KPMG

Norfolk Island Health Service Plan

Department of Infrastructure, Transport, Cities and Regional Development

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KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

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The findings in this report have been formed on the above basis.

Third Party Reliance

This report is solely for the purpose set out in the Scope Section and for the Department's information and is not to be used for any other purpose.

This report has been prepared at the request of the Department in accordance with the terms of KPMG's Work Order Request (WOR) 10017230 for the provision of Stage 1 (Planning) - for the design of the Norfolk Island Health and Residential Aged Care Service (Multipurpose Service Facility) Replacement Project dated 16 November 2018, updated 23 November 2018 and 23 January 2019. Other than our responsibility to the Department, neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this report. Any reliance placed is that party's sole responsibility.

Executive summary

KPMG was engaged by the Department of Infrastructure, Transport, Cities and Regional Development (the Department) to review the 2015 Norfolk Island Health Service Plan (the 2015 Plan) and determine the types of health and aged care services that may be needed in the future for Norfolk Island. The updated Norfolk Island Health Service Plan (the 2019 Plan) will be one of the inputs to the Initial and Detailed Business Cases for a new Multipurpose Health Service Facility on Norfolk Island.

The 2019 Plan sets out a sustainable strategy for the development of health services on Norfolk Island. A 'sustainable service' has been defined as a service that is delivered in a way that is effective, safe, people-centred, timely, integrated and efficient.[1]

The services, infrastructure, workforce and other supports required to deliver healthcare on Norfolk Island at an appropriate level of safety and quality, have been identified based on publicly available clinical planning guidelines and by comparison to service profiles in similar remote communities and the Australasian Health Facility Guidelines (AHFG).[2,3] The additional key considerations for reviewing the 2015 Plan and determining the services to be delivered on Norfolk Island included the following:

- the distance from Norfolk Island to other larger referral hospitals on the mainland;
- the community expectations for health services delivered on Norfolk Island;
- the cultural and social implications for community members who have to access services on the mainland;
- the role that the current service provider (South East Sydney Local Hospital District (SESLHD)) has had in supporting service delivery on Norfolk Island; and
- the uniqueness of Norfolk Island as an external Australian territory which has only recently become administered by Australia (since 2016) and, as such, has not previously required health services on Norfolk Island to be independently assessed by an external agency.

Introduction

Norfolk Island is an isolated island community of approximately 1,750 people located in the Pacific Ocean 1,600km north east of Sydney and 1,456km east of Brisbane.

Following many reviews into the governance and financial sustainability of Norfolk Island, the Norfolk Island Legislation Amendment Act 2015 was passed in May 2015. This resulted in the removal of elements of self-governance and provided Norfolk Island residents with access to Australian Government funded primary health care (via Medicare) and other Australian Government funded social services from 1 July 2016.

[1] Organisation for Economic Cooperation and Development 2018. Delivering Quality Health Services: A Global Imperative.
[2] The publicly available clinical planning guidelines used were the NSW Health Guide to Role Delineation of Clinical Services and the community profiles that Norfolk Island has been compared to are provided in detail in Appendix F of the report.
[3] Australasian Health Facility Guidelines 2016. Australasian Health Facility Guidelines Health Facility Briefing and Planning - General Requirements.

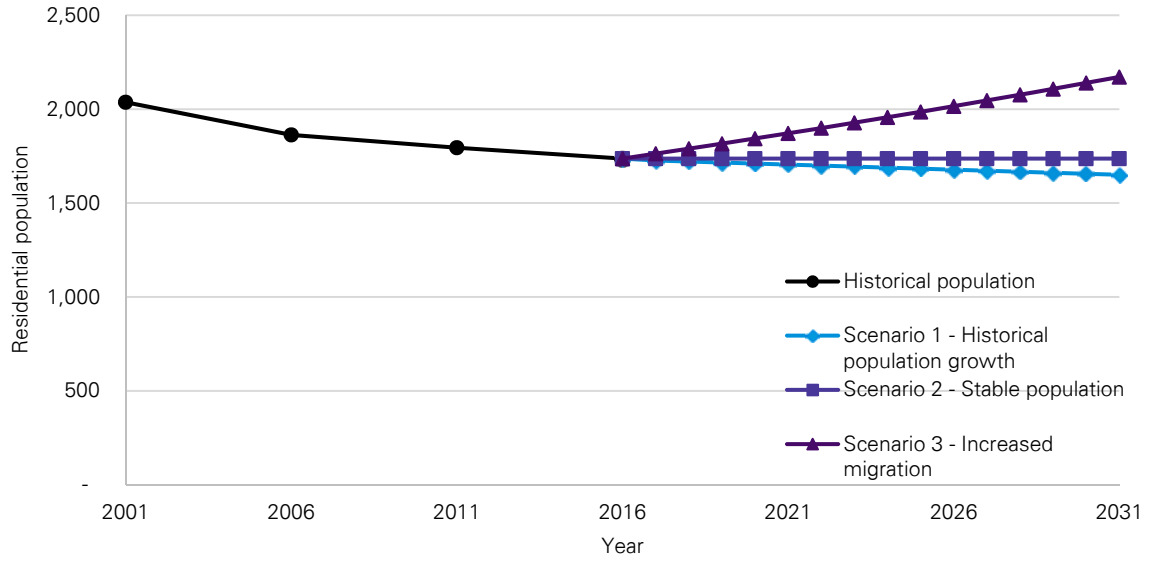
Health needs analysis

Section 2 of the 2019 Plan provides an overview of the Norfolk Island population and the health needs of the population based on analysis of the available data. The 2016 Census recorded a total Norfolk Island population of 2,140 people, comprising a residential population of 1,748 people (82 per cent) and a visitor population of 392 people (18 per cent). The residential population has decreased by approximately 16 per cent since the 2001 Census.[4] Whilst the residential population is decreasing overall, there has been significant growth in the number of residents aged 65 and over. The proportion of people aged 65 or older, relative to the population aged 15-64, increased from 20 per cent to 40 per cent between 2001 and 2016. This growth rate is higher than the growth rate seen in the overall Australian community and similar remote island communities. The higher proportion of residents in older age groups is an important factor to consider when planning for future health services, as health service usage typically increases as age advances.

For the purposes of understanding the type and volume of services that should be planned for Norfolk Island, a series of population projections were developed across three different growth scenarios. Figure 1 below shows these scenarios. At most, the population of Norfolk Island is expected to be approximately 2,200 people or, in a low growth scenario, the population is projected to be approximately 1,500 people.

- Scenario 1: A continuation of the historical growth rate with a decline in the residential population of 1.4 per cent per annum.
- Scenario 2: A continuation of the current residential population size of 1,748 people.
- Scenario 3: A high growth scenario with a 1.5 per cent per annum increase in residential population through migration and natural increases. A 1.5 per cent per annum increase is used in this report as this is consistent with the highest non-metropolitan regional growth rate for Australian states and territories from 2012-2017.

Figure 1: Norfolk Island population growth scenarios



Source: KPMG 2019

In Scenario 1 and Scenario 2 population projections, the growth in the proportion of people aged 65 and over is expected to continue. This indicates that the demand for services currently required by this population cohort, for example minor surgery and other chronic disease management, may increase over time.

[4] Administrator of Norfolk Island (ANI) Census 2001-2011, Australian Bureau of Statistics (ABS) Census 2016.

To better understand the future health need of the projected population, analysis of the available health data was undertaken. This data included:

- death rates for Norfolk Island;
- self-reported health status;
- research on the genetic impacts for population health; and
- historical health service utilisation.

The detailed analysis of this data is provided in Section 2. In summary, this analysis indicates that the majority of the Norfolk Island community consider themselves to be healthy and fewer Norfolk Islanders reported sedentary lifestyles when compared with the general Australian population. Whilst this paints a positive picture in terms of self-reported health outcomes, the data analysis also indicated that there are a relatively high number of obese people on Norfolk Island and a relatively high proportion of people who report feeling "high" to "very high" psychological distress. This analysis, combined with the genetic propensity for Norfolk Islanders to develop heart disease, the high rate of smoking and the fact that the community has a high proportion of elderly people, indicates that there may be a future need for preventative health measures, chronic disease management (e.g. for diabetes and heart disease), drug and alcohol support (e.g. for tobacco), mental health support and residential aged care or other home supports for the elderly. This analysis also indicates that there will continue to be a need for acute services such as emergency services, procedural surgery and cardiology to meet the emergent needs of both residents and visitors to Norfolk Island (refer to Section 5 for a detailed discussion of the future service requirement).

Challenges with existing infrastructure

Section 3 of the 2019 Plan provides an overview of the existing health facilities on Norfolk Island and the challenges with this infrastructure. Delivering quality, sustainable health care requires a combination of the appropriate infrastructure, workforce and clinical supports. Currently, the Norfolk Island Health and Residential Aged Care Service (NIHRACS) delivers health and aged care services out of the Norfolk Island Multipurpose Health Service facility as part of the Australian Government's Multipurpose Service (MPS) program. The MPS program is designed to provide small regional and remote communities with improved access to a mix of health and aged care services that meet community needs through flexible use of funding and infrastructure.[5]

The existing infrastructure used by NIHRACS is aged and does not meet current AHFG with regards to best practice service design, patient flows and size of rooms. The AHFG provide advice on flexible facility responses to allow for the delivery of current and emerging models of care.[6] Compliance with the AHFG indicates good health facility design and the ability for facilities to support contemporary clinical practice.

The Norfolk Island Multipurpose Health Service facility (previously named the Norfolk Island Hospital facility) is yet to achieve accreditation against the National Safety and Quality Health Service Standards (NSQHS standards). This lack of accreditation is a barrier to expanding the volume and type of services that can be delivered on Norfolk Island. The Norfolk Island Hospital facility, which was formerly operated by the Norfolk Island Hospital Enterprise (NIHE), participated in an accreditation survey in 2014. The assessor, the Australian Council on Healthcare Standards (ACHS) identified a number of opportunities for improvement, which NIHRACS (the current operator) has been working to address.

The current facilities impact on the ability of NIHRACS to implement best clinical practice models of care and provide a homelike environment to the aged residents. The residential aged care facilities in

[5] Department of Health 2019. Aged Care Funding Instrument (ACFI) User Guide. Retrieved from: https://agedcare.health.gov.au/funding/aged-care-subsidies-and-supplements/residential-care-subsidy/basic-subsidy-amount-aged-care-funding-instrument/aged-care-funding-instrument-acfi-user-guide.
[6] Australasian Health Infrastructure Alliance 2018. Australasian Health Facility Guidelines. Retrieved from: https://healthfacilityguidelines.com.au/australasian-health-facility-guidelines.

particular lack the availability of single rooms and privacy for residents and family. There is also no functioning operating suite within the facility as the operating theatre was closed by the NIHE following the ACHS accreditation survey.[7]

Whilst these observations point to the need for a new facility, it is important to note that having a new facility that complies with the AHFG will not be enough to ensure safe, quality healthcare. In addition to appropriate infrastructure, it is critical to have the appropriate workforce and clinical supports in place to enable safe, quality healthcare. The clinical supports would include having a clinical governance framework and appropriate systems and procedures in place to operationalise services across a range of service delivery models (e.g. face-to-face on Norfolk Island, telehealth, fly-in and fly-out, and referral to the mainland).

Network of health services

Section 4 of the 2019 Plan provides an overview of the current network of health services available on Norfolk Island. This network is supported by the Australian Government through the MPS program. The Australian Government's MPS program is designed to enable coordination with private and not-for-profit service providers in remote communities, with the aim of delivering additional local services and improved quality of care to community members.[8] In common with many rural and remote populations, the health needs of the Norfolk Island population are met through a network of health service providers, located on and off Norfolk Island. Like most health services, NIHRACS does not exist in isolation and should form part of a larger system that enables reach back to a larger referral hospital or group of specialist clinicians, as well as step down supports (e.g. community support).

For this network to operate effectively, safely and seamlessly for the patient and community, mechanisms to coordinate care and share information are required. These include established referral pathways, for example the urology and oncology pathways currently in place, protocols for referral and follow up. It also includes access to a single source of patient information. The My Health Record (MHR) system has the potential to enable better coordination of care between on-Island healthcare professionals, visiting clinicians and health consultants based on the mainland.

Since 2014, when the Norfolk Island Hospital facility (formerly operated by the NIHE) was unable to meet a number of standards in the ACHS accreditation survey, the local population have been referred off Norfolk Island for surgery and various procedural services including gastroenterology and ophthalmology. Community members also leave Norfolk Island to give birth on the mainland.

There are, however, a range of health, aged and support services offered on Norfolk Island that are targeted to the specific needs of the community with its growing aged person cohort and corresponding prevalence of chronic disease. Most of the services are provided by NIHRACS which includes general practice, emergency care, acute admitted care and residential aged care as well as public health, allied health and community health services such as cancer screening, health promotion, physiotherapy, counselling services and dentistry. There are also a number of core support services available on Norfolk Island including pathology, diagnostic imaging, pharmacy and ambulance.

When compared to other remote island communities, the Norfolk Island residents have access to a greater breadth of services. However, there are a number of service requirements which could be used to more effectively meet the needs of the population in the future and deliver a more sustainable health service that is less reliant on aeromedical transfers to the mainland. These are outlined in 'Planned Services' below, after consideration of the social and policy issues impacting on the delivery of sustainable healthcare on Norfolk Island.

[7] Norfolk Island Legislative Assembly (NILA), 14th NILA Hansard, 17 December 2014, p. 871.
[8] Department of Health 2019, p iv.

Social and policy issues

Section 5 of the 2019 Plan provides an overview of social and policy issues impacting on the demand and supply of health services. For Norfolk Island, the key social and policy issues impacting on the delivery of sustainable healthcare include the following:

- the degree of remoteness and isolation of Norfolk Island;
- the sustainability of the workforce, given the isolation of the community;
- community expectations about the services that should be offered locally as an alternative to travelling to the mainland;
- the challenges inherent in working toward complying with and maintaining a standard of care; and
- technology developments.

Norfolk Island is grappling with a set of challenges that are similar to those faced by remote communities on the mainland. Health service systems in remote communities typically struggle with the following issues: addressing the social determinants of health for their population; attracting health professionals and administrators with appropriate capabilities; and ensuring a coordinated approach to health service delivery.

This issue of staff recruitment, and the distance from larger referral hospitals, can also make it difficult for facilities in remote areas to comply with standards of care and maintain safety and quality. For Norfolk Island, the adoption of standards of care is important in delivering appropriate healthcare, as standards not only define the care people should expect to receive but they also signal to health professionals that there are appropriate protocols and procedures in place to ensure safe and consistent service delivery.

There are also a range of social and policy issues that will continue to impact on the availability and uptake of alternative models of care and service delivery for Norfolk Island residents. These include community expectations and the limited use of technology. One way to make sure that health service delivery remains sensitive to community expectation, advances in technology and clinical practice is through the establishment of an ongoing process for reviewing the evidence base informed by expert advice and in consultation with community members. A proposed review process is described in more detail in Section 8 Governance Framework.

Planned services

The approach to determining the planned services

Section 6 of the 2019 Plan describes the future planned services that have been identified for the Norfolk Island health system. The future planned services have been identified based on analysis of the community population and health need, consideration of the number of social and policy issues that are likely to have an ongoing impact on the health system, comparative analysis with other similar communities and consideration of the principles that underpin contemporary service planning in rural and remote Australia. These principles include:

- improved access to appropriate and comprehensive health care;
- effective, appropriate and sustainable health care service delivery;
- an appropriate, skilled and well-supported health workforce;
- collaborative health service planning and policy development; and

- strong leadership, governance, transparency and accountability.[9]

The services proposed for meeting the future health needs of Norfolk Island are outlined in Table 1 below. These services are based on the New South Wales (NSW) Health Guide to Role Delineation of Clinical Services (the Role Delineation) which describes the minimum support services, workforce and other requirements for the safe delivery of clinical services.[10] Each service standard in the Role Delineation has up to six levels of service in ascending order of complexity. Where a health facility has no planned service, it is classified as level 'NPS' with no numerical value assigned (e.g. the 2019 existing level for the Operating Suite is 'NPS').

The service levels identified for future increase or improvement in Table 1, will require the Norfolk Island Multipurpose Health Service facility to become accredited in order for the proposed service level to be attained. Many of the opportunities for improvement identified in the ACHS survey related to administrative protocol and clinical governance. Clinical governance will be a critical enabler for any changes to healthcare on Norfolk Island. It is understood that progress has been made by NIHRACS, with support from SESLHD, to improve quality management, however this issue of clinical governance will continue to be a key priority for developing a sustainable healthcare service.

Maternity health services

There are several health services that are of cultural and social importance to Norfolk Island community members. These services include maternity services and surgical services. Table 1 overleaf shows that in future it is projected that the Norfolk Island community will require a Level 1 Maternity service and a Level 2 General Surgery service to meet the population health needs.

A Level 1 Maternity service provides for emergent births, however, planned births are not provided for at this level. This means that to ensure a safe and quality service for Norfolk Island community members, mothers will continue to travel to the mainland to give birth. To assess whether a safe planned birthing service could be sustained on Norfolk Island a number of critical safety and quality factors were considered. These factors included:

- consideration of the volume of births and the inherent risk associated with particular births;
- availability of a suitable qualified and credentialed workforce to provide continuity of maternity and perinatal care; and
- isolation of the community as measured by the time taken to travel to a higher clinical capability service in the event of foetal or maternal compromise for both mother and neonate.[11]

Based on the current network of services on Norfolk Island, it is unlikely that all of these key factors could be addressed to sustain a safe planned birthing service on Norfolk Island. Consequently, it is projected that a Level 1 Maternity Service will be required on Norfolk Island for emergent (unplanned) births in the future and that planned birthing services will be delivered on the mainland.

Surgical services

A Level 2 General Surgery service involves providing some low risk surgical procedures on Norfolk Island. As with maternity services, there are a number of factors to consider including the risk profile of the patient and the type of surgery to be offered (e.g. the appropriate facilities, workforce and supports may be in place for low risk endoscopy procedures but not low risk ophthalmology procedures or vice versa). The preconditions for the introduction of surgical services on Norfolk Island are similar to those for maternity services, that is, organisational accreditation, establishing and

[9] Australian Health Ministers' Advisory Council's (AHMAC) Rural Health Standing Committee 2012. National Strategic Framework for Rural and Remote Health.
[10] NSW Ministry of Health 2018. Guide to the Role Delineation of Clinical Services. Retrieved from: https://www.health.nsw.gov.au/services/pages/role-delineation-of-clinical-services.aspx
[11] These are three of the key factors considered in a range of guidelines and frameworks relating to maternity services including the National Maternity Services Capability Services Framework and the Australian Rural Birthing Index (ARBI). Detailed information about the preconditions for a planned birthing service in rural and remote areas, based on the ARBI, is provided in Appendix H.

retaining a workforce that is skilled and experienced with contemporary practice and establishing guidelines and procedures for the functioning of the service.

Projected future service levels

It is acknowledged that the projected future service levels described in the table below may change over time. There will need to be a periodic and ongoing monitoring process to assess both the current service levels on Norfolk Island and the possible future level requirements, based on changes in the population needs, advances in technology or changes in the availability of workforce.

Table 1: Role delineation of services for Norfolk Island

Service	2015	2019 Existing level	Projected future level	Comment
Section 1: Core Services				
Anaesthesia and Recovery	Level 1 service	Level 1 service	Level 2 service	A Level 2 anaesthesia capability and capacity is required to support the delivery of low-risk surgery (see comments below).
Operating Suite	Level 1 service[12]	NPS	Level 2 service	A decision by NIHE was made to close the operating suite, following the outcomes of the ACHS survey in 2014. A Level 1 service was provided in 2015 which involved providing procedures that required analgesia without general anaesthetic. A Level 2 Operating Suite service is required in future to facilitate delivery of low-risk surgical procedures on Norfolk Island (e.g. endoscopies) by either local or fly-in clinicians.
Close Observation Unit	NPS	NPS	NPS	
Intensive Care Service	NPS	NPS	NPS	
Nuclear Medicine	NPS	NPS	NPS	
Radiology and Interventional Radiology	Level 1 service	Level 2 service	Level 2 service	A Level 2 radiology service is required to support diagnostic imaging for treatment and surgery and reduce referrals off Norfolk Island.
Pathology	Level 1 service	Level 3 service	Level 3 service	Level 3 service exists without National Association of Testing Authorities accreditation. This means that the pathology services have not been independently assessed for safety and quality as most pathology and laboratory services on the mainland are.
Pharmacy	Level 2 service	Level 1 service[13]	Level 2 service	The pharmacy requirement for hospital inpatients are currently supported by an external pharmacy. An allocated pharmacist resource for hospital facility is required to support a Level 2 service for a range of other service types.

[12] The operating suite was closed by the NIHE in 2014, following the accreditation survey by the ACHS. NILA, 14th NILA Hansard, 17 December 2014, p. 871.
[13] There is a reduction in the level because there is no longer a designated clinical pharmacist allocated to deliver prescriptions to the hospital.

Service	2015	2019 Existing level	Projected future level	Comment
Service	**2015**	**2019 Existing level**	**Projected future level**	**Comment**
Section 2 Part A: Emergency Medicine				
Emergency Medicine	Level 1 service	Level 2 service	Level 2 service	A Level 2 emergency service is required to safely respond to emergencies and stabilise patients ahead of aeromedical evacuations.
Part B: Medicine				
Cardiology and Interventional Cardiology	NPS	Level 1 service	Level 1 service	A Level 1 cardiology service is required to support an ageing population and the associated chronic diseases.
Chronic Pain	NPS	NPS	NPS	
Clinical Genetics	NPS	NPS	NPS	
Dermatology	NPS	Level 2 service	Level 2 service	A Level 2 dermatology service is required to respond to conditions such as skin cancer, psoriasis and eczema.
Drug and Alcohol	NPS	Level 1 service	Level 2 service	A Level 2 drug and alcohol service is required to support an ageing population with a relatively high proportion of smokers and relatively high levels of reported stress.
Endocrinology	NPS	Level 2 service	Level 2 service	A Level 2 endocrinology service is required to support an ageing population with a relatively high proportion of obese people and the associated chronic diseases including diabetes and kidney disease.
Gastroenterology	NPS	Level 1 service	Level 2 service	Visiting specialist
General and Acute Medicine	NPS	Level 2 service	Level 2 service	A Level 2 general medicine service is required to help keep unnecessary medical referrals to the mainland to a minimum and to address the emergent needs of visitors to Norfolk Island.
Geriatric Medicine	NPS	Level 2 service	Level 2 service	A Level 2 geriatric medicine service is required to support an ageing population.
Haematology	NPS	NPS	NPS	
Immunology	NPS	NPS	NPS	
Infectious Diseases	NPS	NPS	NPS	
Neurology	NPS	NPS	NPS	
Oncology – Medical	NPS	NPS	NPS	
Oncology – Radiation	NPS	NPS	NPS	
Palliative Care	NPS	Level 2 service	Level 2 service	A Level 2 palliative service is required to support an ageing population and to help people to age on Norfolk Island.
Rehabilitation Medicine	NPS	NPS	NPS	

Service	2015	2019 Existing level	Projected future level	Comment
Renal Medicine	Level 2 service	Level 2 service	Level 2 service	A Level 2 renal medicine service is required to support an ageing population with a relatively high proportion of obese people and the associated chronic diseases including kidney disease.
Respiratory + Sleep Medicine	NPS	Level 2 service	Level 2 service	A Level 2 respiratory service is required to support a population with a relatively high proportion of smokers and the associated chronic diseases including respiratory disease.
Rheumatology	NPS	NPS	NPS	
Sexual Assault Services	NPS	Level 3 service	Level 3 service	This service is currently provided through NI-Connect services and is required to address emergent needs.
Sexual Health	NPS	Level 1 service	Level 1 service	A Level 1 sexual health service is required to ensure preventative education and surveillance of sexually transmitted disease on Norfolk Island.
Part C: Surgery				
Burns	NPS	Level 2 service	Level 2 service	This service currently exists based on an arrangement with SESLHD.
Cardiothoracic Surgery	NPS	NPS	NPS	
Ear, Nose and Throat	NPS	NPS	NPS	
General Surgery	Level 1 service	Level 1 service	Level 2 service	A Level 2 service is required to facilitate delivery of low-risk surgical procedures on Norfolk Island. This is required as the population ages and the number of referrals to the mainland for low-risk procedures increases.
Gynaecology	NPS	NPS	NPS	
Neurosurgery	NPS	NPS	NPS	
Ophthalmology	NPS	Level 1 service	Level 1 service	This service currently exists based on an arrangement with SESLHD and is required to support an ageing population.
Oral Health	Level 2 service	Level 3 service	Level 3 service	A Level 3 service is required to prevent unnecessary referrals to the mainland for dental issues and to support future demand as chronic disease is commonly associated with poor dental hygiene.
Orthopaedic	NPS	NPS	NPS	
Plastic Surgery	NPS	NPS	NPS	
Urology	NPS	NPS	NPS	

Service	2015	2019 Existing level	Projected future level	Comment
Vascular Surgery	NPS	NPS	NPS	
Part D: Child and Family Health Services				
Child and Family Health	NPS	Level 2 service	Level 2 service	Service established and provided through NI-Connect.
Child Protection Services	NPS	Level 3 service	Level 3 service	Service established through NIHRACS.
Maternity	Level 1 service	Level 1 service	Level 1 service	A Level 1 service is required to provide antenatal and postnatal care for women with no identified risk factors.
Neonatal	NPS	Level 1 service	Level 1 service	A Level 1 neonate service is required to support the Level 1 maternity service and to facilitate delivery of any emergent births, not to facilitate any planned births.
Paediatric Medicine	NPS	Level 2 service	Level 2 service	This service currently exists based on an arrangement with SESLHD and is required to support children on Norfolk Island.
Surgery for Children	NPS	NPS	NPS	
Youth Health	Level 1 service	Level 2 service	Level 2 service	A Level 2 youth health services is required to meet the specific health needs of youths in a remote environment.
Part E: Mental Health				
Adult	Level 1 service	Level 2 service	Level 2 service	There are a relatively high proportion of community members who reported being stressed. A Level 2 service is required to support ongoing mental health needs in a remote island environment.
Child and Youth	Level 1 service	Level 2 service	Level 2 service	
Older Person	Level 1 service	Level 1 service	Level 1 service	A Level 1 service is required to support elderly residents with mental health issues.
Part F: Aboriginal Health				
Aboriginal Health	NPS	NPS	NPS	
Part G: Community Health				
Community Health	Level 1 service	Level 1 service	Level 3 service	An increase in the level of community health services includes a range of multidisciplinary services such as chronic disease management and prevention, rehabilitation and allied health. These services are required to help keep people well and prevent hospitalisations and transfers.

Source: Guide to Role Delineation of Clinical Services, NSW Health, June 2018 and KPMG consultation.

NPS = No Planned Service.

Enabling infrastructure

Section 7 of the 2019 Plan describes the facilities required to safely deliver the future planned services on Norfolk Island. Table 2 below outlines the infrastructure that will be required to deliver the future health service requirement (refer to Table 1 above). The infrastructure requirement described in Table 2 has been determined based on the guidelines provided by the Role Delineation and consideration of the AHFG. It is important to note that the existing infrastructure outlined in Table 2 does not comply with the AHFG and that even where there is no gap identified in the existing and future requirement for infrastructure, these facilities are ageing and not fit-for-purpose in terms of delivering services to an appropriate standard of quality, despite the fact that they have been renovated to improve the original facilities. A more detailed summary of both services and infrastructure is provided in Appendix G.

In addition to improving the physical space in which services are delivered, there is also a need to better leverage technology to support the delivery of health services on Norfolk Island. For example, telehealth can support on-Island clinicians to access support and advice from specialist clinicians elsewhere, and also improve continuity of care for patients in between visits from fly-in clinicians.

Table 2: Proposed Norfolk Island Multipurpose Health Service facility

Infrastructure	2019 Existing	Projected future level	Rationale / Comment
Primary Care			
General Practitioner (GP) and medical consulting rooms	3	6	Additional medical consulting rooms are required to provide additional infrastructure for visiting specialist staff to deliver services, e.g. ophthalmology, surgery etc.
Allied health consulting rooms	2	4	Additional allied health consulting rooms enable mental health, social work, dietician, diabetes educator and other allied health services to be delivered. These services are required to respond to the chronic disease and mental health needs of the Norfolk Island population. These consulting rooms may be used by visiting fly-in, fly-out clinicians or the allied health staff on Norfolk Island.
Acute services			
Emergency bay	2	2	Emergency bays are required to enable stabilisation of trauma patients prior to transfer to a secondary or tertiary care provider. The level of procedures available depend on the skill and credentialing of the workforce available at the time and the level of telehealth support available from another centre.
Acute beds	6 physical 3 occupied	6	No additional acute beds are required. The estimated future infrastructure requirement includes the capacity to deal with surge demand periods.
High dependency room	1	1	A high dependency room is required to support any patients who require more attentive care than can be provided in a general ward. For example, following surgery, patients may be placed in the high dependency room rather than back into the normal ward.
Mental health room	1	1	A mental health room is required for emergent mental health cases, where a secure room may be needed.
Birthing room	1	1	A birthing room is required to address the needs of any emergent births on Norfolk Island and is not for the delivery of any planned birthing services.

