CHI
Centre for Healthcare Improvement
Patient Safety and Quality Improvement Service

Statewide Respiratory Clinical Network

Lung Health Services for Aboriginal and Torres Strait Islander Peoples in Queensland

Tomorrow's Queensland:
strong, green, smart, healthy and fair

Toward Q2 Tomorrow's Queensland

Queensland Government

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Authors' Note

The heterogeneity of Indigenous people and their communities is well recognised and understood by the authors of this report. While a collective term does not portray this diversity, for brevity in this report the word "Indigenous" has been used rather the expanded term. We apologise for any offence this may cause to individuals or organisations.

Executive Summary

Diseases of the respiratory system are the leading cause of hospitalisation in Indigenous people in Australia (age-standardised rate of 45 per 1,000 population); 2.9 times higher than non-Indigenous Australians. Respiratory conditions are the fourth leading cause of mortality in Indigenous Australians, accounting for 8.7% of all deaths. Between 2001 and 2005, the age-standardised mortality rate for Indigenous Australian males was 4.3 times higher than non-Indigenous males and 3.6 times higher for Indigenous females. Indigenous infants aged less than 12 months continue to die of these conditions at a rate 8.6 times higher than non-Indigenous infants.

Queensland has the second highest population of Indigenous residents in Australia, and they reside in some of the most remote areas of the country through to inner city Brisbane. Despite the population size and diversity there is scarce information on lung health amongst Indigenous Queenslanders and the services and resources available to prevent, intervene and manage chronic lung diseases. To address this deficit, the Statewide Respiratory Clinical Network was granted funding to identify need, map services and resources and gain insight into the gaps, barriers and enablers that impact on lung health in the Indigenous community.

The project was conducted over a three month period and involved detailed literature reviews, analyses of morbidity and mortality data, a survey of health service providers throughout Queensland and key informant interviews with hospital physicians, Aboriginal Community Controlled Health Organisations and other key stakeholders. Consumer perspectives were not explored given the limited time frame of the project. Asthma, chronic obstructive pulmonary disease, lung cancer and sleep-disordered breathing were the major foci of the project. The project has confirmed that for virtually all health and well-being indicators, Indigenous Queenslanders experience significant disadvantage and health services are not meeting this need.

Indigenous identification in administrative health datasets is poor, with capture of Indigenous status in the areas in which most Indigenous Queenslanders live (ie. urban and regional areas of the south-east of the state) as low as 40%. The best capture rate is in Mt Isa (100%). This presents major limitations in the use of these data to inform policy, service provision and funding models. Indigenous people in the health workforce are substantially under-represented, Indigenous specific health services are under-resourced and access to culturally safe health services in many parts of the state is limited.

The burden of chronic lung disease in the Indigenous population is substantially higher than non-Indigenous Queenslanders across all age groups and regions of the state. Age-standardised hospitalisation rates are 2.20 (95%CI 2.18, 2.23) times higher for asthma, 4.32 (95%CI 4.29, 4.35) times higher for chronic obstructive pulmonary disease and 1.76 (95%CI 1.74, 1.78) times higher for lung cancer. These aggregate ratios however ignore significant variation within age groups and regions in the state. Sleep-disordered breathing differed, with hospitalisation rates for obstructive sleep apnoea 0.71 (95%CI 0.70, 0.72) times that of non-Indigenous Queenslanders; these data are however questionable given access and identification issues. Mortality patterns are similar. Indigenous Queenslanders die from asthma at a rate 1.63 (95%CI 1.40, 1.89) times higher than non-Indigenous Queenslanders, 2.59 (95%CI 2.49, 2.67) times higher for chronic obstructive pulmonary disease and 1.63 (95%CI 1.59, 1.67) times higher for lung cancer. Deaths due to sleep-disordered breathing are rare for both Indigenous and non-Indigenous Queenslanders however sleep disorders are less likely to be recorded as the cause of death given other associated comorbidities. For both hospitalisation and deaths burden, regions of particular concern in the state include the South-West, Mount Isa, Darling Downs – West Moreton and Townsville Health Service Districts. No data could be found on other measures of burden (eg Disability Adjusted Life Years, community-wide prevalence, incidence, Quality of Life, availability of medications etc).

The review of the literature, existing programmes and evaluations of various strategies and programmes identified some initiatives that should (if implemented) positively impact on lung disease in Indigenous Queenslanders. In addition, the survey of health service providers and key informant interviews identified common barriers and gaps that should be addressed. Resources and personnel specifically dedicated to chronic lung disease detection, intervention and management are lacking in many regions of the state. Of particular need are: smoking cessation facilitators and evidence-based, culturally appropriate smoking interventions that go beyond one-off brief interventions; trained and empowered Indigenous Health Workers that are actively involved at the primary, secondary and tertiary levels; multi-disciplinary outreach times that are culturally sensitive, regular, located in areas of need and are well resourced and supported by Queensland Health; trained respiratory nurses, respiratory scientists, chronic disease educators, and; specialist paediatric services. Furthermore, the services that do exist are largely considered fragmented, uncoordinated and substantially hampered by inadequate information systems that support the continuum of care. In some remote regions, the lack of adequate information systems are considered major risks to client safety.

While the views of health service providers do not necessarily reflect the views of Indigenous people with chronic lung disease, access to services remain problematic, despite this being a known problem for decades. The cost of chronic disease care, lack of transport to and from services, fear and distrust of services and a lack of available, culturally safe services in many regions are considered common barriers. Service providers consider these issues are compounded by a lack of knowledge and understanding amongst Indigenous people with chronic lung diseases about what they need to do to maintain optimal health. However many service providers also acknowledge that chronic disease management is hampered by the multiplicity of social, economic, cultural and health problems that exist amongst the Indigenous population and the difficulties these present when they are expected to focus on one particular problem.

Reducing the burden of chronic lung disease in Indigenous Queenslanders should be a priority and receive the same attention afforded to cardiovascular disease, metabolic diseases and renal disease. Strategies should address all age groups and regions of the State but the considerable heterogeneity of Indigenous Queenslanders should not be overlooked. Lung disease initiatives should not operate in a silo; addressing the multi-factorial determinants of lung health in the Indigenous population goes beyond simply providing more lung-specific resources.

Recommendations

Some of the recommendations are based on those developed by the Thoracic Society of Australia and New Zealand, the Australian Lung Foundation and the Australasian Sleep Association in their 2010 report on respiratory and sleep health in Indigenous Australians.[1] Those recommendations are directly applicable to Indigenous Queenslanders. The information obtained during this current project has been used to expand on those recommendations and to articulate Queensland specific needs.

1. Respiratory and sleep health should be clearly articulated, incorporated as a priority and addressed within overarching strategic frameworks for Indigenous health in Queensland. These frameworks should encompass socio-political strategies, improved housing and environmental health, public health measures, workforce development, education, chronic disease management and appropriate research.

2. Culturally appropriate education strategies to combat lung diseases are required as a matter of urgency. They should be readily accessible and widely available to health services, communities and Indigenous people with chronic diseases. These programmes should target pregnant women, mothers, youth and the elderly. This should include reducing the exposure of children to environmental tobacco smoke. The relevant resources required should be formally evaluated with respect to effectiveness and efficiency. Financial incentives should be considered.

3. Innovative and tailored, multi-layered approaches to tobacco control are required. They should be appropriately developed and resourced so that they extend beyond one-off brief interventions and are sustainable in a broad range of settings. Smoking cessation clinics staffed by specialist smoking cessation facilitators (preferably Indigenous) are required across the state, including regular outreach clinics to the smaller and/or more remote regions. Initiatives should include ensuring health care providers have the capacity to identify, counsel and locally refer people for intensive smoking cessation support. This should include training and support of community-based tobacco workers to provide ongoing support and counselling and facilitate access to pharmacotherapy. Centralised expertise is required to support and advise these local providers. Such programs should provide leadership and support to workplace and household smoke-free initiatives, limitations on tobacco marketing and the involvement of children and young adults in diversionary community-based smoke-free initiatives.

4. Much greater integration of service delivery at all levels of the system, including primary care, is required. Existing primary care initiatives (such as adult and child health checks) need to be of sufficient quality to allow effective prevention of lung disease and thorough enough to detect lung problems at an early stage. There should also be the appropriate resources to ensure that the appropriate follow-up occurs for individuals identified through the health checks as being at risk of, or having been diagnosed of, chronic lung disease. These and other primary care activities (eg. self management strategies, smoking cessation, improving physical activities) need to be linked with optimal management of chronic lung disease. This should be supported by high quality information systems and adequate resources (particularly the

availability of multi-disciplinary teams that include Indigenous Health Workers) that are sustainable and fully integrated across the continuum of care.

5. Major initiatives are required to increase the participation of Indigenous people in the health workforce and for this participation to be effective and appropriately rewarded. More Indigenous personnel are required at all levels of the health care system. The apparent shift in the role of current Indigenous Health Workers to largely administrative functions in many areas should be addressed. The training of Indigenous staff with respect to chronic disease prevention and management should occur in collaboration with non-Indigenous staff so that cross-fertilisation of knowledge and experience occurs.

6. Clinical settings should become more culturally safe to facilitate willingness to enter the system, receive the appropriate care and return for follow-up if required. Successful models of Indigenous friendly organisations and initiatives should be used as a guide. More Indigenous Liaison Officers are required in almost all hospitals and they should be more readily visible to clients. This should include positioning Indigenous staff and Liaison Officers at admission and reception areas within clinical settings.

7. There is a clear need to increase adult and paediatric specialist respiratory services at all levels across the state, with paediatric services even more under-resourced than adult services. Teams should be multidisciplinary, provide outreach services across the state and have a role in the training of primary care workers with respect to the detection, intervention and treatment of lung diseases.

8. Improving Indigenous identification in health datasets and at the clinical level is critical and should be undertaken as a matter of urgency. Existing data collections should be evaluated for their accuracy and the degree of misclassification identified. Cross-cultural awareness programmes should be mandatory for all health staff (including senior staff in the organisation) to improve awareness of the importance of accurate identification and to improve client care. Failure to address identification issues will perpetuate policy and funding decisions that are based on poor evidence.

9. Areas of the state with the highest burden of disease are also those with services least equipped to deal effectively with the continuum of care required for chronic lung diseases. Regions requiring urgent attention are the Mt Isa, South West and Darling Downs-West Moreton Health Service Districts, followed by Townsville and Cairns and Hinterland. Targeted research is required in these regions to confirm burden estimates, identify risk factors, design and evaluate interventions and monitor progress. This research should include rigorously designed and implemented qualitative research that addresses consumer perspectives. Much greater collaboration between Queensland Health, Divisions of General Practice and Aboriginal Community Controlled Health Organisations is required. It is important however that the considerable need of Indigenous people living in larger urban centres, particularly Brisbane, is not overlooked.

10. There is a need to address the inadequacy of health information systems in Queensland, particularly with respect to the continuum of care for clients with chronic lung diseases. There are considerable implications with respect to client safety and outcomes, and the

ineffectiveness and inefficiency of services, in the state. The current information systems are considered major contributors to the fragmentation and lack of coordination of services in the State.

11. A centralised data and resource repository with respect to lung health in Indigenous people, including Queenslanders, which provides ready identification of evidence based resources and research outcomes and one that facilitates information sharing should be developed. This could be based on successful initiatives such as the EarInfoNet and Indigenous HealthInfoNet. Health services need easy access to such resources. Such a system should be appropriately resourced for the long-term.

12. The increasing body of evidence implicating acute respiratory infections in infancy and childhood as important antecedents for chronic lung disease later in life translates to a need to develop an evidence-based focus on these infections early in life in Queensland. This should be derived from targeted research that determines risk factors, incidence (at the hospital and community level) and outcomes in Indigenous children.

13. There is an urgent need for high quality, well-designed research into the perspectives of Indigenous people with chronic lung diseases to inform strategies and initiatives. This research should be appropriately funded and conducted according to the national standards and frameworks for Indigenous health research.

14. A continuous quality improvement framework and research strategy is required. Existing primary health care-based CQI initiatives (eg ABCD) should be complemented by region and state-wide systems which include the quality of, and access to, specialist and tertiary level services. This process should facilitate service refinement, identify areas which require targeted research and encompass a process of ongoing review and engagement with primary and specialist health care providers.

Note: The recommendations above have been formulated to address a broad range of stakeholders that may access this report. The recommendations have also been structured around existing Queensland Health strategic frameworks for use by Queensland Health departments. These are represented in Appendix E.

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List of Abbreviations

ABCD	Audit and Best Practice in Chronic Disease
ABS	Australian Bureau of Statistics
ACAM	Australian Centre for Asthma Monitoring
ACCHO	Aboriginal Community Controlled Health Organisation
ACCHS	Aboriginal Community Controlled Health Service
ACT	Australian Capital Territory
AHW	Aboriginal Health Worker
AIGC	Australian Indigenous Geographic Classification
AIHW	Australian Institute of Health and Welfare
AMS	Aboriginal Medical Service
APCC	Australian Primary Care Collaboratives
ASGC	Australian Standard Geographic Classification
ASOS	Asthma Spacer Ordering Scheme
ATODS	Alcohol, Tobacco and Other Drugs Service
ATSIC	Aboriginal and Torres Strait Islander Commission
ATSIHS	Aboriginal and Torres Strait Islander Health Services
CDPSM	Chronic Disease Prevention and Self-Management
CEO	Chief Executive Officer
CF	Cystic Fibrosis
CHIRRP	Clearing House for Indigenous Rural and Remote Projects
CI	Confidence Interval
COAG	Council of Australian Governments
COPD	Chronic Obstructive Pulmonary Disease
CQI	Continuous Quality Improvement
CRCAH	Cooperative Research Centre for Aboriginal Health
CT	Computerised Tomography
CVD	Cardiovascular Disease
DCLO	Diffusion Capacity of the Lung for Carbon Monoxide
DRG	Diagnosis Related Group
ED	Emergency Department
EN	Enrolled Nurse
ENT	Ear, Nose, Throat
EPC	Enhanced Primary Care
FEV	Forced Expiratory Volume
FNA	Fine Needle Aspiration
FVC	Forced Volume Capacity
GP	General Practitioner
GPQ	General Practice Queensland
HACC	Home and Community Care
HPF	Health Performance Framework
HSD	Health Service District
ICD	Indigenous Chronic Disease
IGR	Indigenous Geographic Region
IHNPA	Indigenous Health National Partnership Agreement
IHW	Indigenous Health Worker
ILD	Interstitial Lung Disease
LRI	Lower Respiratory Infection
MBS	Medicare Benefits Scheme

MSOAP	Medical Specialist Outreach Assistance Programme
MSOAP - ICD	Medical Specialist Outreach Assistance Programme – Indigenous Chronic Diseases
NACCHO	National Aboriginal Community Controlled Health Organisation
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NCACCH	North Coast Aboriginal Corporation for Community Health
NGO	Non-Government Organisation
NIPCNS	National Indigenous Palliative Care Needs Study
NPA	National Partnership Agreement
NQICDS	North Queensland Indigenous Chronic Diseases Strategy
NRT	Nicotine Replacement Therapy
NSW	New South Wales
NT	Northern Territory
OATSIH	Office of Aboriginal and Torres Strait Islander Health
OPOOS	Outpatient Occasions of Service
OSA	Obstructive Sleep Apnoea
PAH	Princess Alexandra Hospital
PEF	Peak Expiratory Flow
PBS	Pharmaceutical Benefits Scheme
PEPA	Program of Experience in the Palliative Approach
PHCC	Primary Health Care Centre
PIP	Practice Incentive Payments
QAIHC	Queensland Aboriginal and Islander Health Council
QIMR	Queensland Institute for Medical Research
QLD	Queensland
QUMAX	Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islanders
RBWH	Royal Brisbane and Women’s Hospital
RCH	Royal Children’s Hospital
RN	Registered Nurse
RSL	Restless Leg Syndrome
SA	South Australia
SAR	Service Activity Report
SHW	Senior Health Worker
TAIHS	Townsville Aboriginal and Islander Health Service
TPCH	The Prince Charles Hospital
TSANZ	Thoracic Society of Australia and New Zealand
USA	United States of America
VMO	Visiting Medical Officer
VIC	Victoria
WA	Western Australia

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1. Introduction

Lung disorders, acute and chronic, are major causes of morbidity and mortality amongst Indigenous Australians. Nationally, after excluding care involving renal dialysis, diseases of the respiratory system are the leading cause of hospitalisation in Indigenous people (age-standardised rate of 45 per 1,000 population); 2.9 times higher than non-Indigenous Australians.[2] Respiratory conditions are the fourth leading cause of mortality in Indigenous Australians, accounting for 8.7% of all deaths. Between 2001 – 2005, the age-standardised mortality rate for Indigenous Australian males was 4.3 times higher than non-Indigenous males and 3.6 times higher for Indigenous females.[3] Indigenous infants aged less than 12 months continue to die of these conditions at a rate 8.6 times higher than non-Indigenous infants.[4]

In some regions of Australia, the rates of acute lower respiratory infections (LRI) and pneumonia in Indigenous children are the highest yet documented worldwide.[5, 6] The importance of LRIs in Indigenous children include the large burden of disease and the effect of illness on the child and his/her carers, and its relationship to future lung dysfunction[7] and chronic bronchitis which is an independent risk factor for cardiovascular illness.[8] Amongst Indigenous adults, the rates of chronic lung disease begin to increase at a much younger age than non-Indigenous Australians, from 25 years of age.[2] Age-specific pneumonia hospitalisation rates between 2004 and 2006 ranged from seven times higher in those aged 25 – 34 years to 15 times higher in those age 45 – 54 years.

