

# Palliative care in Solomon Islands

Joanna Spratt and Gabriel Spencer

## Abstract

This Discussion Paper presents the findings of initial research into palliative care in Solomon Islands. This research sought to explore the current palliative care policy and service landscape in Solomon Islands, existing strengths to expand upon, and opportunities for future action and research. The result here is the first published exploration of palliative care in Solomon Islands. Following a literature review, data collection involved documentary analysis and interviews with policy-makers, health professionals and other community stakeholders. All interviewees agreed that there is a need to pay more attention to palliative care in Solomon Islands. Key areas for future action include: supporting health professionals to have difficult conversations with people about their prognosis and what to expect during the dying process; training for health professionals in pain assessment and management; improving systems and guidelines, particularly referral systems and access to morphine; and expanding support for families caring for loved ones dying at home. Future research opportunities exist in understanding: families' and patients' needs; cultural approaches to caregiving, pain and death; the role of traditional healers; how to increase health literacy; the costs and savings associated with palliative care provision; and the knowledge, attitudes and behaviours of health professionals. An examination of the opiate analgesic system is a pressing research priority. We conclude with recommendations for donors regarding how they could support future action and research.

## **Palliative care in Solomon Islands**

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*“How do the poorest of the poor die? Do we really want to know? That knowledge could be very disturbing, loaded as it might well be with imperatives for action” (Roy 1999, pp. 3-5).*

*“Poor people in all parts of the world live and die with little or no palliative care or pain relief. Staring into this access abyss, one sees the depth of extreme suffering in the cruel face of poverty and inequity” (Knaul et al. 2017, p. 1).*

## **1. Introduction**

The latest global mapping of palliative care found that most Pacific island countries and territories (PICTs) have no known palliative care activity, including Solomon Islands (Conner & Bermedo 2014, p. 36). This is despite the need: across all countries in the Pacific region, there is a high prevalence of diseases that cause serious health-related suffering and therefore require palliative care. However, global mapping may overlook activity that is already occurring. It is likely that churches, communities and families are providing palliative care to individuals who need it. Further, there may be individuals in the health system who are taking unrecognised steps to provide palliative care. More regionally-focused and country-specific analyses can contribute to a deeper understanding of palliative care activity in the Pacific region. The Solomon Islands exploration presented here begins this process of growing our understanding and sets a foundation for future research.

This Discussion Paper presents findings from initial research undertaken in Honiara, Solomon Islands, and concludes with recommendations for future research and action. While specific to Solomon Islands, due to commonalities regarding palliative care in PICTs (discussed in Spratt 2018), the recommendations presented here may have relevance in other countries. A companion report entitled ‘Pacific regional palliative care’ (Spratt 2018) provides a broader literature review and snapshot of palliative care across the Pacific region. The research underpinning both documents was broad and general, providing a starting point for expanded conversations, research and action on palliative care in specific PICTs and across the region. To our knowledge, this research is the first to explore palliative care in Solomon Islands.

We begin this Discussion Paper with a definition of palliative care and an overview of the case for investing in palliative care. Justification for the initial research into palliative care in Solomon Islands is then provided. We describe the research design before detailing the findings. The conclusion suggests potential future action, particularly that which donors may support in health workforce development, guidelines and protocols, opiate access analysis, and community action. Appendix 1 details the interview protocol. Appendices 2 and 3 provide specific assessments of palliative care in Solomon Islands against health systems functions and the Essential Package for palliative care.

### **What is palliative care?**

Palliative care is not only a health issue but a community and a social issue (Abel et al. 2011; Kellehear 2013). Palliative care “is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual” (World Health Organization (WHO)). Palliative care should be focused on relieving the serious health-related suffering associated with life-threatening or life-limiting health conditions or end-of-life (Knaul et al. 2017, p. 2). Serious health-related suffering is the suffering that “cannot be relieved without medical intervention and compromises physical, social, or emotional functioning” (Knaul et al. 2017, p. 2). Symptoms that cause this suffering include pain, anxiety, nausea, dyspnoea, anorexia, fatigue (Knaul et al. 2017), as well as the psychological, emotional, spiritual and existential challenges that death and dying bring to the fore.

### **Investing in palliative care**

There are many reasons for investing in palliative care. Palliative care has significant positive impacts for the individuals experiencing serious health-related suffering and their families, including greater quality of life and improved bereavement outcomes (Spruyt 2018). Further, investing in palliative care holds the potential to decrease end-of-life and symptom-associated hospital admissions, which means hospital resources can be used for other needs (Knaul et al. 2017, p.5).

Knaul et al. (2017, p. 3) estimate that in developing countries, the cost of an Essential Package of palliative care interventions (see Appendix 2) will be somewhere between US \$0.78 and US \$2.16 per capita per year. Yet, costs vary significantly across countries, and additional costs depend upon what is already in place. There is the potential to lower these estimated costs if all countries could obtain the best international prices, particularly for medicines, including injectable morphine. There are also associated savings that could be realised with expanded palliative care.

Investing in palliative care is the archetypal diagonal approach, whereby implementation of palliative care will improve the entire health system (Knaul et al. 2017). For example, improving pain management for serious health-related suffering can assist in improving pain management across the entire system, including in surgical interventions requiring perioperative pain relief (generally outside of the remit of palliative care) (Knaul et al. 2017, p. 39). Further, improving health professionals' communication and holistic assessment skills will improve health care provision across the entire system. Similarly, improving referral systems for palliative care can also strengthen system-wide referral systems.

Palliative care can have positive impacts beyond improving peoples' quality of life and strengthening health systems. Ensuring access to a basic package of palliative care interventions can reduce the risk of impoverishment (Knaul et al. 2017), and increase the potential for carers to remain in productive employment. While there is no specific Sustainable Development Goal (SDG) target on palliative care, SDG 3 aims to achieve universal health coverage by 2030. "Palliative care and pain relief are essential elements of universal health coverage" (Knaul et al. 2017). Without investing in palliative care, SDG 3 cannot be achieved.

### **Why explore palliative care in Solomon Islands?**

Solomon Islands is a tropical country comprised of approximately 1,000 islands, with a sea area of 1.5 million square kilometres and a land area of 30,400 square kilometres (Solomon Islands Government 2016, p. 1). There are six main islands: Choiseul, New Georgia, Isabel, Guadalcanal, Malaita and Makira. Guadalcanal is the largest of the islands and where the capital city, Honiara, is situated. Solomon Islands is part of

Melanesia, but has both Micronesian and Polynesian influences. Approximately 91 different languages are spoken across the country, as well as English and Pidgin (Solomon Islands Government 2016). Christianity is the main religion. Most people live on the coast, but there are significant populations that live inland on both Guadalcanal and Malaita.

The 2009 census counted 515,870 people living in Solomon Islands (National Statistics Office 2012), but a more recent estimate is that the population is 639,157 (Solomon Islands Government). In the 2009 census approximately 102,030 people lived in urban areas, with 64,609 of these in Honiara, where the National Referral Hospital is situated (National Statistics Office 2012). The population is youthful, with a median age of 19 years (National Statistics Office 2012). However, the older age population is projected to grow (Anderson and Irava 2017, p. 194).

**Table 1: Solomon Islands population breakdown**

<b>Age range</b>	<b>Population Structure</b>
15 years and under	209,284
15-24 years	96,631
25-59 years	182,894
60 years and over	27,061
Males	264,455
Females	251,415

*Source: National Statistics Office 2012.*

Solomon Islands' health statistics indicate a significant need for palliative care. The country is "still battling to control communicable diseases" and maternal and child health conditions while simultaneously dealing with increasing non-communicable diseases (Ministry of Health and Medical Services 2016, p. 14). In 2016, at least nine of the top ten causes of mortality were conditions that cause the serious health-related suffering that requires palliative care intervention, including ischemic heart disease (IHD), cerebrovascular disease (CVD), diabetes, chronic obstructive pulmonary disease (COPD), and road injuries (Institute for Health Metrics and Evaluation 2016). Congenital defects were also a significant contributor to death and disability in Solomon Islands

(Institute for Health Metrics and Evaluation 2016), and cause serious health-related suffering.