Infrastructure	2019 Existing	Projected future level	Rationale / Comment
Operating room	0	1	An operating room is required for low risk procedures and surgery which is currently being referred to the mainland (e.g. endoscopy, superficial surgery). This can only occur if suitable resources and capability are available (e.g. general surgeon, GP surgeon). The pathway to accreditation includes a series of system and operational steps which need to be taken before the operating room can be used safely.
Dialysis chairs	2	3	Three dialysis chairs have been purchased to replace obsolete equipment. The operationalisation of the chairs is pending staff training.
Residential care			
Residential care beds	14	24	Residential aged care beds are required to meet the needs of the fast growing population of people aged 65 and over.
Support services			
X-ray room	1	1	An X-ray room is required for delivering diagnostic imaging. This is required in any facility with an operating theatre and will also support the delivery of other allied health services (e.g. physiotherapy).
Mammography	1	1	A mammography room is required to facilitate future breast screening.
Dental chairs	2	2	This infrastructure is required for the ongoing visiting services delivering dental and allied health services to the Norfolk Island community.
Allied health treatment spaces	3	3	

Source: KPMG 2019.

Note: Existing facilities in most acute areas do not achieve compliance with AHFG.

Note: Since the 2015 Plan, two acute beds have been repurposed as residential aged care beds. This has resulted in a decrease of acute beds and an increase of residential aged care beds between the 2015 Plan and 2019 Plan.

Note: In 2016 the two emergency bays were reallocated for use as outpatient general practitioner services during business hours (9am to 5pm from Monday to Friday). Outside of business hours the two emergency bays are used for after-hours triage of emergency presentations.

Governance framework

Section 8 of the 2019 Plan describes a proposed governance framework to allow for periodic clinical advice and review of the evidence base for particular service delivery models on Norfolk Island. This would ensure that the health services, infrastructure and supports offered on Norfolk Island are responsive to both identified health need and changes in practice. The evidence base for effective and appropriate service delivery models is continually evolving in response to a range of factors including advances in technology, changes in community expectations and the demand for and supply of the clinical workforce nationally. This means that the infrastructure, workforce and supports identified as necessary in this report for the delivery of safe and quality health services on Norfolk Island may change over time as the evidence base for contemporary 'better practice' health service delivery evolves. Furthermore, whilst this report has provided an assessment of the need for health services based on the currently available data, technology, workforce and infrastructure, there are a select number of health services that the community will continue to have an interest in. These services include maternity services, surgery and aged care.

Given the evolving nature of the evidence base for better practice models of care, and the apparent interest from the community in making particular services available on Norfolk Island, a governance

framework, including the establishment of a clinical advisory panel, will allow for periodic expert review of the need, and evidence for, the provision of specific services on Norfolk Island.

Some jurisdictions in Australia already have a formalised process in place for monitoring the healthcare needs of their population and reviewing the models of service delivery employed to meet these needs. Examples include the Clinical Senates in the Northern Territory (NT) and Western Australia and the Agency of Clinical Innovation (ACI) in NSW.

One mechanism to ensure that health services and delivery models available on Norfolk Island remain contemporary is to establish a clinical advisory panel. The establishment of a clinical advisory panel would allow for periodical review of the evidence base for particular service delivery models on Norfolk Island. The purpose of this clinical advisory panel would be to provide independent expert advice, information and recommendations on the extent to which approaches to care delivery on Norfolk Island (including workforce, use of technology or other aspects of service delivery models) should respond to changes in the evidence for provision of safe, quality care on Norfolk Island.

A clinical advisory panel for Norfolk Island would have a makeup of people with experience in remote healthcare delivery and hold a relevant clinical and / or academic background. For example, membership could include an experienced health administrator, obstetrician with rural experience and a GP proceduralist with rural experience. The terms of reference for the clinical advisory panel would be developed in consultation with the Norfolk Island community but would be focused on:

- changes in demand for specific service types based on analysis of locally collected data (e.g. historical activity, historical service provision or other data indicating a likely or actual change in demography or health need in the future); and
- changes in the evidence or accepted practice for specific service types which are commonly identified as difficult to resource in remote areas (e.g. birthing and surgery).

The clinical advisory panel could convene triennially and take responsibility for consulting, examining the contemporary evidence base, and considering and formulating practical recommendations in the context of clinical and operational best practice. As part of their review of the contemporary evidence base, the clinical advisory panel would consider both qualitative and quantitative research relating to health service need and service provision on Norfolk Island and identify any changes in the evidence base for better leveraging technology to deliver health services in similarly remote and / or isolated locations. The clinical advisory panel would also be responsible for presenting key findings from their review to the Department and community, including recommendations for whether a review of the 2019 Plan is warranted based on changes in the key enablers for effective service delivery, including access to appropriately skilled health workforce, clinical training and education practices and technology.

The Norfolk Island community will require support to set up the governance framework and the associated panel of experts, which would be independent from the current external service provider (i.e. SESLHD). It will be important to have community and government input into the collective development of the governance framework and the terms of reference for the clinical advisory panel, to ensure both perceived and actual independence.

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Abbreviations

Abbreviation	Term
ABS	Australian Bureau of Statistics
ACHS	Australian Council on Healthcare Standards
ACI	Agency of Clinical Innovation
ACRRM	Australian College of Rural and Remote Medicine
AHFG	Australasian Health Facility Guidelines
AIHW	Australian Institute of Health and Welfare
AIN	Assistant In Nursing
ANI	Administrator of Norfolk Island
ARBI	Australian Rural Birthing Index
CESPHN	Central and Eastern Sydney Primary Health Network
DSS	Department of Social Services
GP	General Practitioner
HDU	High Dependence Unit
ICSEA	Index of Community Socio-Educational Advantage
IRSD	Index of Relative Socio-economic Disadvantage
MBS	Medicare Benefits Schedule
MHR	My Health Record
MPS	Multipurpose Service
NATA	National Association of Testing Authorities
NATIN Inc.	Norfolk Assists Those In Need Inc.
NBN	National Broadband Network
NI	Norfolk Island
NICS	Norfolk Island Central School
NIHE	Norfolk Island Hospital Enterprise, which operated the health facilities on Norfolk Island until 30 June 2016, when NIHRACS took over operations.
NIHRACS	Norfolk Island Health and Residential Aged Care Service, which has operated the health facilities on Norfolk Island since 1 July 2016.
NIPTAAS	Norfolk Island Patients' Travel Accommodation and Assistance Scheme
NIRC	Norfolk Island Regional Council
NSQHS	National Safety and Quality Health Service
NSW	New South Wales
NT	Northern Territory
PHN	Primary Health Network
QLD	Queensland
SEIFA	Socio-Economic Indexes for Areas
SESLHD	South Eastern Sydney Local Health District
The Department	The Department of Infrastructure, Transport, Cities and Regional Development
The 2015 Plan	The 2015 Norfolk Island Health Service Plan

Abbreviation	Term
The 2019 Plan	The 2019 Norfolk Island Health Service Plan which was an update of the 2015 Norfolk Island Health Service Plan

1. Introduction

Scope

The scope of this project was to review the Health Service Plan that was developed in 2015 for Norfolk Island (the 2015 Plan) and to determine the types of health and aged care services that may be needed in the future. This updated Plan (the 2019 Plan) forms one of the inputs to the Initial and Detailed Business Cases which are being developed for a new Multipurpose Health Service Facility on Norfolk Island.

The 2019 Plan sets out a sustainable strategy for the development of health services on Norfolk Island. A 'sustainable service' has been defined as services that are delivered in a way that is effective, safe, people-centred, timely, integrated and efficient.[14]

The 2019 Plan provides an overview of the necessary health services to inform the health infrastructure requirements for the redevelopment of the health and aged care facilities on Norfolk Island.

The information provided in the 2019 Plan is sourced from previous studies and reports investigating the health and aged care requirements for the Norfolk Island community. A detailed account of the documents reviewed and the data analysed is provided in Appendix A. This information has been complimented by consultations with the Norfolk Island community and service providers. A list of the stakeholders consulted is provided in Appendix B. There are a range of organisations that have previously undertaken health service planning on Norfolk Island. The reports from these prior studies were also used to understand the history and context of service provision on Norfolk Island. Appendix C provides a chronology of the health service planning on Norfolk Island.

Overview of Norfolk Island governance

Norfolk Island has been an Australian territory under the Commonwealth of Australia since 1 July 1914. Prior to this date, Norfolk Island had been under the administration of New South Wales (NSW). Norfolk Island is one of Australia's oldest territories and is of importance to the nation as a convict settlement spanning the era of transportation to eastern Australia from 1788-1855.[15] In 2010, Norfolk Island was included on the World Heritage List as part of the Australian Convict Sites inscription.

Up until 2015, Norfolk Island operated as a substantially self-governing territory under the *Norfolk Island Act 1979*. The legislation represented a mix of Commonwealth laws and those passed by the elected Legislative Assembly.

[14] Organisation for Economic Cooperation and Development 2018. Delivering Quality Health Services: A Global Imperative.
[15] Department of Infrastructure, Transport, Cities and Regional Cities, Norfolk Island Overview. Retrieved from: http://www.regional.gov.au/territories/norfolk_island/fact-sheets/Norfolk-Island-overview.aspx.

In May 2015, the *Norfolk Island Amendment Act 2015* and related Acts, came into effect. This allowed the Minister for Territories, Local Government and Major Projects to assume responsibility for many decisions affecting Norfolk Island.

As a result, mainland taxation, social security, immigration, biosecurity and customs were extended to Norfolk Island from 1 July 2016. Since this time, the Australian Government has delivered and funded these services.

In line with the approach to Australia's other external territories taxation arrangements, Norfolk Island is exempt from indirect taxes, including goods and services tax, luxury car tax, wine equalisations tax, excise duties and customs.

Overview of Norfolk Island health service administration

Before Norfolk Island came under the Australian Government's administration in 2016, health services on Norfolk Island were delivered and administered by the Norfolk Island Hospital Enterprise (NIHE). In 2014, the NIHE applied for accreditation with the National Safety and Quality Health Service Standards (NSQHS standards) and engaged the Australian Council on Healthcare Standards (ACHS) to do an accreditation survey of the facilities. The ACHS accreditation survey identified a number of opportunities to improve health service delivery on Norfolk Island and prompted the NIHE to close the operating suite.[16]

In 2016, the Norfolk Island Health and Residential Aged Care Service (NIHRACS) took over the operation of the Norfolk Island Multipurpose Health Service facility (previously named the Norfolk Island hospital facility) and began working with the NSW Government, through South Eastern Sydney Local Health District (SESLHD) to improve the management and delivery of services on Norfolk Island. This work included addressing a number of the opportunities for improvement identified in the ACHS survey. The arrangement between NIHRACS and SESLHD is scheduled to end in 2021, following the NSW Government's decision to cease the delivery of health services on Norfolk Island.

NIHRACS continues to deliver healthcare out of the Norfolk Island Multipurpose Health Service facility as a non-accredited facility but intends to apply for accreditation with the NSQHS standards in the future. Most states and territories in Australia (with the exception of the Australian Capital Territory) mandate engagement with the NSQHS standards.[17] This indicates that NIHRACS' compliance with the NSQHS standards would bring the Norfolk Island Multipurpose Health Service facility into alignment with the regulation of health safety and quality in other Australian states and territories.

In addition to hospital services, Norfolk Island citizens and permanent residents also have access to the Medicare Benefits Schedule (MBS) and the Pharmaceutical Benefits Scheme (PBS) for primary health care and pharmaceuticals funded by the Australian Government.[18]

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[16] Norfolk Island Legislative Assembly (NILA) 2014. 14th NILA Hansard.

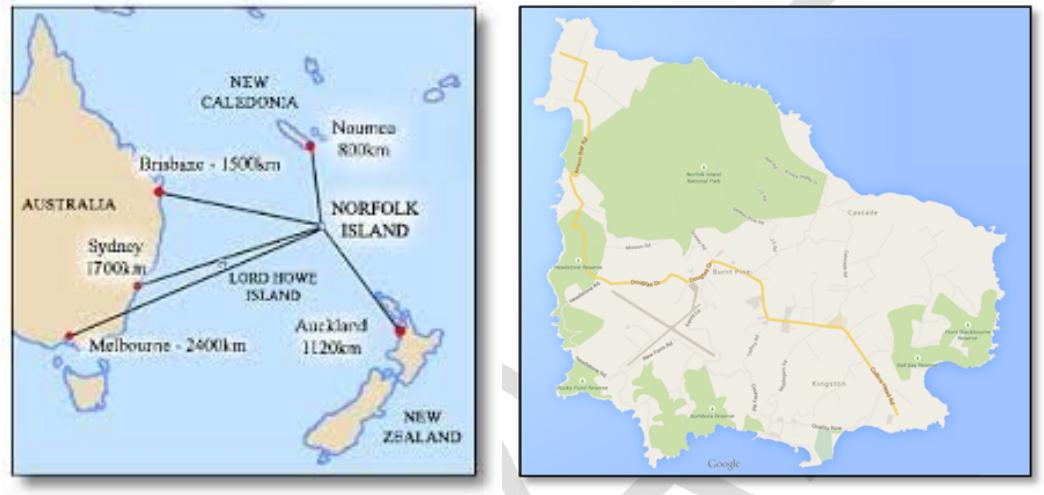
[17] In September 2011, all Australian Health Ministers endorsed the NSQHS Standards and a national accreditation scheme. Since January 2013 the majority of public hospitals across Australia have been required to be accredited to the NSQHS Standards by way of a formal Council of Australian Governments agreement (with the exception of the Australian Capital Territory).

[18] Department of Human Services 2019. Enrolling in Medicare. Information last updated August 2019. Retrieved from: https://www.humanservices.gov.au/individuals/subjects/how-enrol-and-get-started-medicare/enrolling-medicare#whocan.

Location

Norfolk Island is located approximately 1,600km north east of Sydney and 1,456km east of Brisbane. It is approximately 8km long and 5km wide and includes two small, uninhabited islands (Nepean Island and Phillip Island) which are located south of the Norfolk Island mainland. A one-way commercial flight from Norfolk Island to Sydney takes approximately three hours. There are at least two flights from Sydney and Brisbane to Norfolk Island each week.

Figure 2: Map of Norfolk Island location



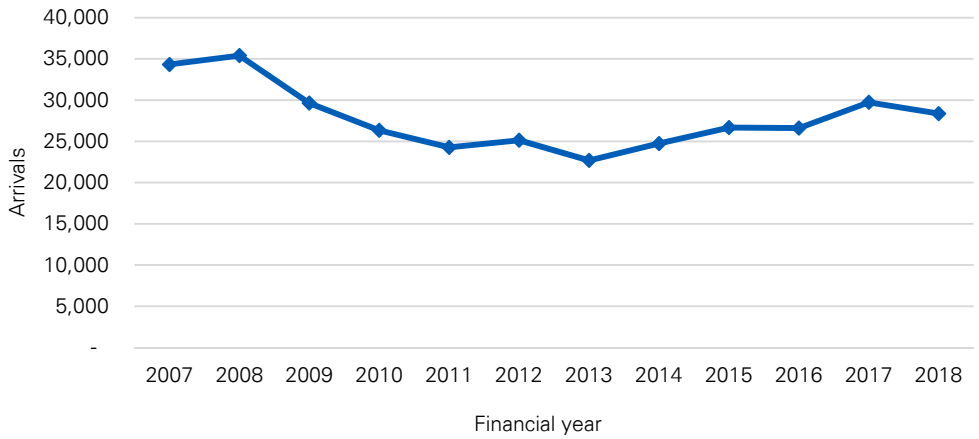
Source: KPMG 2019.

Local industries and employment

Tourism accounts for a large proportion of the Norfolk Island economy but steadily declined from 2007-08 to 2012-13, with annual increases in subsequent years and a slight decline in 2017-18 (Figure 3).[19]

[19] Joint Standing Committee 2014. Same Country: different world – the future of Norfolk Island. Report of the Joint Standing Committee on the National Capital and External Territories' Inquiry into Economic Development on Norfolk Island.

Figure 3: Norfolk Island annual tourist arrivals 2006-07 to 2017-18



Source: Norfolk Island Regional Council 2019, NI Tourism. Retrieved from: http://www.norfolkisland.gov.nf/tourism-and-economic-development/ni-tourism.

Like other services, the *Fair Work Act 2009* was amended to ensure that Norfolk Island was included. This amendment became effective on 1 July 2016. Reforms through the *Fair Work Act 2009* include the National Minimum Wage, National Employment Standards, modern awards and an unfair dismissal framework.

2. Health needs analysis

This section of the report provides an overview of the demography and health needs of the Norfolk population based on publicly available information including publicly available data, epidemiology studies and consultation with the community (refer Appendix A and B for data sources). The analysis presented in this section is used to assess both the current health of the population and the future health needs. This analysis is used later in the report to determine the health service and infrastructure requirements for Norfolk Island (refer Section 6 and 7 respectively).

Population description

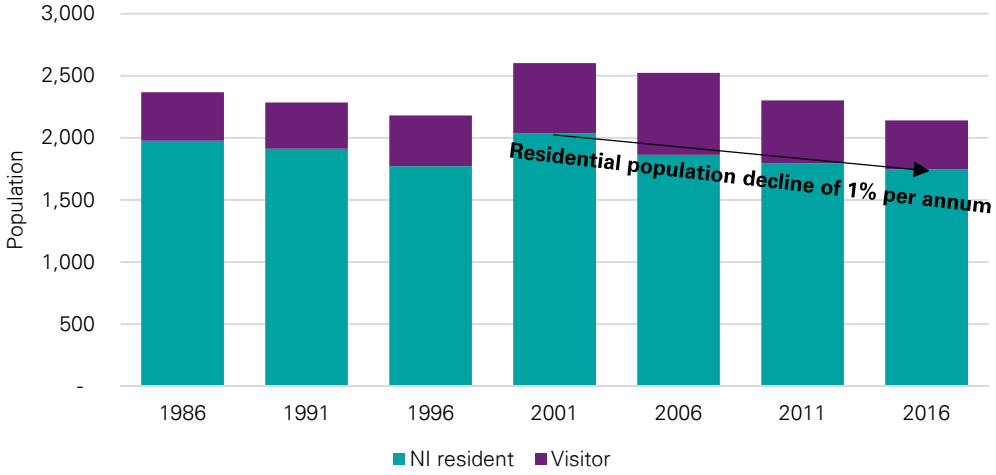
Historical data is available which describes the size and characteristics of the Norfolk Island population over time. The Australian Bureau of Statistics (ABS) included Norfolk Island in the 2016 Australian Census. Data prior to that time was collected by the Norfolk Island Government using similar methods to the ABS Census. This provides a long time series of data for analysis purposes.

The 2016 Census recorded a total Norfolk Island population of 2,140 people, comprising a residential population of 1,748 people (82 per cent) and a visitor population of 392 people (18 per cent).

This is a decline in the residential population of 289 people (16 per cent) since 2001 and has been declining at a rate of 1 per cent per annum (Figure 4). It is noted that 2001 was a high point for the residential population in recent decades, significantly higher than the previous 1996 population and reversing the historical population decline from 1986.

Of the 2016 resident population, 6 per cent were not residents on Norfolk Island 1 year previously and 12 per cent were not residents on Norfolk Island 5 years previously. Of the migrated residents over the previous 5 years, 44 per cent were from NSW and 30 per cent from Queensland (QLD).

Figure 4: Norfolk Island resident and visitor population 1986-2016



Source: Administrator of Norfolk Island (ANI) Census 2001-2011, ABS Census 2016.

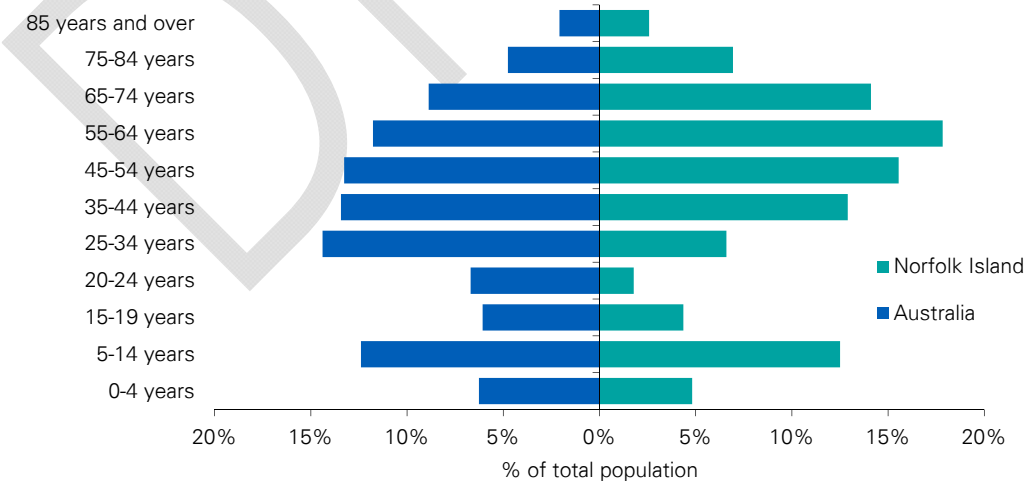
Age profile

The age profile of Norfolk Island residents has some significant differences to the average Australian population with:

- a larger proportion of adults aged 55 years and older, 41 per cent compared with 27 per cent of the Australian population; and
- a smaller proportion of people aged 15-34 years, 13 per cent compared with 27 per cent of the Australian population (Figure 5).

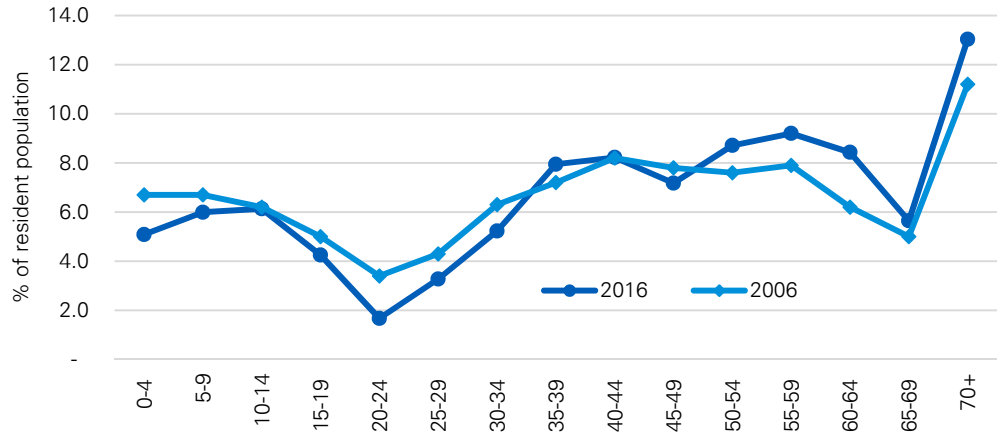
The proportion of residents in older age groups is increasing with 45 per cent of residents aged over 50 years in 2016 compared to 38 per cent in 2006 (Figure 6). The higher proportion of residents in older age groups is an important factor to consider when planning for future health services, as health service usage typically increases as age advances.

Figure 5: Population distribution by age group, Australia and Norfolk Island 2016



Source: ABS Census 2016.

Figure 6: Proportion of Norfolk Island residential population by age group 2006 and 2016



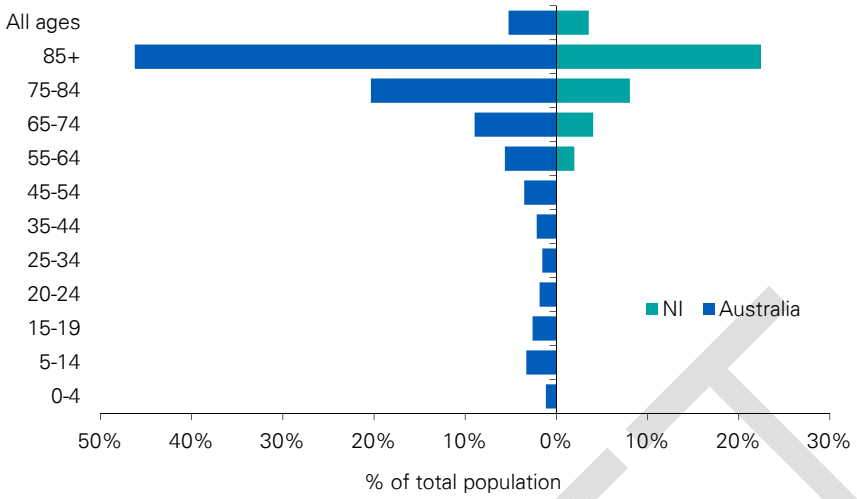
Source: ABS Census 2016, Norfolk Island: Census of Population and Housing – 2006.

There are several core community characteristics relating to health status that are measured through the population Census data. This enables a comparison to be made between the population of Norfolk Island and the overall Australian population:

- There is a low proportion of Norfolk Island residents across all age groups that report requiring assistance with core activities of living. This includes assistance with self-care, mobility or communication because of a disability, long-term health condition (lasting six months or more) or old age. In particular only 22 per cent of residents aged 85 years or older require assistance, compared with 47 per cent for all Australians (Figure 7).
- There are high rates of community involvement with a higher proportion of the population providing unpaid assistance to a person with a disability – 13 per cent compared with 11 per cent for the Australian population (Figure 8), and a high proportion of the population that provides Voluntary Work for an Organisation or Group – 35 per cent compared with 19 per cent for the Australian population (Figure 9). These high rates of community participation are highly desirable in maintaining population health (see Box 1).
- A population dependency ratio is commonly used in health, social and economic planning contexts to illustrate the dependency of the population on the working population.[20] Figure 10 illustrates the increase in the aged dependency ratio relative to the Australian population and peer communities since 2001, indicating increasing financial stress on the economy. This effect is compounded by the declining absolute numbers of working age residents.

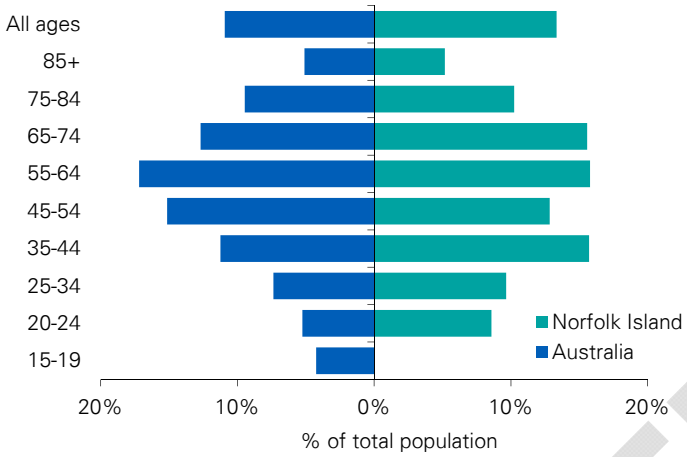
[20] The Population Dependency Ratio is an age-population ratio of those typically not in the labour force (Aged 0-14 or 65+- the dependent part) and those typically in the labour force (Aged 15-64 - the productive part). It is used to measure the pressure on productive population. As the ratio increases there may be an increased burden on the productive part of the population to maintain the upbringing and pensions of the economically dependent. This results in direct impacts on financial expenditures on things like social security, as well as many indirect consequences. The Aged Dependency Ratio is the ratio of people aged 65+ to the population aged 15-64.

Figure 7: Proportion of the population by age that has a core activity need for assistance



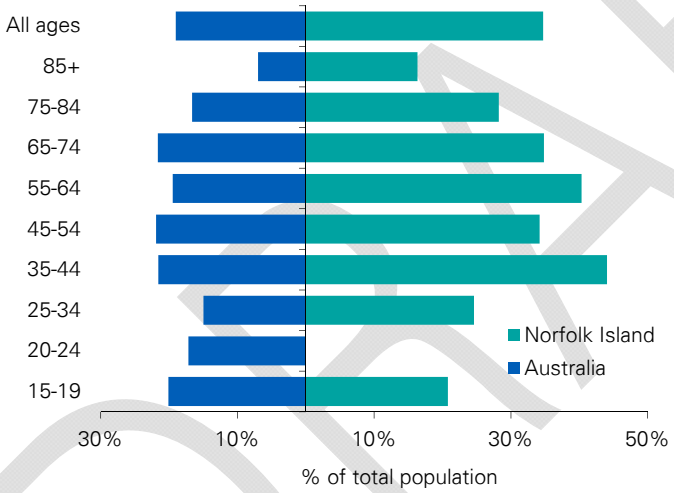
Source: ABS Census 2016.