The recent novel influenza H1N1 (2009) pandemic further emphasised the susceptibility of Indigenous Australians to lung disease and the excess morbidity and mortality associated with infection.[9, 10] Indigenous Australians in the Top End of the Northern Territory were 12 (95% CI: 7.8, 18) times more likely to be hospitalised with H1N1.[9] Nationally, between May to October 2009 in Australia, the relative risk of hospitalisation, admission to intensive care unit and death was 6.6, 6.2 and 5.2 times higher respectively for Indigenous Australians than non-Indigenous Australians.[10]

Disparity in lung disease burden between Indigenous and non-Indigenous Australians persists across all age groups, in all Australian jurisdictions and for all of the major diagnoses (pneumonia, influenza, asthma, chronic obstructive pulmonary disease (COPD), bronchiectasis, upper respiratory tract infections such as otitis media and lung cancer). While there are no data on respiratory sleep health, the high prevalence of associated risk factors such as overweight, tobacco smoking and chronic lung disease suggest the burden of this group of respiratory illnesses is also likely to be higher.[1]

Despite the burden of disease, the importance of lung disease as a cause of acute and chronic ill-health amongst Indigenous Australians has not received recognition comparable to that of cardiovascular disease, diabetes and renal disease. As recently articulated by Dr Alex Brown in a review of respiratory and sleep health in Indigenous Australians, "*The impact of respiratory illness as a key driver of the elevated burden of disease and as a major contributor to the lower life expectancy in Indigenous Australians is almost without peer.*" [1]

Knowledge specific to disease burden in this population is however largely limited to hospital separations data; community based data are virtually non-existent. Hospitalisation data present major limitations to accurately portraying disease burden and evaluating trends over time given issues such as poor identification of Indigenous status in some jurisdictions, changes in coding practices, coding errors and that they may be largely influenced by frequent admissions amongst a select number of individuals. Similarly, while there are there are now comprehensive national and state strategic plans to address chronic disease (including lung disease) in Indigenous communities, there have been surprisingly few efforts to document data, service needs and gaps to inform the implementation and evaluation of these strategies.

To address this knowledge gap in Queensland, in March 2010, the Queensland Statewide Respiratory Clinical Network was granted funding through Queensland Health's Aboriginal and Torres Strait Islander Health Branch to conduct a needs analysis of respiratory services for Indigenous in Queensland. The funding became available under the auspices of the Indigenous Health National Partnership Agreement, part of the Australian Government's Close the Gap initiative.[11] The Close the Gap campaign calls on federal, state and territory governments to commit to closing the life expectancy gap between Indigenous and non-Indigenous Australians within a generation.

Aim

The aim of this project was to inform the delivery of lung health services for Indigenous peoples in Queensland and to identify gaps in knowledge and service provision. Given the limited time frame available, the scope of the project was limited to chronic lung diseases, specifically asthma, chronic obstructive pulmonary disease (COPD), lung cancer and obstructive sleep apnoea (OSA).

Objectives

- To summarise the available data on chronic lung diseases amongst Indigenous peoples in Queensland
- To map existing primary, secondary and tertiary lung health services amongst mainstream and Aboriginal Community Controlled health services in Queensland
- To identify areas of need with respect to lung health services for Indigenous peoples in Queensland
- To identify research needs relevant to lung health amongst Indigenous peoples in Queensland

2. Methods

2.1 Overview

This project was conducted between March and June 2010. The project used a mixed methodology approach, combining both quantitative and qualitative data collection and analysis techniques. The project was framed within the Queensland Government's *Queensland Strategy for Chronic Disease 2005 – 2015* which includes a specific focus on Indigenous populations within the State.[12] Consistent with the Strategy, this project therefore focused on three key aspects of respiratory services to Indigenous communities:

- Standard best practice approaches that improve the primary prevention of risk factors;
- Standard best practice approaches that integrate the early detection and management of risk factors and disease markers; and,
- Standard best practice approaches to the management of existing disease and the prevention of complications.

Each of these criteria was examined within the context of primary, secondary and tertiary health care services. Given the scope of lung conditions affecting Indigenous people and the available time frame, the project focused on four key areas: asthma, COPD, lung cancer and OSA.

2.2 Project management

A project working group was established via a call for volunteers through the Statewide Respiratory Clinical Network, and chaired by a Senior Paediatric Respiratory and Sleep Physician with experience in Indigenous Health. The Queensland Health Aboriginal and Torres Strait Islander Health Branch was represented on the working group. Two project officers were employed to implement the project; a post-doctoral epidemiologist with a nursing background and clinical, management and research experience in rural, remote and Indigenous health (K O'Grady) and an Indigenous registered nurse from Queensland with extensive professional and family connections throughout the state (A Revell).

The working group met fortnightly by teleconference as per a defined agenda and all meetings were minuted. All draft and final documents including the project plan, interview and survey tools and final report were circulated to the working group for comment and revision, particularly the validity of information collected during key informant interviews. Recommendations were formulated by group discussion with a core writing group taking executive responsibility for the final content of the report.

2.3 Literature review

A review of both the published and grey literature was conducted to identify and quantify the current knowledge base for disease burden, risk factors for disease and evidence-based interventions and/or strategies applicable to Indigenous peoples in Queensland. The review identified the relevant national and state policy contexts and any current models of care and lung health specific programmes that may be operating in Queensland and/or elsewhere in Australia. The review sought to identify gaps in knowledge that need to be addressed. Literature searches were conducted through the following avenues:

- PubMed, Embase, Cochrane Library
- Queensland Health inter- and intranet

- Indigenous *Health*Infonet
- General internet searches via Google
- Indigenous health programme of the Queensland Divisions of General Practice
- Australian Institute of Health and Welfare (including The Closing the Gap Clearinghouse)
- Australian Bureau of Statistics

Reference lists contained within identified documents were reviewed to identify data sources, policies, reports and other relevant material not identified through the mechanisms listed above. In addition members of the working group identified data personally known.

2.4 Documentation and evaluation of existing data

The project documented and evaluated existing information on the following key aspects of the four targeted diseases in Indigenous persons in Queensland:

- Disease epidemiology
- Service provision
- Service monitoring and evaluation

Published research, government and non-government organisation documents on disease burden, risk factors, services, policy, strategies and the evaluation and impact of interventions was collated and gaps in knowledge identified. Hospitalisation and deaths data were obtained from Queensland Health and analysed by Indigenous status, age group and health service district (HSD). To a limited extent, the quality of the data sources were evaluated with respect to scope, completeness, timeliness, usefulness, ease of access and reporting mechanisms.

2.5 Mapping of respiratory services

Service mapping was conducted via internet based searches, key informant interviews and a quantitative survey of key stakeholders and health service providers.

2.5.1 Key informant interviews

Key informant interviews were conducted with:

- Respiratory and sleep physicians at the following tertiary facilities: Cairns Base, Townsville General, Royal Brisbane & Women's, Princess Alexandria, Royal Children's, Mater Adults, Mater Children's, Royal Children's Hospital, Prince Charles, Gold Coast, Mt Isa Base and Rockhampton Base Hospitals
- The staff of three Aboriginal Community Controlled Health Organisations (ACCHOs): one urban, one regional and one remote
- The staff of five district public hospitals in Queensland in areas with a relatively large Indigenous population
- Indigenous Health Programme coordinators and policy officers in a range of community and corporate settings

In addition, opportunistic discussions were held at various meetings in a range of settings as they arose. Interviews were conducted by either the Senior Project Officer or the Indigenous Nurse Project Officer, with the latter undertaking a road trip around regional Queensland.

In general the interviews followed a semi-structured format although this varied depending on the time available and the numbers and disciplines of those who attended. Issues discussed included the services provided by organisations, Indigenous identification and service provision, gaps and barriers from both a system and client's perspective and identification of key Indigenous lung health needs in the regions. Most key informants also completed the online survey described below.

The information collected during these interviews was summarised and the main themes identified. This was not done using formal qualitative analysis techniques but is rather presented in the style of meeting records.

In addition to the formal interviews, several meetings were held with a range of stakeholders to discuss the project, identify relevant information and to assist with various aspects of the project. These stakeholders included:

- Representatives from General Practice Queensland
- Representatives from various Divisions of General Practice in Queensland
- Staff from the Queensland Health Indigenous Information Unit
- Staff from the Queensland Health Indigenous Workforce Strategy Unit
- Staff from the Queensland Health Office of Rural and Remote Health
- Staff from Asthma Victoria

Several attempts were made to arrange meetings with the Queensland Aboriginal and Islander Health Council (QAIHC), the peak body representing ACCHOs in Queensland, to discuss the project in both Brisbane and Townsville. These attempts were not successful within the time frame allocated to the project.

2.5.2 Online stakeholder survey

A largely quantitative online survey was conducted via Survey Monkey™ (Pao Alto, California). Following review by the project working group and pilot testing on a small number of health professionals, the survey link was distributed electronically via the following networks:

- The Statewide Respiratory Clinical Network
- The Statewide General Medicine Clinical Network
- General Practice Queensland (3 – 4 divisions only)
- Chronic Disease Coordinators and Indigenous Health Coordinators in each of the Queensland Area HSDs
- Key informants participating in interviews on the road trip

The survey addressed specific topics including:

- Respondent information (profession, type of service in which they were employed etc)
- General service information including access to key health professionals necessary to best practice lung health care and management
- Access to resources such as spirometry, pulmonary rehabilitation and tobacco control programmes
- The key gaps, system enablers and barriers and client enablers and barriers in the prevention, identification and management of chronic lung diseases. This information was collected via open-ended questions that allowed participants to write detailed responses if desired

The data were analysed descriptively and are presented as an overall Queensland summary and by HSD in Queensland. The qualitative information presented in the last section of the survey is presented verbatim, with the major themes identified summarised for each key question.

2.6 Project limitations

It is important to note that given the limited time frame (3 months), the methods employed were not gold standard quantitative and qualitative approaches, particularly with respect to the collection and analysis of qualitative data. In any target population, let alone Aboriginal and Torres Strait Islander Australians, that requires more extensive consultation. Similarly the scope of areas covered in Queensland was limited to what were considered potentially representative of various regions rather than comprehensive mapping within every region. There will therefore be important issues, services and programmes that have not been identified in this report.

Furthermore, this project did not involve the views and perspectives of consumers given this would not have been appropriate or feasible within the allocated time frame. This is a critical aspect of a needs analysis that is missing and should be addressed if policies, strategies and services are to be acceptable, sustainable and effective.

Finally, one of the most important limitations, particularly with respect to the epidemiology of chronic lung in Indigenous Queenslanders is the inadequate availability of accurate data (addressed in more detail in Section 4). Whilst substantial efforts were made to obtain accurate data, there is a large gap in the accurate identification of Indigenous Queenslanders in important health datasets.

3. Indigenous people in Queensland

3.1 Population size

At the 2006 Census, the estimated resident number of Indigenous persons in Australia was 517,174 representing 2.3% of the total Australian population.[13] Indigenous status was unknown or not reported in 5.7% of the total Census count. An estimated 28% (n=146,429) of Australia's Indigenous population are resident in Queensland, equating to 3.6% of the State's total population (table 1). The number of people identifying as Indigenous in Queensland increased by 13% from the 2001 Census;[13] the majority of this increase was attributed to an excess of births over deaths rather than increasing self-identification. Just over 14% of Queensland's Indigenous population identify as Torres Strait Islander only with an additional 8.2% identifying as both Aboriginal and Torres Strait Islander (table 2)

Table 1. Estimated resident population, by Indigenous status and State/Territory, 2006

	Indigenous persons		Non-Indigenous persons		All persons		% of population that is Indigenous
State/Territory	**N**	**%**	**N**	**%**	**N**	**%**	**%**
QLD	146,429	28.3	3,945,117	19.5	4,091,546	19.8	3.6
NSW	148,178	28.7	6,669,004	33.0	6.817,182	32.9	2.2
VIC	30,839	6.0	5,097,471	25.3	5,128,310	24.8	0.6
SA	26,044	5.0	1,542,160	7.6	1,568,204	7.6	1.7
WA	77,928	15.1	1,098,117	9.8	2,059,045	9.9	3.8
TAS	16,900	3.3	473,022	2.3	489,922	2.4	3.4
NT	66,582	12.9	144,022	0.7	210,674	1.0	31.6
ACT	4,043	0.8	330,182	1.6	334,225	1.6	1.2
Australia	517,174	100.0	20,184,314	100.0	20,701,488	100.0	2.5

Table 2. Estimated resident population, by type of Indigenous origin and State/Territory, 2006

	Aboriginal only		Torres Strait Islander only		Both Aboriginal & Torres Strait Islander		Indigenous total	
State/Territory	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
QLD	113,291	24.4	21,127	63.8	12,011	59.5	146,429	28.3
NSW	139,994	30.2	5,083	15.4	3,101	15.4	148,178	28.7
VIC	27,746	6.0	2,234	6.7	859	4.3	30,839	6.0
SA	24,562	5.3	1,047	3.2	435	2.2	26,044	5.0
WA	75,230	16.2	1,385	4.2	1,313	6.5	77,928	15.1
TAS	15,003	3.2	1,263	3.8	634	3.1	16,900	3.3
NT	64,060	13.8	791	2.4	1,731	8.6	66,582	12.9
ACT	3,772	0.8	167	0.5	104	0.5	4,043	0.8
Australia	463,874	100.0	33,112	100.0	20,188	100.0	517,174	100.0

3.2 Population Distribution in Queensland

Indigenous Geographic Regions (IGRs) comprise the highest level of the Australian Indigenous Geographic Classification and are largely based on the former Aboriginal and Torres Strait Islander Commission (ATSIC) region boundaries.[14] In 2006, the Brisbane Indigenous region was second only to Sydney with the highest estimated number of Indigenous residents (n=41,369).[14] Nationally, the IGR with the highest proportion of Indigenous residents (83%) was the Torres Strait Indigenous Region. The Indigenous population by IGR in Queensland is presented in table 3. Of note is the considerable number of people within these regions for whom Indigenous status is unknown.

Table 3: Queensland's Indigenous population distribution by ABS Indigenous Geographic Region, 2006.

	Indigenous		Unknown	
Indigenous Geographic Region	N	% Tot Pop in IGR	N	%Tot Pop in IGR
Brisbane	41,369	1.6	145,040	5.6
Townsville	19,036	5.6	22,314	6.5
Cairns	18,267	9.1	15,733	7.9
Rockhampton	15,114	3.8	22,248	5.5
Roma	12,247	4.0	14,012	4.6
Torres Strait	7,106	82.9	225	2.6
Mt Isa	6,998	24.2	3,100	10.7
Cape York	6,944	54.7	821	6.5

Just over 51% of Queensland's Indigenous population reside outside of the major cities and inner regional areas of the State; the corresponding proportion of non-Indigenous persons in these areas is 17.3% (table 4). The majority of the Indigenous population is distributed along the coastal corridor, although there are a significant number of people concentrated in smaller towns and discrete communities in the north-, central- and south-western areas of the state.

Table 4. Estimated resident population by Indigenous status and remoteness area, Queensland, 2006

Location	Indigenous		Non-Indigenous		All persons	
	N	%	N	%	N	%
Major city	41,097	28.1	2,398,025	60.8	2,439,122	59.6
Inner regional	30,206	20.6	866,656	30.0	896,862	21.9
Outer regional	42,612	29.1	578,226	14.7	620,838	15.2
Remote	12,523	8.6	72,230	1.8	84,753	2.1
Very remote	19,991	13.7	29,980	0.8	49,971	1.2
Total	146,429	100.0	3,945,117	100.0	4,091,546	100.0

In 2008, 17% of Indigenous Queenslanders aged 15 years and over were presently living in their traditional homelands or country; 27% did not recognise Indigenous homelands.[15] The 2006 Census reported 38 discrete Indigenous communities in Queensland (table 5) ranging in population size from approximately 100 (Jumbun) to 3,500 persons (Thursday Island).[16] The majority of communities fall within the Torres Strait/Northern Peninsula and Cape York HSDs.

Table 5: Discrete Indigenous Communities in Queensland, by Queensland HSD and ABS Indigenous Regions.

Queensland Health Services District	ABS Indigenous Region	Community name	Estimated Resident Population 2006*
Torres Strait/Northern Peninsula	Torres Strait	Boigu Island	255
		Sabai Island	317
		Dauan Island	145
		Darnley Island	283
		Yorke Island	267
		Coconut Island	180
		Yam Island	288
		Mabuiag Island	241
		Badu Island	706
		Warraber Island	238
		Kubin (Moa Island)	182
		St Pauls (Moa Island)	224
		Mer Islands	465
		Hammond Island	203
		Horn Island	360
		Seisia	127
		Umagico	222
		Injinoo	397
		New Mapoon	320
		Bamaga	688
		Thursday Island	3,500
Cape York	Cape York	Mapoon	218
		Napranum	783
		Aurukun	955
		Lockhart River	489
		Coen	195
		Hopevale	726
		Laura	100
		Pormpuraaw	539
		Kowanyama	947
		Wajul Wajul	309
Cairns & Hinterland	Cairns	Mossman Gorge	156
		Yarrabah	2,296
Mt Isa	Mt Isa	Gununa	943
		Doomadgee	1,006
Townsville	Townsville	Jumbun	102
		Palm Island	1,851
Central Queensland	Rockhampton	Woorabinda	804
Darling Downs-West Moreton	Roma	Cherbourg	1096

*Source: [16]

3.3 Age and sex distribution

The Queensland Indigenous population is younger than non-Indigenous Queenslanders, with a median age of 20.3 years for the former compared to 36.6 years for the latter; 39% are aged less than 15 years.[13] This difference is thought to be primarily due to higher fertility and mortality rates in the Indigenous population. The age and sex distribution of Indigenous Queenslanders is presented in table 6. Data comparing the age and sex distributions between Indigenous Queenslanders could not be readily sourced.

Table 6: Queensland's Estimated Resident Indigenous Population by Age and Sex, 2006

	Males		Females		Persons	
Age group (years)	**N**	**%**	**N**	**%**	**N**	**%**
0 - 4	9,675	13.3	9,506	12.9	19,181	13.1
5 - 9	9,644	13.3	9,372	12.7	19,016	13.0
10 - 14	9,718	13.4	9,092	12.3	18,810	12.8
15 - 19	7,871	10.8	7,439	10.1	15,310	10.5
20 - 24	6,255	8.6	6,182	8.4	12,437	8.5
25 - 29	5,239	7.2	5,286	7.2	10,525	7.2
30 - 34	5,088	7.0	5,321	7.2	10,409	7.1
35 - 39	4,717	6.5	5,090	6.9	9,807	6.7
40 - 44	4,048	5.6	4,358	5.9	8,406	5.7
45 - 49	3,230	4.4	3,472	4.7	6,702	4.6
50 - 54	2,540	3.5	2,802	3.8	5,342	3.6
55 - 59	1,860	2.6	2,071	2.8	3,931	2.7
60 - 64	1,262	1.6	1,368	1.9	2,530	1.7
64 - 69	690	0.9	949	1.3	1,639	1.1
70 - 74	483	0.7	597	0.8	1,080	0.7
75 +	508	0.7	796	1.1	1,304	0.9
Total	72,728	100.0	73,701	100.0	146,429	100.0

3.4 Selected socio-demographic variables.

The Queensland Indigenous population is not homogenous across the State and there will be substantial differences in key socio-demographic variables both within and between communities and regions. It was not within the scope of this project to investigate these differences and the data presented below are composite data only derived from the 2006 Census.

