand<br>26. Republic of Korea<br>27. Singapore | 11. Australia<br>12. Brunei Darussalam<br>13. Japan<br>14. New Zealand<br>15. Republic of Korea<br>16. Singapore |
| Unclassified | 35. Pitcairn Islands<br>36. Tokelau<br>37. Wallis and Futuna | | |



breadth; together they offer a reasonably comprehensive picture of the suicide prevention activities taking place in the region.

## The Extent of Suicide and Self-Harm in the Region

### Suicide

The 2014 WHO report entitled *Preventing Suicide: A Global Imperative* provides the most recent information on the extent of suicide and self-harm in the Western Pacific Region (WHO,

2014). It uses statistical modeling techniques to estimate the total number of suicides for the 27 member states in the region, and presents country-specific estimates for the 16 member states with populations of 300,000 or more (on the grounds that rates in countries with smaller populations are unstable). All data are presented for 2012.

### Low- and Middle-Income Countries

*Preventing Suicide: A Global Imperative* estimated that there were 131,000 suicides in the 21 independent member states classified as low- and middle-income countries in the region (age-standardized rates of 7.5 per 100,000 persons, 7.9 per 100,000 females, and 7.2 per 100,000 males). Among the 10 low- and middle-income countries with populations of 300,000 or more, the lowest age-standardized rates were found in the Philippines (2.9 per 100,000 persons, 1.2 per 100,000 females, and 4.8 per 100,000 males) and Malaysia (3.0 per 100,000 persons, 1.5 per 100,000 females, and 4.7 per 100,000 males), and the highest were found in Papua New Guinea (12.4 per 100,000 persons, 9.1 per 100,000 females, and 15.9 per 100,000 males). China is noteworthy because it is the only country where the rate for females (8.7 per 100,000) exceeded that for males (7.1 per 100,000; WHO, 2014).

In eight of the 10 low- and middle-income countries, the 2012 age-standardized suicide rates were lower than those of the year 2000. The exceptions were the Philippines and Mongolia, where rates for females decreased (−13 % and −35 %, respectively) but rates for males increased (+24 % and +6 %, respectively; WHO, 2014).

### High-Income Countries

The WHO report did not provide aggregated data for the high-income countries in the Western Pacific Region, instead presenting data for all high-income countries together. It did, however, offer details of the patterns of suicide in each of the six high-income countries in the region. The lowest age-standardized rates for 2012 were found in Singapore (7.4 per 100,000 persons, 5.3 per 100,000 females, and 9.8 per 100,000 males) and the highest were found in the Republic of Korea (28.9 per 100,000 persons, 18.0 per 100,000 females, and 41.7 per 100,000 males; WHO, 2014).

Changes in the age-standardized rates of suicide from 2000 to 2012 varied by country. In the Republic of Korea, the rates more than doubled over this 12-year period in both females (+124 %) and males (+105 %), and in Brunei Darussalam rates also increased both for females (+24 %) and males (+13 %). In Australia, New Zealand, and Japan the rates increased for females (+5 %, +16 %, and +2 %, respectively) but decreased for males (−15 %, −30 %, and −4 %, respectively). In Singapore, rates decreased by more than 30 % both for females (−31 %) and for males (−33 %; WHO, 2014).

### Limitations

Certain caveats should be considered when interpreting the aforementioned data. Many countries – particularly low- and middle-income countries – do not systematically register all deaths. Even those that do register all deaths may not accurately record the number of deaths by suicide. Whether a death is correctly recorded as being due to suicide depends on legal, religious, and societal imperatives that influence coroners' practices and the willingness of families to acknowledge suicides.

In addition, the picture in individual countries may have changed since 2012. In Australia, for example, more recent suicide statistics have been released (Australian Bureau of Statistics, 2018). These show that the trend is now moving in the opposite direction to that observed from 2000 to 2012, with a recent analysis indicating that 2013 marked the beginning of a significant upturn in rates for males (in that year, the rate was 16.7 per 100,000, and in 2015 it was 19.4 per 100,000) (Australian Bureau of Statistics, 2018).

Finally, as noted, the individual country data were restricted to independent member states with populations of over 300,000. This was appropriate for the reasons stated earlier. As a result, however, the picture in certain individual countries/areas was not presented.

Some of these countries/areas have experienced significant changes in their suicide rates in recent times. In Hong Kong, for example, the age-standardized rates decreased from a peak of 14.7 per 100,000 persons in 2003 to 8.6 per 100,000 persons in 2014. This reduction is greater than those observed in other high-income countries/areas in the region.

## Self-Harm: Data From Population-Based Surveys

Information on the extent of nonfatal self-harm can be collected via population-based surveys. These typically elicit self-report information from a randomly selected sample of participants, asking them whether they have self-harmed (usually phrased as *made a suicide attempt*) in a given period (usually in the past 12 months or over their lifetime; Welch, 2001). The most comprehensive international survey data on self-harm comes from the WHO World Mental Health (WMH) surveys, which have been conducted in a number of countries/areas across the globe. *Preventing Suicide: A Global Imperative* provides data from 11 low- and middle-income countries/areas and 10 high-income countries/areas (WHO, 2014) citing a book devoted to the WMH surveys (Nock, Borges, & Ono, 2012).

### Low- and Middle-Income Countries/Areas

China was the only low- and middle-income country from the Western Pacific Region represented in the WMH survey book (Kessler & Ustun, 2008). Two separate surveys were conducted in China, one of 5,201 adults in Beijing and Shanghai during 2002–2003 and the other of 7,134 adults in Shenzhen during 2006–2007. Estimates of the 12-month prevalence of self-harm were 1.0% in the former and 0.7% in the latter.