Figure 8: Proportion of population aged 15 years or older that provides unpaid assistance to a person with a disability



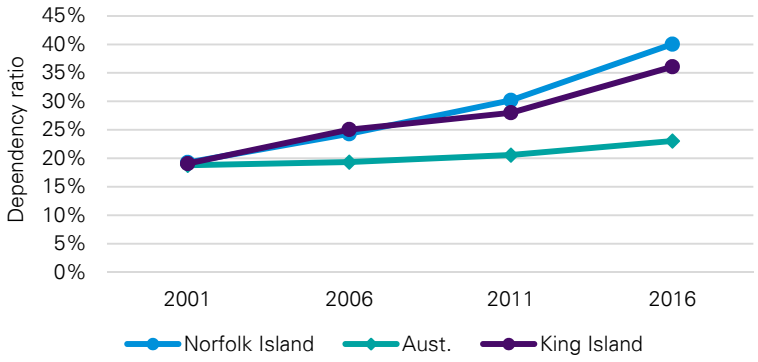
Source: ABS Census 2016.

Figure 9: Proportion of the population aged 15 years or older that provides voluntary work for an organisation or group



Source: ABS Census 2016.

Figure 10: Norfolk Island Dependency Ratio (aged), 2001-2016



Source: ANI Census 2006 and 2011, ABS Census 2016.

Box 1: Community involvement and health outcomes

A healthy community is one in which members are in an environment that promotes productive, rewarding and socially inclusive lives.

Good health requires conditions which allow residents to pursue personal goals, enjoy fulfilling relationships and take part in their community:

- Social networks can have an impact on health. One large study showed that over seven years, those with adequate social relationships had a 50 per cent greater survival rate compared with individuals with poor social relationships.
- Social support is particularly important in increasing resilience and promoting recovery from illness. Social capital can also improve the chances of avoiding lifestyle risks.
- Lack of social supports and chronic loneliness produces long-term damage to health via raised stress hormones and poorer immune function. Loneliness also makes it harder to self-regulate behaviour and build willpower and resilience over time, leading to unhealthy behaviours.

Source: Kings Fund, 2013.

Population projections

There has been a historical decline in the Norfolk Island population, with the residential population declining from 2,037 in 2001 to 1,743 in 2016, a decline of approximately 1.4 per cent per annum.[21]

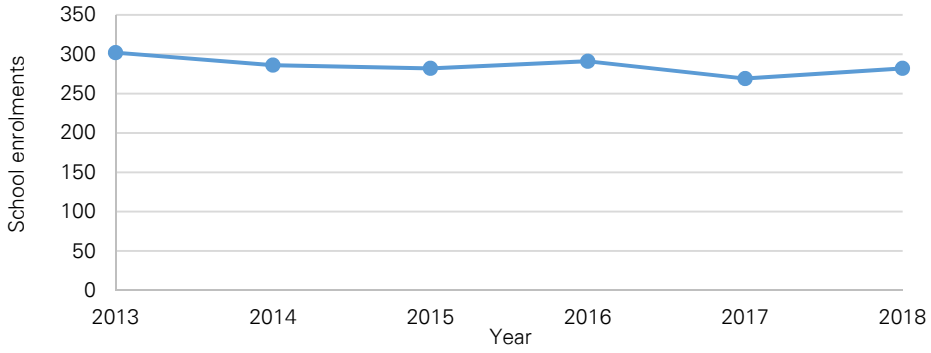
Forecasting a future population is a complex task. It requires an understanding of social, environment and economic factors and an estimation as to how these may change in the future.

One of the factors to consider in developing population projections for Norfolk Island is the extension of mainland social security, migration, customs and health arrangements in 2016. The extension of these services aimed to improve access for the Norfolk Island community and to provide services comparable to regional communities on the mainland.

The impact of improving access to services and other factors on the overall population size is unclear, however, some indicators point to continued low population growth. These indicators include:

- airline passenger arrivals have increased 4.1 per cent per annum since 2013 with an increase of 5,700 visitors and the proportion of passenger arrivals that are visitors has remained stable at 84-86 per cent (Figure 3). This increase is despite the cessation of Air New Zealand flights from Auckland in mid-2017;
- Norfolk Island Central School (NICS) enrolments have remained stable at approximately 300 students per year (Figure 11); and
- The number of residential building approvals has remained stable at between 10-20 buildings per year.[22]

Figure 11: Norfolk Island Central School enrolments 2013-2018



Source: NICS, NSW Minister of Education.

To inform the planning of services, three population scenarios have been developed to understand the impact on services under a range of conditions (Figure 12):

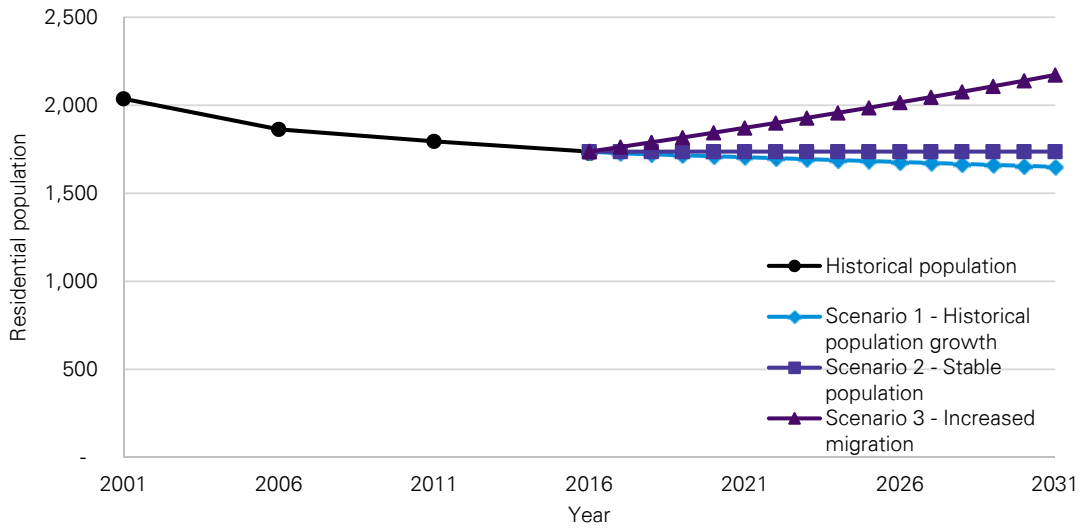
- Scenario 1: A continuation of the historical growth rate with a decline in the residential population of 1.4 per cent per annum;
- Scenario 2: A continuation of the current residential population size of 1,748 people; and

[21] ANI Census 2001-2011, ABS Census 2016.
[22] Sourced from Norfolk Island Regional Council (NIRC) Annual Reports: www.norfolkisland.gov.nf/reports-annual-reports.

- Scenario 3: A high growth scenario with a 1.5 per cent per annum increase in residential population through migration and natural increases. A 1.5 per cent per annum increase is used in this report as this is consistent with the highest non-metropolitan regional growth rate for Australian states and territories from 2012-2017.

Refer to Appendix D for detail on the scenario populations by age group.

Figure 12: Norfolk Island population growth scenarios



Source: KPMG 2019.

Cultural and linguistic diversity

The cultural diversity of the Norfolk Island community is a valuable part of Norfolk Island's heritage.

The method by which cultural diversity has been assessed in the Census has changed from 2011 to 2016. The format and design of the 2011 Norfolk Island Census ancestry question aimed to capture information specifically about Pitcairn ancestry. In comparison, the 2016 ABS Census' intention was to capture up to two ancestries that the person most affiliates with.

Based on results from the 2016 ABS Census the Norfolk Island community has a distinct cultural heritage with its composition reflecting elements of its settlement history, including:

- 22.8 per cent of the population identifying as Australian;
- 22.4 per cent of the population identifying as English;
- 29.6 per cent of the population reporting as Pitcairn ancestry; and
- 22.1 per cent born on Norfolk Island, 39.1 per cent born elsewhere in Australia and 17.6 per cent born in New Zealand.[23]

Continuation of the cultural heritage is important to elements of the community including recognition of Norfolk Island residency and location of birth.

[23] ABS 2017. Fact Sheet: Understanding ancestry in the Norfolk Island population.

Socio-economic status

There is a well-established link between socio-economic status and levels of health and wellbeing, with less advantaged communities having high rates of chronic health care conditions.[24]

There have been many assessments of the socio-economic status of the Norfolk Island community prior to the governance changes in 2015 and 2016. The 2014 '*Same country: different world – the future of Norfolk Island'* report, stated that economic activity had deteriorated in recent years,[25] with families reporting their experiences of "doing it tough" in an economic environment of increasing job insecurity and a downturn in the tourism industry.[26]

In 2012, consultants ACIL Tasman described the economic downturn as relatively severe and an economic depression. There was strong evidence that the post-Global Financial Crisis economic downturn impacted on the quality of life for Norfolk Islanders. For example, they were further impacted by the high cost of living which had been increasing at a faster rate than on the mainland. Even the absence of income tax did not disguise the financial stress the Norfolk Island population experienced on a day-to-day basis.[27]

Prior to 2016, traditional measures of socio-economic status such as the Socio-Economic Indexes for Areas (SEIFA) were not measured on Norfolk Island as the community had not been included in the ABS data set. The SEIFA Index of Relative Socio-economic Disadvantage (IRSD) is a general socio-economic index that summarises a range of information about the economic and social conditions of people and households within an area. SEIFA IRSD was calculated for the first time in 2016 and enables a comparison to the Australian community.

Communities are measured across Australia, with the Australian average allocated a score of 1000. Communities with scores less than 1000 are on average relatively more disadvantaged than the average Australian population. Communities with scores greater than 1000 are relatively less disadvantaged.

A low score indicates relatively greater disadvantage in general. For example, an area could have a low score if there are many low income households; many people with no formal academic qualifications; or many people in low skill occupations.

These data illustrate that there is variation in the level of disadvantage across Norfolk Island with some areas in the most disadvantaged 30-40 per cent when compared to the rest of Australia, and other areas aligning with the least disadvantaged 30 per cent of Australia.

Other measures to assess socio-economic disadvantage include the Index of Community Socio-Educational Advantage (ICSEA) produced by the Australian Curriculum, Assessment and Reporting Authority.

The NICS community has an ICSEA of 1025 compared with the level of 1000 for the total Australian community. This illustrates that the school community is marginally more advantaged than the average school community, with a smaller proportion of families in the bottom half of ICSEA scores (Table 3).

[24] Australian Institute of Health and Welfare (AIHW) 2018. Australia's health 2018. Australia's health series no. 16. AUS 221. Canberra.
[25] Joint Standing Committee 2014, p. 8.
[26] Calvert and Connolly 2012. Review of Existing Child and Family Support Services on Norfolk Island
[27] ACIL Tasman 2012. Norfolk Island Economic Development Report, 25.

Table 3: Norfolk Island Central School, distribution of students Index of Community Socio-Educational Advantage score in 2017 compared with the Australian average distribution

	ICSEA	Bottom quarter	Middle quarters		Top quarter
NICS distribution	1025	13%	34%	31%	22%
Australian Distribution	1000	25%	25%	25%	25%

Source: Australian Curriculum, Assessment and Reporting Authority, Norfolk Island Central School, Norfolk Island, NSW, My School webpage, www.myschool.edu.au/school/42158/profile/2017.

Health of the population

This section of the report provides an overview of the health of the Norfolk Island population based on publicly available information, data from NIHRACS, the Norfolk Island Regional Council (NIRC) and consultation with the community (refer sources in Appendix A and B). An analysis of the historical needs of visitors to Norfolk Island is also provided, because this cohort will continue to require health services on Norfolk Island to address emergent needs. Much of the information presented below was previously provided in the 2015 Plan. This has been reproduced in this report as no new information has been developed since that time (refer to Appendix E for progress assessment against the 2015 Plan).

In order to provide some context around the relative health needs of the Norfolk Island population, a comparison has been made to other regions including the rest of Australia and, where data is available, NSW or Outer Regional and Remote areas of NSW. Outer Regional and Remote areas of NSW was chosen as a comparator because this region has a similar demographic profile to Norfolk Island.

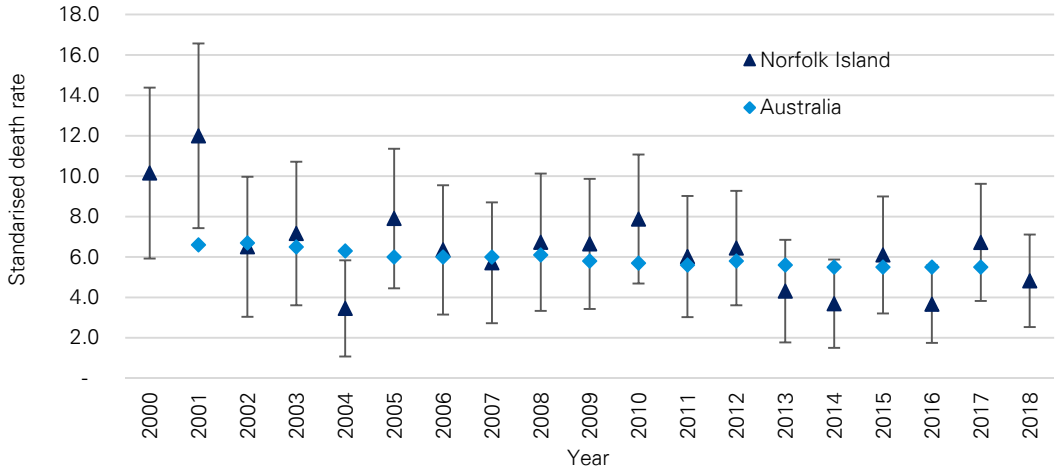
Death rates

Analysis of the death rates provides an indication of whether there are ongoing mortality risks on Norfolk Island and the extent to which the population health is poor. The analysis shown in Figure 13 overleaf includes a 95 per cent confidence interval which indicates the degree of certainty around the extent to which the death rate for Norfolk Island differs when compared to the average Australian community. Given the small population size of the Norfolk Island community, the confidence intervals are wide and show little variation between the death rate for the Norfolk Island community and the rest of Australia. The only years in which there is a notable difference between the death rates for Norfolk Island and Australia is in 2001, when the Norfolk Island death rate is higher than the Australian, and 2004, when the death rate for Norfolk Island is lower.

This analysis indicates that based on the data available there are no significant mortality risks for the community living on Norfolk Island when compared to the rest of Australia. However, interpretation of this analysis should be made with caution. In some cases, it has been previously reported that rural death rates may be impacted by the frail and aged migrating to larger, less remote centres in order to access health and other services (including aged care) leaving behind healthier individuals who live longer.[28] It is not known whether this has historically occurred on Norfolk Island.

[28] AIHW 2017. Rural and remote health. Retrieved from: https://www.aihw.gov.au/reports/rural-health/rural-remote-health/contents/rural-health.

Figure 13: Age standardised mortality rate (deaths per 1000 people) for Norfolk Island (2000-2018) and Australia (2001-2017), with 95% confidence intervals for Norfolk Island (directly age standardised).[29] [30]

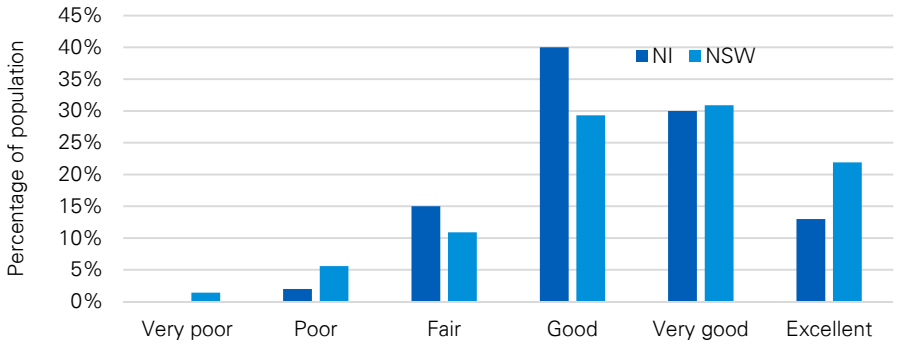


Source: KPMG analysis of NIRC Registry of Deaths, ANI Census, ABS Census and ABS Deaths data. Note that at the time of writing the death rate for Australia in 2018 has not yet been published publicly.

Self-reported health status

The self-reported health status of the Norfolk Island population was reported as "good" to "excellent" by 83 per cent of the population compared with 82 per cent of the NSW total population. While these overall levels are similar, fewer Norfolk Island people (13 per cent) reported "excellent" health compared to the NSW population (22 per cent) (Figure 14).

Figure 14: Self-reported health status for Norfolk Island and New South Wales



Source: NIHE - Health Services Survey Report 2015 (R&S Muller Enterprise Pty Ltd) and NSW Ministry of Health, Centre for Epidemiology and Evidence. HealthStats NSW.

[29] The Standardised Death Rate has been calculated using the direct standardisation method and the Australian 2001 population as the standard population. Norfolk Island deaths include all registered deaths on Norfolk Island, as such this will exclude deaths of Norfolk Islanders that occurred in other states and territories and include deaths of people normally resident elsewhere. Deaths are attributed to a year based on the date that the registration was included in the register.

[30] Direct standardisation takes the age rates in the Norfolk Island population and computes the expected rate if the population of interest had the same age distribution as the Australian population. These rates are then standardised by taking a weighted average across the age groups.

The survey reported that 63 per cent of the overall Norfolk Island population were overweight or obese which is higher than the equivalent NSW population (53 per cent), but similar to the outer regional and remote areas of NSW (65 per cent). Of particular note is the 78 per cent of the male population reporting being overweight or obese – significantly higher than the comparator population (64 per cent).

Figure 15: Proportion of the population that are overweight or obese – Norfolk Island and New South Wales

Source: NIHE - Health Services Survey Report 2015 (R&S Muller Enterprise Pty Ltd) and NSW Ministry of Health, Centre for Epidemiology and Evidence. HealthStats NSW.

The Norfolk Island population reported higher levels of "High" to Very High" psychological distress compared to the NSW population (13 per cent compared with 9.8 per cent), but similar levels to the Outer Regional and Remote areas of NSW (Figure 16). The rationale for this higher level is not clearly known but may relate to perceived poor economic conditions and geographic isolation factors.[31]

Figure 16: Proportion of the population with reported high to very high level of psychological distress (K10 score) – Norfolk Island and New South Wales

Source: NIHE - Health Services Survey Report 2015 (R&S Muller Enterprise Pty Ltd) and NSW Ministry of Health, Centre for Epidemiology and Evidence. HealthStats NSW. Note: K10 is the Kessler Psychological Distress Scale and is a widely used, simple self-report measure of psychological distress.

[31] People in rural and remote areas face a range of stressors unique to living outside major cities. These include a greater prevalence of some chronic conditions and disability and generally poorer health. Rates of smoking and risky drinking are also higher. There are fewer employment opportunities leading to lower incomes and less financial security (National Rural Health Alliance Fact Sheet 2017: Mental Health in Rural and Remote Australia).

Genetic impacts on health

The Norfolk Island community has participated in a number of studies investigating the genetic determinants of disease given that a large proportion of the population have common genetic heritage as descendants of The Bounty mutineers and from Polynesian Islanders. Many of the studies have been undertaken through Griffith University and have documented that:

- The proportion of Polynesian ancestry in the present-day individuals was found to significantly influence total triglycerides (fat found in blood), body mass index and blood pressure. For various cholesterol traits, the influence of ancestry was less marked but overall the direction of effect for all cardiovascular disease related traits was consistent with Polynesian ancestry conferring greater cardiovascular risk.[32]
- Up to 17 per cent of the population had a previous diagnosis of high blood pressure, with 25 per cent of those sampled recording high blood pressure levels. Additionally, 40 per cent of the population reported a family history of hypertension.
- The known prevalence of diabetes was reported at similar levels to the Australian community, but a high number of undiagnosed cases were identified in the sampled population.[33]
- The prevalence of blindness and visual impairment in the Norfolk Island population is low, especially amongst those with Pitcairn Island ancestry.[34]

Table 4 below outlines the levels of several of the risk factors for cardiovascular disease within the Norfolk Island population and comparisons to the Australian community. This data was obtained from a larger self-selected sample than that used in the Muller study (600 adult participants compared with 335) and indicates a higher level of some cardiovascular risk factors including family history of heart disease and current heart disease. In contrast, fewer Norfolk Islanders reported sedentary lifestyles compared with the general Australian population.

Table 4: Prevalence of cardiovascular disease factors in Norfolk Island and Australian populations (2009)

Risk factor	Factors leading to increased cardiovascular disease risk	Proportion of Norfolk Island with increased risk	Proportion of Australian population with increased risk (AIHW)
Body Mass Index	> 25	57%	63%
High Blood Pressure	Diagnosed hypertension	17%	34%
Smoker	Current smoker	22%	12%
Sedentary	Exercise < once per week	20%	56%
Heart disease	Existing or experienced	7%	4%
Genetic predisposition	Family history of heart disease	61%	52%
Cholesterol:HDL ratio	>4	49%	50%

Source: Reproduced from Bellis (2009) Griffith University.

[32] Blangero et al. 2009. Legacy of mutiny on the bounty: Founder effect and admixture on Norfolk Island. Nature Publishing Group. http://dx.doi.org/10.1038/ejhg.2009.111.
[33] Bellis 2009. Use of the isolated Norfolk Island population for cardiovascular disease risk trait genetic analysis. Griffith University.
[34] Sherwin et al. 2011. Prevalence of Chronic Ocular Diseases in a Genetic Isolate: The Norfolk Island Eye Study (NIES). Informa Healthcare.

Health service utilisation

This section provides an overview of the utilisation of health services, based on the data available. Whilst the utilisation data reflects historical service demand, it is also a good proxy for current and future health need. The recent introduction of Norfolk Island to Australian health care data collections and the time lag in analysis, limits the comparisons that can be made on the utilisation of health care services on Norfolk Island with other jurisdictions. Table 5 below shows that the average length of stay for acute hospital services on Norfolk Island has decreased from 4.5 days to 3.9 days between 2013-14 and 2017-18. The average number of occupied beds has also decreased from 3.4 beds to 2.2 beds. At the same time, the number of occupied residential aged care beds has increased, from 5.6 beds in 2013-14 to 12.5 beds in 2017-18. This indicates that the need for residential aged care services on Norfolk Island has increased over the past five years while the relative demand for acute hospital services has decreased. This gradual decrease in the demand for acute hospital services may have resulted from a reduction in the availability of these services on Norfolk Island rather than a reduction in need for these services.

Hospital and aged care services

Table 5: Norfolk Island population utilisation of Norfolk Island health services

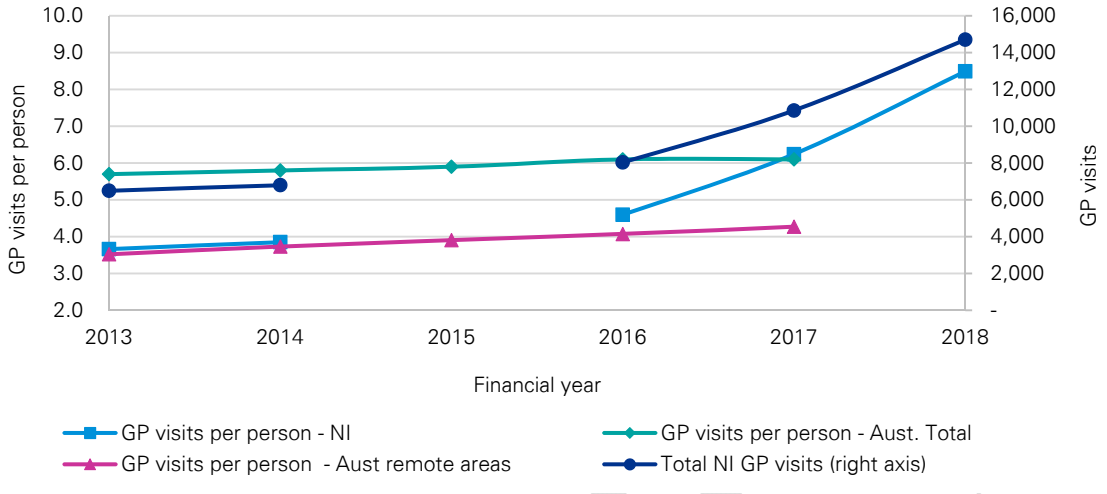
Type	2013-14 activity	2017-18 activity	Norfolk Island rate per 1,000 people (2017-18)	Comparator rate
Acute hospital services: average occupied beds / average length of stay	3.4 beds / 4.5 days	2.2 beds / 3.9 days	460 bed days	1,171 bed days per 1,000 people[35]
Residential aged care beds - average occupied	5.6 beds	12.5 beds	43.3 beds	80 beds per 1,000 people aged 70+[36]

Source: KPMG analysis of NIHE and NIHRACS data.

Figure 17 overleaf shows the historical utilisation of General Practitioner (GP) services. In comparison to other Australian areas, the Norfolk Island community currently has a higher utilisation of GP services (8.5 per person) than the average Australian rate (6.1 per person) and remote communities (4.3 per person). This may be because the community have less access issues (i.e. Norfolk Island is small and there is not much competition for providers) or because the community members require more support with their conditions. The data available did not enable identification of conclusive reason for the relatively higher utilisation.

[35] AIHW 2015. Admitted patient care 2013–14: Australian hospital statistics. Health services series no. 60. Cat. no. HSE 156. Canberra: AIHW.
[36] Department of Social Services 2017. Guide to aged care law. Retrieved from: http://guides.dss.gov.au/guide-aged-care-law/3/3/2.

Figure 17: Use of general practitioner services on Norfolk Island 2013-2018 – number of attendances and per capita rates for Norfolk Island, Australia and Australian remote areas



Source: NIHE, NIHRACS, AIHW.

Note: Data on Norfolk Island GP visits for 2015 was not available

Allied health and dentistry services

The allied health services available on Norfolk Island include counselling, with a clinical psychologist and physiotherapy. There is also a dental service available (refer Section 4 for a detailed description of the supply of these services). Table 6 below summarises the service utilisation for these services.

There has been variation in the utilisation of the counselling service but given that a relatively high proportion of the Norfolk Island community's self-reported levels of psychological distress, there is likely to be an ongoing need for clinical psychologist and counselling services. There has been significant growth in the volume of physiotherapy services. This is primarily due to the ageing population and their need for support with rehabilitation. The utilisation of dental services has varied over the last four years, predominantly due to variations in the supply of appropriate dentists. There has also been growth in the use of services over the last four years. Given the projected increase in the aged population and associated chronic disease, it is likely that there will continue to be an ongoing need for dental services.[37]

Table 6: Norfolk Island Allied health services and dentistry (number of episodes) 2015-2018

Service	2015	2016	2017	2018	Growth 2015-18
Counsellor	697	855	693	617	-80
Physiotherapy	1,727	1,796	4,404	4,763	3,036
Dental	1,083	1,194	724	1619	536

Source: NIHRACS.

Note: No data provided for FY18 Radiology.

[37] People with chronic conditions are more likely to have oral health issues and require ongoing dental services (AIHW 2012. Chronic Disease and Oral Health, Research Report 56. Retrieved from: https://www.aihw.gov.au/reports/dental-oral-health/chronic-conditions-and-oral-health/contents/table-of-contents).

Tourism and health care need

Tourism contributes significantly to the Norfolk Island community and economy, with this sector experiencing some growth in recent years.

The tourist population, while transient, represents some demand for health care services. In particular, visitors to Norfolk Island usually require the following services:

- access to over the counter and some prescription medications;
- primary care services for routine health issues; and
- higher level care for acute onset illness or injury.

Table 7 provides a summary of the proportional use of some services by visitors. This illustrates a low utilisation of general practice but a higher use of more acute services.

Table 7: Utilisation of selected health care services by visitors to Norfolk Island

Service type	% of total
General practice patients	1.0%
Acute hospital admission	25.1%
Acute hospital occupied bed days	9.3%
Medical evacuation to mainland service	21%

Source: NIHRACS data.

Health needs analysis summary

This section provides an overview of both the projected population and the health needs of the population. The analysis of death rates does not indicate that the community on Norfolk Island is any more (or less) healthy than other Australian communities. The data on self-reported health status indicates that whilst the majority of the Norfolk Island community consider themselves to be healthy, there are a relatively high number of obese people and relatively high proportion of people who report feeling stressed. This analysis, combined with the genetic propensity for Norfolk Islanders to develop heart disease, the high rate of smoking and the fact that the community has a high proportion of elderly people, indicates that there may be a future need for a range of health services including preventative health measures, chronic disease management (e.g. for diabetes and heart disease), drug and alcohol support (e.g. for tobacco), mental health support and residential aged care or other home supports for the elderly. The analysis above also indicates that there will continue to be a need for acute services to meet the emergent needs of both residents and visitors to Norfolk Island. The next section of the report describes the Norfolk Island Multipurpose Health Service facility before describing the network of services available on Norfolk Island (refer Section 4).