In 2006:

- The average household size was 3.4 persons compared to 2.5 persons in other households
- There was an average of 1.2 children under the age of 15 per household compared to 0.5 in other households
- 88.5% of Indigenous Queenslanders spoke only English at home; 9.2% (n=11,245 persons) spoke Australian Indigenous languages at home with 64.3% and 22.3% of these being Torres Strait Island and Cape York Peninsula languages respectively. By remoteness areas, the highest proportion of people who spoke an Indigenous language at home were in very remote areas (69.4%) followed by outer regional (14.9%) and remote areas (9%)
- 74.7% of Indigenous Queenslanders aged 15 years and over had no post-school qualifications compared to 55.5% of non-Indigenous Queenslanders. There was marked variation in this index by age and remoteness area in Queensland
- The overall unemployment rate was 12.7% for Indigenous males and 13.8% for Indigenous females; the corresponding rates for non-Indigenous Queenslanders were 4.3% and 5% respectively. The unemployment rates were highest for Indigenous Queenslanders living in inner regional areas (15.6% for males and 17.6% for females)

- The mean gross household income for Indigenous Queenslanders was $481 per week compared to $725 per week for non-Indigenous Queenslanders. Forty percent of households were in the lowest income quintile, compared to 19% of non-Indigenous households. The proportion of households in the lowest quintile ranged from 31% in major cities to 52% in very remote areas. Only 6% of Indigenous households in Queensland were in the highest income quintile compared to 21% of non-Indigenous households
- 55% of Indigenous households did not have access to the internet at home compared to 34.5% of non Indigenous households. The proportions of Indigenous households without internet ranged from 43% in major cities to 84% in very remote areas
- In 20.5% of Indigenous households there were no registered motor vehicles compared to 7.7% of non-Indigenous households

3.5 Indigenous identification in health datasets in Queensland

The accurate identification of Indigenous persons in population and health datasets has been a subject of concern in most Australian jurisdictions for much of the past two decades. Despite improvements in recent years, there have been continuing problems in establishing and maintaining standard practice in the collection of Indigenous status, resulting in the under-identification of Indigenous people in key national health data sets. The consequences of such under-identification with respect to the accuracy of health statistics can be profound, particularly given the substantial impact that even small changes in numerators and/or denominators can make with small area or small population analyses. Further efforts to improve identification have recently been implemented, culminating in the Australian Institute of Health and Welfare (AIHW) recently releasing new national guidelines to establish best practice for collecting Indigenous status in health data sets.[17]

In 2007/2008 the estimated level of capture of Indigenous status in Queensland acute public hospitals was 83.5%, with marked variation by HSD (table 7).[18] Of note is that four health districts that collectively represent 40.2% of Queensland’s estimated resident population (Darling Downs-West Moreton, Metro South, Metro North and Sunshine Coast-Wide Bay) had an average capture rate of only 63.6%.

Table 7: Proportion of estimated level of capture of Indigenous status in Queensland acute public hospitals by HSD, 2007/2008, and Estimated Resident Population 2007[18]

HSD	% captured	Estimated Resident Pop	HSD Indigenous % of Population	HSD % of QLD Indigenous Population
Queensland total	83.5	150,529	3.6	100.0
Cairns & Hinterland	93.1	23,503	10.2	15.6
Cape York	93.0	6,748	52.6	4.5
Central Queensland	89.0	10,704	5.2	7.1
Central West	43.8	868	7.0	0.6
Darling Downs-West Moreton	67.9	16,985	3.6	11.3
Gold Coast	40.3	5,662	1.2	3.8
Mackay	61.2	6,792	4.2	4.5
Metro North	62.9	13,034	1.6	8.7
Metro South	63.0	19,045	2.0	12.7
Mt Isa	100.0	8,337	27.3	5.5
South West	86.3	3,143	12.0	2.1
Sunshine Coast-Wide Bay	60.6	11,334	2.1	7.5
Torres Strait-Nth Peninsula	88.3	8,803	83.4	5.8
Townsville	97.5	15,571	7.2	10.3

3.6 General health indicators

As with other social and demographic indicators, general health and well-being statistics for Indigenous Queenslanders are likely to vary widely within and between regions. However, as in other Australian States and Territories, there continues to be substantial health disparities between the Indigenous and non-Indigenous population in Queensland. For the period 2005 – 2007, life expectancy was 10.3 years lower for Indigenous males and nine years lower for Indigenous females.[19] All-cause mortality rates are higher (998.4 per 100,000 compared with 604.3 per 100,000 in the non-Indigenous population) and these rates increase by degree of remoteness in the State (from 683 per 100,000 persons in major cities to 1,246 per 100,000 persons in remote/very remote areas).[20] Indigenous Queenslanders experienced 4.4% of Queensland's disease and injury burden in 2006 despite comprising 3.1% of the population.[21]

The prevalence of key risk factors for poor health is high in the Queensland Indigenous population. Approximately 15% of occupied dwellings are considered overcrowded.[2] In 2004/05 approximately 50% of the population were current daily smokers, with the highest proportions being in the 35 – 44 years age bracket (59%) and those living in remote areas (56%).[22] Amongst children aged 0 – 14 years, 17.5% of those in remote areas and 16% of those in non-remote areas live in households where there is a current daily smoker who smokes indoors.[22] Fifty-two percent of Indigenous women in Queensland smoked during pregnancy, compared to 18% of non-Indigenous women.[2] The prevalence of obesity is almost double that of non-Indigenous Queenslanders (34% versus 18%) and almost 51% of Indigenous Queenslanders in non-remote areas report their activity levels as sedentary.[22]

Despite the burden of disease, access to health care and the provision of evidence-based care remains problematic. While there are now Medicare incentives for health care providers to undertake comprehensive health assessments in Indigenous Australians, in 2007/2008 only 12.3% of Indigenous persons aged over 55, 6.3% of those aged 0 – 14 years and 10.8% of those aged 15 – 54 years had received the annual health check.[20] In 2004/2005, 15% of Indigenous Queenslanders did not consult a doctor when required and 7% did not go to hospital when needed.[22] Over the period 2003/04 to 2007/08, Indigenous Queenslanders were three times more likely to self-discharge from hospital than non-Indigenous Queenslanders.[20] Of particular interest is that in the period 2004 – 2006, Indigenous Queenslanders were up to 50% less likely to have procedures performed while in hospital compared to non-Indigenous Queenslanders (table 8),[2] including for the diseases that contribute to the majority of the disease burden in this population.

Table 8. Percent (age standardised) of hospital episodes with a procedure reported, selected principal diagnoses, by Indigenous status, Queensland and Australia, 2004-05 to 2005-06

	Queensland			Australia		
	Indigenous	Other	Ratio[(a)]	Indigenous	Other	Ratio[(a)]
	%	%		%	%	
Symptoms, signs n.e.c	25.6	55.5	0.5	31.1	56.5	0.6
Mental & behavioural disorders	29.6	55.8	0.5	35.1	50.3	0.7
Diseases of the respiratory system	28.1	57.6	0.5	35.5	59.6	0.6
Infectious & parasitic diseases	29.7	34.5	0.9	38.8	38.8	1.0
Diseases of the nervous system	42.1	78.6	0.5	45.3	80.0	0.6
Diseases of the circulatory system	43.1	68.2	0.6	50.3	73.0	0.7
Diseases of the skin	47.3	69.7	0.7	56.0	72.4	0.8
Diseases of the genitourinary system	56.9	84.0	0.7	60.9	85.3	0.7
Endocrine, nutritional & metabolic	51.6	78.2	0.7	59.2	80.9	0.7
Injury, poisoning, external causes	55.0	68.5	0.8	59.0	71.4	0.8
Diseases of the digestive system	59.7	88.5	0.7	61.5	88.4	0.7
Pregnancy, childbirth	56.4	76.6	0.7	61.7	75.5	0.8
Diseases of the musculoskeletal system	64.2	90.4	0.7	67.6	91.4	0.7
Certain conditions in perinatal period	66.2	76.6	0.9	72.5	70.4	1.0
Diseases of the ear	72.5	85.2	0.9	74.4	86.7	0.9
Diseases of the eye	85.9	98.1	0.9	84.2	98.4	0.9
Diseases of the blood	81.7	93.7	0.9	83.5	93.2	0.9
Neoplasms	86.2	95.1	0.9	87.3	95.5	0.9
Congenital malformations	89.8	92.8	1.0	87.3	92.9	0.9
Factors influencing health status	95.0	93.0	1.0	96.2	95.2	1.0

(a) Ratio Indigenous: Other.

Source: [2]

3.7 Indigenous persons in the health workforce in Queensland

Access to health professionals of Indigenous origin is an important component of culturally appropriate health care and has been shown to have positive outcomes for Indigenous persons needing health care. Not only does an Indigenous health workforce affect physical, emotional and cultural well-being, it plays an important role in community capacity and political determination.[23] Up-to-date information on the Indigenous health workforce was requested from the Indigenous Workforce Unit of Queensland Health however it was not provided within the timeframe of this project. Data are therefore predominantly limited to the AIHWs *Indigenous health labour force and data quality assessment* report, published in 2009,[24] and the Service Activity Reports (SAR) for organisations funded by the Office of Aboriginal and Torres Strait Islander Health (OATSIH).[25] An additional workforce planning report was identified on the QAIHC website.[26]

In 2006, there were 2,522 Indigenous people employed in health occupations in Queensland or 2.2% of the total health workforce - below the state Indigenous population of 3.6% but higher than the national average of Indigenous health employees of 1.6%. A QAIHC report in 2008 indicated that within Queensland Health, there were 1,334 people who identified as Indigenous people in the workforce in 2006 or 2.34% of the total workforce. This compares to 1,067 Indigenous-identified people in the workforce in 2003 or 2.14%.[26] Indigenous people were primarily employed in operational (42.8%), nursing (24.1%) and managerial and clerical occupations in Queensland Health. Thirty-four Indigenous doctors were employed and 69 Indigenous staff worked in professional categories which included allied health professions. This translated to 1.4% of the Queensland Health nursing working, 1.3% of the medical officer and visiting medical officer (VMO) workforce and 1.1% of the professional workforce.

Amongst ACCHOs, there are shortfalls in all disciplines compared to community needs with medical recruitment and access to allied health professionals presenting major problems.[26] In 2008, there were approximately 24.75 FTE funded medical positions in the community controlled sector and 14.5 FTE of these positions or nearly 60% were vacant. ACCHOs in both urban and rural areas are heavily dependent on overseas trained medical officers.[26]

3.7.1 Indigenous Health Workers (IHWs)

There has been wide variation in the definition of an IHW over time and by jurisdiction. In 2008, the National Aboriginal Health Worker Association Advisory Group agreed to the following definition: *"A person who is an Aboriginal and/or Torres Strait Islander and is in possession of the minimum baseline qualification as accepted and listed by each jurisdiction and who provides evidence of such qualification or registration. The qualification must be within primary health care work or clinical practice."* [24]

According to the 2006 Census, there were approximately 60 Indigenous males and 170 Indigenous females who were employed as IHWs in Queensland.[24] A major limitation to quantifying the scope of services provided by IHWs in Queensland is that they are not required to report specific clinical activities they undertake (Warren Locke, personal communication, 2010). Consequently, the role of many IHWs is seen as limited to health promotion and education, despite many also undertaking a range of activities that fall within the scope of clinical practice.

3.7.2 Medical Practitioners

While there are known problems with data quality, particularly under-identification of Indigenous status, according to the 2006 Census, there were 18 generalist Indigenous medical practitioners in Queensland; a rate of 14 per 100,000 Indigenous persons in Queensland.[24] The 2006 Medical Labour Force Survey reported 25 Indigenous medical practitioners whose primary role was clinical practice (including primary care practitioners, hospital non-specialists, specialists and specialists-in-training).[24] The latter survey is considered an under-estimate given Queensland data did not include all registered medical practitioners. Data on the location of those medical practitioners were not readily available however, nationally, only 1.1% of primary care practitioners were based in Aboriginal Medical Services and 38% of those were located in remote/very remote regions.[24]

3.7.3 Nurses and Midwives

Data on Indigenous nurses and midwives was limited to national data sources from the Nursing and Midwifery Labour Force Survey for 2003 to 2005.[24] Data from this survey are however substantially limited by poor response rates and by the number of people who did not answer the question on Indigenous status. For all years of the survey, the proportion of those surveyed who did not answer the identification question was more than double that of those who identified as Indigenous. Over the survey period, the proportion of the registered nurse (RN) population nationally that identified as Indigenous was approximately 0.3% and 0.9% for enrolled nurses (EN). The number of Indigenous registered and enrolled nurses declined by 9.6% and 9.1% respectively between 2004 and 2005. Given data limitations, further results from this survey are not presented.

3.7.4 Allied Health Professionals

Access to allied health professionals is a major issue in many regions of the country. However, access to Indigenous allied health professionals is particularly restricted. In 2006, there were only 54 Indigenous physiotherapists, 39 Indigenous psychologists and 269 Indigenous social workers identified in Australia.[3] The Australian Indigenous Psychologists Association estimates the numbers of Indigenous psychologists would need to be increased by 1500% to achieve parity per head of population with non-Indigenous Australians.[27] In 2008, there were no Indigenous allied health professionals employed in ACCHOS contributing to SARs and only one visiting Indigenous professional.[25]

3.7.5 Indigenous Liaison Officers

Data on the location and number of Indigenous Liaison Officers in Queensland were not available.

3.7.6 Indigenous Health Coordinators

There are dedicated Indigenous Health Coordinators and or Indigenous Health policy/programme officers in each of the Queensland HSDs. At 11 November 2009, all regions had staff in these positions with the exception of the Children’s HSD and Darling Downs – West Moreton regions.

3.8 Indigenous Health Services in Queensland

The establishment of organisations dedicated to the health and welfare of Indigenous persons, particularly those in the community controlled sector, has been a major component of political and social growth and is a key element in self-determination. Such organisations provide cultural safety, health care is more likely to be viewed in a holistic manner that accounts for Indigenous concepts of health and well-being and, critically, extend care beyond the individual to that of family and community.

While there are a multitude of organisations that provide some services dedicated to Indigenous persons in Queensland, this section focuses only on those services that have Indigenous persons as their primary focus of care. For this report, identification of those services was limited to OATSIH funded organisations, those listed as members of the QAIHC and others identified through key informant interviews.

In 2008, there were 30 Indigenous primary health care services in Queensland that received funding from the Australian Government through OATSIH (19% of all Australian Indigenous primary health care services receiving OATSIH funding).[25] An additional seven health services and organisations were identified as members of QAIHC. Furthermore, there were a number of services/organisations that receive OATSIH funding to support Indigenous communities with a range of health and welfare services (figure 1). The striking feature of Figure 1 is the notable absence of Indigenous organisations in regions away from the coastal corridor, despite a substantial proportion of the population residing in inland Queensland. The implication is that there are a substantial number of Indigenous Queenslanders who do not have access to services they are comfortable with and/or that are culturally competent in the delivery of health and welfare services.