### High-Income Countries/Areas

Two high-income countries from the Western Pacific Region were represented in the WMH survey book, namely, Japan and New Zealand. The Japanese survey was conducted during 2002–2006 with 3,417 adults from nine metropolitan areas, and suggested that the 12-month prevalence of self-harm was 1.5%. The New Zealand survey was conducted during 2003–2004 with a nationally representative sample of 12,992 individuals aged 16 and older, and yielded a lower estimate of 0.4%. Since the WMH survey book was published (Kessler & Ustun, 2008), at least one other high-income country in the Western Pacific Region has conducted a similar survey. Australia's National Survey of Mental Health and Wellbeing took place in 2007 and involved a nationally representative sample of 8,841 adults. Findings from this survey put the 12-month prevalence of self-harm at 0.4% (Johnston, Pirkis, & Burgess, 2009).

### Limitations

Again, certain methodological issues should be considered when interpreting the aforementioned data. In particular, population-based surveys ask participants to report retrospectively whether they have self-harmed, which introduces the potential for recall bias.

## Self-Harm: Data From Registration Studies

Information on the extent of self-harm in given countries/areas can also be collected via registration studies (Welch, 2001). These use administrative data on hospital admissions, emergency department presentations, or general practitioner (primary care physician) contacts for "medically serious self-harm" (Beautrais, 2001) over a given period (usually 12 months; Welch, 2001). The outcome of these admissions or presentations for self-harm is often not known, but it can be assumed that although most of these instances of self-harm were not fatal, some may have been (e.g., if the person died in hospital).

*Preventing Suicide: A Global Imperative* makes mention of registration studies, noting that very few countries/areas currently have the capacity to collate nationally representative administrative data on the rates of medically seri-

ous self-harm (WHO, 2014). Steps have been taken to address this in the Western Pacific Region via an innovative, multi-country study supported by the WHO called Suicide Trends in At-Risk Territories (WHO START; De Leo & Milner, 2010; De Leo et al., 2013; De Leo, Milner, & Wang, 2009). This study was instigated in 2005 to stimulate suicide research and prevention in the Western Pacific Region (although countries/areas from other regions have since joined the study). The study has four components, the first of which is to establish standardized systems for monitoring self-harm and suicide. Considerable progress has been made; self-harm data are now collected from hospitals and ministries of health in participating countries/areas (De Leo & Milner, 2010; De Leo et al., 2013; De Leo et al., 2009).

### Low- and Middle-Income Countries/Areas

A key paper from the START study by De Leo et al. presents data on presentations for self-harm from three low- and middle-income countries/areas in the Western Pacific Region (Fiji, the Philippines, Tonga, and Vanuatu; De Leo et al., 2013). In Fiji, 646 people presented to St. Giles Hospital with self-harm from 2004 to 2009 (an average of 108 per year). In the Philippines, 93 people presented to the Philippines General Hospital and General Emilio Aguinaldo Memorial Hospital in 2008 and 2009 (47 per year). In Tonga, 19 people presented to Tongatapu Main Hospital in Tonga in from 2001 to 2009 (two per year). In Vanuatu, 10 people presented to the Vila Central Hospital in 2010. De Leo and colleagues did not convert these raw numbers to rates, presumably because precise denominator data on the total population served by the given hospitals were not available (De Leo et al., 2013).

### High-Income Countries/Areas

The paper by De Leo et al. also presents data on presentations for self-harm from three high-income countries/areas in the Western Pacific Region (Australia, French Polynesia, and Hong Kong; De Leo et al., 2013). In Australia, 5,817 people presented to the Gold Coast Hospital with self-harm from 2005 to 2010 (970 per year). In French Polynesia, 557 people presented to Taaone Hospital from 2008 to 2010 (186 per year), and in Hong Kong, 445 people presented to Alice Ho Miu Ling Nethersole Hospital and Prince of Wales Hospital from 2006 to 2008 (148 per year). Again, De Leo and colleagues did not calculate rates from these raw numbers (De Leo et al., 2013), but Amadéo and coworkers did further work with the French Polynesian data and concluded that the incidence of medically serious self-harm might be around 90 per 100,000 (Amadéo et al., 2016). Similarly, Milner has since confirmed that the Gold Coast Hospital's catchment population was 515,157, which means that the incidence of medically serious self-harm in that area was 190/100,000 % (A. Milner, pesonal communication, September 23, 2016).

Data on presentations for self-harm in high-income countries/areas in the Western Pacific Region are also available from sources other than the START study. For example, a recent study of self-harm based on hospital admission records in Hong Kong estimated the annual rate of self-harm to be 120/100,000 (Kwok, 2015).

### Limitations

Registration studies also have their limitations. They only consider episodes of self-harm that result in hospital presentations, missing episodes in which people injure or poison themselves but do not seek/receive care, or do so from an alternative setting. Adjustment methods can be employed to correct for potential underestimation (e.g., the capture–recapture method; Kwok, 2015) but these are not widely used.

In addition, caution should be exercised in generalizing these rates to the total population of given countries/areas because they come from selected sites (although in smaller countries/areas these sites sometimes serve the entire population).

## Suicide Prevention Activities in the Region

Suicide is receiving increased attention as a major public health problem in a number of countries in the Western Pacific Region.

### Low- and Middle-Income Countries/Areas

#### China

China has not yet developed national or regional suicide prevention plans, possibly because the very rapid fall in the suicide rate over the past two decades (by more than 50%; Zhou et al., 2016) has decreased the perceived urgency of the problem and, thus, the need for proactive government involvement. Nevertheless, there have been some markers of increased awareness of the problem. Several national and regional associations for suicide prevention were established by mental health and public health professionals in the late 1990s. Suicide prevention centers (often labeled *psychological crisis centers* to avoid the negative connotations of the term *suicide*) were opened in several cities (primarily based in psychiatric hospitals) in the 1990s and early 2000s. A WHO Collaborating Centre for Suicide Prevention and Training was established at the Beijing Hui Long Guan Hospital in 2006. The first national mental health law for China, announced in 2013, mentioned risk of self-harm as a reason for involuntary psychiatric admission (providing that a family member agreed; Chen et al., 2012). The most recent national mental health plan for the period 2015–2030 stipulated that all provinces should open at least one hotline (for psychological aid) and that all provinces and 70% of cities should establish crisis intervention teams (Xiong & Phillips, 2016).