3. Existing facility profile

This section of the report outlines the Norfolk Island Multipurpose Health Service facility which, when combined with the description of the network of services available (refer Section 4), enables a holistic picture of the health system (i.e. services, infrastructure, workforce and clinical supports) currently available on Norfolk Island. The analysis in this section of the report will later be compared with the health service needs outlined in Section 2, to determine the enabling infrastructure required to deliver the future planned services (refer Section 6 and Section 7).

Delivering quality, sustainable health care requires a combination of the appropriate infrastructure, workforce and clinical supports. Currently, NIHRACS delivers health and aged care services out of the Norfolk Island Multipurpose Health Service facility as part of the Australian Government's Multipurpose Service (MPS) program. The MPS program is designed to provide small regional and remote communities with improved access to a mix of health and aged care services that meet community needs through flexible use of funding and infrastructure.[38]

The existing infrastructure used by NIHRACS is aged and does not meet current Australasian Health Facility Guidelines (AHFG) with regards to best practice service design, patient flows and size of rooms. The AHFG provide advice on flexible facility responses to allow for the delivery of current and emerging models of care.[39] Compliance with the AHFG indicates good health facility design and the ability for facilities to support contemporary clinical practice.

The Norfolk Island Multipurpose Health Service facility is yet to achieve accreditation against the NSQHS standards. This lack of accreditation is a barrier to expanding the volume and type of services that can be delivered on Norfolk Island. The Norfolk Island Hospital (operated by the NIHE) participated in an accreditation survey in 2014 and the ACHS identified a number of opportunities for improvement which NIHRACS have been working to address since taking over the operation of the Norfolk Island Multipurpose Health Service facility (previously named the Norfolk Island Hospital facility) in 2016. NIHRACS intends to apply for accreditation against the NSQHS standards in the future.

The lack of compliance with the AHFG impacts on the ability of NIHRACS to implement best clinical practice models of care and provide a homelike environment to the aged residents. The

[38] Department of Health 2019. Aged Care Funding Instrument (ACFI) User Guide. Retrieved from: https://agedcare.health.gov.au/funding/aged-care-subsidies-and-supplements/residential-care-subsidy/basic-subsidy-amount-aged-care-funding-instrument/aged-care-funding-instrument-acfi-user-guide.
[39] Australasian Health Infrastructure Alliance 2018. Australasian Health Facility Guidelines. Retrieved from: https://healthfacilityguidelines.com.au/australasian-health-facility-guidelines.

residential aged care facilities in particular lack the availability of single rooms and privacy for residents and family.

The existing Norfolk Island Multipurpose Health Service facility includes infrastructure for a general practice, emergency department, acute overnight beds, residential aged care, dental services and other allied health services. The facility has a total of 24 physical beds and associated care areas, including 14 residential aged care beds and 6 acute adult beds. These are supported by a variety of allied health, diagnostic and primary care facilities (Table 8).

The existing facility was first established by the New Zealand Army during World War 2 and has had a number of modifications and additions since. It has previously been identified that these alterations and additions have compromised functionality and structural soundness. There is also a significant amount of asbestos both within and outside the building.

Since 2011 a program of building maintenance to address issues, particularly work health and safety has been done. Table 8 provides an overview of the health facilities currently available on Norfolk Island.

Table 8: Norfolk Island Multipurpose Health Service facility profile (2019)

Type of infrastructure	Number	Comment
Beds		
Acute beds	6 physical 3 occupied	2 x 1 bed rooms and 1 x 4 bed room
Residential aged care beds	14	Shared resident rooms
High dependency room	1	1 single room with mobile physiological monitoring
Mental health room	1	1 secure room with bed
Maternity beds	2	No planned use from 2012
Neonatal cot	1	No planned used from 2012
Procedural rooms		
GP and medical consulting rooms	3	Used by staff general practitioners or other visiting staff
Visiting staff consulting rooms	2	Under construction (Feb 2019)
Emergency department / outpatient spaces	2	Resuscitation bays
Operating room	0	Operating room was decommissioned in March 2014 following quality and safety audit of NIHE by ACHS.
Allied health treatment spaces (e.g. physiotherapy)	3	Treatment spaces for visiting or local allied health staff
Hydrotherapy	1	A space to support occupational or physiotherapy but not often used.
Counsellor room	1	1 consulting room with chairs
Dental chairs	2	Treatment spaces for the visiting dentist
Dialysis chairs	2	Machines have been decommissioned as they were obsolete. Three dialysis chairs have been purchased to replace this obsolete equipment. The operationalisation of the chairs is pending staff training.
Other		
Aged care hostel beds (Mawson Units)	3	Decommissioned before 2015 due to poor quality of the accommodation.
Plain x-ray	1	Digital system installed in 2016-17
Orthopantomogram x-ray	1	
Mammography	1	Digital system installed in 2016-17
Ultrasound	1	

Source: KPMG 2019.

Note: Existing facilities in most acute areas do not achieve compliance with AHFG.

Whilst Table 8 presents a comprehensive list of facilities for the delivery of health services, it is important to note that the existing facilities are not compliant with AHFG and that even with new facilities, facilities alone will not be enough to deliver appropriate health services on Norfolk Island. Delivering quality health care requires a combination of the appropriate infrastructure, workforce and clinical supports. The clinical supports would include having a governance framework, and appropriate systems and procedures in place to operationalise services across a range of service delivery models (e.g. face-to-face on Norfolk Island, telehealth, fly-in and fly-out and referral to the mainland).

Existing facility profile summary

The health facilities on Norfolk Island are dated and do not comply with AHFG. There are currently a number of unused or decommissioned spaces within these facilities. Based on the analysis in Section 2, the population on Norfolk Island will require facilities that can deliver a range of services including preventative health services, chronic disease management, mental health support and residential aged care. Whether these services are provided by local staff on Norfolk Island, fly-in-fly-out clinicians or via telehealth, appropriate facilities will be required to support service delivery. Additionally, in order to ensure safety and quality for both the facilities and the systems supporting it, there should be appropriate clinical governance in place.

The following section of this report describes the network of services that are currently delivered on Norfolk Island, including those provided by SESLHD. This analysis, in combination with Section 3, will later be used to determine the gap in services available on Norfolk Island and the planned services for meeting future need (Section 6).

4. Network of health services

This section of the report describes the type and level of health services currently available to the Norfolk Island community. The information in this section is used to understand what services are currently available on Norfolk Island and the models of service delivery (e.g. established on-Island service or fly-in, fly-out service provision). This section sets the foundation for understanding the gap, if any, between what health services are currently delivered on Norfolk Island and what healthcare services may be required to support the future population (as described in Section 2).

Primary and Community Health Services

General Practice

NIHRACS provides a general practice service, employs 3.6 full time equivalent general practitioners and provides a scheduled and emergency service. There is no external after-hour coverage or telephone from a deputising service or telephone advice line. Two of the three GPs service a 24 hour on-call roster with a 1 in 3 on-call availability.

Private allied health and other practitioners

The Norfolk Island community has a small number of resident private health practitioners without affiliation to NIHRACS. These include:

- one community pharmacy outlet – the pharmacist dispenses prescriptions for NIHRACS residential aged care residents and the community;
- one psychologist – it is not known how many patients the private psychologist on Norfolk Island sees each year; and
- one optometrist – visiting service with no fixed schedule.

Community health services

Community health services are those typically organised and provided on a population basis rather than to individual clients. The community-based model of care supports community capacity building to promote health and wellbeing and encourages community participation in service planning, delivery and evaluation.

The Norfolk Island community has elements of a community health delivery model, with a growing emphasis on population health interventions.

Health promotion

A structured health promotion program has been implemented since 2015 with funding assistance from Central and Eastern Sydney Primary Health Network (CESPHN). The current Norfolk Island 2018-19 Health Promotion Plan focuses on the following four main areas:

1. children, young people and families;
2. adults;
3. older people; and
4. whole community.

Focusing on these life stages, various health promotion activities have taken place with positive community engagement and participation. These include men's health checks, chronic disease programs (Healthy Cooking Program and Get Started Exercise Program), The Health and Wellbeing Expo and health education presentations.

Child and family services

A range of additional child and family services have commenced provision since the publication of the 2015 Plan. These services include:

- Anglicare, which is commissioned through the Department of Social Services (DSS). This provides Family and Relationship Services, Children and Parenting Support along with a small amount of Emergency Relief funding; and
- Child and Family Wellbeing Team at NI-Connect, which provides: information about positive parenting, life skills, stress management and wellbeing; specialist counselling services for children and young people experiencing anxiety, depression, trauma, or who are at risk of developing issues with alcohol or other drugs; specialist support for children and young people at risk of harm; support to improve communication and relationships; and crisis accommodation arrangements for victims of domestic and family violence.

Acute and Sub-Acute Care Services

Non-admitted patient occasions of service

Acute and sub-acute non-admitted services are provided from the Norfolk Island Multipurpose Health Service facility in conjunction with specialist practitioners from the mainland, who visit periodically and provide some limited telephone-based support outside of these visits. Table 9 provides a summary of the type of specialty service available, with the schedule published on the NIHRACS website. This schedule is developed based on the patient demand and availability of specialist staff. Data was not available on the number of patients seen by each practitioner. The service arrangements with the visiting staff are typically organised through SESLHD.

Table 9: Specialty medical and allied services provided on a fly-in, fly-out basis

Speciality
Allied Health
• Podiatry
• Child and adult speech pathology
• Child and adult occupational therapist
• Audiologist
• Residential aged care dietician
• Sonographer (generalist and cardiac)
• Mammography
• Optometry
• Orthodontist
Medical specialists
• Endocrinologist
• Orthopaedic surgeon
• Paediatrician
• Psychiatrist
• Geriatric medicine
• Nephrologist
• Cardiologist
• Urologist
• Respiratory
• Ophthalmology

Source: NIHRACS February 2019.

Admitted occasions of service

The Norfolk Island Multipurpose Health Service facility which is operated by NIHRACS has a combination of acute and aged care beds with 15 beds generally occupied (Figure 18).

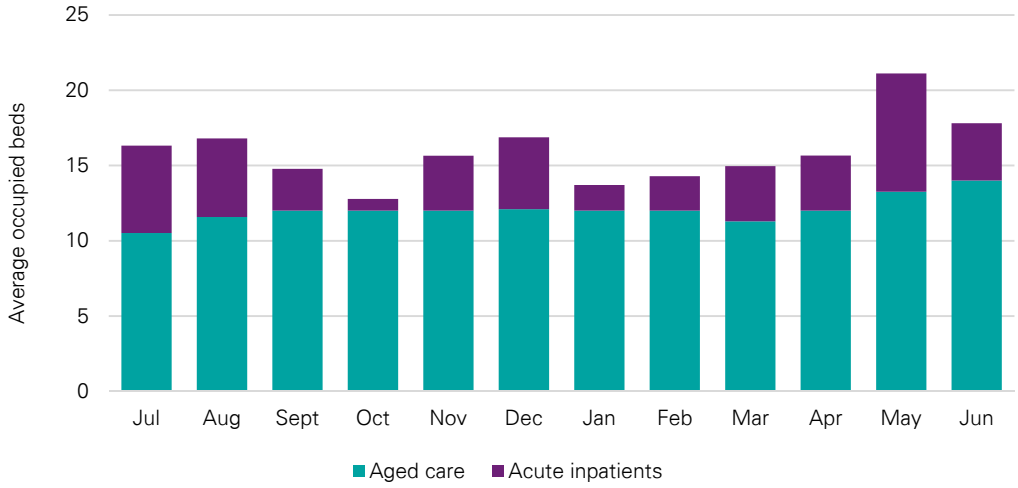
Most of the occupied beds accommodate aged care residents, with acute admitted care occurring for a small number of patients, with an average of 2.2 beds used for acute admissions in 2017-18. Of these, an average of 0.2 acute beds (9 per cent) were used by visitors to Norfolk Island. The average length of stay of the acute admitted patient cohort was 3.9 days in 2017-18.

Historically, the hospital has provided a maternity and minor surgical service. Maternity services ceased in 2012, due to the inability to recruit GPs with suitable obstetric and anaesthetic capability to replace retiring practitioners.

Surgical services have not been provided since the ACHS accreditation survey in March 2014. This was a decision made by the NIHE in response to high priority recommendations relating to the physical infrastructure of the operating theatre and the sterilisation services area.[40]

[40] Norfolk Island Hospital Enterprise (NIHE) 2014. ACHS Final Report.
Noting that the NIHE was the former operator of health facilities on Norfolk Island and NIHRACS took over this responsibility in 2016.

Figure 18: Norfolk Island Multipurpose Health Service facility: average occupied beds, acute and aged care 2017-18



Source: NIHRACS.

Other health services

As discussed in Section 2, the allied health services provided on Norfolk Island include physiotherapy and counselling, and there is also an established dental service. This section of the report provides a more detailed description of the supply of these services, where there is relevant information available. Other support services include diagnostic services such as pathology and medical imaging as well as an ambulance service and pharmacy.

Counselling

NIHRACS provides a mental health counselling service from a standalone building on the facility site. This is staffed by a full-time psychologist with referrals made to mainland based specialist mental health services or providers as required.

Additional counselling services are provided through the Child and Family Services program at NI-Connect and Anglicare.

Dental

A dental service is provided by NIHRACS from a standalone building on the facility site. This is staffed by a permanent dentist with an orthodontist visiting periodically throughout the year.

Pathology

NIHRACS pathology service provides inpatient and outpatient services to the hospital and external veterinary clients. It provides services in haematology, biochemistry, microbiology and blood bank with most demand met on-Island. The remaining services are provided by mainland pathology laboratories.

Radiology and other medical imaging

The medical imaging service has a capacity to provide plain film, orthopantomogram, ultrasound and screening mammography. The digital radiology system has the capacity to digitally transfer images to the Picture Archiving and Communications System at SESLHD for reporting.

A visiting sonographer provides an ultrasound service.

The breast screening service was established in 2018 and is provided by Sydney Breast Clinic.

Pharmacy

The Burnt Pine pharmacy service provides a community retail service and provides medications to residential aged care clients. NIHRACS provides medications to admitted hospital patients.

This service obtained PBS Supplier Registration from the Australian Government in accordance with the pharmacy location rules, with the Australian Government seeking to maximise private sector involvement in health service provision. At this time, the retail elements of the hospital transitioned to supply from the Burnt Pine pharmacy.

Medication supply chain issues have been experienced from time to time relating to the variation in air freight schedules.

Aged care services

NIHRACS provides the only residential aged care service on Norfolk Island with residential beds provided at the hospital site. An average of 13 high care beds were occupied in 2017-18.

A retirement village development was proposed for Norfolk Island but did not progress due, in part, to local planning regulations prohibiting strata title of property. This regulation is currently subject to review by the NIRC.

There are limited home-based nursing or allied health and therapy support services for elderly residents on Norfolk Island. This means that if elderly people on Norfolk Island need ongoing health support, they have to visit or reside at the NIHRACS facility. Although, some elements of a home-based service are provided by NIHRACS.

Home support programs

Home support programs are mostly provided by Care Norfolk Inc. and NIHRACS. These are listed in Table 10.

Care Norfolk Inc. is a community based not for profit organisation established to provide aged residents with home based services. It receives revenue through a combination of consumer fees, DSS and Department of Veterans Affairs.

There is no centralised or coordinated approach to intake, assessment of client needs or coordination of care.

Table 10: Availability of home support programs on Norfolk Island

Service	Comments
Domestic Assistance	Provided by Care Norfolk Inc.
Home Maintenance	Provided by Care Norfolk Inc.
Home Modifications	Provided by Care Norfolk Inc.
Personal Care	Provided by Care Norfolk Inc.
Social Support – Individual and Group	Provided by Care Norfolk Inc. and service clubs.
Community Nursing	Limited service provided by NIHRACS
Allied Health and Therapy Services	Physiotherapy service through NIHRACS. Visiting occupational therapy, podiatry and speech pathology.
Wettle on Wheels	Managed by Care Norfolk Inc. Prepared by NIHRACS. Delivered by volunteers.
Community Transport	No organised service. Periodic service provided by a non-government organisation and service clubs.
Goods, Equipment and Assistive Technology	The physiotherapy service through NIHRACS provides mobility aids and basic equipment. Care Norfolk has services through the National Disability Insurance Scheme to provide services to clients.
Flexible Respite	Provided by Care Norfolk Inc.
Centre-Based Respite	Provided by NIHRACS.

Source: KPMG 2019, based on consultation and advice from NIHRACS.

Public Health services

Vaccination schedules

Since 2016 Norfolk Island has participated in the Australian Immunisation Program and contributed data to the Australian Immunisation Registry.

This has enabled a continuation of the community vaccination program that was coordinated by NIHRACS and the Administrator of Norfolk Island (ANI) for vaccines listed on the NSW vaccination schedule.

Water quality and safety

Norfolk Island is currently self-supplied and there is no universal water supply system. Drinkable water supply is typically provided to domestic and retail premises from rainwater tank collections (97 per cent of private occupied dwellings in 2011).[41] As such, there is no systematic process for fluoridation of the water supply for dental health purposes.

The NIRC operated Norfolk Island Water Assurance scheme provides sewerage services to Burnt Pine and Middlegate, which is where the majority of residents and tourism related businesses are located. The remaining population use septic tanks and effluent absorption trenches.[42] Previous studies have reported on quality issues of potable water with high e-Coli levels. These levels are perceived to relate to contamination from septic tanks or cattle management practices.[43]

[41] Table B6.07, Norfolk Island Census of Population and Housing, 2011.
[42] Wilson 2017. Water Quality in the KAVHA catchment. Norfolk Island Regional Council. Retrieved from: http://www.norfolkisland.gov.nf/sites/default/files/Water%20Quality%20in%20the%20KAVHA%20Catchment.pdf.
[43] Australian Continuous Improvement Group 2011. Norfolk Island Public Service Review. Prepared for the Department of Regional Australia, Regional Development and Local Government.

Water Security

Water security is a major issue for the Norfolk Island community as it is reliant on captured rainfall and ground water for potable and other uses, as there is no water reservoir or articulated water supply to much of the community.

The current drought conditions have heightened awareness of how reliant the community is on captured rainfall and that any variation to long term rainfall trends will have a substantial impact on the community.

Cancer screening

Norfolk Island has recently commenced a systematic approach to cancer screening for the community. Since 2016, the following State and Commonwealth programs in these areas have been extended to the Norfolk Island population:

- The National Bowel Cancer Screening Program commenced in late 2016, with the eligible population obtaining the test kits in the mail.
- The breast screening service was established in 2018 through the advocacy of a local community group. A digital mammography system was purchased by the Department of Infrastructure, Transport, Cities and Regional Development and installed at NIHRACS, with the clinical service provided by Sydney Breast Clinic. This provides screening on asymptomatic women in accordance with the procedures of the national breast cancer screening program. Diagnostic mammography is provided on referral to a mainland service.
- NIHRACS continues the practice of having periodic "women's health clinics". These offer the opportunity for catch-up pap screening, instruction on breast self-examination and other services.

Alcohol and tobacco control

Norfolk Island has historically been subject to different alcohol and tobacco regulations than on the mainland. These regulations have changed in recent years with progressive alignment to mainland regulations.

Tobacco duty free limits and advertising restrictions aligned with the mainland regulations in 2017.

Table 11 illustrates some differences in the purchasing price of tobacco between the jurisdictions, noting the significantly lower price on Norfolk Island.

Table 11: Tobacco regulation differences between Norfolk Island and Australia

	Norfolk Island	Australia
Cigarette retail price	$0.37 / stick: Longbeach $11.20 / 30 pack: Longbeach	$1.00 / stick: Longbeach $29.95 / 30 pack: Longbeach

Source: KPMG February 2019; Australian Government, Department of Home Affairs. Retrieved from: http://www.customs.gov.au; The Cancer Council 2019. Tobacco in Australia, State and territory legislation. Retrieved from: http://www.tobaccoinaustralia.org.au/chapter-11-advertising/11-4-state-and-territory-legislation; Patterson Road Wholesalers 2019. Retrieved from: http://wholesale.pattersonroad.com.au/rrp_cigarettes.jsp.

The importation and sale of alcohol is controlled through the NIRC managed Liquor Bond. This is the only location for retail sale of alcohol, with products generally comparable in price to mainland cities.

Changes have been made to relevant regulations and include the following:

- the introduction of random breath testing in late 2015; and
- a lowering of the blood alcohol permissible level from 0.08% to 0.05% in late 2016.

Disaster and emergency planning

The NIRC is responsible for the Norfolk Island Disaster and Emergency Plan. This plan describes the response to likely emergency issues, such as cyclones, pandemic infectious diseases, fires, plane crashes, terrorism and marine search and rescue.

This plan was last updated in 2018 and describes the actions of the responsible agencies and escalation requirements for obtaining assistance from other entities.[44]

A volunteer ambulance service is provided by the St John Ambulance organisation. This service has a 24 hour availability with the volunteers receiving some training oversight from the St John Ambulance organisation in NSW. The volunteers met in the consultation indicated a willingness and need for increased training and equipment upgrade to improve first responder capability.

Other Services

Telehealth availability

A developing telehealth capability is available on Norfolk Island with the following being the main service elements:

- computerised radiography service with image reading from SESLHD on selected films;
- telephone advice and triage on acute patients from the Director of Emergency Medicine at Prince of Wales Hospital; and
- a limited use of video conference / consultation service utilising Skype and other non-secure products.

High fidelity equipment has been purchased and progressively installed to provide telehealth capability for video, voice and data applications. The system development is being coordinated through SESLHD.

The low internet bandwidth is restricting the use and utility of the equipment with the expectation that utilisation will increase as Norfolk Telecom infrastructure is upgraded.

Medical evacuation

Patients that cannot be safely managed within the skill and experience level of the hospital and staff are referred and transferred to a mainland hospital. Children requiring admission are also automatically transferred or evacuated. The urgency and criticality of the patient condition is considered when requesting a retrieval team and suitable aircraft.

[44] Norfolk Island Regional Council 2018. Norfolk Island Disaster and Emergency Plan. Retrieved from: www.norfolkisland.gov.nf/sites/default/files/public/documents/NORDISPLAN%20June%202018.pdf.

The number of medical evacuations and transfers has increased in recent years from 20-40 in 2012-13 to 2013-14 and up to 60-70 in 2017-18 (Table 12).

Other key features include:

- 59 per cent of medical evacuations and transfers are to NSW and 38 per cent to QLD;
- 79 per cent are for Norfolk Island residents; and
- 21 per cent are on Air New Zealand commercial flights with the remaining on chartered medical evacuation aircraft.

Table 12 provides an overview of the volume of medical evacuations and transfers from Norfolk Island.

Table 12: Medical evacuation and transfers from the Norfolk Island Multipurpose Health Service facility (previously named Norfolk Island Hospital) by financial year

	2013	2014	2017	2018	Jul 18 -Nov 18
Total Patients	40	23	65	72	32 (25 locals, 7 visitors)

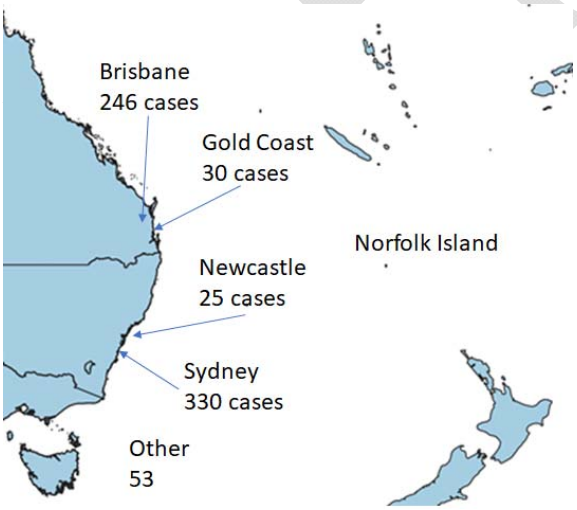
Source: NIHRACS May 2015, NIHRACS 2018. Note that data for 2015 and 2016 was unavailable given the poor integrity of the data.

A medical retrieval team is available by flight approximately 6-8 hours after dispatch. Poor local weather conditions can further delay this support.

Interstate referral

The number of off shore medical treatments are larger than the medical evacuations, as most treatment and consultation is non time critical. Figure 19 and Table 13 illustrate that patients funded through Norfolk Island Patients' Travel Accommodation and Assistance Scheme (NIPTAAS) are transported to a range of sites mainly in NSW and QLD. They are for a large number of conditions of which Ophthalmology (eye conditions) is the most frequent (16 per cent of total).

Figure 19: Destination of off shore claims from Norfolk Island Patients' Travel Accommodation and Assistance Scheme (NIPTAAS) July 2017 – June 2018



Source: NIHRACS.

Table 13: Number of claims by referral specialty for Norfolk Island Patients' Travel Accommodation and Assistance Scheme 2017-18

Specialty	No of claims	% of total
Ophthalmology	112	16%
Gastroenterology	71	10%
Oncology	60	9%
Orthopaedic	56	8%
Cardiac	52	8%
Maternity	21	3%
Other (31 specialties)	312	46%
Total	684	100%

Source: NIHRACS 2018.

Maternal and child health

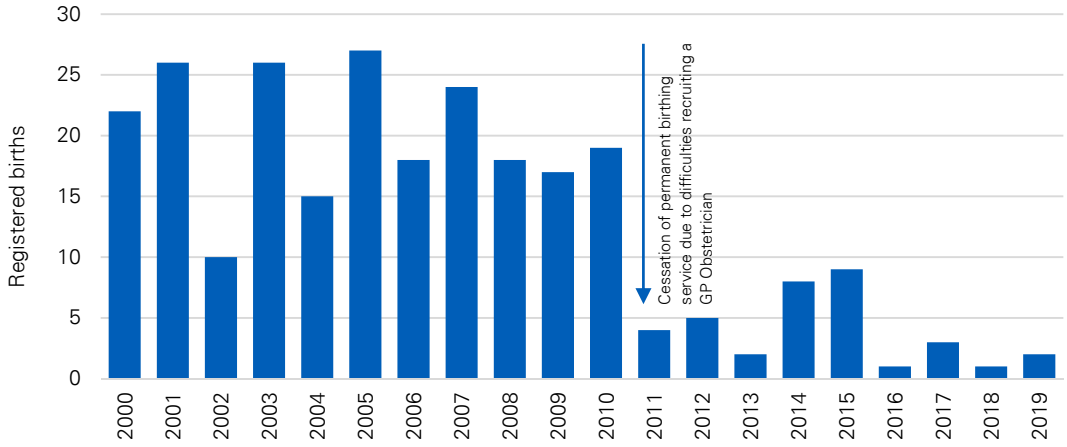
A limited maternal and child health service is provided on Norfolk Island. Initial antenatal and postnatal care is a shared care model with the GP and midwife, with additional support and services provided by mainland maternity providers.

Referral is made to a mainland maternity provider for the shared care of the mother throughout the perinatal period based on the estimated birth date.

As the hospital doesn't support on-site birthing, mothers typically travel to the mainland at 36 weeks gestation (four weeks prior to estimated birth date), with accommodation and other costs paid by the family. Some of these costs are subsidised by the NIPTAAS but it is unclear to what extent mothers have to pay additional costs out of their own pocket for their travel to the mainland to give birth.

The data presented in Figure 20 illustrates the historical number of registered births on Norfolk Island, with an average of 20 births per year prior to 2011 when there was a birthing service provided by a GP Obstetrician. Since that time there has been an average of 3.8 births per year on Norfolk Island and there were 21 births on the mainland in 2017-18 (refer Table 13).

Figure 20: Number of registered births by registration year 2000-2019 year-to-date



Source: NIRC Registry of Births, Deaths and Marriages.

Note: There may be some delay in the registration of the birth, as such the actual number of births per year may be slightly different.

The analysis in Figure 20 indicates that there has been a relatively low volume of births on Norfolk Island, both before and after the cessation of the permanent birthing service (i.e. less than 30 births each year). Despite this relatively low volume of births, many community members were disappointed by the cessation of this service.

Norfolk Island is not the only remote community to experience a decline in the availability of birthing services. Planned birthing services in remote areas across Australia have declined in the past decades due to the following factors:

- general population decline of many rural communities and associated decline in birthing service demand;
- declining availability of the GP obstetric and anaesthetic workforce and increasing sub-specialisation of the medical workforce and health care more broadly;
- increasing difficulty of attracting, retaining and sustaining a highly skilled workforce; and
- concerns regarding the clinical risk for mothers and babies in providing birthing services in environments without higher level clinical care back-up.[45,46]

In determining the future requirement for maternity services on Norfolk Island, a number of other factors were also considered. These are outlined in more detail in Section 6, 'Planned Services'.