Primary health care/clinical services comprise 50% of the organisations in Queensland that receive OATSIH funding. These services provide annual service activity reports to OATSIH and the National Aboriginal Community Controlled Health Organisation (NACCHO). In 2007-08 over 250,000 episodes of health care were provided by OATSIH funded primary health care services in Queensland, with the majority of these occurring in outer and inner regional areas in the State.[25] This represented a 127% increase in service provision since 1997-98.[25]

The scope of activity of these organisations is vast, ranging from direct clinical care for individuals to advocacy work, cultural promotion activities and family and community support across the social, economic, spiritual, environmental and political spectrum. From the narrow clinical perspective of management of a client with a chronic illness, in 2007-08:

- 85% of OATSIH funded primary health services reported they either provided or facilitated access to manage of chronic illness other than diabetes and cardiovascular disease (CVD)
- 83% provided referral to hospital and specialist services off site
- 63% provided outreach clinical services
- 94% provided or facilitated access to health promotion/education
- 79-80% provided or facilitated access to influenza and pneumococcal immunisation
- 70% provided or facilitated access to hospital inpatient visits and support
- Approximately 90% managed clients with respect to tobacco use and approximately 48% conducted specifically targeted services
- 92% provided transport services (eg to medical appointments)
- 76% provided family support and education
- 72% provided home visits
- 66% provided case management with other agencies[25]

On April 14 2010, the Australian Government announced funding for more than 80 Indigenous Health Project Officers to general practices across Australia, and a further 14 positions to Divisions of General Practice and ACCHOs.[28] It is not clear how decisions were made and on what basis however, in Queensland, the following Divisions and Practices were allocated positions; of note is the lack of allocated positions to the western regions of state:

- South East Alliance of General Practice (Brisbane), CAPALABA
- Brisbane South Division of General Practice, SALISBURY
- SouthEast Primary HealthCare Network, WOODRIDGE
- GPpartners, LUTWYCHE
- General Practice Gold Coast, BURLEIGH WATERS
- Moreton Bay General Practice Network, MARGATE BEACH
- Ipswich and West Moreton Division of General Practice, IPSWICH
- GP Connections, TOOWOOMBA
- Central Queensland Rural Division of General Practice, BILOELA
- Townsville General Practice Network, GARBUTT BC
- RHealth,TOOWOOMBA
- Far North Queensland Rural Division of General Practice, BUNGALOW
- North and West Queensland Primary Health Care, GARBUTT BC
- Sunshine Coast Division of General Practice, COTTON TREE

- Capricornia Division of General Practice, ROCKHAMPTON
- GP Links Wide Bay, BUNDABERG
- General Practice Queensland (State Based Organisation),BRISBANE
- Queensland Aboriginal and Islander Health Council (NACCHO affiliate),WEST END

3.9 Summary

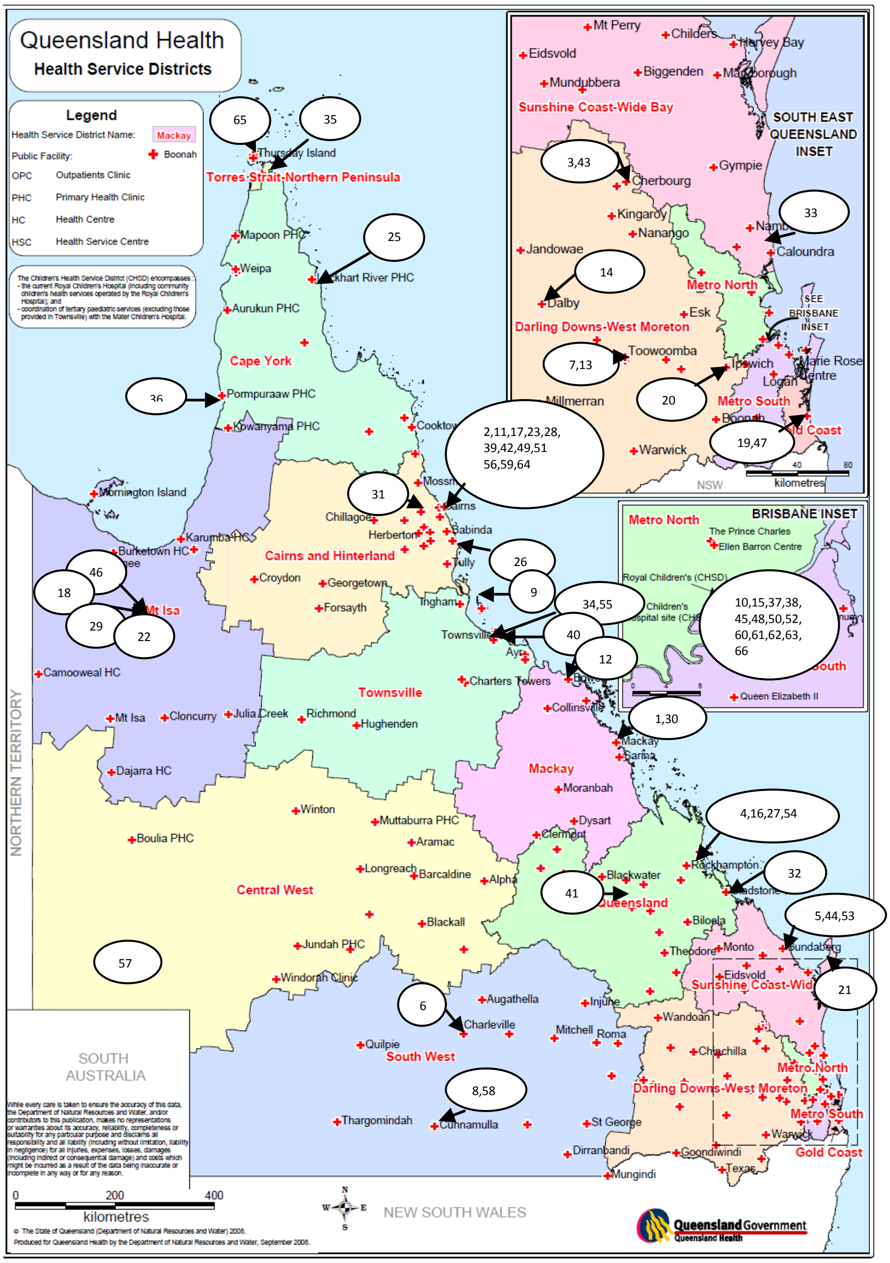
This overview of the Indigenous population in Queensland provides the background context in which future sections of the report need to be considered. It profiles where Indigenous people live, social and economic indicators that would both impact on overall health and well-being and influence a person’s ability to seek care for chronic diseases and manage those diseases effectively.

The Indigenous population of Queensland is not homogenous or located only in the defined, remote communities that tend to dominate the discourse on Indigenous issues in Australia. The largest numbers of Indigenous people live in urban or inner regional areas of the state, particularly in South-East Queensland. Despite this heterogeneity, there are social, economic and health disparities common to the population irrespective of geographic location. The Indigenous population is younger, dies earlier, lies in general in the lower socio-economic quintiles, has a poorer overall health status and continue to experience differential access to health care.

Access to culturally “safe” health care is a substantial issue with Indigenous persons significantly under-represented in the health workforce, indications of differentials in care while in hospital (reflected in table 8) and of particular note is the large gap in access to Indigenous organisations for those living in the central and south western districts in the state. In addition, the poor identification of Indigenous persons in health datasets in Queensland reflects a lack of awareness of the importance of identification and results in significant uncertainty with respect to the common health indicators that are used to inform policy and funding decisions.

1. *Aboriginal & Torres Strait Islanders Community Health Service (Mackay) Limited, Mackay*
2. *Apunipima Cape York Health Council Aboriginal Corporation, Bungalow*
3. *Baramba Regional Medical Service (Aboriginal Corporation), Murgon*
4. *Bidgerdii Aboriginal and Torres Strait Islanders Corporation Community Health Service, Rockhampton*
5. *Bundaberg Indigenous Well Being Centre, Bundaberg*
6. *Charleville & Western Areas Aboriginal and Torres Strait Islander Corporation, Charleville*
7. *Carbal Medical Centre, Toowoomba*
8. *Cunnamulla Aboriginal Corporation for Health, Cunnamulla*
9. *Ferdy's Haven Alcohol Rehabilitation Aboriginal Corporation, Palm Island*
10. *Gallang Place Aboriginal and Torres Strait Islander Corporation, West End*
11. *Gindaja Substance Misuse Aboriginal Corporation, Yarrabah*
12. *Girudala Community Cooperative Society Ltd, Bowen*
13. *Goolburi Health Advancement Aboriginal Corporation, Toowoomba*
14. *Goondir Aboriginal and Torres Strait Islanders Corporation for Health Services, Dalby*
15. *Goori House Addiction Treatment Centre, Cleveland*
16. *Gumbi Gumbi Aboriginal and Torres Strait Islanders Corporation, Rockhampton*
17. *Gurriny Yealamucka (Good Healing) Health Services Aboriginal Corporation, Yarrabah*
18. *Injili Youth Health, Mt Isa*
19. *Kalwun Development Corporation Ltd, Burleigh Town Centre*
20. *Kambu Medical Centre Ipswich Incorporated, Ipswich*
21. *Koorawinga Aboriginal Corporation, Scarness*
22. *KASH Aboriginal Corporation, Mt Isa*
23. *Kuranda Medical Service, Kuranda*
24. *Link-up (Queensland) Aboriginal Corporation, West End*
25. *Lockhart River Aboriginal Shire Council, Lockhart River*
26. *Mamu Health Service Limited, Innisfail*
27. *Milbi Incorporated, Allenstown*
28. *Mookai Rosie-Bi-Bayan Aboriginal and Torres Strait Islander Corporation, Earlville*
29. *Mt Isa Aboriginal Community Controlled Health Organisation, Mt. Isa*
30. *Mudth-Niyleta Aboriginal & Torres Strait Islander Corporation, Sarina*
31. *Mulungu Aboriginal Corporation Medical Centre, Mareeba*
32. *Nhulundu Wooribah Indigenous Health Organisation,Gladstone*
33. *North Coast Aboriginal Corporation for Community Health, Maroochydore*
34. *North and West Queensland Primary Health Care Association Inc., Garbutt BC*
35. *Northern Peninsula Area Women's Shelter Aboriginal & Torres Strait Islander Corporation*
36. *Pormpur Paanth Aboriginal Corporation, Pormpuraaw*
37. *Queensland Aboriginal & Torres Strait Islanders Corporation for Alcohol & Drug Dependence Services*
38. *Queensland Aboriginal and Islander Health Council*
39. *Queensland Aboriginal and Torres Strait Islander Health Worker Education Programme Aboriginal Corporation, Bungalow*
40. *Townsville Aboriginal & Islander Health Service Ltd, Garbutt*
41. *Woorabinda Aboriginal Shire Council, Woorabinda*
42. *Wuchopperen Health Service Limited, Manunda*

Figure 1: Organisations in Queensland funded by OATSIH* and/or providing health services for Indigenous Queenslanders



43. *Wunjuada Aobirignal Corporation for Alcoholism and Drug Dependence Service, Murgon*
44. *Yaamba Aboriginal and Torres Strait Islander Corporation for Men, Bundaberg*
45. *Yulu-Burri-Ba Aboriginal Corporation for Community Health, Dunwich*
46. *Yappatjara Health Service, Mt Isa*
47. *Krurungal-Aboriginal & Torres Strait Islander Corporation for Welfare Resource & Housing, Coolangatta*
48. *Aboriginal & Torres Strait Islander Corporation for Health Education & Training (SE QLD), Woolloongabba*
49. *Aborigines and Islanders Alcohol Relief Service Limited, Cairns*
50. *Access Arts Inc, New Farm*
51. *Australian First Nations Academy for Cultural Family Therapy and Counselling Ltd, Manunda*
52. *Brisbane Indigenous Media Association, Fairfield Gardens*
53. *Bundaberg and Burnett Region Community Development Aboriginal Corporation*
54. *Central Queensland Indigenous Development Limited, Rockhampton*
55. *Congress Community Development & Education Unit Ltd, Thuringowa Central*
56. *Department of Emergency Services – QLD Ambulance Service, Cairns*
57. *Diamantina Shire Council, Bedourie*
58. *Eagle EDGE Solutions Inc, Cunnamulla*
59. *Far North Queensland Rural Division of General Practice Assoc Inc, Bungalow*
60. *Queensland Association for Healthy Communities, Eagle Farm*
61. *Queensland Health, Brisbane*
62. *Queensland Injectors Health Network, Fortitude Valley*
63. *Royal Flying Doctor Service of Australia (Queensland Section), Brisbane Airport*
64. *Rural and Remote Mental Health Queensland Ltd, Cairns*
65. *Torres Strait Regional Authority, Thursday Island*
66. *Yumba-Teilah*

4. The epidemiology of chronic lung disease in Indigenous people in Queensland

4.1 Introduction

Chronic lung diseases were responsible for 8.9% of the total disease burden in Indigenous Australians in 2003.[29] COPD and asthma caused 43% and 38% of this burden respectively. Males experienced the majority of burden due to COPD, while females experienced the majority of asthma burden. The high rates of tobacco smoking in the Indigenous population (Section 3) are likely to be major contributors to disease burden. Despite this, in 2006 only 40% of Indigenous discrete communities in Queensland (defined as > 50 people located 10 or more kilometres from a hospital) had a stop smoking programme implemented in the community.[2]

Much of the data reported nationally regarding Indigenous lung health have been derived predominantly from the Northern Territory (NT), Western Australia (WA) and South Australia (SA), the jurisdictions that have had reasonably reliable reporting and completeness of Indigenous status in morbidity and mortality datasets for long periods. Furthermore, morbidity and mortality data are traditionally reported for Queensland as a whole. Given the population is not homogenous; such aggregate reporting precludes identification of disparities and priority communities within the State.

A detailed report that provides a national overview of respiratory and sleep health in Indigenous Australians has recently been released by the Thoracic Society of Australia and New Zealand (TSANZ), the Australasian Sleep Association and the Australian Lung Foundation.[1] As the TSANZ report summarised the available data for Indigenous Australians overall, the data presented in this current project summarises the available data on asthma, COPD, bronchiectasis, lung cancer and sleep disordered breathing specific to Indigenous Queenslanders.

The data presented here have been collated from a variety of sources including:

- The Australian Institute of Health and Welfare
- The Australian Bureau of Statistics
- Queensland Government Reports
- Queensland Health Reports
- Research reported in the scientific literature
- Research, programme and policy reports identified through the internet, including the Indigenous HealthInfonet
- Data extracted from the Queensland Health Queensland Hospital Admitted Patient Data Collection for the period 2005 – 2009
- Queensland Health Cause of Death File for the period 2003 – 2007
- Data extracted from the Queenslander Health TII dataset for the 2008/2009 financial year

Denominators used in the calculation of rates were sourced from data published by the Australian Bureau of Statistics (ABS) and from unpublished ABS data provided by Queensland Health. Age-standardised rates were calculated by the direct method using the Australian population for aggregate Queensland data and the Queensland population for regional analyses.

4.1.1 Limitations of the data

As described in Section 3, detailed data on Indigenous health, particularly for specific conditions, have been limited by wide variation and quality in reporting of Indigenous status in health datasets. Most of the reports identified through the sources described above derive statistics from the AIHW national health datasets and the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the last of which was conducted in 2004/2005. Most of the national data reports do attempt to adjust for under-reporting however varying degrees of uncertainty persist.

Hospital activity data, both inpatient and outpatient, must be interpreted with caution. The data presented with respect to hospitalisations reflect only the number and rates of admissions, not the prevalence or incidence of disease amongst individuals per se. One person may have several admissions per year. Similarly, the lack of a unique health record identifier for Queensland residents means that an individual’s experience in the health system cannot be readily tracked and documented.

A decision to hospitalise an individual presenting with lung disease may also be based on more than the underlying current severity of disease. Whilst limited health care access may translate to reduced health care presentations and hospital admissions it has also previously be shown that Indigenous people with acute respiratory illness (and particularly pneumonia) have high rates of admission even when the assessed severity of pneumonia would, in isolation, support outpatient management.[30] This may in part be related to the fact that some patients may have difficulty re-presenting to health care if they deteriorate or where the access to and security of medication supply may be limited. Hospitalisation rates may thus be a reflection of social and environment disadvantage in addition to the severity and prevalence of chronic lung disease.

Separation diagnoses may also be incorrect or differ depending on the clinician or health service involved in an individual’s care. Many causes of chronic lung disease can be difficult to differentiate without more detailed clinical review and investigation. This may best be summarised for respiratory medicine by the adage that ‘all that wheezes are not necessarily asthma’. In addition more than one form of chronic lung disease can occur in a single individual. Thus it may be difficult to differentiate between asthma and bronchiectasis in a child and asthma, COPD and bronchiectasis in an adult. Differences in the reporting of individual causes of chronic lung disease at different sites should therefore take into account limited availability or use of diagnostic tools (eg detailed lung function and computerised tomography (CT) scanning) and the diagnostic preferences of the clinicians involved.

Variations in the data reported here by different regions in the State may also be a reflection of better reporting of Indigenous status in some areas, particularly in remote and very remote regions and those with higher concentrations of discrete communities. In addition, tertiary referral centres do not exist in each of the Queensland HSDs; the activity of major centres will therefore reflect referrals from other regions.

Given the considerable uncertainty surrounding the validity of the data reported here, and that the data are population-based and not a sample, confidence intervals are not provided around rates in the tables and graphs. Where substantial misclassification bias is likely to exist, confidence intervals provide no additional, valid, information to aid in interpretation of the data.

4.2 Results

4.2.1 Asthma

Asthma is the second most common self-reported long-term illness in Indigenous Australians, and is more common than in non-Indigenous Australians, particularly among young children and older people.[31] The differences are greater in those living in non-remote localities and, among adults, are greater in females than males. However, these differences need to be interpreted with caution given misclassification of the diagnosis of asthma is common.

Prevalence

Inconsistency of results between studies of the prevalence of asthma amongst Indigenous people is not uncommon.[32] Nationally, it has been estimated that the prevalence of ever being diagnosed with asthma (defined as a doctor- or nurse-diagnosed long term condition) was 24% (95%CI 21.5 – 26.6) for Indigenous children aged 0 – 17 years and 27% (95%CI 24.6 – 29.6) for adults 18 years and over in 2004-2005.[22] Estimates of current asthma were lower with a prevalence of 13.5% (95%CI 11.9 – 15.1) in children and 17.5% (95%CI 15.4 – 19.5) in adults.[22] Asthma was reported almost twice as often in non-remote areas (17%) as in remote areas (9%). The prevalence of asthma is estimated to be 1.6 times higher for Indigenous Australians than non-Indigenous Australians.

Data on asthma prevalence in Queensland are limited to composite data from the NATSIHS and targeted prevalence studies conducted in the Torres Strait Islands and remote communities in North Queensland. The 2004/2005 NATSIHS reported an overall age-standardised prevalence of 15.3%; 10.9% (95%CI 2.7 – 19.1) for those in remote areas and 16.7% (95%CI 10.8 – 25.8) in non-remote areas.[22] A cross-sectional survey of children aged 0 – 17 years in five randomly selected communities in the Torres Strait and Northern Peninsula regions in 1999 found the overall prevalence of self-reported ever wheezing was 21%; 12% reported wheezing in the previous year; and 16% reported ever having asthma.[33] There was marked variation in the prevalence of asthma symptoms between communities. A follow-up study conducted in 2003 found asthma prevalence had remained high but stable.[34]

Data on the prevalence of asthma amongst both non-Indigenous and Indigenous people elsewhere in Queensland are limited. A cross-sectional telephone survey of 493 households in the Queensland Fitzroy and Central West Statistical Divisions and four rural communities within the Queensland Fitzroy Statistical Division (ie. regions approximating the Central West and Central Queensland HSDs) reported a prevalence of asthma of 8.5% for the entire region and 14.2% in the four specific communities close to Rockhampton.[35] The study did not collect data on Indigenous status, although the point estimates are not dissimilar to remote and non-remote estimates collected in the NATSIHS.

Table 9 applies the overall NATSIHS estimates of current asthma by remoteness to each of the Queensland HSDs to obtain an estimated number of Indigenous people in those regions with asthma. If it is assumed that these prevalence estimates are consistent across regions, then the largest number of Aboriginal and Torres Strait Island people with asthma are in the Cairns & Hinterland HSD, followed by Metro South, the Darling Downs –West Moreton and Metro North Health HSDs.

Table 9: Estimated number of Indigenous persons in Queensland with asthma, by Queensland HSD.