The most widely implemented prevention activity is the development of crisis hotlines, which have opened in many cities and other localities throughout the country. These services are provided by a variety of agencies, although most are centered in psychiatric hospitals. The quality of the training of the hotline operators has varied greatly, and their ability to deal with suicidal crises also differs. There has been some attempt by the Ministry of Health and Family Planning to integrate the various crisis hotline services with the national emergency telephone services, but there is a long way to go before this plan can be realized. There has never been a formal assessment of these hotlines in preventing suicidal behavior.

Other intervention activities have been local and time-limited. Studies of providing psychological support to people who self-harm (such as the WHO SUPRE-MISS project; Bertolote et al., 2010) have shown promise, but in most cases the sample sizes are too small or the follow-up periods too short for the effectiveness of these interventions to be unequivocally demonstrated. Several of the crisis centers in the country sporadically provide training for different potential gatekeepers (e.g., university counsellors, schoolteachers, volunteers) or conduct community-based mental health promotion and suicide prevention activities for students, the elderly, or other groups. The effectiveness of these activities has not been assessed. A 5-year project aiming to restrict access to pesticides in Shaanxi Province yielded equivocal results (WHO, 2016a).

### High-Income Countries/Areas

#### Australia

Australia's suicide prevention activities underwent a review in 2014, in the context of a broader review of mental health programs and services conducted by the National Mental Health Commission (National Mental Health Commission, 2014). As a result of this review, the Australian Government has announced a renewed approach to suicide prevention that will be encompassed in a revised national suicide prevention strategy (Australian Government, 2015). Australia was one of the first countries to put in place a national suicide prevention strategy, but there is recognition that a renewed effort is required to address recent increases in the suicide rate. Several Austral-

ian states and territories have recently revised their suicide prevention strategies (e.g., Tasmania and Victoria; Department of Health and Human Services, 2016a, 2016b) and the new national strategy will complement and build on these.

The Australian Government's renewed approach has several key features (Australian Government, 2015). It recognizes that a significant reduction in suicides requires national leadership as well as strong local implementation of activities. The approach also prioritizes suicide prevention among Aboriginal and Torres Strait Islander people, who have strikingly higher suicide rates than other Australians. In addition, it emphasizes best-practice aftercare for people discharged from hospital inpatient units or emergency departments following an episode of self-harm.

The Australian Government recently released $44.5 million for a National Suicide Prevention Leadership and Support Programme to provide national leadership in the suicide prevention sector as a whole and in suicide prevention research (Australian Government, 2016). It will also provide for national media and communication strategies and for national support services for people at risk of suicide. In addition, it will fund a Centre of Best Practice in Aboriginal and Torres Strait Islander Suicide Prevention.

The Australian Government's approach to ensuring strong local implementation relies heavily on organizations known as Primary Health Networks (PHNs; Australian Government, 2015, 2016). PHNs play a major role in planning and commissioning services at a regional level. Each PHN has a pool of funds that can be used in a flexible manner for suicide prevention activities that have the greatest chance of achieving positive outcomes. The PHNs' commissioning role includes ensuring that culturally appropriate services are available for Aboriginal and Torres Strait Islander people, and that those who have self-harmed receive appropriate community follow-up. PHNs are being encouraged to take a systems-based approach to suicide prevention, similar to that which has been tested in several European countries (van der Feltz-Cornelis et al., 2011). This involves implementing a range of evidence-based universal, selective, and indicated suicide prevention strategies in an integrated fashion. The Black Dog Institute has received independent philanthropic funding to test the impact of this approach in four sites in New South Wales (Black Dog Institute, 2016).

### French Polynesia

Various events can be viewed as early landmarks in the suicide prevention efforts of French Polynesia. One was the establishment in 2001 of SOS Suicide, a nongovernmental organization (NGO) focused on suicide prevention (Amadéo, 2010a, 2010b). Another was the presence of French Polynesia at two important forums: the Western Pacific Regional Meeting held in Manila in 2005 to address the burden of suicide in the region and the IASP Asia-Pacific Conference held in Singapore in 2006 (in 2014 the same conference was held in Tahiti; Amadéo, 2014).

Recommendations from the 2005 Manila meeting led to the launch of the START study, in which French Polynesia was involved. As noted earlier, the START study has four components, the first of which is establishing reliable recording systems for monitoring self-harm and suicide. The others are: a randomized controlled trial comparing a brief phone contact intervention with treatment as usual for people who have self-harmed; a psychological autopsy study with next-of-kin of those who have died by suicide; and a longitudinal follow-up study of those who have engaged in medically serious acts of self-harm. The START study was supported by French Polynesian local health authorities in 2006, following a visit to Tahiti by the WHO. Few epidemiological studies of suicide had been conducted in French Polynesia prior to this, thus involvement in the START study was viewed as an opportunity to garner evidence for suicide prevention programs that could take into account cultural attitudes and risk and protective factors. In addition, efforts began to raise community awareness through World Suicide Prevention Day (Amadéo, 2010a, 2010b).

The results of the first two components of the START study have been published (Amadéo, Kõlves, et al., 2016; Amadéo, Rereao, et al., 2015). To complement these, another survey (Mental Health in the General Population, or MHPG) was conducted in Tahiti in 2015. Preliminary analysis suggests that suicide risk is high in French Polynesia, and that those who are suicidal use Indigenous healing approaches and religion to address mental suffering. These findings have implications for the types of priorities that might be included in the new suicide prevention plan.