Other groups

Community support and service groups undertake the planning and delivery of a range of services. These include funding and coordination of the periodic visit of an audiologist and developmental paediatrician and day programs and activities for elderly citizens.

Travel and accommodation assistance

The Norfolk Island health care system provides limited financial and travel coordination assistance to citizens when they require health services on the mainland, with most costs borne by individual community members. Community members are further supported by Norfolk Assists Those In Need Inc. (NATIN Inc.), which is a not-for-profit organisation formed in 2012. NATIN Inc. provides limited financial and other assistance for accommodation and expenses when eligible residents are required to travel to the Australian mainland to access emergency specialist medical treatment.

Network of health services summary

There are a range of health, aged and support services offered on Norfolk Island that are targeted to the specific needs of the community with its growing aged person cohort and corresponding prevalence of chronic disease. Most of the services are provided by NIHRACS which includes general practice, emergency care, acute admitted care and residential aged care as well as a small amount of community-based services.

Whilst the general practice service has received accreditation, the Norfolk Island Multipurpose Health Service facility has not and this limits the volume and type of services that can be sustainably delivered on Norfolk Island with an appropriate level of safety and quality.

[45] Department of Health 2009. National Maternity Services Plan, Commonwealth Government.
[46] Department of Health 2019. Rural Maternity Taskforce Report. Published by the State of Queensland (Queensland Health).

Since 2014, when the Norfolk Island Hospital did not achieve accreditation against the NSQHS standards, the local population have been referred off Norfolk Island for surgery and a range of procedural services including gastroenterology and ophthalmology. Norfolk Island residents also have to leave Norfolk Island to give birth on the mainland. The facility does, however, continue to admit people who require acute care which includes both visitors to Norfolk Island and local residents. It is noted that NIHRACS intends to apply for accreditation against the NSQHS standards in the future. NIHRACS' engagement with the NSQHS standards would bring the Norfolk Island Multipurpose Health Service facility into alignment with the regulation of health safety and quality in other Australian states and territories, which are mandated to engage with the NSQHS standards.[47]

There are a range of established public health, allied health and community health services offered on Norfolk Island including cancer screening, health promotion, physiotherapy, counselling services and dentistry. There are also a number of core support services available on Norfolk Island including pathology, diagnostic imaging, pharmacy and ambulance. Section 6 of the report provides a comparison of the service profile on Norfolk Island with the service profile in other remote communities.

The next section of the report will also outline the social and policy issues that impact on the infrastructure, workforce and clinical support requirements for the safe delivery of healthcare services on Norfolk Island. Analysis of these social and policy issues enables a practical understanding of the services that can be delivered on Norfolk Island to address any identified gap in the type of services required to meet the future population health need (refer Section 6).

[47] In September 2011, all Australian Health Ministers endorsed the NSQHS Standards and a national accreditation scheme. Since January 2013 the majority of public hospitals across Australia have been required to be accredited to the NSQHS Standards by way of a formal Council of Australian Governments agreement (with the exception of the Australian Capital Territory).

5. Social and policy issues

This section of the report outlines the social and policy issues impacting on the infrastructure, workforce and clinical support requirements for the safe delivery of healthcare services on Norfolk Island. These social and policy issues include the unique needs of isolated communities, the availability of workforce, community expectations and technology. These issues influence the mix and type of services that can ultimately be delivered on Norfolk Island in a sustainable way.

Service needs of isolated communities

A key social and geographical driver for the unique needs of healthcare planning on Norfolk Island is that it is a relatively isolated community (refer Section 1 for a description of the geography). Australia's Health 2018 identified several issues which have an impact on the social determinants of health for rural and remote populations. These issues include:

- lower levels of income, employment and education;
- higher occupational risks, particularly associated with farming and mining;
- challenging geography and the need for more long-distance travel;
- poorer access to fresh foods; and
- poorer access to health services.[48]

These health issues are compounded by the known complexities in the planning, managing and delivering of health services in rural and remote locations, in that rural health services:

- are generally smaller than metropolitan centres;
- have high fixed costs of operation;
- are less able to achieve the economies of scale experienced in large hospitals;
- have a reliance on the public sector as the default service provider in the absence of private sector options; and
- consistently struggle to attract and retain a sustainable skilled clinical workforce.[49]

[48] AIHW 2018. Australia's health 2018: in brief. Cat. no. AUS 222. Canberra: AIHW.
[49] Australian Health Ministers' Advisory Council's (AHMAC) Rural Health Standing Committee 2012. National Strategic Framework for Rural and Remote Health.

It can also be difficult to deliver a coordinated approach to healthcare in isolated communities where there is a mix of visiting clinicians, locums and permanent staff, particularly where the distance to any referral hospital is so great that community members have to travel for extended periods to access secondary and tertiary care.

As mentioned in Section 3, the current facilities on Norfolk Island already inhibit the delivery of integrated, collaborative healthcare. This lack of integration is further compounded by having visiting clinicians and SESLHD locums on Norfolk Island as well as patients travelling to the mainland for some procedures. Similar to remote communities on the mainland, this multi-faceted service delivery model reduces the ability for clinicians across both NIHRACS and SESLHD to deliver coordinated healthcare for community members. For this reason, the enablers for better coordination and integration of services need to be considered as part of the future planning of health services.

Many rural communities in Australia are so remote that external access is only available through commercial or charter flights. As described in Section 4, the response time for medical retrieval is particularly challenging with the dispatch and retrieval period being approximately 6-8 hours. The remoteness and isolation of Norfolk Island from the mainland health care system has led to a greater tendency for self-reliance than would normally be found in mainland communities and a requirement to plan for a range of low probability contingencies.

Sustainable workforce model

Establishing and sustaining an effective health workforce is a challenge for most rural and remote communities, including Norfolk Island. The key reasons for this include:

- the generalist scope of clinical work in remote communities is sometimes at odds with the type of training typically offered to clinicians, which is usually more specialised and delivered in metropolitan centres;
- there are a range of social and environmental challenges to attracting staff to remote locations; and
- in some situations there are fiscal incentives for clinicians to work in urban areas as opposed to rural areas, particularly where the services delivered are funded through a fee-for-service model (e.g. private sector service provision or primary health care funded through the MBS).

In order to recruit and retain skilled health professionals in remote communities, such as Norfolk Island, it is important to address the common problems identified in relation to working in remote areas which include the following:

- professional and social isolation (for the health professional, their spouse and family);
- poorer local amenities and infrastructure;
- limited training and professional development opportunities which creates challenges for maintaining the currency of clinical practice; and
- the difficulty of delivering services in isolated areas, pertaining to travel, extended working hours and lack of locum support.[50]

The challenges of recruiting and retaining healthcare professionals to Norfolk Island has had a very real impact on the healthcare service. The professional and quality imperatives of health

[50] AHMAC Rural Health Standing Committee 2012, p40.

care practice has led to a progressive decline in the availability of general practitioners that are capable and willing to undertake procedural activities, including birthing, in remote areas.

New initiatives to support a sustainable workforce in remote areas

There are a number of initiatives that are aimed at addressing the issues outlined above in relation to recruiting and retaining health professionals to remote areas. The Australian College of Rural and Remote Medicine (ACRRM) promotes the practice of Rural Generalist Medicine. This initiative could support strengthening a sustainable workforce model on Norfolk Island to help address the issues of workforce shortages. ACRRM considers rural generalist medicine to include a broad scope of services including:

- comprehensive primary care for individuals, families and communities;
- hospital in-patient and / or related secondary medical care in an institutional, home or ambulatory setting;
- emergency care;
- a population health approach that is relevant to the community; and
- a multidisciplinary approach to service delivery both local and distant.[51]

The NSW Rural Generalist Medical Training Program also provides a supported training pathway for junior doctors wishing to pursue a career as a rural general practitioner. It enables them to provide primary care in a community general practice setting as well as advanced services and / or procedural skills within a rural hospital.

Community expectations

Community expectations on the level and type of health care services are important considerations in the planning of future health service models. Australia has seen considerable changes over the past decades with:

- increased consumer participation in decision making;
- publication of performance related data on providers;
- establishment and measurement of standards of clinical care and operational management; and
- establishing benchmarks for acceptable infrastructure.

Elements of the Norfolk Island community have expressed the need to re-establish surgical and maternity services in order to:

- increase the self-sufficiency of the local health services;
- reduce the amount of travel, cost and inconvenience associated with seeking mainland health services;
- continue the Norfolk Island traditions of child birth on Norfolk Island; and

[51] Australian College of Rural and Remote Medicine 2014. Cairns Consensus Statement on Rural Generalist Medicine. Retrieved from: http://www.acrrm.org.au/docs/default-source/documents/about-the-college/cairns-consensus-statement-final-3-nov-2014.pdf?sfvrsn=4.

- reduce the need for residents to relocate to the mainland for child birth, although this may remain the preferred option for many.

The Norfolk Island community have a strong dialogue with service providers and administrators from the NSW and Australian Governments. In future, it will be important to continue this consultation with the community so that they can provide feedback and input on the planning and priorities of healthcare on Norfolk Island. Section 8 of this report outlines one arrangement for both consulting with the community and having clinical experts provide periodic and independent advice on both the evolving needs of the community and the changing evidence base.

Standards of care

The adoption of standards of care is important in delivering appropriate healthcare and reducing unwarranted variation, as standards identify and define the care people should expect to be offered or receive, regardless of where they are treated. Accreditation provides credible assurance about the quality of care / service provided and instils confidence for clients and / or consumers.

Prior to 2016, the services provided on Norfolk Island had not been required to obtain accreditation from a standard setting body. As discussed above, the Norfolk Island Hospital undertook its first accreditation survey against the NSQHS standards in 2014, while under operation by the NIHE. This survey acknowledged that the NIHE had undertaken a significant amount of developmental work, but was still unable to meet a number of the criteria.

Since that time, NIHRACS has taken over operations of the Norfolk Island Multipurpose Health Service facility (previously named the Norfolk Island Hospital facility) and significant progress has been made towards accreditation. This includes the accreditation of the general practice in 2017, which enabled the practice to attract a range of additional funding sources. Within this period, Care Norfolk was accredited as an Approved Provider to deliver services under the Commonwealth Home Support program.

Further work is being undertaken in conjunction with SESLHD to progress the remaining NIHRACS service elements towards accreditation and ensure compliance with the NSQHS Standards. NIHRACS intends to apply for accreditation with the NSQHS standards in the future. Accreditation of the facilities on Norfolk Island will be critical for both attracting healthcare professionals to Norfolk Island and ensuring the delivery of safe and quality services for the community.

Technology developments

Developments in information and communications technologies have provided consumers and providers in remote locations around the world with additional options for obtaining information and assistance in maintaining good health and improving outcomes. The utility of these services is dependent on the availability of suitable broadband and telephony networks. Norfolk Island has had satellite connection to the National Broadband Network (NBN) since 2016.[52] However, it is not yet possible to realise the typically fast speeds and generous band-width of

[52] National Broadband Network, Product Roadmap. Retrieved from: http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf.

the NBN with the current Norfolk Telecom infrastructure.[53] The existing infrastructure will need to be improved or replaced in order to take advantage of the availability of the NBN.

Self help

There has been a large expansion in the availability of credible, authoritative information and advice on health care issues. A range of telephone and internet-based support services have been developed in Australia, which could potentially provide Norfolk Island community members with expert assistance, as an alternative or supplement to face-to-face services. These self help strategies include the following:

- "Pregnancy, Birth and Baby" is a free phone and online service providing information, advice and support through pregnancy, childbirth and the first year of parenthood (*www.pregnancybirthbaby.org.au*); and
- "Healthdirect" provides easy access to trusted, quality health information and advice online and over the phone. It is available 24 hours a day, 7 days a week (*www.healthdirect.gov.au*).

Despite the expansion of self help strategies, there continues to be financial and infrastructure issues which inhibit the uptake and frequent use of these self help strategies by Norfolk Island community members. These issues include problems with international dialling, the reliability of internet services and the affordability of call rates.

Telehealth

Telehealth is already being used on Norfolk Island, for example, the transmission of x-ray images to a doctor or medical specialist to assess offline (or on the mainland). There are, however, opportunities for better leveraging technology to support service delivery on Norfolk Island. These opportunities include the following:

- remote monitoring, which would involve medical professionals monitoring patients remotely using various technological devices (e.g. to manage chronic diseases or specific conditions, such as heart disease, diabetes or asthma); and
- interactive services, which would involve the patient and provider interacting in real-time using phone conversations and online communication.

Many activities such as history review, physical examination, psychiatric evaluations and ophthalmology assessments can be conducted using technology in a way that is comparable to a face-to-face consultation. This could reduce transfers to the mainland for these types of consultation.

However, while there are clear benefits for improving the use of telehealth on Norfolk Island, significant administrative and coordinative effort is required to establish the everyday use of telehealth as well as ongoing legal and ethical considerations, such as confidentiality, data protection and privacy.[54]

Given the current use of technology and the challenges in attracting a permanent healthcare workforce, it would also be beneficial for community members on Norfolk Island to be registered with My Health Record (MHR). The MHR system provides a single source of truth for patient history, and with an appropriate referral and follow-up protocol, can enable better

[53] National Broadband Network, Information for home and business. Retrieved from: http://www.nbnco.com.au/connect-home-or-business/information-for-home-or-business/satellite.html.
[54] Newman et al. 2016. Service providers' experiences of using a telehealth network 12 months after digitisation of a large Australian rural mental health service. International Journal of Medical Informatics, 94, 8-20.

coordination of care between on-Island healthcare professionals, visiting clinicians and health consultants based on the mainland.

Contingency planning

Remote island communities, such as Norfolk Island, provide a unique set of challenges in planning health services. Given the extensive time and logistical barriers to obtaining higher levels of care, the health system needs to have the capacity to account for a range of unlikely events and emergencies, such as instances of multiple major trauma, premature or unplanned labour and infectious disease outbreaks.

The response of the health care system to emergency events will be a function of workforce planning, skill development, management practices, scenario testing and facility planning to provide adequate physical facilities. The response to these events is articulated through the Norfolk Island Disaster and Emergency Plan.

Social and policy issues summary

The analysis in this section indicates that Norfolk Island is grappling with a set of challenges that are similar to those faced by remote communities on the mainland. Health service systems in remote communities typically struggle to address the social determinants of health for their population and have difficulty attracting health professionals with appropriate capabilities. This issue of staff recruitment, and the distance from larger referral hospitals, can make it difficult for facilities in remote areas to comply with standards of care and maintain safety and quality.

There are also a range of social and policy issues that will continue to impact on the take-up and availability of alternative models of care and service delivery for Norfolk Island residents. These include community expectations and the limited availability of technology which might otherwise enable residents on Norfolk Island to access more telehealth and healthcare via remote-access with clinicians on the mainland.

The next section of the report describes the healthcare services that are anticipated to be required on Norfolk Island in the future, based on the analysis provided in Section 2, comparison against similar remote communities and consideration of the social and policy issues identified in this section.

6. Planned services

This section of the report describes the type of health services required to meet the needs of the Norfolk Island community, based on the health needs analysis (refer Section 2), an assessment of the services currently available on Norfolk Island (refer Section 4) and consideration of the key social and policy issues (refer Section 5).

Planning principles

In establishing the structure and function of the proposed system of care for Norfolk Island, the following principles have been used, consistent with the National Strategic Framework for Rural and Remote Health:

- improved access to appropriate and comprehensive health care;
- effective, appropriate and sustainable health care service delivery;
- an appropriate, skilled and well-supported health workforce;
- collaborative health service planning and policy development; and
- strong leadership, governance, transparency and accountability.[55]

These principles have been used to structure the proposed suite of services that could optimally be provided to the community. These will be further supported by the ability of the Norfolk Island community to work together to achieve the best health outcomes possible.

Case studies of similar communities

A comparative analysis of similar Australian communities has been undertaken to provide a description on the types of health care services that are typically available to small and isolated communities. Other island communities around Australia have been identified for case study purposes as they have certain key characteristics. These include:

- consumers have significant cost and inconvenience in accessing other services, as air transport is the only feasible transport to another health service location; and
- transport of patients for urgent care at a secondary or tertiary centre is delayed due to the requirement to mobilise a commercial or charter flight.

It is important to note the difficulty in identifying isolated communities that have health needs, culture and age profile similar to Norfolk Island. One reason for this, is that the majority of remote Australian communities having a higher proportion of Aboriginal and / or Torres Strait Island people than Norfolk Island, with Indigenous populations having generally poorer health outcomes and younger populations than non-Indigenous communities. In contrast, only 0.5 per

[55] AHMAC Rural Health Standing Committee 2012, p. 40.

cent of the Norfolk Island population identified as Aboriginal and / or Torres Strait Island people in the 2016 ABS Census, compared with more than 50 per cent in many remote locations.

Table 14 shows the proportion of the Australian population living in remote and very remote locations and an indication of the proportion of Indigenous people in each area. This analysis indicates that the health needs, cultural identity and therefore health service requirements in remote and very remote locations on the Australian mainland are likely to be structurally different to those on Norfolk Island.

Table 14: Geographical distribution of Indigenous and non-Indigenous population across Australia

	Major cities	Inner regional	Outer regional	Remote	Very remote
Indigenous	35%	22%	22%	7.7%	14%
Non-Indigenous	71%	18%	8.7%	1.2%	0.5%

Source: Australia's Health 2018, AIHW, ABS Census 2016.

The isolation of Norfolk Island also contributes to the difficulty in finding comparable health services within a community. Of the remote Australian mainland communities analysed, all have access to an alternative major health service within 600km. Access to an alternative major health service from these remote communities can be by road. This option is unavailable on Norfolk Island. Full details on the analysis of comparative communities is included in Appendix F.

Table 15 details comparable communities to Norfolk Island in terms of population size, population demographics and remoteness from a major health service provider. Thursday Island has been included as a comparator community even though its population demography is substantially different, with a younger cohort and high proportion of Indigenous people. The information about service provision on Thursday Island indicates the scope of service that can be provided in remote areas.

The analysis of these services has identified that Norfolk Island has the oldest community of the comparison sites and is most similar to King Island, in size of the population, age profile and has less than five per cent of the population identifying as Aboriginal and / or Torres Strait Islander people.

In comparison to the breadth of services currently provided, the Norfolk Island community has historically experienced a greater range of services than many other isolated island communities. The Norfolk Island health service is the only isolated service, when compared to similar remote Australian communities, without external quality accreditation.

Table 15: Comparative health services in other remote communities

	Norfolk Island	Christmas Island - IOT	King Island – Tasmania	Lord Howe Island – NSW	Barcaldine – QLD	Thursday Island - QLD
Resident pop. (2016)	1,748 0.5% Aboriginal and Torres Strait Islander (ATSI)	1,843 0.5% ATSI	1,585 2.5% ATSI	382 0.8% ATSI	1,287 8.6% ATSI	2,938 68% ATSI Supports 17 Primary Health Care Centres in the Torres Strait Islands
Median age (2016)	49 years	38 years	47 years	44 years	42 years	28 years
% over 65 years (2016)	23.8%	9.7%	22.4%	19.3%	20.4%	5.3%
Median weekly income (Personal / house) (2016)	$592 / $1,012	$1,164 / $2,141	$707 / $1,199	$762 / $1,397	$722 / $1,149	$788 / $1,987
Distance	Brisbane 1,475km Sydney 1,700km	Perth 2,600km Jakarta 490km	Burnie 212km	Sydney 780km	Longreach 106km Rockhampton 568km	Cairns 800km
Funder	The Department	The Department	Tasmanian Department of Health and Human Services	NSW Ministry of Health	QLD Health	QLD Health
Provider	NIHRACS	The Department	Tasmanian Local Hospital District	SESLHD	Central West Hospital Health Service	Torres and Cape Hospital and Health Service
General practice	Yes 3 full time equivalent (FTE)	Yes 3 FTE	Yes 2 FTE contracted	Yes – private 1 FTE	Yes	Yes
Acute care	Yes: 3 beds	Yes: 8 beds	Yes: 6 beds	Yes: 3 beds	Yes	Yes: 26 beds
Aged care	Yes: 13 beds	No	Yes: 14 beds	No	Yes: 14 residential and 3 home care	No
Surgery	No	No	No	No	No	Yes
Birthing	No	No	No	No	No	Yes: 155 births in 2018
Dental	Yes	Visiting	Visiting	No	Yes	Visiting
Allied health	Physiotherapy, Social Work	Visiting physio, OT, dietetics	Physiotherapy	No	Visiting dietetics, physiotherapy, podiatry, occupational therapy, speech pathology, social work, community health,	Most common specialties are provided.

	Norfolk Island	Christmas Island - IOT	King Island – Tasmania	Lord Howe Island – NSW	Barcaldine – QLD	Thursday Island - QLD
					diversional therapy and a diabetic educator.	
Mental health	Counsellor Visiting Psychologist, Psychiatrist and Private Psychologist	Visiting Psychologist, Psychiatrist and Private Psychologist	Psychologist	No	Visiting psychiatrist	Visiting psychiatrist
Other visiting	Many. See Table 9.		Rheumatologist, Geriatric Medicine		Visiting specialist services include dermatologist, physician, obstetrics and gynaecologist, ophthalmologist, paediatrician, optometrist.	A range of specialties are provided on a visiting basis.
Accreditation status	Not accredited	Until 2020	Until 2020	Until 2021	Yes: date of expiry for accreditation is unknown.	Until 2021

Source: ABS Census 2016; Google Earth; KPMG interviews with providers.

The above comparative analysis of health and aged care services in remote Australian communities, identifies the following:

- Thursday Island is the only remote community that provides surgery and birthing services, but it has a much higher birthing demand than Norfolk Island with over 100 births per year;
- Norfolk Island is the only remote community to provide a full-time dental service; and
- Norfolk Island has the highest percentage of people aged over 65.[56]

[56] ABS Census 2016 and KPMG consultation.

Service gaps

In addition to the planning principles for rural and remote services and the comparison with other similar island communities, the following factors were taken into consideration when determining the level and type of services to be delivered on Norfolk Island:

- the distance from Norfolk Island to other larger referral hospitals on the mainland;
- the community expectations for health services delivered on Norfolk Island (e.g. the desire to have birthing and surgery delivered locally);
- the cultural and social implications for community members who have to access services on the mainland (e.g. not being born on Norfolk Island);
- the role that the current service provider (SESLHD) has had in supporting service delivery on Norfolk Island; and
- the uniqueness of Norfolk Island as an external Australian territory which has only recently become administered by Australia (since 2016) and, as such, has not had to have the health services on Norfolk Island accredited against the NSQHS standards.

Based on these key considerations, the analysis of health needs in Section 2, assessment of the current network of services (refer Section 4) and consideration of the social and policy issues (refer Section 5), a number of service gaps have been identified. These gaps include the following:

- A **birthing service** to address the needs of any emergent (unplanned) births on Norfolk Island for either visitors to Norfolk Island or local residents. It is noted that this issue has been important to the community for many years. As outlined in Section 4, there are significant quality and safety risks for patients in having a planned birthing service on Norfolk Island. These factors include:
  - consideration of the volume of births and the inherent risk associated with particular births;
  - availability of a suitable qualified and credentialed workforce to provide sustainable continuity of maternity care; and
  - the time taken to travel / retrieve to a higher clinical capability service in the event of foetal or maternal compromise for both the mother and neonate.

  There is also a residual risk in not increasing the capability of the birthing service as there may be an ongoing small number of births on Norfolk Island despite health service policies directing people to give birth on the mainland. This creates a further risk for the community of having high maternal and child morbidity within this small group. There are several ways to mitigate this risk including: having a networked and clearly defined retrieval service arrangement that is aligned with the local governance framework; and working with the community to design and build a family centred model for (on and off Island) maternity services.
- A **surgical service** to provide time critical procedures and low risk elective procedures on low risk populations. This is to address the safety, financial and other costs associated with travel to the mainland for low risk, low complexity surgical care and procedures (e.g. endoscopy). Similar to the issues with establishing a birthing service, the challenges in providing this are substantial and would involve having a facility that is accredited under the ACHS standards and an appropriately credentialed workforce that can either travel to Norfolk Island periodically or be permanently located on Norfolk Island with remote-access support (e.g. telehealth support from a referral hospital on the mainland).

Consideration should be given to the key factors in establishing any type of surgical service (e.g. simple surgical procedures or specialist procedures such as endoscopy). This includes the following:

- consideration of the volume of procedures and the inherent risk associated with particular surgery types as well as particular patients;
- availability of suitable qualified and credentialed workforce to provide sustainable continuity of surgical care (pre- and post- operative); and
- the time to travel / retrieve to a higher clinical capability service in the event of problem during surgery.

- A **quality management framework** to ensure services are provided at acceptable standards. The variety of clinical services delivered on Norfolk Island should be underpinned by safeguards to assure the providers and community members of the safety and quality of services. Safety Officers utilise SESLHD and NIHRACS Quality Management Frameworks, alongside the ACHS report, for regular audits and training such as in hand hygiene. Obtaining external accreditation of the clinical and support services will bring the service delivery towards the standards expected of other parts of Australia. Part of the quality management framework would include reporting on quality, operational and other indicators consistent with the national or state-based data collections. This will enable benchmarking of performance compared to peers.
- A **governance framework** including the establishment of a clinical advisory panel for periodic review of the evidence base for particular service delivery models on Norfolk Island. The governance framework would support healthcare planning and ensure that service delivery appropriately addresses the needs of the Norfolk Island community. This governance framework would not involve updating the 2019 Plan but rather provide a mechanism for periodically reviewing changes in both demand and supply of health services within a defined scope, with reference to published evidence or examples of change in better practice.
- An expanded **health promotion program** to increase the availability of primary and secondary prevention activities. The focus of this program would be on providing the community with increased resources and improving the health status of the community through health prevention strategies and the early detection of disease or illness.
- An **aged care service** that supports residents to maintain independent living in community settings and, as a last resort, in an institutional environment. This service should leverage off the high level of existing community resilience and supports by providing a primary focus on home-based service delivery.
- A **chronic disease management model** specifically aimed at minimising the impact of non-communicable disease. A prospective and proactive approach to the management of chronic disease requires the following elements:
  - Self-management support: Collaboratively helping patients and their families to acquire the skills and confidence to manage their condition. Provide self-management tools, referrals to other resources, routinely assessing progress.
  - Decision support: Integration of evidence based clinical guidelines into practice and reminder systems. Guidelines reinforced by clinical "champions" providing education to other health professionals.
  - Community resources: Linking patients and community members with education classes and case managers appropriate to their health condition or health need (e.g. rehabilitation classes, exercise programs or self-help groups).

The next section of the report outlines the service requirements for addressing these service gaps, before identifying the enabling infrastructure (refer Section 7) and the proposed review process for periodically reassessing the local health needs and changes in the evidence base for alternative service delivery models (Section 8).

Proposed services

This section of the report outlines the proposed services for Norfolk Island, based on the assessment of health need in Section 2, the planning principles above, a comparative analysis with similar communities and the gap analysis undertaken to identify what service types and system supports will be required on Norfolk Island to meet the future population's needs.

The proposed health care services should be developed as a vertically integrated health care system that provides the population with a range of affordable health, aged and support services that are targeted to the specific needs of the community.

This is consistent with the MPS program which was established to address the problems of access to and sustainability of, health services in small rural communities. These models promote the integration of primary care, acute and aged care services in small communities.

MPSs bring together a range of health and residential aged care services on one site. The program benefits small rural communities by enabling older residents to 'age in place' and provides small rural communities with access to a range of coordinated acute, aged care and community services.

Role delineation

The projected future service level outlined in Table 16 have been described based on the NSW Guide to Role Delineation of Clinical Services (the Role Delineation) which describes the minimum support services, workforce and other requirements for the safe delivery of clinical services.[57] Each service standard in the Role Delineation has up to six levels of service in ascending order of complexity. Where a health facility has no planned service, it is classified as level 'NPS' with no numerical value assigned.

A summary of the workforce requirements and infrastructure impacts for each service type is provided in Appendix G. The recommended levels of service have been developed based on the achievable scope of practice of Rural Generalist Practitioners with enhanced referral, networking and consultation mechanisms with referral partners and specialist mainland providers (e.g. SESLHD).

It is important to note that a key difference between the facilities identified in the comparative analysis above and those on Norfolk Island is the accreditation of facilities. As mentioned in Section 4, the Norfolk Island Hospital was previously assessed by the ACHS in 2014 for the purposes of accrediting the facility against ACHS standards of quality and safety. A range of opportunities for improvement were identified as a result of this survey, indicating the need for improved processes, capability and infrastructure.