HSD	Estimated Resident Population 2007	Remote	Estimated persons with asthma
Queensland total	150,529	-	23,030
Cairns & Hinterland	23,503	Mixed*	3,243
Cape York	6,748	Yes	736
Central Queensland	10,704	No	1,788
Central West	868	Yes	95
Darling Downs-West Moreton	16,985	No	2,836
Gold Coast	5,662	No	946
Mackay	6,792	No	1,134
Metro North	13,034	No	2,177
Metro South	19,045	No	3,181
Mt Isa	8,337	Yes	909
South West	3,143	Yes	343
Sunshine Coast-Wide Bay	11,334	No	1,893
Torres Strait-Nth Peninsula	8,803	Yes	960
Townsville	15,571	Mixed*	2,149

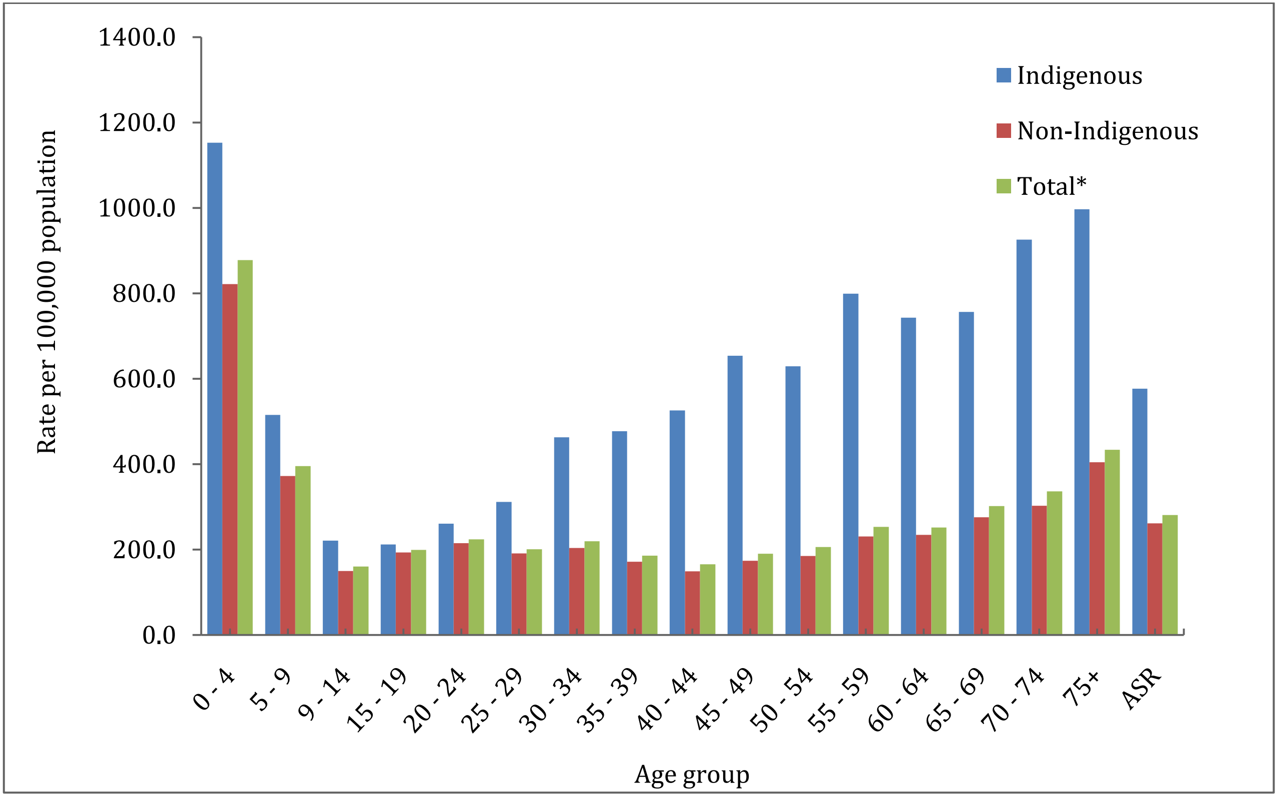
* Average of remote and non-remote prevalence applied (ie. 13.8%)

Hospitalisations

Nationally, in 2006-2007 hospital separations for asthma were 2.1 times higher among Indigenous Australians than other Australians (384.4 vs 179.3 per 100,000 population) and the higher rates persisted across all age groups.[31] In Queensland in 2006 – 2007, the age-standardised hospital separation rate for Indigenous children aged 0 – 14 years was 298.7 (95%CI 251.6 – 350.9) per 100,000 population and 443.9 (95%CI 389.1 – 504.4) per 100,000 population for those aged 15 years and over.[31] Those rates were however calculated on population data as at 30 June 2001 and there was a 13% increase in the Queensland Indigenous population between the 2001 and 2006 Census.[13]

Given the estimated prevalence of asthma is 1.6 times higher, aggregate hospitalisation rates suggest Indigenous people suffer excess morbidity due to their asthma, particularly given minimal differences in the proportion of those hospitalised with asthma who had a least one comorbidity associated with their hospital stay (56.1% vs 52.7%).[31] The average annual age-specific hospitalisation rates for asthma for the period 2005 – 2009 in Queensland are presented in Figure 2. Rates were higher in Indigenous persons than non-Indigenous persons in all age groups and the overall age-standardised hospitalisation rates (directly standardised to the Australian population) were 576.4 per 100,000 Indigenous persons compared to 261.6 per 100,000 for non-Indigenous persons and 281.1 per 100,000 Queenslanders overall. Of note in the Indigenous population is that after the decline from a peak in those aged less than five years, rates began to progressively increase from 20 years of age and, unlike the non-Indigenous population did not decline between 35 to 45 years of age. Whether this represents asthma per se or the misdiagnosis or co-existence of other lung disease (pneumonia/COPD/bronchiectasis) is unclear.

Figure 2: Average annual age-specific asthma hospitalisation[¥] rates per 100,000 population in Queensland by Indigenous status, 2005 – 2009



¥ Source: *Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)*
* Total includes 2,577 asthma hospitalisations in which Indigenous status was not stated.
ASR: Age standardised rate per 100,000 population (directly standardised to the 2006 Australian population)

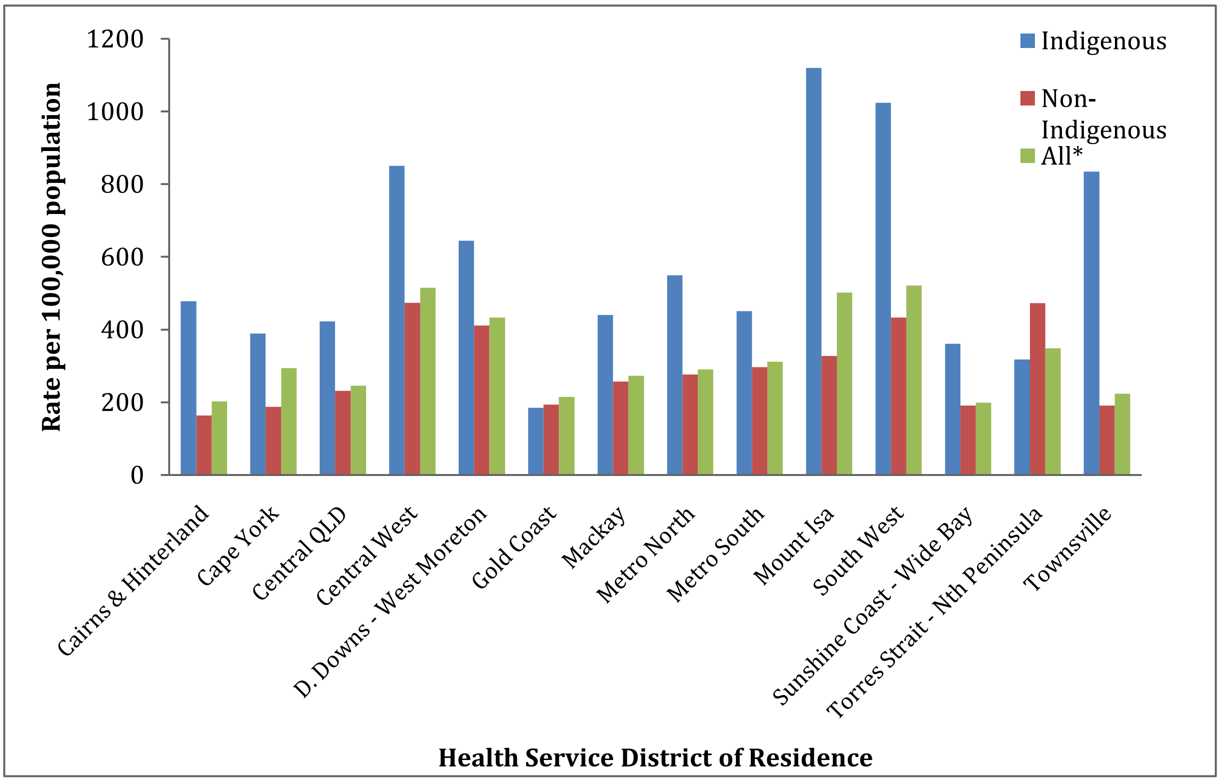
Age standardised hospitalisation rates by HSD of residence in Queensland for the period 2005 – 2009 are presented in figure 3. The data must be interpreted with caution given the large number of hospitalisations for which Indigenous status was not stated. However, the overall Queensland hospitalisation rate ratio (1.9 times higher for Indigenous persons compared to non-Indigenous persons) was similar to the national rate described above for 2006-2007.

Overall, 4.2% of asthma hospitalisations over the 2005 – 2009 time period did not have Indigenous status reported, ranging from 1.4% in Townsville to 9.6% in the Gold Coast HSD (footnote figure 3). Asthma hospitalisation rates were highest for Indigenous persons living in the Mt Isa and the South West HSDs. Hospitalisation rates for all persons with asthma were highest for those living in the South West, Central West, and Mt Isa HSDs.

Hospital activity

Table 10 presents asthma hospital activity for the period 2005 - 2009 for the regions for which data were available from the TII dataset. The data reflect any inpatient episode of care in which a diagnosis-related group (DRG) of asthma was recorded. The data do not represent Queensland residents only and should be interpreted in the context of completeness of Indigenous reporting in hospital datasets. Hospital activity suggests that over the five year period, a minimum of 1,317 Indigenous persons with asthma were hospitalised in the centres providing data (average of 263 per year) with an average of 1.2 hospital episodes per patient. This was compared to an average of 1.1 episodes per non-Indigenous asthma patient. With the exception of the Gold Coast, Indigenous persons were over-represented relative to the proportion of the population in each HSD that were Indigenous.

Figure 3: Average annual age-standardised≠ asthma hospital separation¥ rates per 100,000 population per year by Indigenous status and HSD of residence, 2005 - 2009



¥*Source: Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)*

≠ Directly standardised to the 2007 Queensland Estimated Resident Population.

% of asthma hospitalisations for HSD residents in which Indigenous status was not stated: Cairns & Hinterland (6.3%), Cape York (3.6%), Central Queensland (2.7%), Central West (6.5%), Darling Downs – West Moreton (3.0%), Gold Coast (9.6%), Mackay (3.8%), Metro North (4.2%), Metro South (4.1%), Mt Isa (2.7%), South West (7.5%), Sunshine Coast – Wide Bay (2.7%), Torres Strait-Northern Peninsula (2.2%), Townsville (1.4%)

Tables 11 and 12 present emergency department (ED) activity and outpatient occasions of service (OPOOS) for asthma at the hospitals and regions for which data were available. ED activity across the regions was relatively consistent with an average of 2.5 episodes per Indigenous asthma patient over the five year period. This was compared to an average of 2.2 episodes per non-Indigenous asthma patient. As with ED presentations, OPOOS were relatively consistent across regions and between Indigenous and non-Indigenous patients, with an average of 4.3 episodes for Indigenous asthma patients and 4.2 episodes for non-Indigenous asthma patients over the 5 year period. Higher episodes per patient were observed in the Metro North and Townsville HSDs than other regions. As with hospitalisations, with the exception of the Gold Coast, Indigenous persons were over-represented in ED and OPOOS activity relative to the proportion of the population in each HSD that were Indigenous.

Table 10: Asthma Hospitalisations, TII dataset, by HSD and Indigenous status, 2005 – 2009

	Cairns & Hinterland	Central QLD	Children's Health Services	D Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	SC-Wide Bay	Townsville
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total asthma patients										
Indigenous (%)	173 (24.9)	97 (11.8)	98 (4.8)	132 (7.3)	18 (1.1)	100 (8.7)	111 (2.9)	151 (4.1)	141 (4.7)	296 (21.3)
Non-Indigenous (%)	522 (75.1)	727 (88.2)	1930 (95.2)	1669 (92.7)	1598 (98.9)	1060 (91.3)	3710 (97.1)	3503 (95.9)	2836 (95.3)	1094 (79.7)
Total asthma discharges										
Indigenous (%)	184 (24.1)	112 (11.9)	122 (5.1)	155 (7.6)	39 (2.1)	113 (8.7)	127 (2.9)	161 (4.0)	160 (4.8)	356 (22.6)
Non-Indigenous (%)	579 (75.9)	826 (88.1)	2251 (94.9)	1881 (92.4)	1764 (97.9)	1181 (91.3)	4230 (97.1)	3849 (96.0)	3186 (95.2)	1220 (77.4)
Av discharge rate/ pt										
Indigenous	1.06	1.15	1.24	1.17	2.17	1.13	1.14	1.07	1.13	1.20
Non-Indigenous	1.11	1.14	1.17	1.13	1.10	1.11	1.14	1.10	1.11	1.12
Av length of stay										
Indigenous	2.22	2.18	1.80	1.76	1.97	2.03	2.11	1.65	1.70	1.90
Non-Indigenous	2.13	1.90	1.46	1.84	1.79	1.50	2.09	1.61	1.88	1.67
Av cost per discharge ($)										
Indigenous	1,726	2,209	1,992	1,589	1,595	1,128	1,866	1,200	1,726	1,498
Non-Indigenous	1,742	1,786	1,666	1,181	1,451	1,615	1,867	995	1,675	1,395
All discharges*										
Indigenous	766	324	199	352	69	204	427	1290	359	1591
Non-Indigenous	1366	1759	4622	4564	7333	2612	12539	8746	7383	2639
Readmit < 28 days*										
Indigenous	386	173	34	152	18	69	178	1108	121	776
Non-Indigenous	589	655	1289	1841	4982	1067	5894	4508	3471	633
Readmit < 28 days as % of all discharges.										
Indigenous	50.4	53.4	17.1	43.2	26.1	33.8	41.7	85.9	33.7	48.8
Non-Indigenous	43.1	37.2	27.9	40.3	67.9	40.8	47.0	51.5	47.0	24.0
Deaths										
Indigenous	3	0	0	0	0	1	1	1	0	2
Non-Indigenous	5	8	1	23	30	7	61	24	31	15
Case fatality rate*										
Indigenous	16	0	0	0	0	9	8	6	0	6
Non-Indigenous	9	10	0.4	12	17	6	14	6	10	12
Patient mortality rate**										
Indigenous	17	0	0	0	0	10	9	7	0	7
Non-Indigenous	9	14	0.5	7	19	7	16	7	11	14

All discharges: Number of inpatient admissions for the group of individual patients who had at least one admission for Asthma during the same period Asthma chronic disease population). **<28 days since last admission:** Number of Asthma Inpatient Admissions which commenced within 28 days of discharge from a previous inpatient admission. Note that the previous admission may not have been directly related to the patient's respiratory status. ≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs

*per 1000 discharges: **per 1000 patients

Hospitals contributing data: Cairns & Hinterland (Cairns Base); Central QLD (Biloela, Emerald, Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Gatton, Ipswich, Oakey, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Bowen, Clermont, Collinsville, Dysart, Mackay Base, Moranbah, Proserpine, Sarina); Metro North (Caboolture, Kilcoy, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro

South (Beaudesert, Dunwich Outpatients Centre, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Eidsvold, Gaynah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Mount Perry, Nambour General), Townsville (Ayr, Charters Towers, Hughenden, Ingham, Joyce Palmer (Palm Island), Richmond, Townsville).

Table 11: Emergency Department activity for asthma patients, by Indigenous status and HSD, 2005 – 2009.

	Cairns & Hinterland	Central QLD	Children's Health Services	Darling Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total Asthma patients										
Indigenous (%)	326 (27.0)	135 (13.4)	118 (4.5)	237 (8.5)	43 (1.4)	112 (9.9)	207 (3.1)	215 (5.0)	180 (4.6)	409 (17.7)
Non-Indigenous (%)	882 (73.0)	875 (86.6)	2,528 (95.5)	2,543 (91.5)	2,926 (98.6)	1,017 (90.1)	6,488 (96.9)	4,748 (95.0)	3,696 (95.4)	1,898 (82.3)
Total ED episodes for Asthma patients*										
Indigenous (%)	754 (29.4)	300 (12.6)	235 (4.6)	545 (8.8)	139 (2.2)	262 (10.4)	551 (3.6)	486 (4.9)	502 (6.1)	1,053 (19.6)
Non-Indigenous (%)	1,814 (70.6)	2,078 (87.4)	4,879 (95.4)	5,675 (91.2)	6,021 (97.8)	2,266 (89.6)	14,819 (96.4)	9,433 (95.1)	7,704 (93.9)	4,317 (80.4)
Av ED episodes per patient										
Indigenous	2.3	2.2	2.0	2.3	3.2	2.3	2.7	2.3	2.8	2.6
Non-Indigenous	2.1	2.4	1.9	2.2	2.1	2.2	2.3	2.0	2.1	2.3

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs
*Episodes for patients known to have a diagnosis of Asthma. Reason for presentation may not necessarily be for Asthma

Hospitals contributing data: Cairns & Hinterland (Cairns Base); Central QLD (Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Ipswich, Toowoomba); Gold Coast (Gold Coast Hospital); Mackay (Mackay Base); Metro North (Caboolture, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Bundaberg, Caloundra, Gympie, Hervey Bay, Maryborough, Nambour General), Townsville (Townsville).