Since the START study, surveillance efforts have been improved. A health observatory is being implemented by the local authorities, and suicide and self-harm surveillance in each of the public health structures is promoted as an important component of this. In addition, there is agreement from the public prosecutor to convey real-time details of suicides to SOS Suicide. This could facilitate appropriate, timely, and culturally sensitive interventions.

SOS Suicide established a crisis hotline in 2006 and, since 2008, has developed preventive actions with the support of local authorities (Amadéo, 2010a, 2010b). SOS Suicide is also testing several pilot programs for people who have self-harmed or are otherwise at risk. One has various elements, including Indigenous healers, mobile unit teams, and agreement with the local hospital emergency department. Another involves collaboration with churches and using the religious faith in life contracts. Additional programs have been recommended on the basis of known risk factors for suicide, such as depression and alcohol/drug use (e.g., training in recognizing depression and suicidality for general practitioners and a range of gatekeepers, and public awareness campaigns that provide information on the identification of and treatment for depression). Consideration is also being given to interventions that recognize that many French Polynesians do not have ready access to mental health care because the population is spread over a vast area of over 100 islands (e.g., Internet-based self-help and treatment). These programs and interventions will need to be introduced in a coordinated fashion under the new suicide prevention plan.

### Hong Kong

Hong Kong's suicide rate increased from 12.1 per 100,000 in 1997 to 18.8 per 100,000 in 2003, then gradually decreased to about 12.6 per 100,000 in 2015. The pattern of the suicide rate appears to be related to several factors. During the period of increase (1997–2003), Hong Kong faced unfavorable conditions, with an increase in the unemployment rate and the emergence of a new method of suicide, charcoal burning, which accounted for about 25 % of suicides in 2003 (The Hong Kong Jockey Club Centre for Suicide Research and Prevention, 2016). The sensational media reporting of suicides by this method was found to contribute to its spread, (Yip & Lee, 2007) and it became the second most common suicide method between 2001 and 2004. Since then, some community-based programs for suicide prevention have been launched, for example, the restriction of access to charcoal in a community (Yip et al., 2012) and school-based programs on positive mental health and well-being (Lai et al., 2016).

The awareness of mental health in the community has been raised and the reporting style of suicide has also improved. A study that reviewed the suicide news reporting before and after the launch of the WHO media guidelines in 2004 showed that the proportion of prominent suicide stories (e.g., those on the front page or with graphical presentation of the death) had been reduced and other reporting styles have been improved as well (Fu & Yip, 2008).

With the involvement of many stakeholders in the community, including media, schools, hospitals, nongovernmental social service organizations etc., there has been a steadily decreasing trend in suicides. The age-standardized rate for the general population decreased from 14.7 per 100,000 to 8.8 per 100,000 between 2003 and 2015 (Committee on Prevention of Student Suicides, 2016). However, the recent increase in suicides by young people is of concern. In the academic year 2015–2016, there was a sudden increase in student suicides,

especially for full-time students aged 15–24, when compared with the data from the period 2009–2015. In view of this situation, the Education Bureau of the Hong Kong Government has set up a Committee on Prevention of Student Suicides to look into the possible causes for student suicides and to propose short-, medium-, and long- term measures to prevent suicides at primary, secondary, and tertiary education levels (Committee on Prevention of Student Suicides, 2016). According to the police and the Coroner's Court, one of the most immediate precipitants of student suicides is relationship difficulties, and recommendations have been made by the committee at universal, selective, and indicated levels.

Social media has also been found to be quite commonly used among young people to share their suicidal thoughts, and this could provide an opportunity to engage vulnerable individuals in early intervention (Cheng, Kwok, Zhu, Guan, & Yip, 2015). Leading social media and Internet service providers such as Facebook, YouTube and Google have been engaged to take part in suicide prevention. For instance, a reporting system on suicidal posts was enhanced on Facebook and a pamphlet about helping a friend in need was developed with local experts. Google removed websites with detailed descriptions of suicide methods and some pro-suicide websites. Popular local YouTubers were also engaged to promote mental health and help-seeking behaviors through their channels.

There are some promising results arising from efforts in Hong Kong to stop an emergence of suicides by a relatively new method, inhaling helium. With the government's support, the new method has not spread in the same way as charcoal burning suicides did (Chang, Cheng, Lee, & Yip, 2016). Different stakeholders (including but not limited to the Hong Kong Police Force, the Hong Kong Poison Information Centre, the Fire Service Department, and the Coroner's Court) have collaborated in preventing helium suicide, using approaches such as regulating the storage of compressed gas, providing relevant information on helium suicide cases, and establishing postvention support for those who have lost someone to suicide by this method.

Although there is no region-wide strategy for suicide prevention in Hong Kong, the government and many local charities and other organizations (e.g., the Hong Kong Jockey Club Charities Trust) have devoted considerable resources to suicide prevention. The Centre for Suicide Research and Prevention at the University of Hong Kong has played a significant role in promoting a public health approach to suicide prevention in Hong Kong (Yip, So, Kawachi, & Zhang, 2014). The Centre for Suicide Research and Prevention has also shared many of its positive practices with other countries/areas, including the Republic of Korea, Singapore, and Taiwan. Examples of efforts that appear to have been crucial in preventing suicide in Hong Kong include:

- Timely monitoring and surveillance programs to inform the public and the government on suicidal behaviors in the community;
- Developing good practice models so that the community can take part in relevant programs and benefit from them;
- Gaining government policy support for integrated suicide prevention programs;
- Constructively engaging media (printed and social) professionals to present suicide in a responsible manner, thereby reducing the likelihood of copycat acts; and
- Using social media to reach vulnerable young people.

Promoting community support and gatekeeper training would enlarge the supporting network for those in need of help.