Cancer prevalence in Solomon Islands is not well-understood, but there is a high mortality to incidence ratio for cancer (Martiniuk et al. 2017). In particular, Solomon Islands people experiencing breast, ovarian and uterine cancer have poor age-standardised death rates, with cervical cancer deaths well above the global age-standardised mortality rate (18.8 compared to 6.8 per 100,000) (Martiniuk et al. 2017, p. 177). It is reported that half of women requiring a mastectomy do not have one (Martiniuk et al. 2017, p. 178), meaning the cancer will progress in the absence of any other proven treatment. Typically, people present late to health services, and as a consequence, have poor prognoses.

Further, the risk factors for diseases that cause serious health-related suffering are high in Solomon Islands, such as fasting plasma glucose, tobacco use, alcohol consumption, betelnut use, body-mass index, and blood pressure (Martiniuk et al. 2017; Win Tin et al. 2014; World Health Organization 2006). Outpatient visits for diabetes and hypertension have not been increasing despite the rising prevalence of non-communicable diseases, and outpatient visits overall have not increased (Ministry of Health and Medical Services 2016, p. 9). Prevention efforts to reduce disease risk factors will take time. Meanwhile, people will continue to develop NCDs, and, if not managed well, they will progress to cause serious health-related suffering requiring palliative care.

Without better data and further analysis, it is not possible here to state what number of people require palliative care in Solomon Islands. Yet, the disease profile indicates a likely high need. Also, the fact that people present late means their needs are likely to be more complex. For cancer alone, the WHO estimates that 80 per cent of people who die from cancer would have needed palliative care, with additional requirements for those who provide care (World Health Organization 2007, p. 9).

There is little documented about the policy and service environment for palliative care in Solomon Islands. One recent study highlighted the lack of data on the accessibility and appropriateness of palliative care and recommended improvements to palliative care (Martiniuk et al. 2017, p. 181). Anecdotal information indicates the central role families and communities play in providing care for individuals experiencing serious

health-related suffering. There are opportunities for Solomon Islands to build on these strengths, and avoid the mistakes other countries have made in centralising end-of-life care in hospitals (Spruyt 2018, p. 13).

The National Health Strategic Plan 2016-2020 prioritises outcomes for women and children, and focuses on communicable and non-communicable diseases. The aim is to improve service coverage of the most effective interventions, to the most underserved areas and people, for the diseases causing the most deaths and illnesses (Ministry of Health and Medical Services 2016, p. 8). Other key result areas are to build strong partnerships, improve service quality, and lay the foundation for the future (in terms of health infrastructure, workforce, disaster risk reduction, and financing). Palliative care is mentioned as part of improving service coverage, to achieve Universal Health Coverage, but only as part of the definition (Ministry of Health and Medical Services 2016, pp. 14, 46). There is no coherent or overt attention given to palliative care in the Strategic Plan or any other document reviewed for this initial research.

The Solomon Islands Government provides the majority of health funding (with significant, ongoing support from the Australian Department of Foreign Affairs and Trade's (DFAT) Health Sector Strengthening program). It has allocated approximately 14 per cent of its budget over the five years prior to 2016 to health (Centre for Health Economics Monash University 2015, p. 10; Ministry of Health and Medical Services 2016, p. 29). The Ministry of Health and Medical Services (MHMS) predicts that due to inflation and population growth, to maintain the status quo the health system requires an annual increase in the money available of about seven per cent, unless efficiencies are created (Ministry of Health and Medical Services 2016, p. 29). Meanwhile, the World Bank estimates that Solomon Islands Government revenue will not be able to keep up with the required spending for human development needs, again emphasising the need for efficiencies, as well as ongoing official development assistance (Edwards 2016). There is the potential for palliative care to contribute to creating efficiencies, but this requires further investigation.

Overall, Solomon Islands' disease profile and health situation indicates a need for palliative care. Yet it appears that little attention is given to palliative care in the formal



health system. This initial research can contribute information about palliative care, what is actually occurring and what more could be done to respond to the need.

## **2. Research design**

This study involved a broad, qualitative exploration, aiming to gain a general understanding of where health workers, policymakers and civil society representatives are 'at' in relation to palliative care. A generic assessment of the policy landscape and presence of the rudiments for palliative care was made. Documentary analysis complemented interviews. The interview protocol is included in Appendix 1, and it provided a generic guide for interviews. The key questions this initial research aimed to answer were:

- What is the current palliative care policy and service landscape in Solomon Islands?
- What are the strengths to expand upon, and the opportunities for future action and research?

Solomon Islands was chosen for a specific country analysis predominantly for logistical and resource reasons. However, what emerged from the regional research (Spratt 2018) was that few Australian or New Zealand-based clinicians had connected with colleagues in Solomon Islands and provided palliative care training. From this perspective, Solomon Islands provided a case with little outside intervention in the area of palliative care.

A total of 35 interviews were requested, with 11 non-responders, two not interviewed, one informal 'chat', one email exchange, and 20 interviews. The largest number of interviewees were clinicians working at the National Referral Hospital. Other interviewees included MHMS staff (including one from a provincial hospital), civil society workers (churches and NGOs), people from the private sector, staff from the nursing school, World Health Organization, the Ministry of Education and Human Resource Development, donors, Australian Volunteers for International Development (AVI) volunteers working at the National Referral Hospital or MHMS, and researchers and clinicians based in Australia. A significant number of interviewees requested not to

be identified. Given this, we have not identified by name any of the individuals interviewed for this study. This study received Australian National University Ethics Committee approval and the MHMS Research Ethics Committee approval.

There are two main limitations to this study. First, those who responded positively to the request for an interview are likely to be those who are already thinking about palliative care or have some knowledge of the issues. Second, a major limitation of this country case analysis is that it did not extend beyond Honiara. Only one interview was conducted with a health administrator from a province, and this was opportunistic. This is a significant limitation, because Honiara has the National Referral Hospital, which means that people are much closer to a specialist tertiary health facility than they are anywhere else in the country. In addition, most of the health professionals interviewed worked at the National Referral Hospital. While these interviewees described the situation as they saw it, they all acknowledged that the situation would be worse in the provinces. This can't be emphasised enough. The situation beyond Honiara, including on Guadalcanal (particularly the weather coast), will be significantly worse than that in Honiara. For example, the MHMS Strategic Plan identifies that health facilities are closed in several provinces, health workers often absent, and supplies only reach 73 per cent of primary care facilities (Ministry of Health and Medical Services 2016, p. 15).

### **3. Findings**

#### **What is already happening?**

Families, relatives, community groups and some health professionals are already providing some degree of palliative care. Particular activities stood out, and provide foundations for future action. These are outlined below.

Empower (a local NGO affiliated with Empower Pacific in Fiji) provides the only counselling service in Solomon Islands, and recently moved to be situated at the National Referral Hospital (NRH) to centralise counselling and social work support at the hospital. Empower staff take a holistic, patient-centred approach to their work. While focused on counselling, Empower staff also provide crossover social work inputs: the nature of their work makes this unavoidable and there is no other social work service at the NRH. Empower staff have encountered several complex palliative care

cases and provided crucial patient and family advocacy and support. They are a logical focal point for providing the holistic social, psychological and emotional aspects of palliative care, if appropriately resourced.