Table 12: Outpatient occasions of service for asthma patients, by Indigenous status and HSD, 2005 – 2009

	Cairns & Hinterland	Central QLD	Children's Health Services	Darling Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total Asthma patients										
Indigenous (%)	200 (25.7)	218 (11.9)	79 (4.7)	174 (6.4)	27 (1.4)	105 (8.1)	147 (2.8)	134 (3.8)	222 (5.7)	626 (26.4)
Non-Indigenous (%)	578 (74.3)	1,610 (88.1)	1,604 (95.3)	2,549 (93.6)	1,944 (98.6)	1,190 (91.9)	5,107 (97.2)	3,362 (96.2)	3,681 (94.3)	1,745 (73.6)
Total OPOOS for Asthma patients*										
Indigenous (%)	719 (27.2)	904 (10.5)	345 (5.0)	642 (6.5)	98 (1.2)	315 (6.4)	833 (3.1)	479 (3.5)	945 (6.2)	4,043 (28.5)
Non-Indigenous (%)	1,928 (72.8)	7,670 (89.5)	6,542 (95.0)	9,190 (93.5)	7,987 (98.8)	4,596 (93.6)	26,188 (96.9)	13,232 (96.5)	14,359 (93.8)	10,136 (71.5)
Av OPOOS episodes per patient										
Indigenous	3.6	4.1	4.4	3.7	3.6	3.0	5.7	3.6	4.3	6.5
Non-Indigenous	3.3	4.7	4.1	3.6	4.1	3.9	5.1	3.9	3.9	5.8

Outpatient Services: Number of other encounters with the hospital by Asthma chronic disease population. This includes specialist Outpatients clinic attendances, pathology, imaging or other diagnostic procedures (excluding those performed during inpatient admissions).
≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs

Hospitals contributing data: Cairns & Hinterland (Cairns Base); Central QLD (Biloela, Emerald, Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Gatton, Ipswich, Oakey, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Bowen, Clermont, Collinsville, Dysart, Mackay Base, Moranbah, Proserpine, Sarina); Metro North (Caboolture, Kilcoy, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Dunwich Outpatients Centre, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Eidsvold, Gaynah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Mount Perry, Nambour General), Townsville (Ayr, Charters Towers, Hughenden, Ingham, Joyce Palmer (Palm Island), Richmond, Townsville).

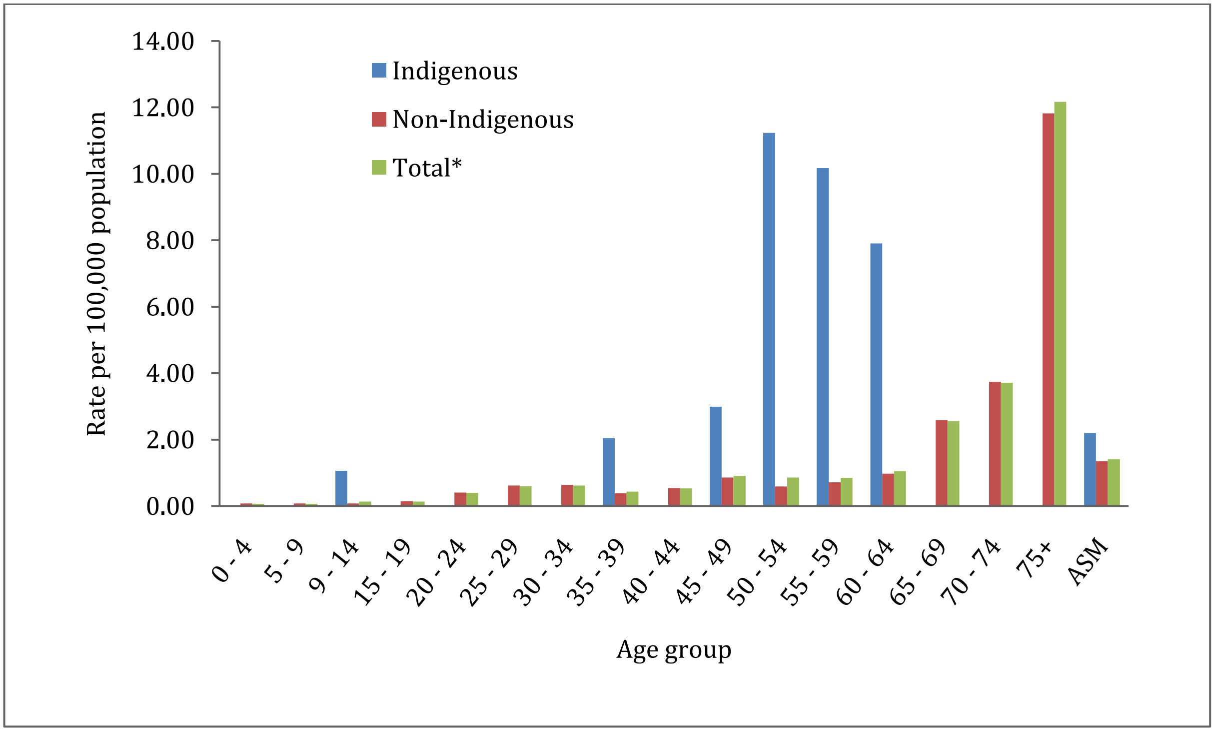
Mortality

Specific data on mortality rates in Indigenous Australians were difficult to ascertain. The Australian Centre for Asthma Monitoring (ACAM) reported that over the five-year period between 2002 and 2006, there were 3.15 (95%CI 2.09-4.56) times more deaths due to asthma amongst Indigenous

Australians than expected when compared with age-specific mortality rates among non-Indigenous Australians.[31] The actual numbers of deaths, rates and geographic distribution of those deaths was not reported. The TSANZ report documented asthma (as the underlying cause of death) rates of 4.21 per 100,000 population for Indigenous persons and 1.49 for other Australians, with those data based on 2002 – 2004 deaths in the NT, WA, SA and QLD.[1] No published reports could be found that presented asthma mortality specific to Indigenous Queenslanders, and the deaths documented in this report above should be interpreted with caution given data limitations. The ACAM reported an overall Queensland age-standardised asthma mortality rate of just over 1.5 per 100,000 population.[31]

Data provided by Queensland Health indicate that, for the period 2003 – 2007, there were nine deaths due to asthma in Indigenous Queenslanders, 268 in non-Indigenous Queenslanders and six deaths in which Indigenous status was not recorded. The average annual age-standardised asthma mortality rates in Queensland were 2.20 per 100,000 Indigenous persons, 1.35 per 100,000 non-Indigenous persons and 1.41 per 100,000 Queenslanders overall. Figure 4 presents age- specific average annual asthma mortality rate per 100,000 population by Indigenous status with asthma as the cause of death.

Figure 4: Average annual age-specific asthma mortality¥ rate per 100,000 population≠ by Indigenous status, Queensland, 2003 – 2007



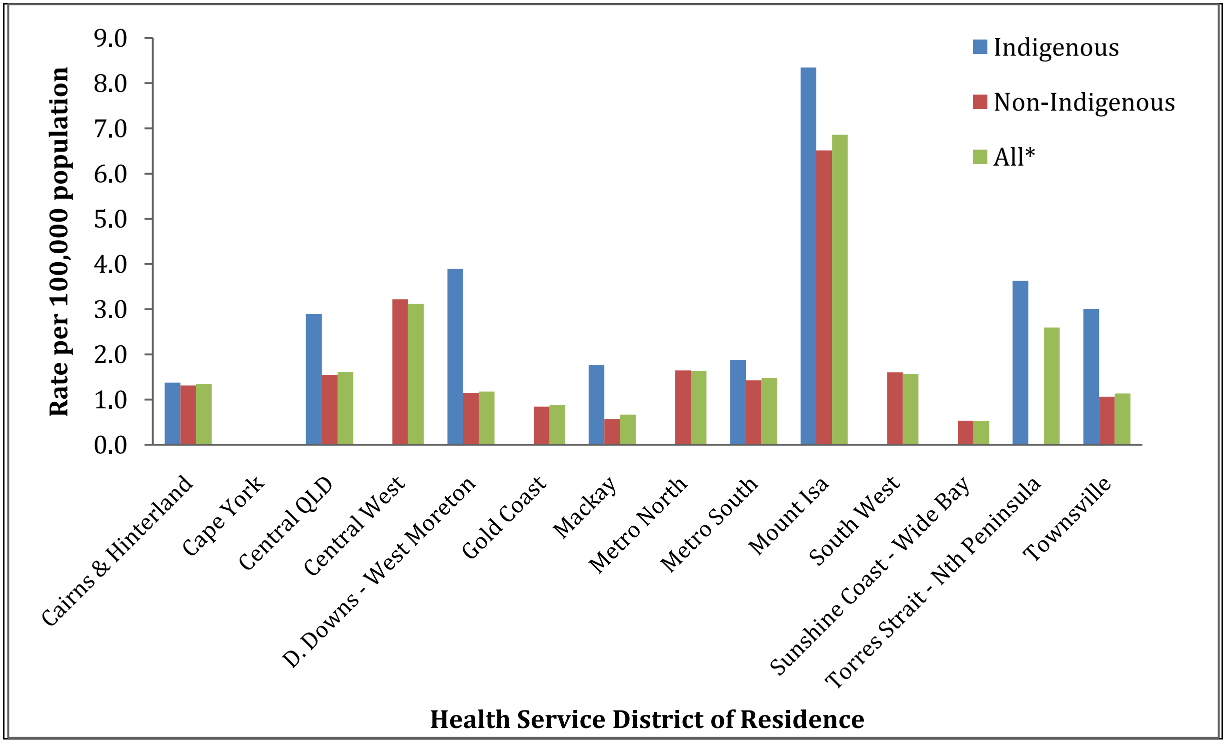
¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Total includes 6 deaths in which Indigenous status was not stated

ASM: Age standardised mortality rate (directly standardised to the 2006 Australian population).

Figure 5 presents mortality rates for asthma recorded as the cause of death by Indigenous status and HSD of residence for the years 2003 – 2007. There was wide variation in the rates for both Indigenous and non-Indigenous persons between regions, although the data must be interpreted with caution given very small numbers in some regions. The highest overall mortality rates due to asthma were for persons living in the Mt Isa and Central West HSDs.

Figure 5: Average annual age-standardised asthma mortality rates per 100,000 population by Indigenous status and HSD of Residence, 2003 – 2007.



¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Total includes 6 deaths in which Indigenous status was not stated
Age standardised mortality rates directly standardised to the 2007 Queensland population.

4.2.2 Chronic Obstructive Pulmonary Disease

Prevalence

Remarkably, the prevalence of COPD amongst Indigenous Australians has been poorly quantified, despite mortality from chronic lower lung disease being 14 and 12 times higher for Indigenous males and females respectively than non-Indigenous males and females.[36] The prevalence of COPD estimated through self-report in Queenslanders overall was 3.7% in 2004/2005.[37]

Surveys of lung health in Indigenous adults aged 18 years and over in remote areas of north Queensland, the NT and northern WA in the late 1990s reported prevalences ranging from 16.7% to 54%, although case definitions and case finding methods differed between studies.[38-41] A NT data linkage study in 2005 estimated the prevalence of COPD in remote Aboriginal adults aged >50 years to be approximately 30%, although significant data quality issues were identified.[42] Given there are no recent estimates of COPD prevalence, estimates of the number of Indigenous people with COPD by Queensland HSD are not provided.

Hospitalisations

Over the two year period 2006/07 – 2007/08, the age-standardised hospitalisation rate for Indigenous Queenslanders with COPD was 1,103 per 100,000 persons; four times greater than for non-Indigenous persons.[20] Hospitalisation rates ranged from 759 per 100,000 persons in the major cities to 1,551 per 100,000 persons in remote/very remote regions. Of note is that hospitalisation rates increased between 2004 and 2008 in inner regional areas (from 553 to 951 per 100,000 persons and decreased in remote/very remote regions from 1,952 to 1,551 per 100,000 persons.[20] The reasons for these changes are not known and may reflect either changes in hospitalisation practices and access, changes in either the prevalence or severity of disease, or changes in the identification of Indigenous persons in the Queensland Hospitals Admitted Patient Data Collection.

COPD average annual hospitalisation rates by age group and Indigenous status for the period 2005 – 2009 are presented in table 13. The age-standardised rates calculated from these data differ to those reported above, although the rate ratio is similar (4.3). Differences may reflect different denominators, the standard population used in the standardisation calculations and that the data below represent any diagnosis of COPD. Data inaccuracies are also evident given that COPD is not a paediatric diagnosis.

Table 13: Average annual age-specific COPD hospitalisation¥ rates per 100,000 population≠ in Queensland by Indigenous status, 2005 – 2009

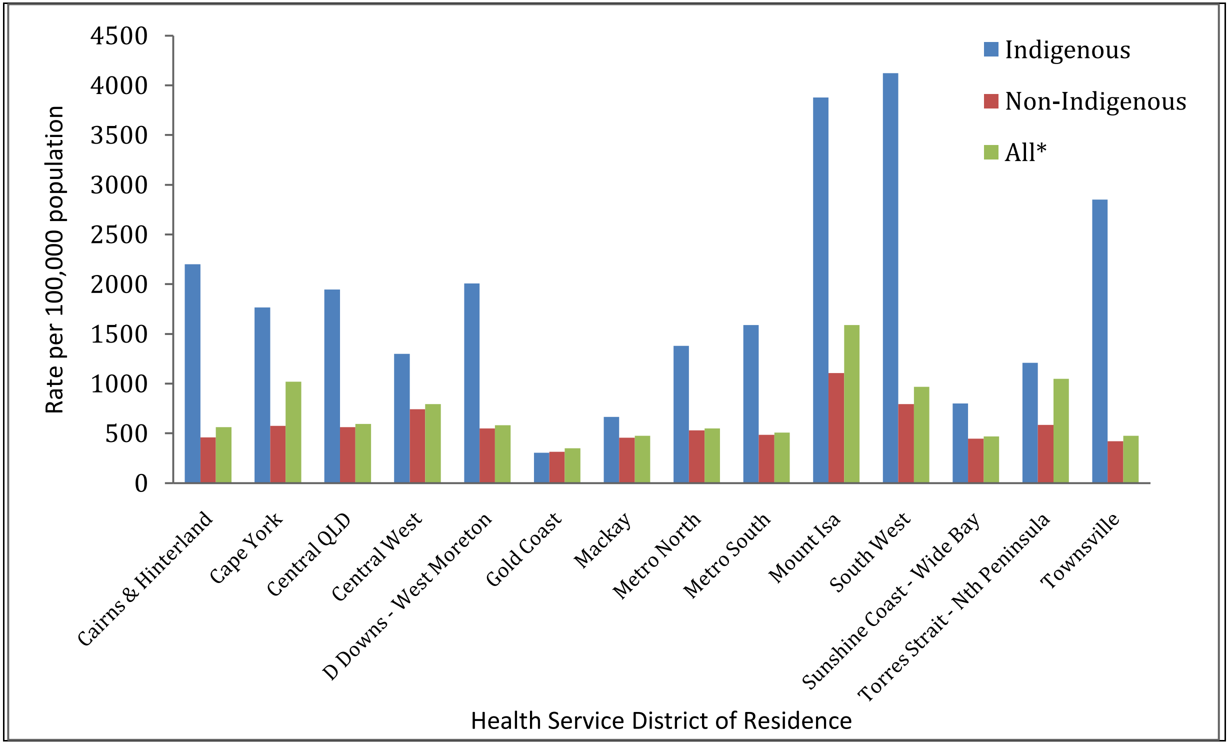
Age group	Indigenous	Non-Indigenous	Total*
0 - 4	9.4	5.8	6.5
5 - 9	1.1	3.0	3.0
9 - 14	8.5	1.8	2.2
15 - 19	18.3	3.5	4.4
20 - 24	11.3	6.7	7.0
25 - 29	19.0	5.0	5.5
30 - 34	59.6	6.6	9.0
35 - 39	142.8	17.9	22.5
40 - 44	409.2	42.5	53.6
45 - 49	898.2	101.0	121.5
50 - 54	1,830.8	216.5	254.4
55 - 59	3,154.4	450.1	508.0
60 - 64	5,881.4	840.9	928.0
65 - 69	7,345.9	1,642.5	1,762.4
70 - 74	12,388.9	2,544.0	2,720.1
75+	12,714.7	4,253.7	4,486.8
ASR$^{\tau}$	**2,193.8**	**507.1**	**545.2**

¥ Source: *Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)*
* Total includes 4,077 COPD hospitalisations in which Indigenous status was not stated.
τ ASR: Direct age-standardised rate per 100,000 population, standardised to the 2006 Estimated Resident Australian Population (ABS 47130DO003_2006 Population Characteristics, Indigenous Australians, 2006)

Average annual age-standardised COPD hospitalisation rates per 100,000 persons for the period 2005 – 2009 by HSD of residence are presented in figure 6. Overall, 3.7% of COPD hospitalisations did not have Indigenous status recorded. This ranged from 0.5% for residents of the Townsville HSD to 10.1% for residents in the Gold Coast HSD (footnote figure 6). The highest hospitalisation rates were for residents of the Mt Isa and South West HSDs.

COPD was the third most common condition responsible for ambulatory care sensitive admissions to Queensland hospitals over the period 2004 – 2006, with an age-standardised rate of 13.8 per 1,000 population compared to 2.7 per 1,000 population for non-Indigenous Australians (rate ratio = 5.2).[2]

Figure 6: Average annual age-standardised COPD hospital separation¥ rates per 100,000 population per year by Indigenous status and HSD of residence, 2005 - 2009



¥ Source*: Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)*

* Includes 4,077 episodes in which Indigenous status was not stated

≠ Directly standardised to the 2007 Queensland Estimated Resident Population.

% of COPD hospitalisations for HSD residents in which Indigenous status was not stated: Cairns & Hinterland (6.8%), Cape York (0.5%), Central Queensland (1.6%), Central West (4.4%), Darling Downs – West Moreton (3.3%), Gold Coast (10.1%), Mackay (3.1%), Metro North (2.9%), Metro South (2.8%), Mt Isa (1.6%), South West (4.5%), Sunshine Coast – Wide Bay (3.7%), Torres Strait-Northern Peninsula (1.6%), Townsville (0.5%)

Hospital activity

COPD hospital activity for the period 2005 - 2009 for the regions for which data were available from the TII dataset is presented in Table 16. The data reflect any inpatient episode of care in which a DRG of COPD was recorded. As noted previously, the data do not represent Queensland residents only and should be interpreted in the context of completeness of Indigenous reporting in hospital datasets. Data coding errors are also obvious given COPD is not a paediatric diagnosis yet episodes have apparently occurred at the Royal Children's Hospital. Hospital activity suggests that over the five year period, a minimum of 921 Indigenous persons with COPD were hospitalised in the centres providing data with an average of 1.6 hospital episodes per patient. This was compared to an average of 1.5 episodes per non-Indigenous COPD patient. Relative to the proportion of the population in each HSD that are Indigenous, Indigenous COPD patients were over-represented in Cairns and Hinterland, Central Queensland, Darling Downs – West Moreton and Townsville.