### New Zealand

New Zealand implemented a national Youth Suicide Prevention Strategy in 1998 (Ministry of Youth Affairs, 1998). Building on this work, in 2006 the New Zealand Ministry of Health launched a 10-year national Suicide Prevention Strategy for people of all ages (Associate Minister of Health, 2006). This strategy promoted a multisectoral approach to suicide prevention based on seven action areas:

- Promote mental health and well-being and prevent mental health problems;
- Improve the care of people experiencing mental disorders associated with suicidal behaviors;
- Improve the care of people who make nonfatal suicide attempts;
- Reduce access to means of suicide;
- Promote safe reporting and portrayal of suicidal behavior by the media;
- Support families, friends, and others affected by a suicide or suicide attempt; and
- Expand the evidence about rates, causes, and effective interventions.

Suicide rates have not declined substantially since the introduction of the 2006–2016 national strategy and the strategy has not been evaluated. The Ministry of Health released the draft of a new national strategy for consultation in 2017 but the release of the final strategy has been delayed while a broader review of the mental health system takes place. In 2015 the Ministry of Health devolved responsibility for suicide prevention to individual District Health Boards (DHBs). New Zealand has 20 DHBs covering the country and each has responsibility for regional health services. Each DHB was required to develop a suicide prevention and postvention plan based on the principles and action priorities of the national strategy and localized to their region. The Ministry of Health provides no funding to DHBs for implementation of their local suicide prevention plan, but requires quarterly reports on actions and progress. The DHB plans across the country share similar content and most DHBs have appointed Suicide Prevention Co-ordinators (SPCs) to activate these plans. SPCs are not clinicians and tend to focus on health promotion and community-based components of the plan (such as provision of gatekeeper training to community groups) and on providing support to families and communities bereaved by suicide.

Suicide prevention in New Zealand includes a strong focus on provision of postvention support, which has led to the development of unique national postvention services. The goal of the postvention focus is not only to provide integrated, inter-agency support, but to do so in the hope that such support, delivered in a timely way, will minimize the risk of suicide clusters and contagion. To facilitate a timely response, in 2014, the Ministry of Health established a national Coronial Data Sharing Service (CDS). In New Zealand, all suspected suicide deaths must be reported to a coroner. These reports are collected centrally by Coronial Services and sent to the CDS, which then notifies DHBs of a suspected suicide in their region, allowing the DHB to implement their suicide postvention plan in a timely and appropriate way. DHBs work alongside Victim Support, a national volunteer program that provides the Initial Postvention Response Service to all people bereaved by suicide. The Ministry of Health also contracts an agency to provide a national Community Postvention Response Service. This service provides support in the event of an emergent suicide cluster.

New Zealand suicide prevention efforts have been strongly focused on young people. Since 2000, the government has funded the national Towards Wellbeing Suicide Consultation and Monitoring Programme (TWB) to address suicide risk in children and young people in contact with the child welfare and juvenile justice systems. TWB supports social worker and other staff in these services to assess, monitor, and respond to suicide risk in young people in their care. To address high suicide rates in Pacific and Maori people, particularly youth, the government funds, respectively, Le Va and Te Rau Matatini to deliver culturally appropriate, community-based suicide prevention programs.

To meet suicide prevention goals, the National Depression Initiative was launched in 2006 to increase community understanding about depression and encourage help-seeking, appropriate treatment, and recovery. The program includes online information and self-help programs with access to trained staff.

A prerequisite of national suicide prevention initiatives in New Zealand is that they target, involve, and empower wider community groups in suicide prevention and life and wellness promotion. Responsiveness to Maori and Pacific Island youth has been a major focus of the

overall strategy. Attention to community initiatives, however, risks neglecting users of mental health services and people with severe mental illness. While there is emerging interest in the Zero Suicide program in health-care systems, this is at an individual DHB level, rather than as a national initiative. Community gatekeeper training is common but educational programs for clinicians are lacking. Other gaps also remain. Neither individual community-based programs nor the overall strategy has been subjected to evaluation. Some groups have been relatively neglected (e.g., older adults, men). Surveillance systems are not timely and national suicide data are still reported with a 4-year time lag. The government has trialed a national suicide mortality review system but funding for other suicide research is limited. New Zealand lacks a national suicide prevention strategy, and does not have a national training and research center that could provide overarching leadership for suicide prevention.

## Overview of Suicide Prevention Activities: Findings From the IASP/WHO Global Survey on Suicide Prevention 2013

As noted earlier in this chapter, the IASP/WHO Global Survey on Suicide Prevention was conducted in 2013. Surveys were sent to key stakeholders from a total of 157 countries/areas from around the world, most of whom were IASP national representatives. In the Western Pacific Region, responses were received from 14 countries/areas of the 37 listed in Table 1: Six were low- and middle-income countries/areas (Cambodia, China, Cook Islands, Malaysia, Philippines, and Tonga), seven were high-income countries/areas (Australia, Brunei Darussalam, Hong Kong, Japan, Macau, New Zealand, and the Republic of Korea), and one was unclassified (Tokelau). Tokelau is considered with the low- and middle-income countries/areas for the remainder of this chapter.

### Suicide Prevention Activities

#### Low- and Middle-Income Countries/Areas

According to survey respondents, two of the low- and middle-income countries/areas have developed a national suicide prevention strategy (i.e., a comprehensive national strategy or action plan adopted by the government), namely, Malaysia and Tonga. The strategy in Malaysia was adopted in 2012; no date was provided for Tonga's strategy. Malaysia and Tonga's strategies have not been implemented or evaluated.

The remaining low- and middle-income countries/areas have some suicide prevention activities in place. Cambodia has setting-specific programs, China has suicide prevention hotlines available in several cities, the Philippines has both integrated and scattered programs, and Tokelau has integrated programs. No details were provided for the Cook Islands. National strategies are planned for the Cook Islands and Tokelau. The Ministries of Health, Education, Internal Affairs and an NGO (Te Kainga) take responsibility for the strategy's development in the former and the Director of Health and the Chief Clinical Advisor and Mental Health Coordinator do so in the latter.