As well as Empower's work, there are discrete activities underway at the National Referral Hospital that could contribute to improved palliative care. The pharmacy is developing a pain management guideline or policy, which holds the potential to contain some guidelines on pain management for palliative patients, at the very least regarding breakthrough pain relief. (Breakthrough pain relief is the analgesia that people receive to alleviate the pain that 'breaks through' the slow-release pain relief people receive. It is also called 'as necessary' or 'prn'.) Also, some medical practitioners use 'Do not resuscitate' orders, and write these in the patient files. This does not appear to be institutionalised, and could form the basis of a guideline and expanded standard practice.

Recently, two National Referral Hospital staff (a doctor and a nurse) attended a two-week training course at the Catholic University for Hospice and Palliative training in South Korea. This is a WHO Collaborating Centre for palliative care. The two staff found the training worthwhile, and have already taken steps to change their practice, such as prescribing breakthrough/as necessary pain relief for inpatients on their ward. There is an expectation that they will train other staff, a point we return later in the recommendations section of this paper. Regardless of formal training, these two staff can share their knowledge with colleagues in their day-to-day work.

An Oncology Committee has formed at National Referral Hospital and they are working on chemotherapy protocols in particular. Committee members also see a need for improved palliative care, including palliative chemotherapy. Other members interviewed thought that the planned Oncology Unit, which is budgeted for, will provide a space for action on palliative care.

There are some existing relationships between staff at the National Referral Hospital and specialists in Canberra, Australia. One physician from the National Referral Hospital spent two months at Canberra Hospital, including time with Palliative Care Nurse Practitioner Anne Booms and medical oncologist Professor Desmond Yip. Professor Yip has visited Honiara once, and has another visit planned in late 2018 to provide medical

oncology support (the latter with support from the Royal Australasian College of Physicians). (Professor Yip's first visit was supported by the John James Foundation and included other doctors such as Dr Nick Gemmel-Smith, an anaesthetist, and Doctor Liz Gallagher, an obstetrician and gynaecologist.)

Solomon Islands received Essential Pain Management (EPM) training from Professor Roger Goucke, one of the architects of EPM, and Doctor Dipti Mittal, a palliative care specialist, in 2010, 2011, 2014 and 2017 (Goucke et al. 2015; Huggins 2018). This training is a short workshop in the recognition, assessment and treatment of pain, and also has a robust train-the-trainers course. No interviewee mentioned this training, but it was not specifically asked about.

Some of the AVI volunteers working at the National Referral Hospital and MHMS have provided on-the-job mentoring and coaching, but this has been opportunistic, and relies, to some degree, on their job descriptions and roles in reality. There is no palliative care specialist volunteer.

In the broader community, there is at least one private nursing care provider who offers palliative care services to people at home. Churches also provide pastoral care and social support.

In terms of more formalised training, there is some palliative care content in the Diploma of Nursing and Degree course curricula, but this is generic and limited. In terms of medical practitioner training, this is also reported to be limited and generic for those who trained at the National University of Fiji. It was not ascertained what palliative care training has been provided to medical trainees studying in Cuba or China.

As discussed further below, families and relatives are providing care for loved ones at home. It is highly likely that there are village committees and community groups that provide some degree of support, but the NGOs interviewed for this scoping study were unaware of these. Investigating this further would require travel to provinces.

### **What are the issues surrounding palliative care provision?**

Due to the broad nature of this initial research, a number of generic issues were raised. These are discussed below. Appendix 2 provides a systematic summary of palliative

care in Solomon Islands, using a health-systems strengthening framework (Knaul et al. 2017). The extent to which Solomon Islands provides the Essential Package for palliative care (Knaul et al. 2017) is detailed in Appendix 3.

All interviewees expressed concern about the suffering that people experience due to life-limiting and threatening conditions, and expressed a desire to improve palliative care. This research deliberately did not solicit personal experiences, yet several interviewees reflected on their personal experiences. One individual described how difficult it was to hear a relative in the village cry out at night due to pain from breast cancer. Another outlined the isolation experienced while caring for a dying loved one – feeling totally alone, struggling with watching that person suffer, enduring challenges in trying to get the supplies and equipment to help that person, and after the person died starting “back at zero”. Clinicians had stories of patients with complex needs, and the personal and professional challenges of trying to best explain the patient’s diagnosis and inevitability of their imminent death.

Four issues emerged repeatedly: a desire to improve pain management; a desire to communicate better with patients and families about prognoses and what to expect during the dying process; the need to provide support and services to patients at home and to their families caring for them; and the need for improved systems, guidelines and protocols, including referral pathways. We elaborate on these issues first, followed by a discussion of broader issues that arose during the initial research.

### **Pain management and access to morphine**

All interviewees noted the need for improved pain recognition, assessment and treatment. This need was identified for both inpatients and outpatients. The issues highlighted by interviewees for inpatients included patients not being asked if they need pain relief, a lack of understanding about how to identify and treat pain, stock-outs of morphine, and inadequate prescription of pain relief.

Issues identified for outpatients included inconsistent supply of morphine, sometimes leading to patients coming back to the hospital in severe pain or simply going without at home. People discharged from the National Referral Hospital were given a prescription for morphine, but when they ran out they often did not return for more and there was

no follow-up. All interviewees raised questions about the supply of morphine in the provinces. As noted below in Appendix 3, the Essential Medicines List allows for injectable morphine at Nurse Aid Posts, but it is highly likely that in practice availability is inconsistent and limited. One interviewee indicated that morphine was available at provincial hospitals, but only for specific patients at Area Health Clinics, Rural Health Clinics, and Nurse Aid Posts. This situation is unclear. Interviewees questioned the supply system: how do you get morphine from the National Referral Hospital to a clinic, and then to a village; how does the message get to the National Referral Hospital, and how do the medications get back? Further, people requiring pain relief may not be aware of what is available, or may not be able to travel to a Nurse Aid Post. It did not appear that injectable morphine could be provided for people to use at home without a nurse, although this was unclear.

We were given inconsistent information about morphine's availability. One day we spoke with a nurse caring for a person who was in pain and requiring morphine who lived five minutes from the hospital. The nurse was offering the patient injectable morphine, because that was all she had. Further, she was not aware that this could be administered subcutaneously (a less painful administrative route) and was offering it only intramuscularly (a more painful administrative route). (Morphine appears to be given subcutaneously at the National Referral Hospital.) The next day, we spoke with an individual who had just been to the hospital and received a prescription for a relative in the village who required morphine, and had obtained a bottle of liquid morphine. Few interviewees were completely sure how many days' supply of morphine a patient could be given on discharge, with estimates generally being between one and two weeks.

In general, interviewees did not think that there were concerns about addiction or misuse surrounding morphine, either amongst health professionals or the general public. Some interviewees explained that pethidine was being phased out because there had been some issues with misuse. This may be accurate, or it may be because pethidine is no longer recommended. It is not clear what people know about opioid use and misuse. The inability of patients to have injectable morphine at home may be related to concerns about opioid misuse in the past, but this requires contemporary examination. The situation in Solomon Islands regarding ordering, storage, prescription, distribution, availability, administration and use of opioids warrants a full review.

## **The home and the village is the site of most palliative care**

While some interviewees spoke of inpatients with complicated palliative care needs who died in hospital, everyone stated that the general practice was that “once people are told the bad news, they go home and then get no further management”. The overwhelming majority of palliative care is provided by relatives. While this is a cultural expectation, most interviewees reported the significant impact they believed this has on the family, from financial and emotional stress, to students caring for a loved one rather than attending school. Interviewees highlighted that families are not well prepared for what it means to provide palliative care, often for extended periods of time. Families are ill equipped for the realities of wound care, feeding, skin care, incontinence, mobility and pain management. They may experience financial stress due to not being able to engage in formal or informal employment, or having relied on income from the person who is now ill. Subsistence gardening and fishing may be hindered due to caring requirements. On top of all of this, relatives are watching somebody they love suffer and approaching death, causing carers to experience psychological, spiritual and emotional suffering.