ED and OPOOS data are presented in tables 14 and 15. Over the five year period there was an overall average of 3.4 ED presentations per Indigenous persons known to have COPD compared to 2.4 presentations for non-Indigenous persons. With the exception of Mackay HSD, ED presentation rates were consistently higher for Indigenous persons than non-Indigenous persons across the regions. Indigenous COPD patients were over-represented in the Cairns and Hinterland and Darling Downs – West Moreton and Townsville HSDs relative to the proportion of the population in those regions that are Indigenous. They were under-represented in the Gold Coast, Mackay and Sunshine Coast-Wide Bay regions. For OPOOS, there was an average of 5.7 episodes per Indigenous persons known to have COPD compared to 5.4 episodes per non-Indigenous persons. Considerably higher OPOOS rates were observed in Central Queensland and Townsville HSDs relative to other regions. Indigenous patients were over-represented in the Cairns and Hinterland, Central Queensland and Townsville HSDs and under-represented in the Gold Coast, Mackay and Sunshine Coast – Wide Bay HSDs.

Table 14: COPD ED presentations, TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	**Central QLD**	**D. Downs – West Moreton**	**Gold Coast**	**Mackay**	**Metro North**	**Metro South**	**S. Coast-Wide Bay**	**Townsville**
% Pop Indigenous	10.2	5.2	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total COPD patients									
Indigenous (%)	337 (23.1)	89 (8.8)	118 (4.2)	21 (0.7)	34 (3.3)	138 (1.6)	183 (2.8)	56 (1.3)	207 (11.4)
Non-Indigenous (%)	1,123	919	2,681	3,102	994	8,380	6,369	4,230	1,602
Total ED episodes for COPD patients*									
Indigenous (%)	869 (27.7)	342 (10.9)	485 (6.8)	53 (0.7)	83 (3.0)	576 (2.8)	528 (3.4)	226 (2.2)	848 (17.7)
Non-Indigenous (%)	2,263	2,775	6,638	7,450	2,688	20,347	15,168	10,217	3,948
Av ED episodes per patient									
Indigenous	2.6	3.8	4.1	2.5	2.4	4.2	2.9	4.0	4.1
Non-Indigenous	2.0	3.0	2.5	1.5	2.7	2.4	2.4	2.4	2.5

*Episodes for patients known to have a diagnosis of COPD. Reason for presentation may not necessarily be for COPD. HSD (Hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Gladstone, Rockhampton Base, Yeppoon); Darling Downs – West Moreton (Ipswich, Toowoomba); Gold Coast (Gold Coast Hospital); Mackay (Mackay Base); Metro North (Caboolture, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Bundaberg, Caloundra, Gympie, Hervey Bay, Maryborough, Nambour General), Townsville (Townsville).

Table 15: COPD Outpatient Occasions of Service (OPOOS), TII dataset, by HSD and Indigenous status, 2005 – 2009

	Cairns & Hinterland	**Central QLD**	**D Downs – West Moreton**	**Gold Coast**	**Mackay**	**Metro North**	**Metro South**	**S. Coast-Wide Bay**	**Townsville**
% Population Indigenous	10.2	5.2	3.6	1.2	**4.2**	1.6	2.0	2.1	7.2
Total COPD patients									
Indigenous (%)	302 (21.2)	169 (7.3)	149 (3.9)	20 (0.6)	**32 (2.2)**	174 (1.6)	154 (2.3)	90 (1.5)	452 (15.7)
Non-Indigenous (%)	1122	2157	3,642	3,095	**1,387**	10,533	6,565	6,006	2,431
Total OPOOS for COPD patients*									
Indigenous (%)	1229 (21.8)	1387 (8.5)	557 (3.2)	81 (0.5)	**169 (2.5)**	1,087 (1.9)	656 (2.0)	513 (1.7)	4,376 (19.2)
Non-Indigenous (%)	4406	14,948	16,604	16,954	**6,560**	57,248	31,756	28,963	18,457
Av OPOOS/patient									
Indigenous	4.1	8.2	3.7	4.1	**5.3**	6.2	4.3	5.7	9.7
Non-Indigenous	3.9	6.9	4.6	5.5	**4.7**	5.4	4.8	4.8	7.6

Outpat Services: Number of other encounters with the hospital by COPD chronic disease population. This includes specialist Outpatients clinic attendances, pathology, imaging or other diagnostic procedures (excluding those performed during inpatient admissions). **HSD** (Hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Gladstone, Rockhampton Base, Yeppoon); Darling Downs – West Moreton (Ipswich, Toowoomba); Gold Coast (Gold Coast Hospital); Mackay (Mackay Base); Metro North (Caboolture, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Bundaberg, Caloundra, Gympie, Hervey Bay, Maryborough, Nambour General), Townsville (Townsville).

Table 16: COPD Hospitalisations, TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	Central QLD	Children's Health Services	Darling Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total COPD patients										
Indigenous (%)	196 (22.2)	74 (7.1)	34 (18.0)	98 (4.5)	13 (0.7)	23 (2.4)	94 (1.5)	123 (2.4)	47 (1.2)	219 (14.6)
Non-Indigenous (%)	688	975	155	2,097	1,878	927	6,138	4,942	3,934	1,286
Total COPD disch.										
Indigenous (%)	275 (22.1)	127 (8.5)	39 (10.4)	157 (5.1)	25 (0.9)	28 (2.1)	164 (1.8)	166 (2.4)	84 (1.5)	433 (18.5)
Non-Indigenous (%)	969	1,365	336	2,947	2,802	1,329	8,805	6,855	5,478	1,913
Av discharge/ pt										
Indigenous	1.4	1.7	1.1	1.6	1.9	1.2	1.7	1.3	1.8	2.0
Non-Indigenous	1.4	1.4	2.2	1.4	1.5	1.4	1.4	1.4	1.4	1.5
Av length of stay										
Indigenous	5.1	4.2	7.9	4.6	6.0	4.0	5.6	6.4	7.2	4.3
Non-Indigenous	7.4	5.5	5.1	5.9	7.3	4.6	6.4	5.4	5.9	5.1
Av cost/disch ($)										
Indigenous	4,019	3,313	13,378	2,897	4,566	5,261	4,999	4,731	5,287	4,308
Non-Indigenous	6,375	4,215	6,629	3,080	6,078	2,985	5,280	3,791	4,480	5,519
All discharges*										
Indigenous	2,268	1,588	67	443	219	74	507	636	197	3,607
Non-Indigenous	3,508	5,450	1,018	8,555	16,278	4,173	25,334	18,788	18,406	4,781
Readmit < 28 days*										
Indigenous	1,760	1,373	5	241	179	28	247	361	71	2,900
Non-Indigenous	2,069	3,288	670	3,768	11,856	1,996	11,712	8,912	10,640	1,715
Readmit < 28 days: % all discharges.										
Indigenous	77.6	86.5	7.5	54.4	81.7	37.8	60.7	56.8	36.0	47.5
Non-Indigenous	58.9	60.3	65.8	44.0	72.8	47.8	46.2	47.4	57.8	35.9
Deaths										
Indigenous	17	5	0	6	0	2	7	13	3	18
Non-Indigenous	79	122	2	263	285	104	736	511	438	189
Case fatality rate*										
Indigenous	61.8	39.4	0	38.2	0	71.4	42.2	78.3	35.7	41.6
Non-Indigenous	81.5	89.4	5.9	89.2	101.7	78.3	107.4	74.5	80.0	98.9
Pt mortality rate**										
Indigenous	86.7	67.6	0	61.2	0	87.0	74.5	106.0	63.8	82.2
Non-Indigenous	114.8	125.1	12.9	125.4	151.7	112.2	120.0	103.4	111.3	147.0

All discharges: Number of inpatient admissions for the group of individual patients who had at least one admission for COPD during the same period COPD chronic disease population). **<28 days since last admission:** Number of COPD Inpatient Admissions which commenced within 28 days of discharge from a previous inpatient admission. Note that the previous admission may not have been directly related to the patient's respiratory status

*per 1000 COPD discharges *per 1000 COPD patients. Hospitals contributing data: Cairns & Hinterland (Cairns Base); Central QLD (Biloela, Emerald, Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Gatton, Ipswich, Oakey, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Bowen, Clermont, Collinsville, Dysart, Mackay Base, Moranbah, Proserpine, Sarina); Metro North (Caboolture, Kilcoy, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Dunwich Outpatients Centre, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Eidsvold, Gaynah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Mount Perry, Nambour General), Townsville (Ayr, Charters Towers, Home Hill, Hughenden, Ingham, Joyce Palmer (Palm Island), Richmond, Townsville).

Mortality

In Australia in 2003, COPD was the fifth leading cause of mortality in Indigenous males and females with age-standardised rates of 30 per 100,000 and 24 per 100,000 population respectively.[29] These rates were 4.4 and 5.2 times higher than in non-Indigenous males and females respectively. The TSANZ report documented COPD (as underlying cause of death only) rates of 87.5 per 100,000 population for Indigenous males and 57.7 per 100,000 for Indigenous females for the years 2002 – 2006 (combined NT, SA, WA and QLD data);[1] the corresponding rates in non-Indigenous males and females were 35.7 and 17.8 per 100,000 population respectively.

The Aboriginal and Torres Strait Islander Health Performance Framework 2008 Report reported that, between 2002 and 2006, COPD was ranked seventh as a cause of avoidable mortality in Indigenous Queenslanders, accounting for 4.2% of all defined avoidable causes. [2] The overall age standardised avoidable mortality rate in Queensland was 35.7 per 100,000 Indigenous persons compared to 8.9 per 100,000 non-Indigenous persons (Rate Ratio, 4.0).[2]

For the period 2003 – 2007, there were 83 deaths with COPD reported as the cause of death in Indigenous Queenslanders, 3769 in non-Indigenous Queenslanders and 70 in which Indigenous status was not reported; age-specific rates are presented in table 17. The overall age-standardised COPD mortality ratio between Indigenous and non-Indigenous Queenslanders was 2.59 (95%CI 2.49, 2.67).

Table 17: COPD average annual age-specific mortality rates and age-standardised mortality rates per 100,000 population by Indigenous status, Queensland, 2003 - 2007¥

Age group	Indigenous	Non-Indigenous	All Queensland*
0 - 4	0.00	0.07	0.07
5 - 9	0.00	0.00	0.00
9 - 14	0.00	0.00	0.00
15 - 19	0.00	0.00	0.00
20 - 24	0.00	0.00	0.00
25 - 29	0.00	0.00	0.00
30 - 34	0.00	0.07	0.07
35 - 39	0.00	0.13	0.12
40 - 44	2.38	0.27	0.33
45 - 49	2.98	0.73	0.77
50 - 54	11.23	2.85	3.08
55 - 59	66.14	7.40	8.53
60 - 64	110.67	18.67	19.87
65 - 69	134.23	38.46	40.27
70 - 74	203.70	90.08	92.85
75+	444.79	214.39	219.51
ASMτ	**50.16**	**19.34**	**19.98**

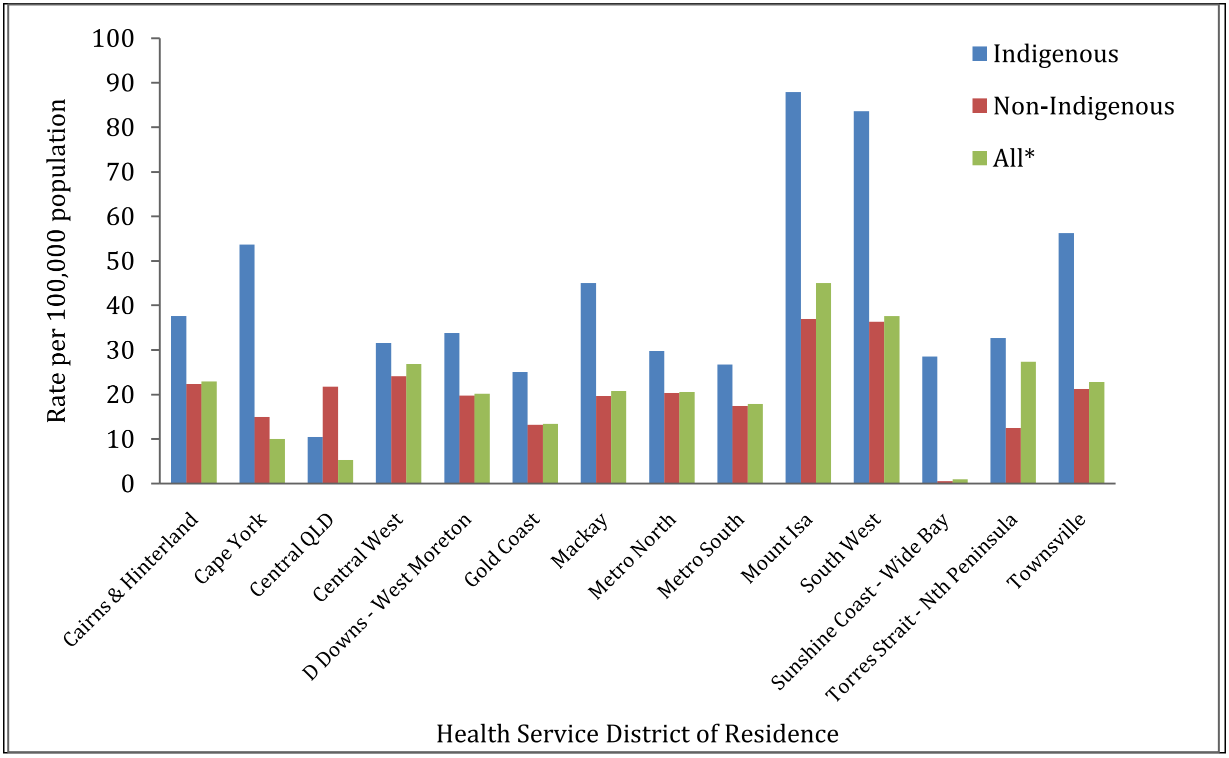
¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Total includes 70 deaths in which Indigenous status was not stated

τ ASM: Age standardised mortality rate (directly standardised to the 2006 Australian population).

Figure 7 presents age standardised COPD mortality rates by HSD of residence. The inclusion of 70 deaths in which Indigenous status was not stated is likely to have an important influence on the data. Overall, mortality rates were highest for Queenslanders with COPD living in the Mt Isa and South West HSDs.

Figure 7: Average annual age-standardised COPD mortality rates per 100,000 population≠ by HSD of Residence and Indigenous status, Queensland, 2003 – 2007¥



¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Includes 70 deaths in which Indigenous status was not stated

≠ Denominator: 2007 Estimated resident population, ABS unpublished data provided by Queensland Health

Age standardised mortality rates directly standardised to the 2007 Queensland population.

4.2.3 Lung cancer

There are currently no national data on cancer incidence in Indigenous Australians due to poor data quality in several jurisdictions and concerns that where data have been collected, it is not accurate, although data in official registries has been improving.[43] Data accuracy is again contingent on hospital identification and a major limitation is that Indigenous identification is not yet included on pathology forms.[44]

A comprehensive review of cancer incidence, aetiology and outcomes in Indigenous Australians[43] found they were more likely to have cancers that have a poor prognosis, were usually diagnosed with cancer at a later stage, were less likely to receive adequate treatment, and were more likely to die from cancers than other Australians. A matched cohort study of all Indigenous people diagnosed with cancer in Queensland between 1997 and 2002[45] found that Indigenous patients were 1·2 times (95% CI 1·0, 1·3) more likely to have distant metastasis when diagnosed than non-Indigenous patients; 1·1 times (95% CI 0·9, 1·3) more likely to have regional spread; and 1·3 times (95% CI 1·1, 1·6) more likely to have cancer stage missing from their medical records. Indigenous patients were also 24% less likely than non-Indigenous patients to receive surgery (p<0·0001), 20% less likely to receive chemotherapy (p<0·0001), and 9% less likely to receive radiotherapy (p=0·039) than non-Indigenous patients.[45]

Comprehensive reviews of the barriers to cancer prevention, detection, and appropriate care are available elsewhere.[43, 44] Factors ranging from lack of services, culturally unsafe services, knowledge, understanding and cultural perspectives on cancer were some of the more common themes identified.

Incidence

In 2000-2004, for NSW, VIC, QLD, WA, SA and the NT combined, the age-standardised incidence of lung cancer, even with under-reporting, was 1.5 times higher among Indigenous persons than non-Indigenous persons (91.0 vs 61.1 per 100,000 for males and 43.6 vs 28.1 per 100,000 population for females).[3] Differences in lung cancer incidence are largely assumed to be related to the well documented much higher prevalence of tobacco smoking in the Indigenous population.[3] Queensland specific data do not appear to have been published. One report compared lung cancer incidence rates by regions of Queensland according to the proportion of the population that were Indigenous;[46] lung cancer incidence rates in 2005-06 were reportedly 30% higher in areas with 1-20% Indigenous population compared with areas of less than 1% Indigenous people.[46]

Hospitalisations

In 2005-2006, lung cancer was the most common malignant cancer for which Indigenous males were hospitalised, and the second most common for Indigenous females after breast cancer.[3] In 2002/03 to 2003/04 there were 86 hospitalisations for lung cancer for Indigenous persons in Queensland; in 11.9% of all lung cancer hospitalisations Indigenous status was not reported.[47] These data translated to age-standardised hospital separation ratios that were 1.3 times higher for Indigenous males, 1.9 times higher for Indigenous females and 1.5 times higher for all Indigenous persons than non-Indigenous persons.[47]

For the period 2005 – 2009 there were 1,162 lung cancer hospitalisations for Indigenous Queenslanders. Table 18 presents average annual age-specific lung cancer hospitalisation rates in Queensland by Indigenous status for the period 2005 – 2009. Of note is that there were 7,002 hospitalisations over the five year period for which Indigenous status was not known. The age-standardised hospitalisation rate was 1.76 times (95%CI 1.74, 1.78) higher for Indigenous persons than non-Indigenous persons.