The service levels identified for future increase or improvement in Table 16, will require the facilities on Norfolk Island to become accredited in order for the proposed service level to be attained. Many of the opportunities for improvement identified in the ACHS survey related to administrative protocol and clinical governance. To this end, clinical governance will be a critical enabler for any changes to healthcare on Norfolk Island. It is understood that a lot of

[57] NSW Ministry of Health 2018. Guide to the Role Delineation of Clinical Services. Retrieved from: https://www.health.nsw.gov.au/services/pages/role-delineation-of-clinical-services.aspx.

work has been undertaken by NIHRACS, with support from SESLHD, to improve quality management, however this issue of clinical governance will continue to be a key priority for developing a sustainable healthcare service.

It is also acknowledged that the level of service required on Norfolk Island may change over time. To this end, there will need to be a periodic and ongoing process of monitoring and evaluation to assess both the current service levels on Norfolk Island and the future requirements. Section 8 of this report provides an overview of the proposed arrangement for monitoring and evaluation of Norfolk Island health requirements as part of a governance framework.

Table 16: Role delineation of services for Norfolk Island

Service	2015	2019 Existing level	Projected future level	Comment
Section 1: Core Services				
Anaesthesia and Recovery	Level 1 service	Level 1 service	Level 2 service	A Level 2 anaesthesia capability and capacity is required to support the delivery of low-risk surgery (see comments below).
Operating Suite	Level 1 service[58]	NPS	Level 2 service	A decision by NIHE was made to close the operating suite, following the outcomes of the ACHS survey in 2014. A Level 1 service was provided in 2015 which involved providing procedures that required analgesia without general anaesthetic. A Level 2 Operating Suite service is required in future to facilitate delivery of low-risk surgical procedures on Norfolk Island (e.g. endoscopies) by either local or fly-in clinicians.
Close Observation Unit	NPS	NPS	NPS	
Intensive Care Service	NPS	NPS	NPS	
Nuclear Medicine	NPS	NPS	NPS	
Radiology and Interventional Radiology	Level 1 service	Level 2 service	Level 2 service	A Level 2 radiology service is required to support diagnostic imaging for treatment and surgery and reduce referrals off Norfolk Island.
Pathology	Level 1 service	Level 3 service	Level 3 service	Level 3 service exists without National Association of Testing Authorities accreditation. This means that the pathology services have not been independently assessed for safety and quality as most pathology and laboratory services on the mainland are.

[58] The operating suite was closed by the NIHE in 2014, following the accreditation survey by the ACHS. NILA, 14th NILA Hansard, 17 December 2014, p. 871.

Pharmacy	Level 2 service	Level 1 service[59]	Level 2 service	The pharmacy requirement for hospital inpatients are currently supported by an external pharmacy. An allocated pharmacist resource for the hospital facility is required to support a Level 2 service for a range of other service types.
Section 2 Part A: Emergency Medicine				
Emergency Medicine	Level 1 service	Level 2 service	Level 2 service	A Level 2 emergency service is required to safely respond to emergencies and stabilise patients ahead of aeromedical evacuations.
Part B: Medicine				
Cardiology and Interventional Cardiology	NPS	Level 1 service	Level 1 service	A Level 1 cardiology service is required to support an ageing population and the associated chronic diseases.
Chronic Pain	NPS	NPS	NPS	
Clinical Genetics	NPS	NPS	NPS	
Dermatology	NPS	Level 2 service	Level 2 service	A Level 2 dermatology service is required to respond to conditions such as skin cancer, psoriasis and eczema.
Drug and Alcohol	NPS	Level 1 service	Level 2 service	A Level 2 drug and alcohol service is required to support an ageing population with a relatively high proportion of smokers and relatively high levels of reported stress.
Endocrinology	NPS	Level 2 service	Level 2 service	A Level 2 endocrinology service is required to support an ageing population with a relatively high proportion of obese people and the associated chronic diseases including diabetes and kidney disease.
Gastroenterology	NPS	Level 1 service	Level 2 service	Visiting specialist.
General and Acute Medicine	NPS	Level 2 service	Level 2 service	A Level 2 general medicine service is required to help keep unnecessary medical referrals to the mainland to a minimum and to address the emergent needs of visitors to Norfolk Island.
Geriatric Medicine	NPS	Level 2 service	Level 2 service	A Level 2 geriatric medicine service is required to support an ageing population.
Haematology	NPS	NPS	NPS	
Immunology	NPS	NPS	NPS	
Infectious Diseases	NPS	NPS	NPS	
Neurology	NPS	NPS	NPS	
Oncology – Medical	NPS	NPS	NPS	
Oncology – Radiation	NPS	NPS	NPS	
Palliative Care	NPS	Level 2 service	Level 2 service	A Level 2 palliative service is required to support an ageing

[59] There is a reduction in the level because there is no longer a designated clinical pharmacist allocated to deliver prescriptions to the hospital.

				population and to help people to age on Norfolk Island.
Rehabilitation Medicine	NPS	NPS	NPS	
Renal Medicine	Level 2 service	Level 2 service	Level 2 service	A Level 2 renal medicine service is required to support an ageing population with a relatively high proportion of obese people and the associated chronic diseases including kidney disease.
Respiratory + Sleep Medicine	NPS	Level 2 service	Level 2 service	A Level 2 respiratory service is required to support a population with a relatively high proportion of smokers and the associated chronic diseases including respiratory disease.
Rheumatology	NPS	NPS	NPS	
Sexual Assault Services	NPS	Level 3 service	Level 3 service	This service is currently provided through NI-Connect services and is required to address emergent needs.
Sexual Health	NPS	Level 1 service	Level 1 service	A Level 1 sexual health service is required to ensure preventative education and surveillance of sexually transmitted disease on Norfolk Island.
Part C: Surgery				
Burns	NPS	Level 2 service	Level 2 service	This service currently exists based on an arrangement with SESLHD.
Cardiothoracic Surgery	NPS	NPS	NPS	
Ear, Nose and Throat	NPS	NPS	NPS	
General Surgery	Level 1 service	Level 1 service	Level 2 service	A Level 2 service is required to facilitate delivery of low-risk surgical procedures on Norfolk Island. This is required as the population ages and the number of referrals to the mainland for low-risk procedures increases.
Gynaecology	NPS	NPS	NPS	
Neurosurgery	NPS	NPS	NPS	
Ophthalmology	NPS	Level 1 service	Level 1 service	This service currently exists based on an arrangement with SESLHD and is required to support an ageing population.
Oral Health	Level 2 service	Level 3 service	Level 3 service	A Level 3 service is required to prevent unnecessary referrals to the mainland for dental issues and to support future demand as chronic disease is commonly associated with poor dental hygiene.
Orthopaedic	NPS	NPS	NPS	

Plastic Surgery	NPS	NPS	NPS	
Urology	NPS	NPS	NPS	
Vascular Surgery	NPS	NPS	NPS	
Part D: Child and Family Health Services				
Child and Family Health	NPS	Level 2 service	Level 2 service	Service established and provided through NI-Connect.
Child Protection Services	NPS	Level 3 service	Level 3 service	Service established through NIHRACS.
Maternity	Level 1 service	Level 1 service	Level 1 service	A Level 1 service is required to provide antenatal and postnatal care for women with no identified risk factors.
Neonatal	NPS	Level 1 service	Level 1 service	A Level 1 neonate service is required to support the Level 1 maternity service and to facilitate delivery of any emergent births, not to facilitate any planned births.
Paediatric Medicine	NPS	Level 2 service	Level 2 service	This service currently exists based on an arrangement with SESLHD and is required to support children on Norfolk Island.
Surgery for Children	NPS	NPS	NPS	
Youth Health	Level 1 service	Level 2 service	Level 2 service	A Level 2 youth health services is required to meet the specific health needs of youths in a remote environment.
Part E: Mental Health				
Adult	Level 1 service	Level 2 service	Level 2 service	There are a relatively high proportion of community members who reported being stressed. A Level 2 service is required to support ongoing mental health needs in a remote island environment.
Child and Youth	Level 1 service	Level 2 service	Level 2 service	
Older Person	Level 1 service	Level 1 service	Level 1 service	A Level 1 service is required to support elderly residents with mental health issues.
Part F: Aboriginal Health				
Aboriginal Health	NPS	NPS	NPS	

Part G: Community Health				
Community Health	Level 1 service	Level 1 service	Level 3 service	An increase in the level of community health services includes a range of multidisciplinary services such as chronic disease management and prevention, rehabilitation and allied health. These services are required to help keep people well and prevent hospitalisations and transfers.

Source: Guide to Role Delineation of Clinical Services, NSW Health, June 2018 and KPMG consultation.
NPS = No Planned Service.

Service description

Service levels

This profile of services is recommended to be similar to those in other rural and remote communities but recognition should be given to the challenges of service provision in isolated communities.

It is recognised that there are workforce availability constraints in the provision of services to isolated communities that may limit the ability to consistently provide all the required services.

Primary care

The foundation of health care services on Norfolk Island should be a comprehensive primary care service that is provided by staff with an appropriate breadth of experience and skill. An interdisciplinary model with medical, nursing and other skills is required to deliver a range of activities including health promotion, prevention, early intervention, treatment of acute conditions and management of chronic conditions.

Acute medicine

The management of acute medical emergencies has increased importance on Norfolk Island with high levels of chronic and complex conditions and the lack of recourse to a higher clinical capability service. The capability to provide effective first line diagnosis and intervention is a fundamental requirement of a health system. This will include the common acute presentations relating to cardiac, respiratory and endocrine disease (acute coronary syndrome, cardiac failure, asthma, diabetes).

The inclusion of a general medicine / internal medicine capability as a remote sub consultation service to support the general practice on Norfolk Island would add value to the community in the provision of secondary specialist care for chronic health conditions that community members receive acute treatment on the mainland for (e.g. cardiac rehabilitation and cardiac check-ups delivered on Norfolk Island following interventional cardiology in a higher level capability service on the mainland).

Maternity services

As discussed in Section 4, there is currently a relatively low volume of births on Norfolk Island and an older population, but there remains significant community interest in a planned birthing service on Norfolk Island. Whilst this expressed desire is an important factor in determining service provision, there are critical safety and quality factors that need to be considered in assessing whether a safe planned birthing service can be sustained on Norfolk Island. These factors include:

- consideration of the volume of births and the inherent risk associated with particular births;
- availability of a suitable qualified and credentialed workforce to provide sustainable continuity of maternity and perinatal care; and
- isolation of the community as measured by the time taken to travel to a higher clinical capability service in the event of foetal or maternal compromise for the mother or neonate.[60]

Based on the current network of services on Norfolk Island, it is unlikely that all of the factors identified above could be addressed to sustain a safe planned birthing service on Norfolk Island.

Perinatal risk factors are a consideration in determining the healthcare requirements for a safe birth. Both maternal factors (e.g. obesity, diabetes and hypertension) and pregnancy factors (e.g. previous caesarean section, smoking status and maternal age) increase perinatal risk and therefore the risk of an adverse outcome such as still birth, preterm birth or neonatal death.[61] Any pregnancies that are deemed not to be low risk would automatically require maternity services at a higher clinical capability (e.g. larger referral hospital on the mainland). Whilst there is no historical data available to review regarding the perinatal risk of births delivered on Norfolk Island or women who birthed off Norfolk Island, it is anticipated that a number of pregnancies on Norfolk Island would fall into the higher perinatal risk category. Furthermore, with an ageing population, the relatively high number of obese people and the high rate of smoking on Norfolk Island it could be anticipated that the number of women who would be expected to have low perinatal risk factors would be small limiting the number of suitable births.

A further important consideration in determining the safe provision of birthing services on Norfolk Island is the sustained availability of a suitably qualified workforce to cater for any level of birthing service. Birthing services for low perinatal risk births is critically reliant on the workforce capability which includes a medical practitioner with suitable obstetric and anaesthetic capability. The current medical workforce does not fulfil that criteria and there is a noted workforce gap in Australia with declining numbers of GPs seeking to be recognised as holding this qualification or choosing to undertake advance training to up skill. Norfolk Island has been unsuccessful in recruiting a medical practitioner who could fulfil this role to date.

Lastly, in terms of quality and safety there is a requirement to minimise the time from decision to intervene, based on evidence of foetal or maternal distress, to time of delivery. In

[60] These are three of the key factors considered in a range of guidelines and frameworks relating to maternity services including the National Maternity Services Capability Services Framework and the Australian Rural Birthing Index (ARBI). Detailed information about the preconditions for a planned birthing service in rural and remote areas, based on the ARBI, is provided in Appendix H.
[61] Board on Children, Youth, and Families; Institute of Medicine; National Research Council 2013. An Update on Research Issues in the Assessment of Birth Settings: Workshop Summary. Washington (DC): National Academies Press (US). Assessment of Risk in Pregnancy. Retrieved from: https://www.ncbi.nlm.nih.gov/books/NBK201935/.

the event that any life threatening problems are identified for the mother or neonate, it is widely accepted that the "decision to delivery time" should be 30 minutes or less and where there are identified problems for the mother or neonate which are not immediately life-threatening, the recommended decision to delivery time should be within 75 minutes.[62] Norfolk Island retrieval times are in excess of six to eight hours which leaves a significant gap in the time allowed to provide safe care to both labouring women and the neonate. The geographical implications for safe birthing needs to be taken into strong consideration, when assessing whether to establish a planned birthing service.

Based on consideration of these factors, the establishment of a planned birthing service is not considered a future requirement for Norfolk Island, however there will need to be ongoing presence of a service capability appropriate for addressing the needs of emergent births (e.g. for visitors to Norfolk Island or for local women who go into labour early, before they can relocate to the mainland). Furthermore, there needs to be further investigation of the extent to which women from Norfolk Island who give birth on the mainland have continuity of care before and after birth, and the extent to which maternity services are patient-centred and enable mothers to have their family with them in the lead up to the birth. Examples of the types of wrap around support would be subject to funding and may include the following:

- enabling family to travel with the expectant mother;
- ensuring that the subsidy reflects the real cost of travel to, and accommodation in, a mainland location where the patient may have few connections; and
- ensuring continuity of care throughout the mother's pregnancy, from pre-natal to birthing and post-natal support.

Surgical services

The continued difficulty in recruitment of GPs with anaesthetic and surgical skills will result in ongoing difficulty in providing a planned surgical service. However, the lifestyle and occupational risks associated with rural communities make it likely that trauma and other surgical emergencies will occur periodically.

Norfolk Island should retain the capacity to undertake emergency stabilisation of trauma patients prior to transfer to a secondary or tertiary care provider. The level of procedures available will depend on the skill and credentialing of the workforce available at the time and the level of telehealth support available from another centre.

The utilisation of the facilities for planned elective low risk procedures on low risk patients should be considered on a case-by-case basis for each procedure type (e.g. the appropriate facilities, workforce and supports may be in place for low risk endoscopy procedures but not low risk ophthalmology procedures or vice versa). Consideration should be given to the cost benefit analysis of local delivery compared with mainland delivery, the management of procedural complications and the availability of the required instrumentation, sterilisation or decontamination equipment, and personnel. The preconditions for the introduction of these services are similar to those mentioned above for maternity services, that is, organisational accreditation, establishing and retaining a workforce that is skilled and experienced with contemporary practice and establishing guidelines and procedures for the functioning of the service. As with maternity services, the need for surgical services on Norfolk Island should be reviewed periodically to assess whether the level and type of need has changed and

[62] National Institute for Health and Care Excellence 2019. Clinical guideline for antenatal care for uncomplicated pregnancies.

whether this service would be better offered on Norfolk Island than on the mainland. Section 8 of the report describes the recommended ongoing review process.

Population health programs

The continued development of population health programs in the Norfolk Island community is likely to add significantly to the achievement of better health outcomes. These should include tobacco control initiatives to further align tobacco control with the mainland.

The prohibition of marketing and point of sales visibility is a good initial step. Significant reductions in smoking rates would be expected with increases in price.[63] In particular, increasing price has a major impact in reducing smoking initiation in younger people.

Aged care services

Citizens in an ageing community will experience times when it is difficult to manage day-to-day living activities. Aged care services can be targeted across a range of supports including home support programs, respite care, transitional care after hospitalisation or permanent residential aged care options.

A key focus of these services is on active ageing and wellbeing which can be enhanced by a supportive and engaged community. The Norfolk Island community has many attributes that support this as it is proud of its heritage and history of hard work and self-reliance and is a supportive community that helps out friends, neighbours and people in need. A continued progression towards achievement of national standards will enhance the service delivery to residents and can precede redevelopment of the physical infrastructure. It should be recognised that this is likely to be challenging.

The NIRC and others should continue to review and remove barriers to the establishment of independent living unit style accommodation. This will provide members of the community with further accommodation and support opportunities.

The ageing of Norfolk Island population, the lack of alternative accommodation in supported living or residential aged care services, and the desire for community members to age at home, indicates that there is a need for an effective home support program on Norfolk Island, with nursing and allied health support services. As described in Section 4, the Community Home Support Programme currently funds the delivery of a range of domestic assistance and home maintenance services for eligible residents on Norfolk Island. These services are delivered by Care Norfolk Inc. A key gap in the current home support services provided on Norfolk Island is home-based nursing support which would better enable community members to age in place. The expansion of the Community Home Support Programme on Norfolk Island would require addressing the following factors:

- availability of appropriate nursing and allied health with a registered Community Home Support Programme provider (e.g. if NIHRACS were to become an approved provider or Care Norfolk Inc. were to provide nursing support); and
- availability of an Aged Care Assessment Team Assessor as part of a Regional Assessment Process which could be provided by an Australian state health service (e.g. SESLHD).

[63] The Cancer Council 2019. Tobacco in Australia, Price elasticity of demand for tobacco products www.tobaccoinaustralia.org.au/13-1-price-elasticity-of-demand-for-tobacco-produc.

Governance

Consistent with the recommendations of the ACHS accreditation survey and previous planning reports, the provision of health services on Norfolk Island should be supported by an entity with well-established clinical and corporate governance mechanisms. This will also assist in expediting the path to achieving accreditation of clinical services.

Clinical governance

Establishing long term clinical and corporate governance mechanisms will also allow for continuity of service, which is a priority of NIHRACS in aiming to achieve the best possible health outcomes for the community.

At a minimum, a robust clinical governance framework would need to include the following:

- a robust patient safety and quality management system including policy and procedures, measurement and quality improvement, risk management and maintenance of healthcare records;
- a link between clinical governance and the overall corporate governance system to ensure clinical governance is of equivalent importance to financial, risk and other business governance;
- ongoing clinical performance and effective measurements focussing on workforce qualifications, credentialing and capability;
- partnering with the community in clinical governance activities and a quality improvement system as well as partnering with the community in their own care; and
- accreditation against the Australian National Quality and Safety Health Service Standards.

Service pathways

Effective pathways for referral and support to mainland providers should be established to enable clarity on the options for care and ongoing support when it cannot be provided locally.

While patient preference and choice is an important consideration, a strong relationship with a small number of providers will enable all parties to develop experience in the interactions. The establishment of effective telehealth links is also best done between a small number of parties to enhance the continuity of care and integration of services.

Staff support

Establishing staff support structures will assist in the continuing education and skill development of staff. These structures could include participation in the learning and development programs of an established health service provider including:

- online mandatory annual training modules and ongoing training and development;
- staff support and mentor capability;
- professional and peer review of practice;
- participation in seminars and other video / webcast initiatives; and
- opportunity for staff exchange and skills transfer.

These programs can also be used as an avenue to progress the development of telehealth programs for the patient level clinical review and treatment.

Education and training

The affiliation with a Rural Clinical School for undergraduate and postgraduate training programs provide the opportunity to:

- encourage medical students (and medical professionals) to take up a career in rural practice;
- encourage rural health professionals to take up academic positions;
- improve the range of rural health care services in rural communities across Australia; and
- strengthen the health workforce in rural communities across Australia.

This opportunity could be a progression towards developing and continuing a supply of highly skilled medical, nursing and allied health staff.

Planned services summary

There are a range of services that will be required to adequately support the Norfolk Island community into the future. The key service gaps identified based on analysis of both the health needs of the community and the existing network of services include health promotion, chronic disease management, birthing services, surgical services and aged care.

Each of these services can be delivered to varying 'levels' based on variations in the service scope according to population size and health need. The analysis provided in this section, indicates the level at which each service type should be delivered in order to meet the needs of the community on Norfolk Island. There are a number of service types which involve an increase in the level of the service delivered (e.g. surgical services moving from NPS to Level 2). It is important to note that in order for any increase in service levels to be realised, there will need to be an appropriate quality management and clinical governance framework in place, and the facilities on Norfolk Island will need to become accredited. The next section of the report outlines the infrastructure required to enable the planned services described above.

7. Enabling infrastructure

This section of the report describes the infrastructure required to deliver the services identified in Section 6.

Facilities

Access is an issue for remote communities that affects health outcomes. To improve access to health services on Norfolk Island, a future health facility should focus on ensuring health services remain integrated in a single facility and that the facility has a high information technology capability.

The proposed configuration of the facilities recognises the increasing role of aged care service provision with continued need to provide effective primary care, acute inpatient care and emergency response.

This facility should be planned with flexibility to allow for expansion or reconfiguration if the service needs change over time, consistent with the service objectives of MPS models and the National Strategic Framework for Rural and Remote Health. This Framework recognises that better infrastructure and accommodation is required to enhance the level of locally provided services.

Table 17: Proposed Norfolk Island Multipurpose Health Service facility profile

Infrastructure	2019 Existing	Projected future level	Rationale / Comment
Primary Care			
GP and medical consulting rooms	3	6	Additional medical consulting rooms are required to provide additional infrastructure for visiting specialist staff to deliver services, e.g. ophthalmology, surgery etc.
Allied health consulting rooms	2	4	Additional allied health consulting rooms enable mental health, social work, dietician, diabetes educator and other allied health services to be delivered. These services are required to respond to the chronic disease and mental health needs of the Norfolk Island population. These consulting rooms may be used by visiting fly-in, fly-out clinicians or the allied health staff on Norfolk Island.

Acute services			
Emergency bay	2	2	Emergency bays are required to enable stabilisation of trauma patients prior to transfer to a secondary or tertiary care provider. The level of procedures available depend on the skill and credentialing of the workforce available at the time and the level of telehealth support available from another centre.
Acute beds	6 physical 3 occupied	6	No additional acute beds are required. The estimated future infrastructure requirement includes the capacity to deal with surge demand periods.
High dependency room	1	1	A high dependency room is required to support any patients who require more attentive care than can be provided in a general ward. For example, following surgery, patients may be placed in the high dependency room rather than back into the normal ward.
Mental health room	1	1	A mental health room is required for emergent mental health cases, where a secure room may be needed.
Birthing room	1	1	A birthing room is required to address the needs of any emergent births on Norfolk Island and is not for the delivery of any planned birthing services.
Operating room	0	1	An operating room is required for low risk procedures and surgery which is currently being referred to the mainland (e.g. endoscopy, superficial surgery). This can only occur if suitable resources and capability are available (e.g. general surgeon, GP surgeon). The pathway to accreditation includes a series of system and operational steps which need to be taken before the operating room can be used safely.
Dialysis chairs	2	3	Three dialysis chairs have been purchased to replace obsolete equipment. The operationalisation of the chairs is pending staff training.
Residential care			
Residential care beds	14	24	Residential aged care beds are required to meet the needs of the fast growing population of people aged 65 and over.
Support services			
X-ray room	1	1	An X-ray room is required for delivering diagnostic imaging. This is required in any facility with an operating theatre and will also support the delivery of other allied health services (e.g. physiotherapy).
Mammography	1	1	A mammography room is required to facilitate future breast screening.
Dental chairs	2	2	This infrastructure is required for the ongoing visiting services delivering dental and allied health services to the Norfolk Island community.
Allied health treatment spaces	3	3	

Source: KPMG.

Note: Existing facilities in most acute areas do not achieve compliance with AHFG.

Note: Since the 2015 Plan, two acute beds have been repurposed as residential aged care beds. This has resulted in a decrease of acute beds and an increase of residential aged care beds between the 2015 Plan and 2019 Plan.

Note: In 2016 the two emergency bays were reallocated for use as outpatient general practitioner services during business hours (9am to 5pm from Monday to Friday). Outside of business hours the two emergency bays are used for after-hours triage of emergency presentations.

Information and Communication Technologies

The continued development of a telehealth system is required to support the availability of secondary care and tertiary care on Norfolk Island. This system should continue to develop with the following features:

- a robust implementation strategy that includes the procedures, protocols and technical support;
- an effective secondary and tertiary health care provider that will support the implementation of the service and the range of specialty clinical services required;
- an education program for staff in all disciplines, which provides the opportunity for professional networking and peer support;
- a bandwidth to enable useful clinically oriented video conferencing; and
- a capability to include devices and remote access cameras.[64]

Other information systems should be implemented to provide the health service with the level of information available for other small rural services. This includes a medical records coding system and inclusion of data to the morbidity data collections for analysis.

Reporting of standard quality and safety outcomes, including morbidity and mortality, on a periodic basis is required.

Enabling infrastructure summary

In order for the services described in Section 6 to be safely delivered on Norfolk Island, there will need to be enabling infrastructure. As described in Table 17, this includes a series of physical spaces for the delivery of health services and aged care.

Physical infrastructure alone is not enough to support the sustainable delivery of services on Norfolk Island. Clinical governance, communication protocols, documentation and other safety standards are required to ensure the safe and effective delivery of healthcare. A summary of the enabling infrastructure, the workforce and other clinical supports required to deliver the future healthcare services on Norfolk Island is provided in Appendix G.

[64] See for guidance on the technology requirements. Accessible at: www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/connectinghealthservices-guidance.

8. Governance framework

As discussed in Section 5, Norfolk Island is an isolated island community grappling with many of the same healthcare challenges as remote communities in Australia. These challenges include attracting and retaining a skilled clinical workforce, having a reliance on the public sector as a default service provider, ensuring access to fresh food and healthy lifestyle options and ensuring access to health services at a distance from any metropolitan centre.

This report has provided a plan for future health service provision on Norfolk Island by identifying gaps in the type and level of services delivered and identifying the infrastructure required to support delivery of these services into the future.

The 2019 Plan has been developed based on the service and infrastructure guidelines currently available. However, the evidence base for effective and appropriate service delivery models is continually evolving in response to a range of factors including advances in technology, changes in community expectations and the demand for and supply of the clinical workforce nationally. This means that the infrastructure, workforce and supports identified as necessary in this report for the provision of safe and quality health services on Norfolk Island may change over time as the evidence base for contemporary 'better practice' health service delivery evolves. Furthermore, whilst this report has provided an assessment of the need for health services based on the currently available data, technology, workforce and infrastructure, there are a select number of health services that the community will continue to have an interest in. These services include maternity services, surgery and aged care.

Given the evolving nature of the evidence base for better practice models of care, and the apparent interest from the community in making particular services available on Norfolk Island, a governance framework should be established, including a process for periodic assessment of the need, and evidence for, the provision of specific services on Norfolk Island.

Some jurisdictions in Australia already have a governance framework and a formalised process in place for monitoring the healthcare needs of their population and reviewing the models of service delivery employed to meet these needs. Examples include the Clinical Senates in the Northern Territory (NT) and Western Australia and the Agency of Clinical Innovation (ACI) in NSW. The Clinical Senates are clinical governance bodies which provide leadership by developing strategies to promote the delivery of high quality, safe and sustainable healthcare. The Clinical Senates operate within agreed terms of reference and, in some cases, have short- and long-term focus areas. The Clinical Senates also provide a structured forum for clinician and stakeholder consultation and communication on matters of strategic importance. The ACI in NSW leads innovation in clinical care, bringing patients, clinicians and managers together to support innovation, design and implementation.

Periodic review of the evidence base for Norfolk Island

To better meet the healthcare needs of Norfolk Island's future population, there are several key elements required for more sustainable service delivery models across a range of services. These key elements include: access to an appropriately skilled health workforce; ongoing training and education and improved use of technology to support clinicians working in a remote location.

The establishment of a governance framework, including a clinical advisory panel would allow for periodical review of the evidence base for particular service delivery models on Norfolk Island. The purpose of this clinical advisory panel would be to provide independent expert advice, information and recommendations on the extent to which approaches to care delivery on Norfolk Island (including workforce, use of technology or other aspects of service delivery models) should respond to changes in the evidence for provision of safe and quality care on Norfolk Island.

A clinical advisory panel for Norfolk Island would have a makeup of people with experience in remote healthcare delivery and have a relevant clinical and / or academic background. For example, membership could include an experienced health administrator, obstetrician with rural experience and a GP proceduralist with rural experience. The terms of reference for the clinical advisory panel would be developed in consultation with the Norfolk Island community but would be limited to:

- changes in demand for specific service types based on analysis of locally collected data (e.g. historical activity, historical service provision or other data indicating a likely or actual change in demography or health need); and
- changes in the evidence or accepted practice for specific service types which are commonly identified as difficult to resource in remote areas (e.g. birthing and surgery).