Patients and their families rarely receive professional support at home. For those who live in and around Honiara, they may have a nurse visit to dress a wound or provide specific services. Yet these tasks are reportedly not provided through a holistic palliative care lens, meaning that broader issues may be overlooked. It is not clear what support patients get in the provinces. Most interviewees believed patients in the provinces would receive little health care at home. Health expenditure supports this, with less than three per cent of expenditure spent on outreach services at all health facility levels (Centre for Health Economics Monash University 2015, p. 13).

In terms of support from community groups, it is not clear what might be available for people and their families. Interviewees thought that village committees or church groups would be the best source of this sort of support. Only one NGO representative responded to the request for an interview. Palliative care is unlikely to be a focus for any of the Honiara-based NGOs. Senior members of both the Anglican and Catholic Churches believed palliative care was a significant issue, but due to time constraints we did not speak to any priest or pastor who worked in communities. Further investigation

at the provincial and village levels is necessary to gain a proper understanding of how patients and families experience dying at home.

### **Patient and family communication and counselling**

The health professionals and allied health professionals interviewed expressed a desire to improve how they discuss patients' situations with patients and their families, including their prognosis and what to expect when they go home. Interviewees acknowledged that people were not given the information or education they needed to understand the disease and eventual dying process. Health professionals do their best, but those working at the National Referral Hospital are also challenged by their environment. It is difficult to find the time necessary: these can be lengthy conversations that can't be rushed. It is also difficult to find the appropriate physical space, as wards are crowded and there are not appropriate spaces to sit with patients and their families. Priests and pastors are available, and do provide some pastoral care, but this is not formalised. Health professionals expressed a desire to have more training on how to have "difficult conversations".

### **Systems, guidelines and protocols**

Many interviewees expressed concern about the lack of systems, guidelines and protocols to support them in their attempts to deliver palliative care. Overall, we found no donor, multilateral or MHMS document that provided overarching policy guidance on palliative care provision (see Appendix 3 for more detail). The WHO's Western Pacific Regional Action Plan for the Prevention and Control of NCDs 2014-2020 recommends that states improve palliative care access and implement a policy (World Health Organization 2014), but there was no evidence that this is being implemented at either a regional (Spratt 2018) or country level.

For the health professionals interviewed, of particular concern were the lack of referral pathways to provinces when patients are discharged. The system appears to be inconsistent, with referrals sent some of the time, a letter given to the patient and their family to take to their provincial hospital or clinic, or sometimes a note written in the medical card. The lack of adequate referral reduces the potential for support and



treatment from the health facility closest to the family and patient, because that facility may not be aware of them.

Palliative care is discussed in the MHMS Adult Treatment Guidelines, on one page. The WHO palliative care definition is provided, along with instructions to give pain relief as necessary and to not be concerned with addiction to morphine (Moulds 2011, p. 189). This is extremely basic information. However, it does not appear that 'as necessary' pain relief is being provided. As the discussion of breakthrough (as necessary) pain relief with some health professionals highlighted, this concept is not well understood. No interviewee referred to the Adult Treatment Guidelines when asked about the presence of guidelines or protocols. A brief description for how to manage chronic heart failure is also provided in the guide for primary care management of major NCDs (Ministry of Health and Medical Services, no date-b), but this is rudimentary and not referred to by interviewees.

### **What does palliative care mean to people?**

Interviewees were asked what they thought palliative care meant. The question was asked to ensure interviewees and interviewers were talking about the same thing during the interview. Often the word 'palliative' is perceived as a code word for 'death', and this can form a barrier to patients and families accepting input from palliative specialists. The majority of interviewees viewed palliative care as that provided when people are drawing to the end of their life, or actively dying. Alongside this, most interviewees thought of palliative care in the context of cancer, and reference was often made to the planned Oncology Unit as a potential way to improve palliative care. A small number of interviewees, particularly those working in internal medicine, saw other conditions as leading to the need for palliative care, such as end stage renal disease, cerebrovascular disease, lung disease and heart disease.

Interviews brought forth complex ideas surrounding culture, care, pain, death and caregiving. It was not in the scope of this study to examine these in greater depth, but the ideas were similar to those highlighted in Spratt (2018), and to ideas in other parts of the world. Interviewees highlighted that it was a cultural practice to care for loved ones at home, and that when people knew they were dying, they wanted to go home. Yet, some interviewees also discussed the impacts this has on families, and the

significant challenges associated with caregiving. Several interviewees said that it should not be assumed that simply because the extended family exists, and there is a culture of helping each other, that this will, in all cases, extend to providing care for a dying family member.

Also, potentially related to culture are ideas about pain, and the concept that people see pain as part of dying and therefore that pain should be accepted and endured. This may not necessarily be cultural, but a pragmatic recognition that there is no way to avoid pain so it must be tolerated. It is not clear. Some interviewees also discussed how talking about death and preparing for death were not necessarily part of their culture. However, simultaneously, they stated that they thought people actually knew they were dying and that it could be a relief to talk about it.

Culture plays an important part in responses to dying, experiences of pain, and caregiving. However, culture is also fluid and changes in response to new information, and broader societal changes. Further exploration is needed to fully understand what aspects of illness, pain, dying and caregiving are deeply cultural, and what are related to the generic human desire to avoid death.

### **Late presentation, low health literacy and use of traditional healers**

Health professionals interviewed described how most people presented late to health services, often with advanced disease, indicating a need for palliative care, and potentially complex needs. Some interviewees related this late presentation to low health literacy. People in Solomon Islands are not exposed to a great deal of information about health and illness. This impacts on their understanding about how their bodies work, how disease occurs and when to seek medical assistance. Several interviewees reported that people will seek assistance from a traditional healer first, particularly if they are not experiencing pain. Some of the health professionals interviewed thought that there is a general belief amongst the population that traditional medicine can cure cancer. The use of traditional medicine delays people's receipt of appropriate medical care, giving time for disease to advance.

## **Inequalities: gender, financial, urban-rural**

Interviewees predominantly commented on the disparities between people who lived in and around Honiara (urban), and those who lived in the provinces. All acknowledged that people living in the provinces would have less access to palliative care interventions, such as adequate pain relief and input from a health professional. Two interviewees highlighted gender issues. One commented on the high rates of deaths due to cervical cancer (a cancer which is entirely preventable). The other highlighted how decision-making power plays out for women with breast cancer. As noted above, many women chose not to have a mastectomy. There are a variety of reasons for this, including the fear of being less of a woman, and decisions made by a woman's husband or family. These are gendered issues, related to the roles and status of women in society. Further, one interviewee referred to a study conducted by the Ministry of Education and Human Resource Development that found that one reason for young women leaving school early was to provide care at home for siblings, because they have lost a parent, or to care for older relatives.

Some interviewees noted financial challenges for patients and families, particularly related to staying in Honiara. A patient exit survey conducted as part of a health services costing study found that a significant percentage of health facilities collected contributions for outpatient, inpatient and delivery services, as well as for the provision of medical record books (Centre for Health Economics Monash University 2015, pp. 15-16). This is despite the fact that legislation only allows for hospitals to collect contributions. Requests for a financial contribution were made of 35 per cent of respondents to the exit survey, and 37 per cent reported making a contribution (Centre for Health Economics Monash University 2015, p. 16). Of concern, a higher proportion of poorer people made a contribution, in comparison to those in wealthier quintiles (Centre for Health Economics Monash University 2015, p. 16). Further, people in the poorest quintile had the longest travel time (82 minutes, on average) to reach a health facility and "were more likely to have travelled by foot" (Centre for Health Economics Monash University 2015, p. 16). Travel by foot would rarely be an option for people who need palliative care.

Finally, children and older people have particular palliative care needs. An analysis of the Solomon Islands' policy landscape for older people showed a general lack of attention to older persons' needs (Williamson 2015). Yet persons aged over 60 years are projected to increase significantly in the future (Anderson & Irava 2017, p. 194). As populations age, there is an associated increased need for palliative care. Children have specialised palliative care needs, and these can be overlooked when the focus is on serious health-related suffering caused by predominantly adult diseases, such as non-communicable diseases.