#### High-Income Countries/Areas

Respondents from four of the high-income countries indicated that their countries have national strategies: Australia's initial strategy was adopted in 1995, Japan's in 2007, New Zealand's in 2006, and the Republic of Korea's in 2004. In each case, the strategy has been at least partially implemented.

In Australia, Japan, and New Zealand, various government entities have taken responsibility (the Australian Government along with the state and territory governments in Australia, the Cabinet Office in Japan, and the Ministry of Health in New Zealand). The strategies in these three countries have been financed by government funders, fully in Australia and partially in Japan and New Zealand. Australia's strategy has been evaluated, and the progress of Japan and New Zealand's strategies has been reported in progress/annual reports.

The Republic of Korea's strategy has been partially implemented, with the Korea Association for Suicide Prevention taking initial responsibility for it and the Korea Suicide Prevention Center taking over in 2012. It has been partially funded, with resources coming from the private sector. It has also been evaluated, with a report of the evaluation being produced in Korean.

Suicide prevention activity in the remaining three high-income countries/areas is more limited. Brunei Darussalam has no programs in place, but there are integrated programs in Hong Kong and Macau. As yet, national suicide prevention strategies are not planned for these three countries/areas, although the Hong Kong Government has planned for a 3-year mental health enhancement program and the Centre for Suicide Prevention Research has been promoting a public health approach to suicide prevention work in the community.

## Availability of Training Relating to the Prevention of Suicidal Behavior

### Low- and Middle-Income Countries/Areas

None of the survey respondents representing low- and middle-income countries/areas indicated that these countries/areas have training programs available for general practitioners. There are, however, some locations where training in suicide prevention is provided to mental health professionals, with examples of undergraduate/postgraduate training and ongoing professional development. In the Cook Islands, a university psychiatrist has delivered a number of training sessions. In Malaysia, training is available in all relevant postgraduate programs, and seminars are available to all. In the Republic of Korea, lectures and videos are available.

The picture improves further when training on suicide prevention for non-health workers (e.g., teachers, journalists, police, first responders, faith leaders) is considered. In Cambodia, training programs are available on mental health promotion and suicide prevention for teachers and educational psychologists working in schools. In the Cook Islands, an NGO leads training for non-health workers with assistance from the Ministry of Health Mental Health Services. In Malaysia, training sessions are provided for professionals such as teachers and faith leaders, albeit only on an occasional basis. In Tokelau, workshops on self-harm and suicide prevention were held on each of the country's atolls in 2013; these attracted a range of stakeholders (e.g., hospital staff, village council representatives, and groups of men, women, and young people).

### High-Income Countries/Areas

According to survey respondents from the high-income countries/areas represented in the survey, only Australia, Brunei Darussalam, Japan, and the Republic of Korea offer suicide prevention training both for general practitioners and for mental health professionals. Australia offers Applied Suicide Intervention Skills Training (ASIST) for general practitioners and mental health professionals. In Japan, local medical associations conduct training courses for general practitioners and mental health professionals in their provinces but a standard program has not been established. Brunei Darussalam does not offer training for general practitioners, but provides a suicide assessment training course for mental health professionals. The Republic of Korea has a training program on suicide assessment and intervention that is widely available for general practitioners. This program was developed by the Korea Association for Suicide Prevention and the Korea Medical Association and includes slides and a video.

Other countries may provide this sort of training for their general practitioners and mental health professionals, but do not do so systematically. In New Zealand, for example, Question, Persuade, Refer (QPR) and ASIST are available for primary care and mental health staff, but not on a consistent or widespread basis.

According to survey respondents, training for non-health workers is only offered in Australia, New Zealand, and the Republic of Korea. In Australia, ASIST is offered for these sorts of professionals. In New Zealand, safeTALK and

ASIST are offered for community groups, as is QPR. There is also in-house training provided for some teachers, and there are specific initiatives for particular groups (e.g., to address the stress engendered by the Global Dairy Crisis in 2015, the New Zealand Government funded an emergency response to deliver training to rural health and social service providers and community groups). In the Republic of Korea, training is available for teachers, the police, first responders, and others. In Hong Kong, suicide prevention programs for schools are made available by the Education Bureau, NGOs, and the Centre for Suicide Prevention and Research, and in-house training is provided by the Hospital Authority, the Social Work Department, and the Department of Health.

## Entities Dedicated to the Prevention of Suicidal Behavior

### Low- and Middle-Income Countries/Areas

Survey respondents indicated that a number of the low- and middle-income countries/areas have a national center or institute specifically dedicated to suicide research and/or prevention, and/or NGOs that work to prevent suicide. In Cambodia, the Center for Child and Adolescent Mental Health (Caritas-CCAMH), a public–private partnership between the Ministry of Health, the Royal Government of Cambodia, and Caritas Cambodia (an international NGO), deals with suicide prevention in the context of supporting and advocating for young people with mental health problems. In China, the WHO Collaborating Centre for Suicide Prevention and Training at the Beijing Long Guan Hospital is the most influential suicide prevention center nationally, but it does not have direct authority over the centers established in other provinces or municipalities around the country. In the Cook Islands, Te Kainga Community Mental Health Services (an NGO) and the Ministry of Health focus on suicide prevention. In Malaysia, the National Suicide Registry of the Ministry of Health provides research data, Befrienders provides direct support to individuals in crisis, and the Suicide Prevention Campaign Penang helps raise awareness of suicide as a public health problem. In the Philippines, the suicide prevention mantle is taken up by the Natasha Goulbourn Foundation. In Tonga, the National Forum of Church Leaders (representing all churches in the country) takes the lead in suicide prevention.