The objectives of this clinical advisory panel would align with any quality management framework (refer Section 6) developed by NIHRACS or health priorities identified by the community (e.g. gaining accreditation or examining the potential need for a planned birthing service). The clinical advisory panel would also provide an objective and informed source of clinical advice for funders, service providers and the community.

The clinical advisory panel might convene triennially and take responsibility for consulting, examining the contemporary evidence base, and considering and formulating practical recommendations in the context of clinical and operational best practice. As part of their review of the contemporary evidence base, the clinical advisory panel would consider both qualitative and quantitative research relating to health service need and service provision on Norfolk Island and identify any changes in the evidence base for better leveraging technology to deliver health services in similarly remote and / or isolated locations. The clinical advisory panel would also be responsible for presenting key findings from their review to the Department and community, including recommendations for whether a review of the 2019 Plan is warranted based on changes in the key enablers for effective service delivery, including access to an appropriately skilled health workforce, clinical training and education practices and technology.

To ensure clarity of purpose, the role of the panel of experts should not be to assess compliance, comment on funding priorities, advocate for clinicians or provide advice on operational health service matters. The purpose of having a panel of experts to periodically assess healthcare service delivery on Norfolk Island against the evidence base is to identify

opportunities to improve patient outcomes and champion innovation in a strengths-based way.

Norfolk Island will require support to establish a governance framework and set up a panel of experts that are independent from the current external service provider (i.e. SESLHD). It will be important to have community and government input into the collective development of the governance framework and the terms of reference for the clinical advisory panel, to ensure both perceived and actual independence.

Appendices

Appendix A: Documents and data reviewed

Table 18: Compilation of reviewed documents and data

Doc No	Author	Document Name
1	Gavin Calvert AO and Marie Connolly PhD	Review of Existing Child and Family Support Services on Norfolk Island, 2012
2	Nexus Management Consulting	Draft Health Services Plan – Norfolk Island, 2013
3	The Australian Council on Healthcare Standards (ACHS)	Report of the ACHS EQuIPNational Organisation-Wide Survey – The Norfolk Island Hospital Enterprise (NIHE), March 2014
4	R&S Muller Enterprise	Health Services Survey Report, February 2015
5	Department of Infrastructure and Regional Development	A Regional Council Model for Norfolk Island, 2014
6	Deloitte Access Economics	Norfolk Island Government Business Analysis, Nov 2014
7	The Parliament of the Commonwealth of Australia: Joint Standing Committee on the National Capital and External Territories	Inquiry into the provision of health services on Norfolk Island (2001)
8	The Parliament of the Commonwealth of Australia: Joint Standing Committee on the National Capital and External Territories	Same country: different world: the future of Norfolk Island (2014)
9	The Parliament of the Commonwealth of Australia	Norfolk Island Legislation Amendment Bill 2015
10	Assistant Minister for Infrastructure and Regional Development	Delivering a stronger and more prosperous Norfolk Island, 19 March 2015
11	Parliament of Australia	Norfolk Island: new governance arrangements, 30 March 2015
12	Commonwealth of Australia	National Strategic Framework for Rural and Remote Health, 2012
13	Ministry of Health, New South Wales (NSW)	Policy Directive - Multipurpose Services - Policy and Operational Guidelines
14	Department of Regional Australia, Regional Development and Local Government	2011 Community Survey
15	Deloitte Access Economics	Wellbeing Presentation Report – Norfolk Island, 29 April 2011
16	Deloitte Access Economics	Wellbeing Report – Norfolk Island, 27 April 2011
17	Administration of Norfolk Island	Report on the 2011 Census on Population and Housing, 9 Aug 2011
18	Griffith University	Claire Bellis, Griffith University, Use of the Isolated Norfolk Island Population for Cardiovascular Disease Risk Trait Genetic Analysis (2009). http://research-hub.griffith.edu.au/display/n31f1ba8276de64c475f66bc140621eed
19	Justin C Sherwin et al	Justin C. Sherwin, Lyn R. Griffiths, John Kelly, Alex W. Hewitt, Lisa S. Kearns, Yaling Ma, David A. Mackey (2011): Prevalence of Chronic Ocular Diseases in a Genetic Isolate: The Norfolk Island Eye Study (NIES). Informa Healthcare. http://dx.doi.org/10.3109/09286586.2010.545933
20	Justin C Sherwin et al	Justin C Sherwin, John Kelly, Alex W Hewitt, Lisa S Kearns, Lyn R Griffiths and David A Mackey (2011) Prevalence and predictors of refractive error in a genetically isolated population: the Norfolk Island Eye Study. Clinical & Experimental Ophthalmology Volume 39, Issue 8, pages 734–742, November 2011

21	John Blangero et al	John Blangero, Peter M. Visscher, Hannah Cox, Lyn R. Griffiths, Rod A. Lea, Tom Dyer, Stuart Macgregor, Claire Bellis (2009): Legacy of mutiny on the bounty: Founder effect and admixture on Norfolk Island. Nature Publishing Group. http://dx.doi.org/10.1038/ejhg.2009.111
22	URS Australia	Norfolk Island Water Quality Study. Emily Bay and Cascade Creek Catchments – Final Report May 2013. http://www.info.gov.nf/land&env/water/NI%20Water%20Quality%20Study%20Final%20Report.pdf
23	S2F Architects	Service Procurement Plan and Project Definition Plan, New Norfolk Island Hospital, 24th March 2011, Version 3
24	Australian Bureau of Statistics (ABS)	Norfolk Island Basic Community Profile
25	Australasian Health Infrastructure Alliance	Australasian Health Facility Guidelines (AHFG), Health Facility Briefing and Planning - General Requirements, 2015 https://www.healthfacilityguidelines.com.au/
26	Australian Institute of Health and Welfare (AIHW)	Australia's Health 2018
27	NSW Health	NSW Health Guide to the Role Delineation of Clinical Services
28	ABS	ABS Census 2016
29	The King's Fund Report	Improving the public's health, 2013

Appendix B: 2018-2019 Consultations Schedule

Table 19: Consultation schedule

Date	Group	Venue
11/12/2018	Norfolk Island Health and Residential Aged Care Service (NIHRACS) CCCC	NI-Connect
12/12/2018	NIHRACS staff	NIHRACS
	Norfolk Island Regional Council (NIRC) Councillors and General Manager	Council Chambers
	Norfolk Assists Those in Need Inc. (NATIN Inc.)	Office of the Administrator
	Care Norfolk Inc.	Office of the Administrator
13/12/2018	Council of Elders	Office of the Administrator
	Norfolk Island Central School (NICS)	Office of the Administrator
	Hettai Ucklan	Office of the Administrator
	Breast Screen Services	Office of the Administrator
	St John Ambulance	Office of the Administrator
14/12/2018	NIRC Statutory Planning Staff	Office of the Administrator
5/2/2019	Focus group of council personnel	NIRC Works depot
	Child Services	NI-Connect
	Mayor, Councillors, NIRC General Manager	Council Chambers
	NIHRACS CCCC	NI-Connect
	Focus group of women 20 – 60	No.11 Quality Row
	NIHRACS Health Promotion Officer	DCA9
	NIHRACS staff	NIHRACS
	Community drop in session	No.11 Quality Row
	Women's Advocacy Group of Norfolk Island	No.11 Quality Row
6/2/2019	Focus group of council personnel	NIRC Waste Transfer Station
	Focus group of Year 6 and Year 12 school leaders	NICS
	Focus group of men aged 20 – 60	No.11 Quality Row
	NIHRACS staff	NIHRACS
	Community drop in session	No.11 Quality Row
	NIHRACS staff	DCA9
	Norfolk Island Chamber of Commerce	No.11 Quality Row
	Church congregation	Norfolk Island Community Church
7/2/2019	Anglicare Child and Family Services	Anglicare
	Focus group of older persons	Bowling Club
	Mental Health Awareness Group	No.11 Quality Row
	Community meeting	Paradise Hotel

Other consultations

Table 20: Other consultations by stakeholder group

Group
Australian Antarctic Division, Department of Environment and Energy
Australian Red Cross
Central and Eastern Sydney Primary Health Network (CESPHN), NSW
Indian Ocean Territories Health Service, Christmas Island
King Island Health Service, Tasmania

NSW Health – Health Education and Training Institute
Northern Territory (NT) Department of Health, NT
Saba Health Care Foundation
South East Sydney Local Health District, NSW
Torres and Cape Hospital and Health Service, Queensland (QLD)

Appendix C: Chronology of health service planning

The Norfolk Island community and health service provision has been subject to a wide range of reviews and studies. The key reports are listed in Table 21.

Table 21: Key reports into Norfolk Island health services

Author and report	Year	Results
Griffith University	2000-2009	Epidemiological studies into the health status of the community including genetic elements.
Joint Standing Committee on the National Capital and External Territories: 'In the pink or in the red? Inquiry into the provision of health services on Norfolk Island'	2001	This enquiry identified a range of issues relating to the availability of health services for the community including governance, funding methodology, workforce sustainability and physical infrastructure inadequacies.
Deloitte Access Economics: Wellbeing Report – Norfolk Island	2011	Provided base information on the economic and social wellbeing of the Norfolk Island population as at March 2011, compared with Australian Census 2006 and the Household, Income and Labour Dynamics in Australia (HILDA) 2006.
Gillian Calvert AO and Marie Connolly: 'Review of Existing Child and Family support Services on Norfolk Island'	2012	Economic hardship was evident in almost all conversations with community members on Norfolk. Norfolk Island residents should become part of the same income security, employment, taxation, child support scheme and benefit systems as other Australians. The Australian Government should provide relief for vulnerable children, young people and families living on Norfolk Island. Include Norfolk Island in key national information collection activities, such as the ABS, AIHW and Australian Early Development Index programme data collections.
Review of Norfolk Island Health Legislation	Jun 2013	An opportunity to consolidate legislation into a smaller number of Acts. Obsolete, inappropriate or inconsistent legislation and / or terminology needs to be addressed. Adoption of the mainland national law for registration and regulation of key health professional groups could be considered. The legislative framework and governance for NIHRACS needs significant improvement. Role separation is required for key positions.
Nexus Management Consulting: 'Draft Health Services Plan: Norfolk Island'	Oct 2013	Norfolk Island Hospital should develop as a Multipurpose Service (MPS) that includes residential care beds, acute care beds, community health and outpatient services. The MPS should host primary health care and community health services with priority given to aged care, mental health, drug and alcohol services. Health services should be contracted to an off-shore position, in line with the model for police and school.
Joint Standing Committee on the National Capital and External Territories: 'Same country: different world: the future of Norfolk Island'	2014	Commonwealth Government should repeal the *Norfolk Island Act 1979* (Cth) and transition Norfolk Island to a local government type body.

Author and report	Year	Results
ACHS EQuIPNational Organisation-Wide Survey: 'Norfolk Island Hospital Enterprise'	Mar 2014	The NIHE was not able to meet base satisfactory assessment ratings. The survey team identified a large number of significant patient and staff safety risks to be addressed through the Advanced Completion 90 day process. Some of the risks were attributable to ageing infrastructure which was assessed as no longer fit for purpose and in need of upgrade. At this time, NIHE was the only Australian hospital facility without external quality and safety accreditation.
Health Services Survey Report (R & S Muller Enterprise Pty Ltd)	Feb 2015	Population based survey on the health status of the community and experience with the health care system.
NIHE: 'Response to the Draft Health Services Plan (R & S Muller Pty Ltd)'	Feb 2015	Staff and community consultation process to review the recommendations made in the Calvert Connolly and the Nexus reports.
Norfolk Island Health Service Plan (KPMG)	Oct 2015	This plan described the challenges in health need and service provision for the Norfolk Island community. It described options for governance and financial models following the introduction of mainland health care programs.
Norfolk Island Health & Aged Care Clinical Services Plan (Carramar Consulting)	May 2017	This NIHRACS internal working document provided additional detail on some clinical service delivery aspects.

Appendix D: Modelled demand estimates

This appendix describes population forecasts and the estimated demand for services.

Table 22: Norfolk Island residential population and base case forecasts

	Census residential population				Forecast								
Age grp	2001	2006	2011	2016	2018	2026	2031	Growth 2001-16	% growth 2001-16	CAGR 2001-16	Growth 2016-31	% growth 2016-31	CAGR 2016-31
0 - 4	146	112	103	84	71	38	17	- 62	-42%	-3.6%	- 67	-80%	-10.1%
5 - 9	136	124	122	104	101	85	74	- 32	-24%	-1.8%	- 30	-29%	-2.2%
10-14	129	114	129	106	106	95	89	- 23	-18%	-1.3%	- 17	-16%	-1.2%
15 - 19	90	78	73	76	71	64	60	- 14	-16%	-1.1%	- 16	-21%	-1.6%
20 - 24	83	57	40	31	16	0	0	- 52	-63%	-6.4%	- 31	-100%	-100.0%
25 - 29	122	80	56	53	29	0	0	- 69	-57%	-5.4%	- 53	-100%	-100.0%
30 - 34	149	124	92	68	61	20	0	- 81	-54%	-5.1%	- 68	-100%	-100.0%
35 - 39	170	139	124	106	95	62	42	- 64	-38%	-3.1%	- 64	-61%	-6.0%
40 - 44	173	141	136	116	110	83	66	- 57	-33%	-2.6%	- 51	-44%	-3.7%
45 - 49	165	155	143	128	121	100	86	- 37	-22%	-1.7%	- 42	-33%	-2.6%
50 - 54	162	160	139	143	137	125	118	- 19	-12%	-0.8%	- 26	-18%	-1.3%
55 - 59	139	151	156	157	160	169	174	18	13%	0.8%	17	11%	0.7%
60 - 64	107	129	148	151	158	180	194	44	41%	2.3%	43	28%	1.7%
65 - 69	83	98	109	142	142	171	189	59	71%	3.6%	47	33%	1.9%
70 - Over	179	197	225	272	272	319	348	93	52%	2.8%	76	28%	1.7%
Not Stated	4	4			4	4	4	- 4	-100%	-100.0%	4		
Total	2,037	1,863	1,795	1,737	1,655	1,514	1,460	- 300	-15%	-1.1%	- 277	-16%	-1.2%

Source: KPMG analysis from Administrator of Norfolk Island (ANI) census and ABS Census data.

Note: Forecast methodology was a linear projection of the historical population from 2001-2016 in 5 year intervals by age group.

Table 23: Norfolk Island residential population and Adjusted base case forecasts

	Census residential population				Forecast								
Age grp	2001	2006	2011	2016	2018	2026	2031	Growth 2001-16	% growth 2001-16	CAGR 2001-16	Growth 2016-31	% growth 2016-31	CAGR 2016-31
0-14	411	350	354	294	286	231	196	- 117	-28%	-2.2%	- 98	-33%	-2.7%
15-19	90	78	73	76	70	63	58	- 14	-16%	-1.1%	- 18	-24%	-1.8%
20-24	83	57	40	31	31	31	31	- 52	-63%	-6.4%	-	0%	0.0%
25-34	271	204	148	121	121	121	121	- 150	-55%	-5.2%	-	0%	0.0%
35-44	343	280	260	222	203	142	104	- 121	-35%	-2.9%	- 118	-53%	-4.9%
45-69	656	693	695	721	729	760	780	65	10%	0.6%	59	8%	0.5%
70+	183	201	225	272	281	330	360	89	49%	2.7%	88	33%	1.9%
Total	2,037	1,863	1,795	1,737	1,721	1,678	1,650	- 300	-15%	-1.1%	- 87	-5%	-0.3%

Source: KPMG analysis from ANI census and ABS Census data.

Note: The methodology adjusts the populations that in the linear were forecast to reach zero people. These population groups have been held constant at the 2016 level (Age 20-24, 25-34).

Table 24: Modelled demand estimates for selected procedures and bed types

Year	2018			2026			2031			Notes
Scenario	**1a**	**2**	**3**	**1a**	**2**	**3**	**1a**	**2**	**3**	
Population – all ages	1,721	1,737	1,790	1,678	1,737	2,016	1,650	1,737	2,172	
Population - aged 70+	281	272	280	330	372	316	360	272	340	
Acute hospital beds	3.3	3.3	3.4	3.2	3.3	3.9	3.2	3.3	4.2	
Births - caesarean birth	4.6	4.8	4.9	3.8	4.8	5.6	3.3	4.8	6.0	Average caesarean rate of 34% of all births.
Births - vaginal birth	8.8	9.3	9.6	7.3	9.3	10.8	6.4	9.3	11.6	
Births - total	13.4	14.1	14.5	11.1	14.1	16.3	9.6	14.1	17.6	Based on 38 births per 1000 women aged 20-45 years.
Elective surgery - all cases	164	166	171	160	166	192	158	166	207	Based on 14.3 emergency surgery separations per 1000 people and 95.4 elective surgery separations per 1000 people (AIHW 2016-17).
Emergency surgery - all cases	25	25	26	24	25	29	24	25	31	
Residential aged care beds										
Planning benchmark	21.8	21.8	22.4	26.4	21.8	25.3	28.8	21.8	27.2	Based on 80 beds per 1000 people aged 70+. Noted that this benchmark is intended to be applied across large populations. It is not intended to be applicable to small areas.
Outer Regional rate	16.4	15.9	16.4	19.3	15.9	18.4	21.0	15.9	19.9	Based on 78% of the planning benchmark. This is the average utilisation of residential beds by communities in Outer Regional communities in 2017.
Aged Care Home care packages										
Planning benchmark	8.3	8.1	8.3	9.8	8.1	9.4	10.7	8.1	10.1	Based on 45 places per 1000 people aged 70+. Noted that this benchmark is intended to be applied across large populations. It is not intended to be applicable to small areas.
Outer Regional rate	12.6	12.2	12.6	14.8	12.2	14.2	16.2	12.2	15.3	Based on 66% of the planning benchmark. This is the average utilisation of residential beds by communities in Outer Regional communities in 2017.

Source: KPMG.

Appendix E: 2015 Health Service Plan - implementation actions progress

Table 25: 2015 Service Plan - implementation actions progress report.

No.	Strategy group	Task	Progress Update 2019
1	Quality	Align clinical governance and credentialing to mainland Local Health Network requirements.	Implemented
2		Obtain general practice accreditation with Royal Australian College of General Practitioners for access to the Practice Incentive Payment scheme.	Implemented
3		A community pharmacy should obtain accreditation requirements for PBS billing.	Implemented
4		Norfolk Island Hospital reporting systems to align to Independent Hospital Pricing Authority and State and Commonwealth requirements.	In progress. Reporting systems being developed and aligned.
5		Obtain hospital accreditation through ACHS.	Nil. NIHRACS' development of standards is progressing according to accreditation guidelines.
6		Obtain aged care accreditation through the Aged Care Quality Agency.	Nil. Working towards accreditation. Linked with South Eastern Sydney Local Health District (SESLHD) aged care program.
7		A local or other agency should obtain Approved Provider status for the Commonwealth Home Support Program.	Implemented. Care Norfolk Inc. is approved provider. Aged Care Assessment Team responsibility of the Department of Health.
8		Obtain Approved Provider status for residential aged care funding.	Implemented
9	Government and management	Develop a communications strategy to engage and communicate with the community regarding the service directions.	Implemented
10		Engage a State Government to develop a partnership in the management of Norfolk Island health system though a Local Health Network.	Implemented. Memorandum of Understanding established with SESLHD and New South Wales Ministry of Health.
11		Link Norfolk Island with a mainland PHN to support general practice and primary health programs.	Implemented. Aligned with South Eastern Sydney Primary Health Network (SESPHN).
12		Issue Medicare numbers to citizens and permanent residents.	Implemented
13		Establish a reporting and governance mechanism to monitor the implementation of the Service Plan.	Implemented

14	Telemedicine	Explore feasibility of local call costs between Norfolk Island to Australia for telephone based health support services.	Nil. Some 1800 numbers are now toll free.
15		Explore the feasibility of establishing internet bandwidth of 384kbs at health care facilities for telemedicine applications.	Implemented. Feasibility has been assessed. Telecom upgrades expected in 2019.
16		Develop feasibility study and business case for telemedicine linkages with tertiary health care provider.	Implemented
17		On issuing Medicare cards, seek enrolment of the population in the Personal Controlled Electronic Health Record.	In progress. My Health Record (MHR) system is being implemented with enrolment on an 'opt out' basis.
18	Public health	Investigate the alignment of Norfolk Island alcohol and tobacco duty free limits to Australian mainland levels.	Implemented
19		Enact NSW legislation regarding tobacco sales and advertising restrictions.	Nil. Point of sale advertising ban introduced. Price excise levels to be implemented.
20		Incorporate vaccination histories in Australian Immunisation Registers.	Implemented
21		Obtain agreement with a breast cancer screening provider for provision of services.	Implemented. Service provided by Sydney Breast Clinic.
22		Enrol population in the National Bowel Cancer Screening Program once Medicare numbers are issued.	Implemented
23		Review population growth and age profile assumptions following 2016 Census. Review the facility requirements once this data is available.	Implemented
24	Infrastructure	Develop a design, cost plan and feasibility study for the replacement of health service and aged care facility.	In progress
25		Develop business case for replacement of the health service and residential care facility.	In progress
26		Develop business case for the outsourcing of laundry and hospital and home delivered meals.	Implemented. Review done and services retained in house.
27		Complete asset audit of hospital based medical equipment and engineering plant.	Implemented
28	Consumer support	Establish a patient travel and accommodation scheme aligned with interstate models.	Implemented. Norfolk Island Patients' Travel Accommodation and Assistance Scheme (NIPTAAS) Scheme established.
29		Further develop, agree and communicate referral pathways with secondary and tertiary care providers.	Implemented. Progressive development of pathways to SESLHD services.

Appendix F: Case study sites

Table 26: Case study sites

Indian Ocean Territories Health Service – Christmas Island

Facility profile	Available resources	Comment
General practice consult rooms	4	
Other consultation room	3	
Emergency department spaces	2	
Treatment / procedure rooms	0	
Operating room	1	The operating room is not currently in use.
Dental chairs	2	
Renal dialysis chairs	0	
Birthing rooms	0	No planned birthing service on Christmas Island.
Acute or sub-acute overnight beds	8	
Residential aged care beds	0	
Mental health beds / spaces	0	None dedicated. Available acute beds are used.
Other beds (describe)	0	
Medical imaging – plain x-ray	Yes	Nurse operators.
Medical imaging – ultrasound	Yes	Visiting radiographer.
Medical imaging – other (describe)		Visiting radiographer.
Staff profile	**FTE**	**Comment**
Hospital / MPS staff	**Availability**	**Comment**
Administration	8	
Nurse practitioner	0	
Registered nurses	6	
Other nurses (enrolled, Assistant In Nursing (AIN))	3	
Allied health – physiotherapy		Visiting 3 x per year.
Allied health – social work	1	External service.
Allied health – dietetics		Visiting 2 x per year.
Allied health – occupational therapy		Visiting 3 x per year.
Allied health – counsellor / psychology	0	
Dentist	1	
Optometry		Visiting 1 x per year.
Medical scientist (pathology)	1	
General medical practitioner	3	
Medical practitioner - other		Visiting Medical Officers include physician, ophthalmologist and paediatrician.
Other - Dental Hygienist / therapist	1	
Community health staff	**Availability**	**Comment**
Community Health Nurse	1	
Health Promotion Officer	0	Included in nursing duties.
Maternal and Child Health	0.5 FTE	No planned birthing service on Christmas Island.
Diabetes Educator	0	Included in nursing duties.
Drug and alcohol	0	
Mental Health	0	
Local service availability (not at the hospital)	Availability and frequency of visit if it is not permanent	Established telemedicine linkage (yes / no)
General practice		No consistent telemedicine usage.
Community pharmacy	Locally based	

Indian Ocean Territories Health Service – Christmas Island

Staff profile	FTE	Comment
Community health staff	**Availability**	**Comment**
Dental	Locally Based	3 FTE, including dental hygienist. Provides a home visiting service.
Optometry	Annually	
Allied health (describe)	Occupational therapist, physiotherapist, speech therapist	Occupational therapist, physiotherapist, speech therapist: 3 visits per year. Dietician: 2 per year.
Subspecialty medicine	**Availability**	**Comment**
General medicine	2 per year	
Cardiology	No	
Respiratory	No	
Gastroenterology	No	
Geriatric medicine	No	
Paediatrics	3 per year	
Subspecialty surgery	**Availability**	**Comment**
General surgery	No	
Ophthalmology	1 per year	
Orthopaedic	1 Per year	
Ear, Nose and Throat	No	
Other (describe)	2 per year	Psychiatry.
Maternity / obstetrics		Locally based maternity – antenatal. Ultrasound in Perth.
Emergency medicine		Skilled local workforce. Medical evacuations as required.
Psychiatry / mental health		Private psychologist. Visiting psychologist and psychiatrist. Social work.
Drug and alcohol		
Sexual health		Nursing and medical staff provide health promotion on sexual health.
Home and community care	**Availability**	**Comment**
Home help – cleaning, gardening	Yes	
Home maintenance / modifications	Yes	
Meals on wheels	Yes	
Personal care	Yes	
Day programs and activities	Limited	
Other (describe)	Yes	Respite. Palliative care in home.
Population health programs	**Availability**	**Comment**
Breast cancer screening	Yes	
Needle and syringe program	No	Informal program where clean fits are provided.
Immunisation program linked to National Immunisation Program	Yes	
QUIT program (tobacco cessation)	Yes	
Fluoridation of drinking water	Yes	

King Island District Hospital and Health Centre

Facility profile	Available resources	Comment
General practice consult rooms	2 doctor 2 RN practitioner 1 Reception	Provided by Ochre Health.
Other consultation room	3	Utilised by other service providers (physios, optometrist, podiatrist etc.).
Emergency department spaces	1	
Emergency department triage	1	
Treatment / procedure rooms	Yes	Basic set-up.
Operating room	0	People fly to Tasmania (Launceston, Hobart, North West hospital) for operations. Services may also be provided by the Royal Flying Doctor Service and funded through Department of Health and Human Services Tasmania.
Dental chairs	1	Visiting government dentists.
Renal dialysis chairs	0	Not provided.
Birthing rooms	0	No planned birthing service on King Island. Expectant mothers are encouraged to fly off Norfolk Island to Tasmania or Melbourne for delivery. King Island has had a few emergencies in the last few years in terms of expectant mothers.
Acute or sub-acute overnight beds	6	
Residential aged care beds	14	Accredited since February 2003. At least 1 respite place available.
Mental health beds / spaces	No	
Other beds (describe)	No	
Medical imaging – plain x-ray	Yes	One x-ray.
Medical imaging – ultrasound	Yes	Small portable one – but more complicated images off Norfolk Island.
Staff profile	**FTE**	**Comment**
Hospital / MPS staff	**Availability**	**Comment**
Administration	2.2	One is part time.
Nurse practitioner	Less than 2 (1.6)	Not sure on specific hours.
Registered nurses	1.0 FTE 6.74 FTE 3.79 FTE	Manager / Director of Nursing. Registered nurse. Enrolled nurses. Casual registered nurse / enrolled nurse: depends on need.
Other nurses (enrolled, AIN)	3.5 FTE	Personal carers (4).
Allied health – physiotherapy	-	Visiting, government funded, fortnightly visits. One private personal trainer on Norfolk Island.
Allied health – social work	-	Mental health – monthly visit. Rural Health.
Allied health – dietetics	Yes	Diabetics educator – monthly.
Allied health – occupational therapy	No	Fly in – when needs arise.
Allied health – counsellor / psychology	Yes	Psychiatrist (every 6 weeks). Psychologist (every 2 weeks).
Dentist	No	Private dentist fly-in for 5 working days at a time. Government dentists come in (3-5 days in a block) twice a year.
Optometry	-	2 service providers (3 times a year – 2-3 days at a time).
Medical scientist (pathology)	No	Blood samples can be taken on Norfolk Island, but samples sent to NSW pathology for analysis.
General medical practitioner	2	-
Medical practitioner – other	No	

King Island District Hospital and Health Centre

Staff profile	FTE	Comment
Hospital / MPS staff	**Availability**	**Comment**
Other (describe)	Orthopaedic	3 visits a year.
	Obstetrics / Gynaecology	Monthly – from Tas. DHHS.
	Rheumatologist	Monthly.
	Podiatrist	3 times a year, 2 days through hospital.
Community health staff	**Availability**	**Comment**
Community Health Nurse	1	On Norfolk Island – 0.8 FTE; also child health clinic 1 day a week.
Health Promotion Officer	No	
Maternal and Child Health	Yes	No planned birthing service on King Island. Midwife clinic on Norfolk Island monthly – supported by visiting midwife.
Diabetes Educator	Yes	Fly in – monthly.
Drug and alcohol	Yes	2 days every month.
Mental Health	Yes	Come from Tasmania DHHS. Psychiatrist (every 6 weeks).
Other (describe)	Australian Hearing	Monthly.
Local service availability (not at the hospital)	Availability and frequency of visit if it is not permanent	Established telemedicine linkage (yes / no).
Subspecialty medicine	**Availability**	**Comment**
General medicine	No	Residents fly out as not provided on Norfolk Island.
Cardiology	No	Residents fly out as not provided on Norfolk Island.
Respiratory	No	Residents fly out as not provided on Norfolk Island.
Gastroenterology	No	Residents fly out as not provided on Norfolk Island.
Geriatric medicine	No	Residents fly out as not provided on Norfolk Island.
Paediatrics	Fly in	3 visits a year.
Rheumatology	Fly in	Every 2 months.
Geriatric Medicine	Fly in	Every 2 – 3 months.
Other (describe)	Psychiatrist	Every 6 weeks - Fly in.
Subspecialty surgery	**Availability**	**Comment**
General surgery	Fly in	Monthly.
Ophthalmology	Fly in	Visit every 3 months.
Orthopaedic	No	
Ear, Nose and Throat	No	Residents fly out as not provided on Norfolk Island.
Maternity / obstetrics	Yes	No planned birthing service on King Island. Antenatal only. Obstetrician and Gynaecologist (every 2 months).
Emergency medicine	No	
Psychiatry / mental health	No	
Drug and alcohol	Yes	2 days every month.
Sexual health	No	
Home and community care	**Availability**	**Comment**
Home help – cleaning, gardening	No	
Home maintenance / modifications	Yes	
Meals on wheels	Yes	Provided by hospital, delivered by volunteer.
Personal care	Yes	Home help assistance.
Day programs and activities	Yes	Adult day centre attached to hospital, room and office. Not full time activities (3 days / wk).