### **Health systems**

Many of the challenges surrounding palliative care provision relate to broader health system issues. These are acknowledged and identified in the Ministry of Health and Medical Service's National Health Strategic Plan (2016-2020) (Ministry of Health and Medical Services 2016). For example, Solomon Islands health infrastructure is in a dire situation, with a 2014 survey across three provinces highlighting that only 15 per cent of facilities had an adequate water supply, and only ten per cent had an adequate toilet (Ministry of Health and Medical Services 2016, p. 29). We do not go into detail regarding all these challenges and how they undermine palliative care, but touch on workforce issues below and refer to supplies issues above and in Appendix 3. In Appendix 2 below, Solomon Islands' health system is assessed against a framework based on the key health system functions associated with palliative care (Knaul et al. 2017, p. 40).

We detail workforce issues here because they are central to improved palliative care and relate to several of our suggestions for action. All allied health and health professionals interviewed expressed a desire to improve their provision of palliative care. Yet, some interviewees raised broader systemic issues in relation to nurses. In particular, Solomon Island interviewees who had nursed for a long time, and interviewees from overseas, highlighted the fact that nurses generally did not provide 'nursing' care for patients in hospital. This was left to the family. Reasons given for this were due to nurses arriving late for their shift and so not having time, high rates of absenteeism placing pressure on other nurses, and a degradation of professionalism. A lack of capability to make nursing assessments, diagnoses and interventions was highlighted. It was beyond the scope of this study to explore these issues further, but

time spent on the wards while waiting for interviews did indicate that families were assisting with showers and personal cares. This may not necessarily be a problem. Yet, the foundations of palliative care are quality nursing assessments, including of a patient's pain levels, cognitive and physical functioning, mobility, skin status, input and output, respiratory function, and general wellbeing. Time spent with patients enables these assessments, and assessment of actions taken to address issues. Further, if families are providing care while in hospital, this is an opportunity to provide them with education and support to enable them to undertake basic assessments when they go home, and nurses are best placed to provide this education and support. Improving palliative care is interlinked with improving nursing care, and vice versa.

Nurses form the bulk of the health workforce in Solomon Islands (Ministry of Health and Medical Services 2016, p. 30). The majority of health workers and resources are at the main centres. In recent years, emphasis has been on expanding the number of doctors available. Of the 86 medical doctors in practice, 73 are at the National Referral Hospital, with the remainder at provincial hospitals (Ministry of Health and Medical Services 2016, p. 28). However, between 2016 and 2020, 138 new medical graduates will enter the workforce. While positive, this also presents a significant management challenge with knock-on impacts, such as the requirement for ongoing funding for salaries, housing and in-service training, and increased drug and supply demand in Area Health Clinics where these doctors are posted (Ministry of Health and Medical Services 2016, p. 30, 32). It also means a good deal of health workforce attention is placed on medical staff. With limited resources, this may mean that issues with the nursing workforce are overlooked, even though they form the backbone of the health workforce.

Related to workforce issues is the Role Delineation Policy. This Policy identifies the levels of services and packages of care to be provided at the various health services across the country (Ministry of Health and Medical Services, no date-a). Palliative care is not mentioned in the reasonably detailed descriptions of service delivery packages at each level of health services. Conceivably, at every level of care, palliative interventions could be part of general outpatient clinics and inpatient services; a component of non-communicable diseases and chronic support care (care and interventions for people with chronic health conditions, disabilities and mental health problems); a subject of referrals from higher-level services to lower-levels; and possibly part of community-

based rehabilitation services. Yet, arguably, palliative care would benefit from a 'package' of its own, particularly at the higher levels of care, such as area health centres, urban health centres and general hospitals. In particular, efforts to expand and palliative care could begin with improving pain assessment and management, including working incrementally but deliberately to make immediate release morphine available at the most decentralised level of care, ideally in the home.

## **Summary**

These findings highlight a broad recognition of the need for expanded palliative care service, and some of the issues involved. Four key issues stood out as important to address: pain management, communicating distressing information, community services, and referral systems and guidelines. The findings also indicate areas for further exploration to gain a full understanding of the situation and to formulate appropriate action, such as access to morphine and other Essential Package components, patient and family support needs at home, and cultural perceptions and practices around care-giving, pain, death and dying. Below we offer some suggestions for action.

## **4. Suggestions for action**

All those interviewed agreed that palliative care is an area that requires more attention, predominantly because health professionals are seeing more and more people who require it. As well as improving people's quality of life, implementing improvements in palliative care holds the potential to alleviate the strain on tertiary health services and to make cost savings.

Donors and multilaterals have important roles to play in responding to the palliative care need in Solomon Islands. The health system is struggling to address long-standing challenges in infrastructure, workforce and governance, while attempting to implement an ambitious Role Delineation Policy, maintain a response to maternal and child health and communicable diseases, and respond to the ever-increasing burden of non-communicable disease and injuries. This places substantial strain on the system, which, as detailed above, already requires a significant amount of government funding in a country where future government revenue-generation is limited. It is possible to

integrate into current efforts activities that improve both palliative care and the broader system, which may not require large amounts of extra funding. But there are some areas where donor funding will be required to support an appropriate response to the need.

### **Champions and building on what exists**

What lessons from elsewhere indicate (outlined in (Spratt 2018)) is that successful action is led by local champions – people who are focused on, and committed to, improving palliative care. Although individuals may work within a system that does not function optimally, and this impacts on their ability to create change, ultimately change will only come from individuals who are prepared to engage for the long-term to improve their system. While this action may be small to begin with, concerted efforts from individuals or groups will lead to system improvements over time. As one interviewee stated, “sometimes the small things can be the most important”. The areas described above where there are already individuals who are thinking about palliative care are a good foundation upon which to build future action. These include:

- Expanding Empower’s capability to provide holistic social, psychological and emotional palliative care inputs.
- Supporting the Oncology Committee to address palliative care issues they see as priority areas.
- Engaging with the development of pain management guidelines to ensure that palliative care issues are included, such as appropriate prescription of pain relief for palliative patients.
- Institutionalising ‘Do not resuscitate’ procedures across the National Referral Hospital and beyond.
- Supporting the two staff who trained in South Korea to provide on-the-job coaching to colleagues.
- Engaging with Essential Pain Management providers and supporting them to integrate the course into the nursing curricula, and to teach and provide ongoing support to a cadre of Solomon Islands trainers who can deliver the training across Solomon Islands’ health workforce, with a focus on the provinces.
- Ensuring links with Canberra Hospital in the Australian Capital Territory, Australia are maximised and focused on supporting clinicians in palliative care.

## **Action in the formal health system**

Three areas within the formal health system require focused action: health workforce development; guidelines and protocols; and access to morphine or equivalent pain relief. We address each of these below.

Within the formal health system it is health professionals who will make improvements. Given this, there needs to be a strong focus on expanding the capacity of the health workforce. Interviewees wanted to be better at recognising, assessing and treating pain, as well as communicating distressing information to patients and their families. Upskilling all health professionals in these two areas will have significant positive impacts throughout the entire health system, as good communication and pain management are cornerstones of all health care provision. Given that nurses are the majority of the health workforce, they should be a priority focus.

Health workforce training should encompass a range of learning approaches, but focus on in-service coaching and mentoring. While overseas placements have their benefits – people can see what is possible and forge clinical support relationships – often the context and resources available are so vastly different that it is not easy or possible to translate what is learned overseas to the Solomon Islands context. Overseas placements also remove much-needed resources from Solomon Islands, sometimes for extended periods of time. Unlike offshore training, in-service mentoring and coaching helps to build a culture of learning and quality improvement, and build supportive clinical relationships in-situ.