Two low- and middle-income countries/areas have self-help support groups for people who have been bereaved by suicide, although in both cases they are only available in certain locations. In the Cook Islands, some but not all of these groups are led by accredited professionals. In Tokelau, all of them are generally led by accredited professionals.

### High-Income Countries/Areas

In the high-income countries/areas, there is arguably a greater distinction between research-focused organizations and organizations that are designed to prevent suicide through advocacy and awareness-raising and/or direct service delivery. According to survey respondents, four high-income countries/areas have both of these types of organizations. In Australia, the Australian Institute of Suicide Research and Prevention conducts nationally and internationally relevant suicide prevention research, and Suicide Prevention Australia provides national leadership for the suicide prevention sector. Japan's equivalent organizations are the Center for Suicide Prevention and the Japanese Association for Suicide Prevention, along with the Federation of Inochi No Denwa. In Hong Kong, the Centre for Suicide Research and Prevention at the University of Hong Kong is the regional center devoted to suicide research and prevention (conducting research, training, and knowledge exchange), and three NGOs provide services (Samaritans, Samaritans Befrienders, and the Suicide Prevention Services). There are also many NGOs that provide different kinds of suicide prevention services to the community (e.g., the Boys' and Girls' Clubs Association, Caritas, and the Hong Kong Federation of Youth provide e-engagement with at-risk youth). In the Republic of Korea, the Korea Suicide Prevention Center has a broad research and prevention remit. Macau does not have a

regional organization with a research focus, but it does have several suicide prevention services (Caritas Macau and the Life Hope Hotline).

Five of the high-income countries/areas have self-help support groups for people who have lost someone to suicide. In Australia and Japan these are widely available, whereas in Hong Kong, New Zealand, and the Republic of Korea they are only available in certain areas. In the Republic of Korea, these groups are generally led by accredited professionals; in the other four countries/areas they are sometimes but not always led by accredited professionals.

## Suicide and Self-Harm Statistics

### Low- and Middle-Income Countries/Areas

Survey respondents indicated that all of the low- and middle-income countries/areas that were represented in the survey issue death certificates for all deaths (although in some countries, such as China, this does not necessarily lead to the inclusion of the death in national mortality data). In almost all countries/areas, these death certificates include suicide as an option for the cause of death; the exception is the Philippines. Countries/areas differ in terms of who has ultimate responsibility for ascertaining the cause of death on the death certificate. In China, it is medicolegal authorities. In the Cook Islands, it is hospital and emergency services' doctors. In Malaysia, it is medicolegal authorities, the police, and assistant medical officers. In the Philippines, it is the family doctor or general practitioner. In Tonga, responsibility lies with the Ministry of Police and Health. In Tokelau, authority is vested in the resident medical officer on the given atoll (and, in his/her absence, the most senior nurse).

The Cook Islands, Malaysia and Tonga routinely publish suicide statistics. In China and Tokelau, official statistics are available for certain regions, settings, or subpopulations. Cambodia and the Philippines have no registries for suicide statistics.

Only two of the low- and middle-income countries/areas publish official national statistics on self-harm. These are the Cook Islands and Tonga. Of the remainder, Malaysia and Tokelau publish self-harm statistics for specific regions, settings, or subpopulations. None has any kind of registry for self-harm.

### High-Income Countries/Areas

All of the high-income countries/areas issue a death certificate in the event of any death. Apart from Brunei Darussalam and the Republic of Korea, all countries/areas permit suicide to be included as an option for the cause of death. In Australia, Hong Kong, and New Zealand, the coroner is responsible for ascertaining the cause of death on the death certificate. In Macau, the police, a medicolegal authority, or the family doctor can take on this role. In Japan, it can be the coroner, but also the family doctor or a police medical doctor. In the Republic of Korea, it is a medical doctor.

Most of the high-income countries/areas publish official national suicide statistics. The exceptions are Brunei Darussalam and Macau.

Only New Zealand publishes official national statistics on self-harm, and even in this country the data only include hospital admissions of 48 hr or more in duration (excluding presentations to the emergency department where no admission took place and shorter admissions, thereby creating a substantial undercount). Australia and the Republic of Korea publish statistics for particular subgroups, Japan has a self-harm registry, and in Hong Kong some self-harm data are available from hospital admissions.

# Summary

## Overview

Table A1 in the appendix provides an overview of the key outcomes described in the previous sections for the Western Pacific Region, by country/area.

## Limitations

The IASP/WHO Global Survey on Suicide Prevention had certain limitations that must be ac-

knowledged. The survey was completed by 14 of the 37 countries/areas in the Western Pacific Region (a response rate of 38%). It relied on self-report, and respondents may have had variable knowledge of specific suicide prevention activities taking place in their given countries/areas. Caution should therefore be exercised in generalizing the findings to the whole region, and even in interpreting the findings from individual countries/areas.

## Recommendations

The IASP/WHO Global Survey on Suicide Prevention complements the epidemiological work that has occurred in recent times. Epidemiological exercises have demonstrated that suicide and self-harm are significant problems in many countries/areas in the Western Pacific Region, and the survey indicates how these various countries/areas have responded, both at a policy level and on the ground. There is considerable variability in terms of the response, and the variability is not all related to the relative wealth of countries/areas. There are pockets of exemplary suicide prevention activity occurring in some low- and middle-income countries, and progress in some high-income countries has not been as great as might have been expected.

There are clearly opportunities for different countries/areas in the region to learn from each other. Countries/areas that have undertaken relatively little activity to date might benefit from looking to other countries that have made good progress to see how they have approached suicide prevention. The IASP/WHO Global Survey on Suicide Prevention provides an excellent starting point for this.