King Island District Hospital and Health Centre

Staff profile	FTE	Comment
Population health programs	**Availability**	**Comment**
Breast cancer screening	Yes	Sydney Breast Screening visits every 2 years for 1 week.
Needle and syringe program	Yes	Offered through hospital.
Immunisation program linked to National Immunisation Program	Yes	Done through general practice.
QUIT program (tobacco cessation)	-	Health promotions officer.
Fluoridation of drinking water	No	Not fluoridated.

Appendix G: Service level and infrastructure summary

This appendix provides a summary table which reconciles the future requirements for service types and service levels on Norfolk Island, with the future infrastructure requirements. This summary provides an analysis of the gap between current service delivery on Norfolk Island and future requirements, and identifies the infrastructure and clinical supports required to address these gaps.

For some services, it is recommended that the service level available on Norfolk Island be increased (e.g. gastroenterology should go from Level 1 to Level 2). This is based on analysis of the population (refer Section 2) and the services available on Norfolk Island (refer Section 4). Where an increase in the service level is recommended, there are a number of key considerations for ensuring safety and quality. These considerations include:

- The service mix and service level (scope) of healthcare services must align with the needs of the population and the role of the facility (e.g. where the population does not have a high level of complex surgeries each year and the facility is not a large referral hospital, there should be a Level 2 or 3 surgical service rather than, for example, a Level 4 or 5 surgical service);
- The supports required to ensure safety and quality in healthcare services must be available to sustain safe and quality service delivery (e.g. there will need to be supporting administration, clinical governance, clinical record keeping, compliance with safety standards and remote clinical referral for escalating complex cases from Norfolk Island to a referral hospital); and
- The infrastructure required to facilitate the safe delivery of quality health services must be available if services are to be maintained at a particular level (e.g. increasing surgery from Level 1 to Level 2 will require infrastructure that enables Lamina air flow for infection control, as indicated in the ACHS survey. Laminar air is designed to prevent hospital acquired infection and surgical site infections).

Additionally, to effectively assess the level and type of services required on Norfolk Island in future, the following factors were also taken into consideration:

- the distance from Norfolk Island to other larger referral hospitals on the mainland;
- the community expectations for health services delivered on Norfolk Island (e.g. the desire to have birthing and surgery delivered locally);
- the cultural and social implications for community members who have to access services on the mainland (e.g. not being born on Norfolk Island);
- the role that the current service provider (South East Sydney Local Hospital District (SESLHD)) has had in supporting service delivery on Norfolk Island; and
- the uniqueness of Norfolk Island as an external Australian territory which has only recently become administered by Australia (since 2016) and, as such, has not had to have the health services on Norfolk Island independently assessed by an external agency (i.e. facilities on Norfolk Island have not previously had to have services accredited against the National Safety and Quality Health Service Standards (NSQHS standards)).

Table 27 provides an overview of the service mix and levels required on Norfolk Island and includes a description of the workforce required to deliver the service. It is important to note that the service level does not always necessitate having the workforce on-Island permanently. There are a range of service delivery models that could be utilised to provide an effective service including telehealth and fly-in, fly-out arrangements. A clear example is the list of specialist medical services under 'Part B: Medicine' which could be provided by visiting specialists if the appropriate equipment was able to be flow in with the clinicians and the appropriate facilities were available (the facilities are also described in Table 27).

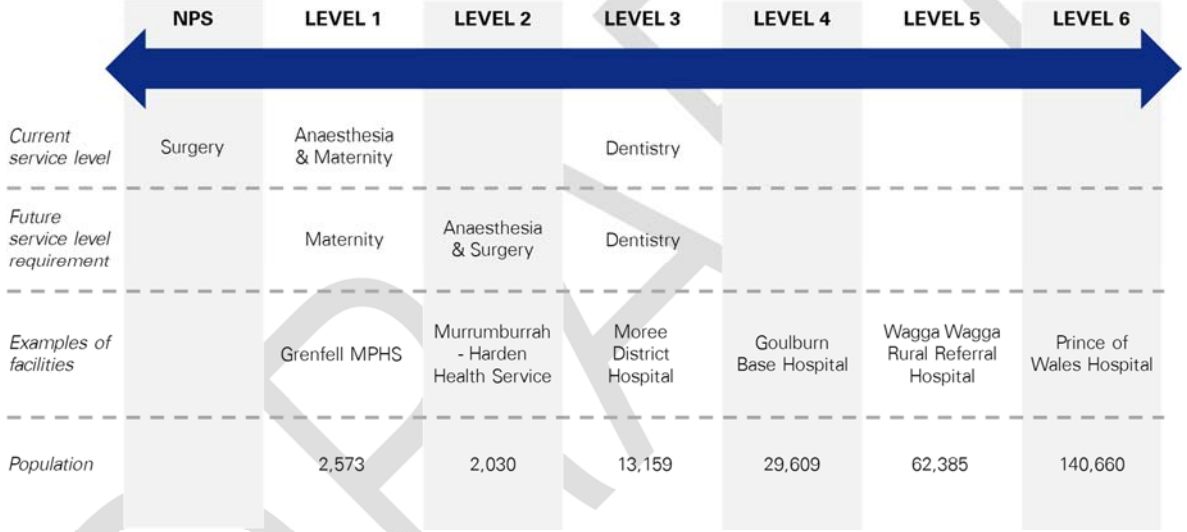
NSW Role Delineation of Clinical Services

As discussed in Section 6, the NSW Role Delineation of Clinical Services (the Role Delineation) provides a framework that describes the minimum support services, workforce and other requirements for clinical services to be delivered safely. It is used to describe the size, service profile and roles of facilities delivering clinical services for a particular catchment population. Each clinical service is then planned and developed to the level appropriate to meet the needs of the relevant catchment population to ensure efficiency in the health system for improved local access.

Each service standard in the Role Delineation has up to six levels of service in ascending order of complexity. Not all services start at Level 1. Where a health facility has no planned service, it is classified as level 'NPS' with no numerical value assigned.

Figure 21 below shows the healthcare service level (standard) of a sample of services delivered on Norfolk Island and the level which is required to better meet the needs of the future population. Figure 21 also provides examples of a sample of facilities across NSW and the level at which they predominantly deliver health services. It is clear that some large communities in NSW have facilities delivering healthcare services at a similar standard / service level to NIHRACS (e.g. Grenfell and Murrumburrah-Harden with a population of approximately 2,000 people).

Figure 21: Examples of facilities operating at different service levels



Source: KPMG 2019, based on Census 2016 and Role Delineation Levels of Emergency Medicine May 2019.

Accreditation

A key difference between the facilities in NSW and those on Norfolk Island is the accreditation of facilities. As mentioned in the report, the hospital facility on Norfolk Island was previously assessed by the ACHS in 2014 for the purposes of accrediting the facility against NSQHS standards. A range of opportunities for improvement were identified as a result of this survey, indicating the need for improved processes, capability and infrastructure.

The service levels identified for future increase or improvement in the summary table below, will require the facilities on Norfolk Island to become accredited in order for the proposed service level to be attained. Accreditation with the ACHS is a formal process to assist in the delivery of safe, high quality health care based on standards and processes devised and developed by health care professionals for health care services.

Many of the opportunities for improvement identified in the ACHS survey related to administrative protocol and clinical governance. To this end, clinical governance will be a critical enabler for any changes to healthcare on Norfolk Island. It is understood that a lot of work has been undertaken by NIHRACS, with support from SESLHD, to improve quality management, however this issue of clinical

governance will continue to be a key priority for developing a sustainable healthcare service. At a minimum, a robust clinical governance framework would need to include the following:

- a robust patient safety and quality management system including policy and procedures, measurement and quality improvement, risk management and maintenance of healthcare records;
- a link between clinical governance and the overall corporate governance system to ensure clinical governance is of equivalent importance to financial, risk and other business governance;
- ongoing clinical performance and effectiveness measurement focussing on workforce qualifications, credentialing and capability; and
- partnering with the community in clinical governance activities and a quality improvement system as well as partnering with the community in their own care.

In the table below, a traffic light system has been used to indicate where there is either a workforce or infrastructure impact for each service type, in order to meet the future service level requirements. Red indicates that there is a requirement to improve workforce capability or infrastructure; amber indicates that either infrastructure requirement is linked to the requirements of another service (e.g. Level 2 Gastroenterology can only be delivered if Level 2 Operating Suite is provided) and green indicates that both workforce and infrastructure needs are already met. Where relevant, additional information about the infrastructure or service supports required has been provided to better describe any identified gap between current service levels on Norfolk Island and the future requirement.

It is acknowledged that the responsibilities for improving both health services and infrastructure will need to be shared between the Norfolk Island community, NIHRACS and the external service provider (currently the SESLHD on the mainland) and the Department of Infrastructure, Transport, Cities and Regional Development. To this end, it will be important to monitor the changing healthcare and infrastructure requirements of the community, which may alter based on demography and health needs. Section 8 of the report provides an overview of the process recommended to ensure this ongoing review of the community needs on Norfolk Island.

Table 27: Service level requirements summary table

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
Governance and administration	**Independent of the workforce and infrastructure requirements, any increase in service levels requires a clinical governance framework to monitor and continuously improve safety and quality in health services**				
Clinical governance and administration (precondition to improving services described below)	The NIHRACS Quality Management Framework and the ACHS report are used for clinical audits	External accreditation	Compliance with ACHS standards and successful accreditation	Workforce with appropriate capability for creating sustained change that can meet ACHS standards across the Norfolk Island service system. To an extent, the SESLHD can support this but given that the contract ends in 2020, an alternative service provider, supportive of accreditation, will need to be identified.	The ACHS survey in 2014 noted a number of opportunities for improvement in the infrastructure. These are described in more detail against relevant service types below (e.g. Operating Suite).
Section 1: Core Services					
1. Anaesthesia and Recovery	Level 1 service	Level 2 service	Level 2 Service	**Level 1 – currently delivering at this level** - Medical practitioner credentialed to provide sedation - Medical officer available on call or via telehealth 24 hours - Anaesthetic assistant (may be nurse, technician or other staff) available during procedures **Level 2 – incremental future requirement** - As for Level 1, and the following in addition: - Need an appropriately credentialed medical practitioner in anaesthesia - Need an appropriately credentialed anaesthetist available for consultation. This could be provided via a telehealth service delivery model.	No impact on infrastructure.
2. Operating Suite	NPS	Level 2 service	Level 2 service	**Level 1 – future requirement** - Appropriately credentialed medical practitioner - Nurse support with the appropriate skills, experience and qualifications for operating suite services **Level 2 – future requirement** - As for Level 1	There is no functioning operating theatre in the current facilities and as described in Table 16 of the report, 1 operating room and 3 more consulting / treatment rooms are required, in addition to the 3 existing consulting / treatment rooms. The ACHS survey in 2014 noted that the current buildings are old which makes cleaning, including sterilisation, challenging. Furthermore, the ACHS survey noted that for the purposes of ensuring infection control during surgical procedures the infrastructure needs to enable Lamina air flow for infection control. This is currently not possible with the existing infrastructure. As noted on page 88, in order to have a functional operating suite there would need to be appropriate clinical governance in place and accreditation of the facility.
6. Radiology and Intervention Radiology	Level 2 service	Level 2 service	No gap identified	**Level 1 - currently delivering at this level** - Radiologist available off-site for reporting - Appropriately licensed remote x-ray operator, able to provide limited radiography services in rural and remote areas if radiographer not available to attend - Nurse support with the appropriate skills, experience and qualifications for radiology and intervention radiology services **Level 2 – currently delivering at this level** - Radiologist available for consultation and reporting in business hours - MRS (Diagnostic Radiographer) access on-site - Nurse support with the appropriate skills, experience and qualifications for radiology and intervention radiology services	No impact on infrastructure. There is currently 1 radiology room plus a mammography room for breast screening.

[65] Based on NSW Health Guide to the Role Delineation of Clinical Services.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
7. Pathology	Level 3 service	Level 3 service	No gap identified	**Level 1 - currently delivering at this level** - Workforce requirements need to be in accordance with standards and guidelines specified by National Pathology Accreditation Advisory Council; accredited for compliance by the National Association of Testing Authorities (NATA) **Level 2 & Level 3 – currently delivering at this level** - As for Level 1	No impact on infrastructure.
8. Pharmacy	Level 1 service	Level 2 service	Level 2 service	**Level 1 – currently delivering at this level** - A pharmacist available for consultation, advice and support (may include telehealth; outreach). This is currently provided through the community pharmacist. **Level 2 – incremental future requirement** - Need an appropriately credentialed pharmacist allocated to hospital services for prescriptions for inpatients, may come from a networked service (e.g. SESLHD)	No impact on infrastructure.
Section 2 Part A: Emergency Medicine					
A. Emergency Medicine	Level 2 service	Level 2 service	No gap identified	**Level 1 - currently delivering at this level** - Staff on-site 24 hours with basic life support capability for adults and children - Nurse support must have the appropriate skills, experience and qualifications for radiology and emergency medicine services **Level 2 – currently delivering at this level** - As for Level 1 - In addition, medical practitioner on call or available via telehealth at least during daytime hours - Preferably, medical practitioner available with a basic level of post-graduate emergency medicine training (Australasian College for Emergency Medicine non-specialist Emergency Medicine Certificate or equivalent) - Some nurses with extra training (e.g. Emergency Triage Education Kit; Detecting Deterioration, Evaluation Treatment, Escalation and Communicating in Teams; Advanced Life Support; First Line Emergency Care Course) - May have allied health practitioners available	The facilities will need to be renovated to enable access to the theatre and high dependence unit (HDU). The ACHS survey identified that the current facilities have ageing emergency infrastructure, particularly in the theatre (which is now closed) and HDU areas. This infrastructure will need to be renovated to sustain the delivery of safe and quality services. There are currently 2 resuscitation bays and no further bays are required. As noted on page 88, in order to have a safe, sustainable emergency services there would need to be appropriate clinical governance in place and accreditation of the facility.
Section 2 Part B: Medicine					
B1. Cardiology and Intervention Cardiology	Level 1 service	Level 1 service	No gap identified	**Level 1 – currently delivering at this level** - Medical officer available for advice - Nurse support with the appropriate skills, experience and qualifications for cardiology and intervention cardiology services	Additional consulting rooms will be required to continue this service along with other medical specialties (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service.
B4. Dermatology	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Appropriately credentialed medical practitioner or physician - A medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW - Nurse support with the appropriate skills, experience and qualifications for dermatology services	Additional consulting rooms will be required to continue this service along with other medical specialties (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
B5. Drug and Alcohol	Level 1 service	Level 2 service	Level 2 service[66]	**Level 1 – currently delivering at this level** As for Level 2 general and acute medicine service, including: - Medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for general and acute medicine services - Allied health professionals available **Level 2 – incremental future requirement** - As for Level 1 - In addition, need a clinician with addiction medicine experience available in business hours (may include telehealth and / or on call arrangements) - Nurse support must have the appropriate skills, experience and qualifications for drug and alcohol services - Need allied health professionals available (e.g. social worker, counsellor, psychologist, health education officer)	Additional consulting rooms will be required to improve this service to the required level (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service.
B6. Endocrinology	Level 2 service	Level 2 service	No gap identified	**Level 2 - currently delivering at this level** - A medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with the Ambulance Service of NSW - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for endocrinology services - Allied health professionals such as podiatrist and dietician available	Additional consulting rooms will be required to continue this service along with other medical specialties (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service.
B7. Gastroenterology	Level 1 service	Level 2 service	Level 2 service	**Level 1 – currently delivering at this level** - Medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW - Nurse support must have the appropriate skills, experience and qualifications for gastroenterology services **Level 2 – incremental future requirement** - As for Level 1 - In addition, need an appropriately credentialed physician or gastroenterologist - May need access to a dietician	Additional consulting rooms will be required to improve this service to the required level (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service. There may be a requirement to ship over additional equipment to deliver endoscopies and other gastroenterology procedures on Norfolk Island. This should be negotiated with the service provider.
B8. General and Acute Medicine	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for general and acute medicine services - Allied health professionals available	Additional consulting rooms will be required to continue this service along with other medical specialties (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service. There is one existing HDU but, as noted above, the infrastructure is ageing and will need to be improved to provide sustainable health services for complex patients.
B9. Geriatric Medicine	Level 2 service	Level 2 service	No gap identified		

[66] Please note that a Level 2 general and acute medicine service on-site or via a networked arrangement is required for this level of service. Currently, Norfolk Island has a network with higher level service, SESLHD, however, may be able to consider other providers if required.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
				Level 2 – currently delivering at this level - May include medical support (local General Practitioner (GP) or Royal Flying Doctor Service), or nurse practitioner, or registered nurse supported by local aged care service; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW[67] - Nurse support with the appropriate skills, experience and qualifications for geriatric medicine services - Allied health professionals available	Additional consulting rooms will be required to continue this service along with other medical specialties (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service.
B16. Palliative Care	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Generalist clinician such as GP or primary health care nurse available (may be via telephone or Clinical Emergency Response Systems Assist) - Nurse support with the appropriate skills, experience and qualifications for palliative care services - May have allied health professionals available	No impact on infrastructure.
B18. Renal Medicine	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Medical practitioner, nurse practitioner, renal clinical nurse consultant, renal clinical nurse specialist or registered nurse with appropriate skills and experience or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW[68] - Nurse support with the appropriate skills, experience and qualifications for renal medicine services - Allied health professionals available	No new infrastructure impact. Three dialysis chairs have been purchased to replace obsolete equipment. The operationalisation of the chairs is pending staff training.
B19. Respiratory and Sleep Medicine	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Medical practitioner, nurse practitioner, or registered nurse supported by local network respiratory service available 24 hours; Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW[69] - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for respiratory and sleep medicine services - Allied health professionals, such as physiotherapist available	No infrastructure impact.
B21. Sexual Assault Services	Level 3 service	Level 3 service	No gap identified	**Level 1 – currently delivering at this level** - Joint Investigation Response Team Senior Health Clinician available in business hours **Level 3 – currently delivering at this level** - As for Level 1 (there is no Level 2) - In addition, medical officer trained in sexual assault response available in business hours - May have Sexual Assault Nurse Examiner staff trained in the provision of a specialised integrated psychosocial sexual assault response to child, young person and adult victims and their families	No infrastructure impact.

[67] Note that the formal relationship with an ambulance service may be with another provider as required.
[68] Note that the formal relationship with an ambulance service may be with another provider as required.
[69] Note that the formal relationship with an ambulance service may be with another provider as required.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
B22. Sexual Health	Level 1 service	Level 1 service	No gap identified	**Level 1 – currently delivering at this level** - Appropriately trained and experienced medical practitioner or registered nurse - Accredited HIV s100 prescriber available - Nurse support with the appropriate skills, experience and qualifications for sexual health services	No infrastructure impact.
Section 2 Part C: Surgery					
C1. Burns	Level 2 services	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Appropriately credentialed medical practitioner - General surgeon or paediatrician available for consultation (may be by telehealth) - Nurse support with the appropriate skills, experience and qualifications for burns services - Allied health professionals available, such as physiotherapist and occupational therapist	No infrastructure impact.
C4. General Surgery	Level 1 service	Level 2 service	Level 2 service	**Level 1 – currently delivering at this level** - Appropriately credentialed medical practitioner - Nurse support must have the appropriate skills, experience and qualifications for general surgery services **Level 2 – incremental future requirement** - As for Level 1 - In addition, general surgeon available for consultation - May need allied health professionals available	An operating theatre and additional consulting rooms will be required to improve this service to the required level (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service. There may be a requirement to ship over additional equipment to deliver procedures on Norfolk Island. This should be negotiated with the service provider. As noted on page 88, in order to have a functional surgical capability there would need to be appropriate clinical governance in place and accreditation of the facility.
C7. Ophthalmology	Level 1 service	Level 1 service	No gap identified	**Level 1 – currently delivering at this level** - Appropriately credentialed medical practitioner - Nurse support with the appropriate skills, experience and qualifications for ophthalmology services	Additional consulting rooms will be required to improve this service to the required level (refer to additional infrastructure identified for consulting / treatment rooms under 'Operating Suite'). If the infrastructure requirement for this is met, then there is no further infrastructure impact for this service. There may be a requirement to ship over additional equipment to deliver procedures on Norfolk Island. This should be negotiated with the service provider.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
C8. Oral Health	Level 3 service	Level 3 service	No gap identified	**Level 2 – currently delivering at this level** - Dental practitioners (e.g. dentist, oral health therapist, hygienist) registered with the Australian Health Practitioner Regulation Agency **Level 3 – currently delivering at this level** - As for Level 2	No infrastructure impact. There is currently 2 dental chairs.
Section 2 Part D: Child and Family Health Services					
D1. Child and Family Health	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - GPs and other secondary screening and referral services available - Nurse support with the appropriate skills, experience and qualifications for child and family health services	No infrastructure impact.
D2. Child Protection Services	Level 3 service	Level 3 service	No gap identified	**Level 1 – currently delivering at this level** - Joint Investigation Response Team Senior Health Clinician available in business hours **Level 3 – currently delivering at this level** - As for Level 1 - In addition, may need a paediatrician or medical officer credentialed in paediatrics – scope of practice should include forensic and medical response to child abuse and neglect (i.e. sexual assault, physical abuse, emotional abuse and exposure to domestic violence)	No infrastructure impact.
D3. Maternity	Level 1 service	Level 1 service	No gap identified	**Level 1 – currently delivering at this level** - Nurse support with the appropriate skills, experience and qualifications for maternity services - Capacity to provide emergency resuscitation and care to critically ill mothers and babies until transfer In the context of Norfolk Island, delivering a Level 1 maternity service means that mothers travel to the mainland to give birth. This is similar to many remote communities in Australia where women have to travel to a regional centre to give birth, weeks before the estimated birth date. If Norfolk Island were to move to having a Level 2 maternity service then the following workforce would be required and the facility would need to be accredited with ACHS standards. **Level 2 – incremental future requirement** - As for Level 1 - In addition, may have a medical practitioner credentialed in obstetrics - Need a medical officer available 24 hours	No new infrastructure impact but it was noted in the ACHS survey that the facilities are ageing and the theatre has been closed for some time. The current facilities will need to be renovated for the delivery of safe and quality services for emergent births. There is currently 1 birthing room and a neonate cot.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
D4. Neonatal	Level 1 service	Level 1 service	No gap identified	**Level 1 – currently delivering at this level** - Medical practitioner available - Nurse support with the appropriate skills, experience and qualifications for neonatal services - Clinician competent in basic neonatal life support - Allied health professionals available (e.g. social worker)	No infrastructure impact.
D5. Paediatric Medicine	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Paediatrician consultation available (may be via telehealth) - Medical practitioner available 24 hours (or CERS Assist) - Nurse support with the appropriate skills, experience and qualifications for paediatric medicine services - Allied health professionals, such as physiotherapist, occupational therapist, social worker, speech pathologist and / or dietician available	No infrastructure impact.
D7. Youth Health	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** - Generalist multidisciplinary staff available during business hours	No infrastructure impact.
Section 2 Part E: Mental Health					
E1. Adult Mental Health	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** As for Level 2 general and acute medicine service, including: - Medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW[70] - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for general and acute medicine services - Allied health professionals available	No new impact on infrastructure. There is one mental health room with a secure bed.

[70] Note that the formal relationship with an ambulance service may be with another provider as required.

Service description (based on the Role Delineation)	Current Service Level	Service Level Requirement	Service Level Gap	Workforce Service Requirements[65]	Additional Facility Requirement
E2. Child and Youth Mental Health	Level 2 service	Level 2 service	No gap identified	**Level 2 – currently delivering at this level** As for Level 2 paediatric medicine and / or Level 2 general and acute medicine, including: - Medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW[71] - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for general and acute medicine services - Allied health professionals available In addition: - Networked access to medical officers in paediatrics and mental health clinicians (may include telehealth and / or on call arrangements)	No impact on infrastructure.
E3. Older Person Mental Health	Level 1 service	Level 1 service	No gap identified	**Level 1 – currently delivering at this level** As for Level 2 general and acute medicine service, including: - Medical or nurse practitioner available 24 hours; or Clinical Emergency Response Systems Assist; or formal relationship with Ambulance Service of NSW[72] - Physician consultation available (may include telehealth) - Nurse support with the appropriate skills, experience and qualifications for general and acute medicine services - Allied health professionals available	No infrastructure impact.
Section 2 Part G: Community Health					
G. Community Health	Level 1 service	Level 3 service	Level 3 service	**Level 1 – currently delivering at this level** - Nurse support with the appropriate skills, experience and qualifications for community health services **Level 2 – incremental future requirement** - As for Level 1 - In addition, need allied health professionals available, commensurate with community need (may be via outreach) - Need multicultural workers available according to identified community need - May need on-site team leader **Level 3 – incremental future requirement** - As for Level 2 - In addition, need community health manager or senior officer on-site - Need locally available allied health professionals commensurate with clinical load and casemix - May need case coordinator / case manager to support speciality programs (e.g. chronic care)	As described in Table 16 of the report, 2 more consulting rooms are required for visiting specialists. Currently 2 consulting rooms exist for visiting specialists plus 2 treatment rooms for allied health staff (e.g. physiotherapists). The 2 additional consulting rooms will be required to increase the delivery of health promotion and chronic disease management.

[71] Note that the formal relationship with an ambulance service may be with another provider as required.
[72] Note that the formal relationship with an ambulance service may be with another provider as required.

Appendix H: Australian Rural Birthing Index

The National Maternity Services Capability Services Framework[73] and the Australian Rural Birthing Index (ARBI)[74] provides guidance on the level of services than may be suitable for small and remote communities and the capabilities required. The key aspects for development are:

- obtaining organisational accreditation to provide assurance of the quality, efficiency and effectiveness of healthcare provision;
- establishing and retaining a workforce that is skilled and experienced with contemporary practice and technologies, inclusive of midwives, a GP obstetrician and GP anaesthetist. This would require models to be developed that enable staff to obtain and retain adequate experience in a higher volume birthing environment;
- establishing a shared care maternity model that provides a local midwife group practice and GPs with a network of support from a secondary or tertiary maternity service;
- providing facilities and equipment to enable a safe and comfortable birth environment, including the capacity to provide caesarean section;
- establishing guidelines and procedures for the functioning of the service including an extensive risk assessment process to assist in the management of pregnancy and protocols with tertiary maternity hospitals and retrieval service;
- providing a community education approach regarding the role and function of the service to enable consumers to have an understanding of the capability and limitations of the service provided;
- providing greater supports for mothers and families that travel to mainland for birthing services; and
- monitoring and reporting on process, cost and clinical outcomes.

Based on the current network of services on Norfolk Island, it is unlikely that all of the key components identified in the ARBI could be satisfied to sustain a safe planned delivery service on Norfolk Island.

[73] Department of Health 2012. National Maternity Services Capability Framework. Retrieved from: http://www.health.gov.au/internet/main/publishing.nsf/Content/maternity-pubs-capab.

[74] Longman et al. 2015. Australian Rural Birthing Index (ARBI) Toolkit: A resource for planning maternity services in rural and remote Australia. University Centre for Rural Health North Coast, Lismore. Retrieved from: ucrh.edu.au/wp-content/uploads/2018/05/AUSTRALIAN-RURAL-BIRTH-INDEX-TOOLKIT-FINAL-24Sep2015.pdf .