Similarly, train the trainer models should be approached with caution. Adult learning requires much more than simply attending a workshop. Expecting a participant to then return home and run a course for colleagues is unrealistic. Individuals may not feel they have the in-depth knowledge to teach others, and they do not necessarily have the knowledge of how to shape a learning experience, let alone the time and resources to do so. The Essential Pain Management approach recognises this, and teaches their trainers the basics of adult learning and supervises new trainers in providing an Essential Pain Management course. This is an improved approach. Yet it does not recognise that often, people trained are busy health practitioners who do not have the institutional support



or resources to go on to provide training. Again, the focus needs to be on professional development by people dedicated to training, through activities such as short courses at Solomon Islands' National University, and in-service mentoring and coaching.

There is the potential in Solomon Islands to build on the existing connections with Canberra Hospital, and the South Korean Catholic University for Hospice and Palliative training, to repeatedly engage trainers from these institutions to support Solomon Islands health professionals, including through formal training and ongoing distance support and advice provision.

This should be incorporated into a focused workforce training plan, potentially managed through Solomon Islands National University, to upskill health professionals in palliative care, with an initial focus on communicating distressing information and pain management. There is the potential to develop a specific certificate or course for those who wish to develop a speciality in palliative care, and these individuals can become a resource for colleagues. Similar action is recommended in Spratt (2018), and regional activity could support local action in Solomon Islands.

This raises the question of whether or not specialists are required. Ideally and initially, palliative care principles should be integrated into every health worker's practice, as these are basic skills: high quality communication, excellent patient assessment, holistic approaches to patient care. Given that most palliative care is provided at home, nurses at the community and village levels need basic palliative care knowledge. Yet, given the fact that patients present late, palliative care needs in Solomon Islands are complex. The ultimate aim over time would ideally be to develop specialists who other health workers can contact for input. Again, Spratt (2018) highlights some successful models from elsewhere that could be explored for implementation in Solomon Islands.

In terms of guidelines and protocols, several interviewees mentioned their absence. However, at this point, rather than developing a suite of palliative care guidelines and protocols, it may be more useful to first focus on improving practise, and then formalise this practice into guidelines. As people develop their palliative care skills or encounter specific issues, they may then decide to develop guidelines. In this vein, formalising and institutionalising good practice that is already happening, such as the move to prescribe breakthrough/as necessary pain relief and to document 'Do not resuscitate' orders,

would be a useful first step. Having said that, the upcoming revision of the Adult Care Guidelines presents an important opportunity to fully describe key pain management and communication principles and techniques that will assist health professionals in these areas.

Two other health systems issues that interviewees highlighted for attention were the referral system, and access to morphine. These are related because without an adequate referral to a lower-level health care facility, patients struggle to access pain relief. Improving the referral system is an implicit component of the Role Delineation Policy. Yet access to morphine is not, and is an urgent area for attention. Donors should urgently fund a full review of how morphine and associated analgesic medications are regulated, stored, prescribed, distributed, and used, from the National Referral Hospital to the Nurse Aid Post. This should include discussions with patients and families. It may also be possible and efficient to assess access to other aspects of the Essential Package alongside reviewing access to morphine.

It is important to note that any action to expand palliative care would ideally be done incrementally, based on careful assessment of the costs and savings (a recommendation for further research, below). Alongside research, process and impact evaluations would be useful to assist MHMS to assess the feasibility, affordability and sustainability of particular Essential Package interventions, and to learn lessons incrementally that inform further expansion. While the existing palliative care needs demand immediate attention, given the myriad challenges Solomon Islands faces in its health service provision, a strategic, selective approach will likely offer better-quality palliative care expansion over the long-term.

Donors can explore ways to support palliative care expansion, including within existing funding mechanisms. For example, DFAT already provides substantial funding to the MHMS, supports WHO activities in the country, and funds several AVI volunteers in the health system. DFAT can support expanded palliative care action by discussing how existing work programs can incorporate action in the areas discussed above. Making funding available for technical assistance through WHO or AVI are also other options. Other donors can do similarly, or fund specific pieces of this work, such as workforce development activities or a morphine accessibility review, in consultation with the

MHMS and other donors. Action in these areas may not require significant amounts of funding, yet will potentially have substantial impacts on improved quality of care.

### **Community-based action**

What will require larger amounts of funding is responding to the need in the community. Here we offer two suggestions, both of which, if done well, could have transformative impacts on the formal health system through increasing an understanding of the need for palliative care, and modelling good practice.

Donors should support a feasibility study into the establishment of a community-support program for people who require palliative care (or additionally, chronic care). This program could offer social, emotional and psychological support, and involve existing community groups and volunteers. Church groups are an obvious first place to begin exploring the feasibility of this, but there may be other groups that could also have the required reach to provincial villages. This approach has been successful in other countries [for example, India (Kumar & Palmed 2007)], but would require careful analysis in Solomon Islands due to the dispersion of small populations across a wide geographical area. Yet, village health volunteer programs have had success in countries like Solomon Islands. A program of this nature could provide people experiencing serious health-related suffering and their families a support network that could also advocate on their behalf with the formal health system. The potential here is to expand on the strengths of what is already occurring, but ensure that people are well-supported at home – building ‘compassionate communities’ (Abel et al. 2011; Kellehear 2013). This program would require ongoing funding for an indefinite period, and donors should be prepared for a longer-term funding commitment if this approach is to succeed.

Another significant investment donors could consider is to fund the establishment of a hospice. In many countries across the world hospices have catalysed significant and ongoing improvements in palliative care (Rhee et al. 2017; The Economist Intelligence Unit 2015). Several interviewees described the potential for a hospice as a vision for the future. If done well, and involving the right people with close connections to the formal health system, a hospice could become a centre of excellence for palliative care, and

assist in improving access to morphine, community care, and health workforce development. Hospice Africa Uganda took this approach (Rhee et al. 2017; The Economist Intelligence Unit 2015; Spratt 2018), and has become a leader in palliative care provision across Africa and beyond. Again, funding for a hospice would need to be long-term and of adequate levels to ensure quality of care can be maintained. Careful consideration would need to be given to its location. At first glance, the best location may seem Honiara, but this is an assumption worth interrogating more deeply.

## **5. Further research**

There are several areas for further research, which donors are well-positioned to fund. Some of these are outlined in Spratt (2018), such as the potential to devise and implement a palliative care outcomes measure.

There is an urgent need to fully research and assess the situation regarding opiate analgesia in Solomon Islands (as discussed above). This assessment should cover current practice, attitudes and knowledge amongst a variety of health professionals and policy-makers, and patient and family perspectives. This must reach down to the village level in outer provinces.

Other areas for useful research include:

- Research with patients and families currently managing serious health-related suffering, including: what support they need, what support they get, what their priorities are, and differences across socio-economic characteristics.
- Research into the extent to which the Essential Package (see Appendix 3) is actually provided on the ground, including to different socio-economic groups.
- Research into the costs of palliative care, including direct public and out-of-pocket costs, and indirect costs, such as loss of earnings or schooling, as well as the costs and savings associated with incrementally expanding access to the Essential Package.
- Exploring ideas about caregiving, pain, death and dying, across different cultures, ages, and religions in Solomon Islands.
- Examining the role of traditional healers and people's beliefs about traditional medicine.

- Analysing opportunities to increase health literacy amongst Solomon Islanders, including attendance for screening.
- Research into the palliative care attitudes, knowledge and behaviours of health professionals, including doctors trained in Cuba and China.
- Study ways to improve pain management and communication skills amongst health professionals, particularly nurses.

Funding research in these areas will produce information that is useful for policy-makers and health professionals, and can contribute to reducing serious health-related suffering in Solomon Islands (and potentially beyond).