Adequate funding for suicide prevention efforts in the region should be a priority, as should the delivery of a range of suicide prevention approaches. There should be an emphasis on the full gamut of prevention approaches, including universal, selected, and indicated interventions as well as postvention activities. Striking the appropriate balance is important. Approaches that target the whole population may be desirable in some contexts, but these should be complemented by interventions designed for subgroups who have particularly heightened levels of risk. An example is people with severe and persistent mental illness and/or drug and alcohol problems. The IASP/WHO Global Survey on Suicide Prevention suggests that clinical staff and other gatekeepers who come into regular contact with these people may often not be adequately trained in suicide prevention, at least in some countries/areas. Training for these sorts of professionals would appear to be a priority.

National strategies have been regarded as important for ensuring that a complementary range of approaches are implemented. Development and/or renewal of national strategies should be encouraged. These strategies should be informed by the best available evidence, interpreted for the local context (e.g., cultural factors, systemic constraints, available resources). Wherever possible, they should have the imprimatur of governments and be developed with genuine input from relevant stakeholders, including those who have been bereaved by suicide or experienced suicidal thoughts themselves.

Sound evaluation of suicide prevention initiatives is crucial. There is still much that is not known about what is effective (and what is ineffective) in preventing suicide. Building evaluation capacity at a local level is important here; as new programs are rolled out, there is an onus on those who fund and deliver them to demonstrate that they are achieving their desired impact. Combining efforts within and across countries will maximize the rigor of these evaluation efforts, which in turn will increase their value in strengthening the evidence base.

Finally, adequate monitoring of suicide and self-harm in the region is also important. Ongoing efforts are required to overcome the obstacles that many countries/areas face in collecting and collating accurate, timely data. Without these data, it will remain difficult for some countries to ensure that suicide prevention gets warranted recognition on the policy agenda.

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**Table A1.** WHO Western Pacific region global survey on suicide prevention outcomes

| | | High income | | | | | | | Low and middle income | | | | | | Un-classified |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Australia | Brunei Darus-salam | Hong Kong | Macau | Japan | New Zealand | Republic of Korea | Cambodia | China | Cook Islands | Malaysia | Philip-pines | Tonga | Tokelau |
| 1 | Does this country have a national suicide prevention strategy? | Yes | No | No | No | Yes | Yes | Yes | No | No | No | Yes | No | Yes | No |
| | If yes, has it been evaluated? | Yes | | | | Yes | Yes | No | | | | No | | No | |
| | If no, which of the below does this country have? | | | | | | | | | | | | | | |
| | A) A national program | | | | | | | | | | Yes | | | | |
| | B) A setting-specific comprehensive program | | | Yes | | | | | Yes | | | | | | |
| | C) Scattered programs | | | Yes | | | | | | | | | Yes | | |
| | D) An integrated program | | | Yes | Yes | | | | | | | | Yes | | Yes |
| | E) Other, please describe | | | | | | | | | Yes[a] | | | | | |
| | F) None | | Yes | | | | | | | | | | | | |
| | If no, is a national strategy under development? | | No | No | | | | | No | No | Yes | | No | | Yes |
| 2 | Does this country have a training program on suicidal behavior, assessment, and intervention for: | | | | | | | | | | | | | | |
| | A) General practitioners | Yes | No | Yes | No | No | Yes | No | No | No | No | No | No | No | No |
| | B) Mental health professionals | Yes | Yes | Yes | No | No | Yes | No | No | No | Yes | Yes | No | No | No |
| | C) Non-health workers | Yes | No | Yes | No | No | Yes | Yes | Yes | No | Yes | Yes | No | No | Yes |
| 3 | In this country is there a national center or institute specifically dedicated to suicide research and/or prevention? | Yes | No | Yes | No | Yes | Yes | No | No | No | Yes | Yes | No | No | No |

Continued on next page

**Table A1.** continued

| | | High income | | | | | | | | Low and middle income | | | | | Unclassified |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Australia | Brunei Darussalam | Hong Kong | Macau | Japan | New Zealand | Republic of Korea | Cambodia | China | Cook Islands | Malaysia | Philippines | Tonga | Tokelau |
| 4 | In this country is there a nongovernment organization(s) specifically dedicated to the prevention of suicide? | Yes | No | Yes | Yes | Yes | Yes | No | Yes | No | Yes | Yes | Yes | Yes | No |
| 5 | Is suicide a listed option for certifying manner of death on this country's/area's death certificate? | Yes | No | Yes | | Yes | No | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| 6 | Who has the responsibility of ascertaining manner of death according to a death certificate? | | | | | | | | | | | | | | |
| | A) Police | | | | Yes | | | | | | | Yes | | | |
| | B) Coroner | Yes | | Yes | | Yes | | Yes | | | | | | | |
| | C) Police and coroner | | | | | | | | | | | | | | |
| | D) Medicolegal authorities | | | | Yes | | | | | Yes | | Yes | | | |
| | E) Family doctor | | | | Yes | Yes | | | | | | | Yes | | |
| | F) Other, please specify | | | | | Yes[b] | Yes[e] | | | | Yes[c] | Yes[d] | | Yes[f] | Yes[g] |
| 7 | Does this country's/area's government publish official national statistics on suicide? | Yes | No | Yes | No | Yes | Yes | Yes | No | No | Yes | Yes | No | Yes | No |
| 8 | Does this country's/area's government publish official national statistics on suicide attempts? | No | No | No | No | No | No | Yes | | No | Yes | No | No | Yes | No |

*Note*. [a]No comprehensive program but there are hotlines for suicide prevention available in several cities. [b]Police medical doctor. [c]Hospital emergency services doctors. [d]Assistant medical officers. [e]Medical doctor who declares death. [f]The Ministry of Police and Health has their own certificate for to the purpose of their work but the National Monitoring System for Fatal and Non-fatal Suicide is designing a national certificate for all deaths by suicide. [g]Residential medical officer of the atoll, in his/her absence the most senior nurse on the atoll.