## **6. Conclusion**

This Discussion Paper summarises the findings from interviews with health professionals, policy-makers and community representatives about the palliative care service and policy situation in Solomon Islands. It is the first published material looking at palliative care in Solomon Islands. This initial research merely disturbed the surface of what is likely to be a deep well of serious health-related suffering across Solomon Islands. All interviewees agreed that there was a need for expanded palliative care, and were concerned about the degree of suffering that people experienced at the end of their lives. Patients, families and health professionals are doing the best they can to reduce this suffering. There is a real opportunity for donors to assist in supporting the strengths that already exist, and expanding efforts to reduce human suffering. While there is much more to learn, this initial research gives us enough of a glimpse into how people die in Solomon Islands to be distressing. This suffering should motivate us to act.

## Appendix 1: Interview protocol

The below are indicative questions for the individual, semi-structured interviews. Each interview varied, depending upon where the participant works. However, the below give a good sense of the questions that were asked of participants, including the most sensitive questions.

After introductions, pleasantries, confirming informed consent, and discussing preferred language for the interview, the researchers acknowledged that every individual has different cultural, religious and other perspectives about palliative care, and that there are no 'right or wrong' approaches – everybody's beliefs and perspectives are their own, and are respected.

The researchers also acknowledged that although the research is not about personal experiences and takes a broad approach to palliative care (aiming to broadly explore policies and services), discussing palliative care can cause people discomfort. The interviewee was reminded that they can request a break during the interview, decline to answer any question, or stop the interview at any time. They were also encouraged to seek support or attend to self-care if they do find the interview brings up uncomfortable feelings. Participants were reminded of the counselling services on the Information Sheet.

Indicative questions:

- What is your understanding of what palliative care is, and involves? (There are many different perspectives on palliative care, and it is important the interviewers know what the interviewee believes to be palliative care.)
- What is your impression of the need for palliative care in Solomon Islands?
- What services do you know of that are available for people who need palliative care?
- What services does your organisation provide for palliative care?
- How do you fund these services?
- What legislation, policies or guidelines exist for palliative care?
- What sorts of cultural norms and issues are there to be aware of when working in/talking about palliative care?

- What sorts of referral pathways exist between different community and health services for people who need palliative care?
- Is palliative care included as part of the curricula at Solomon Islands Nursing College?
- Is there training available for community workers, social workers?
- Is there funding available in the health budget for palliative care?
- What sorts of equipment and medications are available for people who need palliative care?
- What sorts of medications are available for people in pain?
- What opioid pain medications are available? How are they managed and kept secure?
- Are there any public education resources available on palliative care?
- What things do you think are poorly understood about palliative care and need more research?
- What sorts of action do you think needs to be taken to expand palliative care?
- What area of palliative care do you think is most important to address first?

## Appendix 2: Assessment against health system functions

Key function (Knaul et al. 2017, p. 40)	Presence in Solomon Islands
<b>Stewardship</b>	
<i>Priority setting</i>	
Implement public education and awareness-building campaigns on palliative care	None reported.
Incorporate palliative care into the national health agenda.	Palliative care is not integrated into the National Health Strategic Plan 2016-2020, or into the Role Delineation Policy.
<i>Planning</i>	
Develop comprehensive palliative care guidelines, programs, and plans.	There are no guidelines, although clinicians (anaesthetists and pharmacy) are working on a pain management guide.
Integrate palliative care into disease-specific national guidelines, programs and plans.	There is one page on palliative care in the Adult Treatment Guideline 2011. While using the WHO definition of palliative care, it only refers to cancer and only to pain. Clinicians are advised to give analgesia as necessary and in appropriate doses, and not to be concerned with opiate addiction because patients will not live long (Moulds 2011, p. 189).
Include palliative care essential medicines in national Essential Medicines List.	These are predominantly provided – see Appendix 3 below. But their distribution and consistency is questionable.
<i>Regulation</i>	
Establish effective legal and regulatory guidelines for the safe management of opioid analgesics and other controlled medicines that do not generate unduly restrictive barriers for patients.	Pharmacy and Poisons Act – special restrictions may apply to morphine. Dangerous Drugs Act 1996 – possession, distribution, storage of morphine and some other opiates. Not specifically mentioned in the Health Services or Health Workers Acts, or Medical and Dental Practitioners Act.
Design integrated guidelines for provision of palliative care that encompass all service providers.	Guidelines do not exist.
<i>Monitoring and evaluation of performance</i>	
Monitor and evaluate palliative care interventions and programmes using an explicit outcomes scale, measuring coverage as well as effect.	No monitoring and evaluation framework exists.
Promote civil society involvement in performance assessment.	There is no systematic involvement from civil society in performance assessment.
<i>Inter-sectoral advocacy</i>	
Engage all relevant actors in the promotion and implementation of palliative care interventions through ministries of health.	There is no coordinating mechanism. There is an Oncology Committee, but it is predominantly focused on providing chemotherapy, and not specifically resourced. Palliative care is not a priority area for MHMS.
<b>Financing</b>	
Explicitly include palliative care interventions in national insurance and social security healthcare packages.	Not investigated, but social protection systems are weak (Asian Development Bank 2016).
Guarantee public or publicly mandated funding through sufficient and specific budgetary allocations, starting with the Essential Package.	There are no specific palliative care budgetary allocations. Yet, most of the Essential Package medications are already provided for. Other aspects of the Essential Package appear to be supported in an ad hoc manner, when external funding opportunities arise. Reportedly, there is a budget allocated for a new Oncology Unit.



Develop pooled purchasing schemes to ensure affordable, competitive prices for palliative care inputs and interventions.	Not present.
<b>Delivery</b>	
Integrate palliative care at all levels of care and in disease-specific programs.	There is no overarching plan for integration of palliative care across the health system or in disease-specific programs. It is not mentioned in the Role Delineation Policy. Yet, individual staff members are attempting to integrate what they know into their work.
Design guidelines to provide effective and responsive palliative care services.	There are no guidelines.
Integrate pain relief into platforms of care, especially surgery.	Pain relief is provided, but needs further investigation.
Establish efficient and effective referral systems.	Referral systems were a concern for many interviewees. Ad hoc practices exist, but they appear to be informal and not institutionalised.
Implement quality-improvement measures in palliative care initiatives.	There are no specific palliative care services, but several interviewees are working to make improvements in their own work, particularly counselling, and prescribing breakthrough/as necessary pain relief.
Develop and implement secure opioid supply chain and ensure adequate prescription practices.	This requires a focused investigation.
<b>Resource generation</b>	
<i>Human resources</i>	
Establish palliative care as a recognised medical and nursing speciality.	Palliative care is not established as a speciality at the Solomon Islands School of Nursing, nor at the National University of Fiji Medical School. Allied health professionals are limited, and receive no training in palliative care. Empower staff have had on-the-job coaching and mentoring from an AVI volunteer.
Make general palliative care and pain relief competencies a mandatory component of all medicine, nursing, psychology, social work, and pharmacy undergraduate curricula.	
Require that all health and other professionals involved in caring for patients with serious, complex, life-threatening health conditions receive basic training in palliative care and pain relief.	
<b>Information and research</b>	
Incorporate palliative care access, quality, and financing indicators into health information systems.	Not assessed but unlikely to exist.
Ensure that government-funded research programs include palliative care.	This was the first research into palliative care specifically, although it has been mentioned elsewhere (e.g. Martiniuk et al. 2017).

### Appendix 3: Availability of the essential package for palliative care

The Lancet Commission on Palliative Care and Pain Relief developed an Essential Package for palliative care and pain relief (Knaul et al. 2017). This “Essential Package contains the inputs for safe and effective provision of essential palliative care and pain relief interventions” (Knaul et al. 2017, p. 4). The Essential Package can be safely prescribed and administered in primary care settings, is based on WHO’s Essential Medicines List, and is designed to be low cost. Tables 1, 2 and 3 below assess the Essential Package medicines and equipment that are available in Solomon Islands. Table 1 shows that most of the medicines contained in the Essential Medicines package are on Solomon Islands’ Essential Medicines List, although it must be noted that this does not necessarily mean these medications are consistently available or available across the entire health system. The situation is similar for medical equipment, shown in Table 2, for which there are some key gaps, such as pressure-relieving mattresses, adult diapers, portable oxygen, urinary catheters and nasogastric tubes to lower level health facilities. To note for Table 3 on the health workforce, the Essential Package uses a staffing model based on competencies, not professions, allowing for task-shifting where appropriate.

Of note, oral immediate-release morphine is only available at hospitals, while injectable morphine is available down to the Nurse Aid Post level. For other analgesic medications, ibuprofen is only available at hospitals or by specialist prescription (as is diclofenac), leaving only oral paracetamol as the main analgesic available at the most decentralised levels of health facilities. Given that it appears that injectable morphine is only able to be administered by a nurse, this potentially means that for people at home and not receiving home visits, paracetamol is all they will receive for pain relief. Paracetamol sits on the lowest rung of the WHO analgesic ladder, recommended for use in mild pain.

**Table 1: Essential Package medication availability**

Medicines <sup>1</sup>	Availability <sup>2</sup>
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<sup>1</sup> Other palliative-care related medicines on the Solomon Islands Essential Medicines List include: Oxycodone 5mg tabs, H, S4 (but this is rarely available according to interviewees, and some were not

Amitriptyline	50mg tabs, H, S4 <sup>3</sup>
Bisacodyl (or Senna)	10mg supps; 5mg tabs, H, SA Senna is not available
Dexamethasone	4 mg/1 ml injection, C, S4 0.5mg tabs, S, S4 4mg tabs, S, S4 0.1% eyedrops H, S4 eyedrops with neomycin), S, S4
Diazepam	10mg/2ml injection, N, S4 5mg tabs, H; S4 1mg/1ml rectal solution can be manufactured
Diphenhydramine (chlorpheniramine, cyclizine or dimenhydrinate)	Diphenhydramine: not available Chlorpheniramine: 4mg tabs, A, S4
Fluconazole	200mg, caps, S, S4 200mg/100ml injection, S, S4
Fluoxetine or other SSRI (sertraline and citalopram)	20mg caps, H, S4
Frusemide	20mg/2mls injection, A, S4 20mg tabs S, S4 40 mg tabs A, S4 5mg/1ml suspension, manufactured
Hyoscine butylbromide	20mg/1ml injection, H, S4 10 mg tab, H, S4
Haloperidol	5mg/1ml injection, A, S4 5mg tabs, A, S4
Ibuprofen (naproxen, diclofenac, or meloxicam)	100mg/5mg suspension, S, S4 200mg tabs, H, S4 (Diclofenac: 25mg, S, S4)
Lactulose (sorbitol or polyethylene glycol)	3.34g/5mls (500ml), syrup, S, S4
Loperamide	Use zinc sulphate, 20mg dispersible tabs, N, SA
Metoclopramide	10mg/2mls injection, N, S4 10mg tabs, A, SA
Metronidazole	500mg/100mls injectable, H, S4 500mg, supps, A, S4 200mg/5mls suspension, H, S4 200mg or 250mg tabs, A, S4
Morphine (oral immediate release and injectable)	5mg/5mls liquid mixture, H, S4 10mg/1ml injectable, N, S4 10mg, SR tabs, A, S4
Naloxone parenteral	Neonatal 40mcg/2mls injectable, H, S4 400mcg/1ml injectable, H, S4

aware it was on the Essential Medicines List); Codeine phosphate, 30mg tabs, H, S4; Fentanyl 100mcg/2ml injectable, H, S4; Pethidine 50mg/1ml, 100mg/2ml, injectable, S, S4 (according to interviewees pethidine is being phased out, although most attributed this to misuse, not to the fact it is no longer recommended); Midazolam, 5mg/5mls injectable, C, S4; nasal spray, H, S4; Prochlorperazine, 12.5mg/1ml injectable, H, S4; Ranitidine 150mg tabs, A, S4; 25mg/1ml injectable, H, S4; 15mg/1ml liquid, S, S4; 15mg/1ml suspension manufactured; Tranexamic acid 100mg/1ml, injectable, S, S4.

<sup>2</sup> Source: Interviews and Ministry of Health and Medical Services 2018.

<sup>3</sup> Lowest health facility where medication is available: N – Nurse Aid Post; C – Clinics; A – Area Health Clinic; H – Hospital; S – Specialist. Prescribing categories: SA – nurse prescriber (a nurse can prescribe this medication if it is available at their post). S4 – doctor prescriber (specialist nurses may prescribe S4 items pertaining to their specialty; items available at clinics without doctors can be prescribed after discussion with a doctor; nurses can continue long-term items commenced by a doctor previously) (Ministry of Health and Medical Services 2018).

Omeprazole	20mg caps, S, S4 40mg injectable, S, S4 2mg/1ml suspension manufactured
Ondansetron	Have just got this approved for addition to the list (interview)
Paracetamol	500mg, injectable, S, S4 125mg, supps, S, S4 250mg, supps, A, S4 500mg, supps, H, S4 120mg/5ml, syrup, H, S4 100mg tabs, N, SA 500mg tabs, N, SA With codeine phosphate 500mg/8mg, tabs, H, SA
Petroleum jelly	A, SA
<i>Key to table in footnote 3.</i>	

**Table 2: Essential Package medical equipment availability**

Medical Equipment	Availability <sup>4</sup>
Pressure-reducing mattress	Not available.
Nasogastric drainage or feeding tube	Available in hospitals.
Urinary catheters	Available in clinics and hospitals.
Opioid lock box	Available, but not on Essential Medical Supplies List.
Flashlight with rechargeable batteries (if no electricity)	Essential Medical Supplies List specifies a torch for clinics.
Adult diapers (or cotton and plastic)	Diapers, are generally not available.
Oxygen	Masks (adult and paed, AHCs), Non-rebreather (NRB) (adult and paed AHCs), nebulisers (adult and paed clinics), cannula (AHCs); flow meter (AHCs); regulators (AHCs); concentrator (AHCs); cylinders (Hospitals); portable oxy-viva (hospitals). Not available for home use.

**Table 3: Essential Package human resources availability**

Human resources (varies by referral, provincial or district hospital, community health centre, or home).	Availability
Doctors (speciality and general, depending on level of care)	There are some doctors with a basic understanding of palliative care fundamentals, but who require further training. One physician has received two weeks' training in South Korea. There are no specialists.
Nurses (speciality and general)	No specialists. One nurse has received training in South Korea. Similar to doctors, there are nurses with excellent nursing skills, which are the fundamentals of palliative care.
Social workers and counsellors	Empower, as outlined above. Only at National Referral Hospital. No social workers.
Psychiatrist, psychologist, or	Empower counsellors, as outlined above. Only at National

<sup>4</sup> Source: Interviews and National Pharmacy Services Division 2015.

counsellor (depending on level of care)	Referral Hospital. Limited psychiatry. No psychologists.
Physical therapist	There is a nation-wide Community-Based Rehabilitation program, which aims to support people with disabilities. Some of these staff are physiotherapists. There are physiotherapists at National Referral Hospital. This study did not explore the distribution of physiotherapists across the country or their training in palliative care, but they are unlikely to have received palliative care training.
Pharmacist	This study did not assess the distribution of pharmacists across the country, but there are several at National Referral Hospital.
Community health workers	Not assessed. Unlikely to have palliative care training.
Clinical support staff (diagnostic imaging, laboratory technician, nutritionist)	There is no nutritionist. The laboratory services are severely stretched, according to interviewees. It was beyond the scope of this study to explore further.
Non-clinical support staff (administration, cleaning).	Present.

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