Figure 8 presents age-standardised hospitalisation rates by HSD of residence. Overall, 10.7% of lung cancer hospitalisations did not have Indigenous status reported, ranging from 0% of hospitalisations for residents of the Torres Strait – Northern Peninsula HSD to a high of 19.1% for residents of the Metro North HSD (footnote figure 8). There was considerably more variation in Indigenous identification in lung cancer hospitalisations across the regions than was observed for asthma and COPD. This may reflect residents being hospitalised for lung cancer in other HSDs with larger facilities where the overall capture of Indigenous status in hospital datasets is poor. While this variability necessitates caution in interpreting the data, lung cancer hospitalisation rates were highest for Indigenous residents of the Darling Downs – West Moreton, South West, Torres Strait – Northern Peninsula and, surprisingly, the Gold Coast HSDs. The high rate of hospitalisation for non-Indigenous residents of the Torres Strait – Northern Peninsula HSD, is most likely a factor of small numbers; there were only 15 hospitalisations in total over the 5 year period.

Table 18: Lung cancer average annual age-specific hospitalisation[¥] rates and age-standardised hospitalisation rates per 100,000 population[≠] by Indigenous status, Queensland, 2005 - 2009

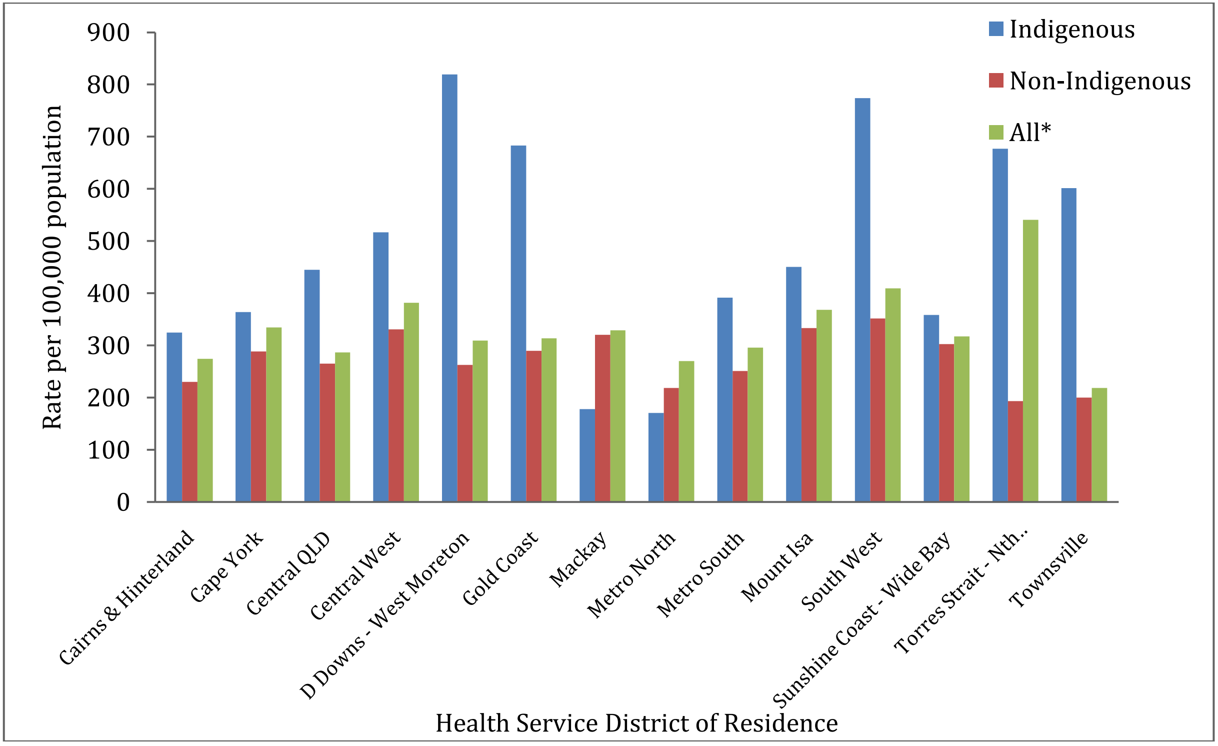
Age group	Indigenous	Non-Indigenous	All*
0 - 4	0.0	2.1	1.9
5 - 9	0.0	0.0	0.0
9 - 14	0.0	0.1	0.1
15 - 19	0.0	0.7	0.7
20 - 24	3.2	5.1	5.3
25 - 29	0.0	3.6	3.5
30 - 34	19.2	6.6	7.5
35 - 39	24.5	22.1	25.6
40 - 44	95.2	56.6	69.8
45 - 49	337.2	120.6	138.6
50 - 54	363.2	251.2	291.1
55 - 59	1,139.7	526.4	622.4
60 - 64	1,675.9	890.2	1,007.8
65 - 69	2,220.9	1,373.2	1,537.3
70 - 74	3,148.1	1,474.9	1,668.7
75+	1,533.7	1,142.5	1,251.3
ASR[τ]	**494.2**	**280.8**	**317.0**

¥ Source: *Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)*

* Total includes 7002 lung cancer hospitalisations in which Indigenous status was not stated.

τ ASR: Directly age-standardised rate per 100,000 population, standardised to the 2006 Estimated Resident Australian Population

Figure 8: Average annual age-standardised lung cancer hospital separation rates per 100,000 population per year by Indigenous status and HSD of residence, 2005 - 2009



Source: Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)

* Includes 7002 episodes in which Indigenous status was not stated

≠ Directly standardised to the 2007 Queensland Estimated Resident Population.

% of Lung Cancer hospitalisations for HSD residents in which Indigenous status was not stated: Cairns & Hinterland (13.5%), Cape York (8.9%), Central Queensland (6.3%), Central West (13.4%), Darling Downs – West Moreton (13.2%), Gold Coast (7.2%), Mackay (3.6%), Metro North (19.1%), Metro South (14.9%), Mt Isa (4.8%), South West (11.1%), Sunshine Coast – Wide Bay (4.5%), Torres Strait-Northern Peninsula (0%), Townsville (4.5%)

Hospital activity – TII dataset

Table 20 (over page) presents lung cancer hospital activity for the period 2005 - 2009 for the regions for which data were available from the TII dataset. The data reflect any inpatient episode of care in which a DRG of lung cancer was recorded. As noted previously, the data do not represent Queensland residents only and should be interpreted in the context of completeness of Indigenous reporting in hospital datasets. Over the five year period, there were a total of 204 patients and 342 discharges for Indigenous lung cancer patients in these facilities, an average of 1.7 discharges per patient. There was an average of 1.8 discharges per non-Indigenous patient. The highest activity was in the Townsville, Cairns and Hinterland and Metro North HSDs.

ED and OPOOS data are presented in tables 19 and 21. Over the five year period there was an overall average of 2.4 ED presentations per Indigenous persons known to have lung cancer compared to 2.2 presentations for non-Indigenous persons. Of note, is the relatively higher rate of presentations in the Mackay HSD. Indigenous lung cancer patients were over-represented in the Cairns and Hinterland, Central Queensland and Townsville HSDs relative to the proportion of the population in those regions that are Indigenous. They were under-represented in the Gold Coast, Mackay, Metro South and Sunshine Coast-Wide Bay regions.

For OPOOS for persons known to have lung cancer, there were considerable variations in the average OPOOS per Indigenous person across the regions, ranging from 1.7 in the Gold Coast HSD to a high of 15.5 in Metro South.

Table 19: Lung Cancer ED presentations, TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	Central QLD	Children's Health Services	Darling Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total Lung cancer patients										
Indigenous (%)	46 (12.3)	12 (6.3)	2 (6.9)	23 (3.8)	2 (0.2)	4 (1.9)	25 (1.3)	11 (0.7)	11 (1.0)	57 (10.5)
Non-Indigenous (%)	328 (87.7)	179 (93.7)	27 (93.1)	580 (96.2)	901 (99.8)	215 (98.1)	1,909 (98.7)	1,631 (99.3)	1,055 (99.0)	485 (89.5)
Total ED episodes for Lung Cancer patients*										
Indigenous (%)	101 (13.5)	30 (6.4)	3 (3.8)	45 (3.6)	3 (0.2)	22 (3.8)	56 (1.5)	26 (0.8)	22 (1.0)	120 (10.7)
Non-Indigenous (%)	645 (86.5)	439 (93.6)	75 (96.2)	1,212 (96.4)	1,912 (99.8)	561 (96.2)	3,745 (98.5)	3,182 (99.2)	2,246 (99.0)	1,005 (89.3)
Av ED episodes per patient										
Indigenous	2.2	2.5	1.5	2.0	1.5	5.5	2.2	2.4	2.0	2.1
Non-Indigenous	2.0	2.5	2.8	2.1	2.1	2.7	2.0	2.0	2.1	2.1

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs

*Episodes for patients known to have a diagnosis of Lung Cancer. Reason for presentation may not necessarily be for Lung Cancer

Health Service District (Hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Gladstone, Rockhampton Base, Yeppoon); Darling Downs – West Moreton (Ipswich, Toowoomba); Gold Coast (Gold Coast Hospital); Mackay (Mackay Base); Metro North (Caboolture, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Bundaberg, Caloundra, Gympie, Hervey Bay, Maryborough, Nambour General), Townsville (Townsville).

Table 20: Hospital activity for Lung Cancer, 2005 – 2009, by Indigenous status and Queensland HSD.

	Cairns & Hinterland	Central QLD	Children's Health Services	D Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total LC patients										
Indigenous (%)	42 (12.1)	16 (4.0)	2 (6.9)	25 (3.6)	1 (0.1)	1 (0.4)	36 (1.2)	16 (0.8)	10 (0.8)	55 (9.6)
Non-Indigenous (%)	305 (87.9)	388 (96.0)	27 (93.1)	678 (96.4)	740 (99.9)	219 (99.6)	2,900 (98.8)	1,884 (99.2)	1,320 (99.2)	515 (90.4)
Total LC discharges										
Indigenous (%)	64 (12.1)	36 (4.6)	5 (4.2)	47 (4.2)	2 (0.2)	1 (0.3)	51 (1.2)	21 (0.8)	15 (0.8)	100 (12.7)
Non-Indigenous (%)	466 (87.9)	750 (95.4)	104 (95.8)	1,078 (95.8)	1,188 (99.8)	353 (99.7)	4,086 (98.8)	2,773	1,963 (99.2)	787 (81.3)
Av discharges/patient										
Indigenous	1.5	2.3	2.5	1.9	2.0	1.0	1.8	1.3	1.5	1.8
Non-Indigenous	1.5	1.9	3.9	1.6	1.6	1.6	1.4	1.5	1.5	1.5
Av length of stay										
Indigenous	4.9	3.6	1.0	5.5	3.5	18	7.2	8.8	2.9	5.8
Non-Indigenous	5.6	5.0	2.3	5.6	6.6	6.6	7.5	7.8	9.5	7.3
Av cost/ discharge ($)										
Indigenous	3,614	3,676	1,572	4,682	2,414	13,865	6,904	8,828	3,993	7,074
Non-Indigenous	3,723	4,039	3,601	3,446	6,519	5,741	6,772	5,072	5,263	6,838
All discharges*										
Indigenous	436	71	8	120	4	11	107	103	118	194
Non-Indigenous	2,077	1,500	679	3,130	5,641	1,380	9,255	10,894	9,431	1,708
Readmit < 28 days*										
Indigenous	361	38	5	81	2	7	66	84	101	92
Non-Indigenous	1,593	829	609	2,013	4,244	984	5,102	8,198	7,446	719
Readmit < 28 days as % of all discharges.										
Indigenous	82.8	53.5	62.5	67.5	50.0	63.6	61.7	81.6	85.6	47.4
Non-Indigenous	76.7	55.3	89.7	64.3	75.2	71.3	55.1	75.3	78.9	42.1
Deaths										
Indigenous	8	9	0	10	1	1	5	7	3	20
Non-Indigenous	70	163	1	222	367	107	963	593	461	228
Disch mortality rate*										
Indigenous	125.0	250.0	-	212.8	-	-	98.0	333.3	200.0	200.0
Non-Indigenous	150.2	217.3	9.6	205.9	308.9	303.1	235.7	213.8	234.8	289.7
Pt mortality rate**										
Indigenous	190.5	562.5	-	400.0	-	-	138.8	437.5	333.3	363.6
Non-Indigenous	229.5	420.1	37.0	327.4	496.0	488.6	332.1	314.7	349.2	442.7

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs**. All discharges:** Number of inpatient admissions for the group of individual patients who had at least one admission for Lung Cancer during the same period Lung Cancer population). **<28 days since last admission:** Number of Lung Cancer Inpatient Admissions which commenced within 28 days of discharge from a previous inpatient admission. Note that the previous admission may not have been directly related to the patient's respiratory status**.** *per 1000 Lung Cancer discharges: **per 1000 Lung Cancer patients. Hospitals contributing data: Cairns & Hinterland (Cairns Base); Central QLD (Biloela, Emerald, Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Gatton, Ipswich, Oakey, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Bowen, Clermont, Dysart, Mackay Base, Moranbah, Proserpine, Sarina); Metro North (Caboolture, Kilcoy, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum);

Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Gaynah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Nambour General), Townsville (Ayr, Charters Towers, Collinsville, Home Hill, Hughenden, Ingham, Joyce Palmer (Palm Island), Richmond, Townsville).

Table 21: Lung Cancer Outpatient Occasions of Service (OPOOS), TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	Central QLD	Children's Health Services	Darling Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total Lung Cancer patients										
Indigenous (%)	56 (9.6)	45 (6.0)	3 (5.0)	36 (3.1)	3 (0.3)	3 (0.9)	49 (1.1)	15 (0.6)	11 (0.6)	91 (9.6)
Non-Indigenous (%)	525 (90.4)	702 (94.0)	56 (95.0)	1,107 (96.9)	1,184 (99.7)	349 (99.1)	4,593 (98.9)	2,540 (99.4)	1,963 (99.4)	858 (90.4)
Total OPOOS for Lung Cancer patients*										
Indigenous (%)	453 (14.2)	455 (5.7)	13 (1.3)	205 (2.8)	5 (0.1)	11 (0.5)	366 (0.9)	232 (1.0)	74 (0.6)	706 (8.4)
Non-Indigenous (%)	2,737 (85.8)	7,523 (94.3)	980 (98.7)	7,119 (97.2)	8,587 (99.9)	2,395 (99.5)	40,280 (99.1)	22,169 (99.0)	11,637 (99.4)	7,731 (91.6)
Av OPOOS episodes per patient										
Indigenous	8.1	10.1	4.3	5.7	1.7	3.7	7.5	15.5	6.7	7.8
Non-Indigenous	5.2	10.7	17.5	6.4	7.3	6.9	8.8	8.7	5.9	9.0

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs

OPOOS: Number of other encounters with the hospital by Lung Cancer chronic disease population. This includes specialist Outpatients clinic attendances, pathology, imaging or other diagnostic procedures (excluding those performed during inpatient admissions).

Health Service District (hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Biloela, Emerald, Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Ipswich, Oakey, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Bowen, Clermont, Mackay Base, Proserpine, Sarina); Metro North (Caboolture, Kilcoy, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Gaynah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Nambour General), Townsville (Ayr, Charters Towers, Ingham, Joyce Palmer (Palm Island), Townsville).

Mortality

For the period 2002 – 2006, lung cancer was responsible for 3.6% of Indigenous mortality in Queensland, WA, the NT and SA combined; the age-standardised mortality rate was 57.7 deaths per 100,000 persons compared to 35.2 per 100,000 for non-Indigenous persons.[2] Lung cancer accounted for 2.6% of the excess deaths (that is the difference in deaths that would have been expected if Indigenous people had the same mortality rates as non-Indigenous people) in Indigenous males and 2.8% in Indigenous females in those jurisdictions. Queensland specific data for the period 2001 – 2003 reported 69 lung cancer deaths in Indigenous persons (37 males and 32 females).[47] This equated to age-standardised mortality rates of 64.5 per 100,000 Indigenous males, 46.4 per 100,000 for Indigenous females and 55.1 per 100,000 Indigenous persons. Mortality rate rates were 2.2 times higher for Indigenous males than non-Indigenous males, 3.0 times higher for Indigenous females and 2.4 times higher for Indigenous persons overall than non-Indigenous persons.[47]

For the period 2003 – 2007 there were 123 deaths with lung cancer reported as the cause of death in Indigenous Queenslanders, 6,630 in non-Indigenous Queenslanders and 57 in which Indigenous status was not reported; average annual age-specific lung cancer mortality rates per 100,000 population are presented in Table 22. Rates were higher in Indigenous persons across all age groups, with the exception of those 75 years and over. The age-standardised mortality ratio between Indigenous and non-Indigenous persons for this time period was 1.63 (95%CI 1.59, 1.67), suggesting a decline in the gap compared to the data reported for 2001 – 2003.

Figure 9 presents average annual age-standardised lung cancer mortality rates per 100,000 population by HSD of residence for the period 2003 – 2007. Rates were highest for residents of the South West HSD.

Table 22: Lung Cancer average annual age-specific mortality rates and age-standardised mortality rates per 100,000 population[≠] by Indigenous status, Queensland, 2003 - 2007[¥]

	Indigenous	Non-Indigenous	All*
0 - 4	0.0	0.0	0.0
5 - 9	0.0	0.1	0.1
9 - 14	0.0	0.0	0.0
15 - 19	0.0	0.0	0.0
20 - 24	0.0	0.1	0.1
25 - 29	0.0	0.1	0.1
30 - 34	0.0	0.4	0.4
35 - 39	2.0	1.0	1.1
40 - 44	9.5	4.4	4.5
45 - 49	11.9	11.1	11.2
50 - 54	67.4	19.8	20.7
55 - 59	106.8	45.9	47.4
60 - 64	173.9	69.2	71.2
65 - 69	292.9	119.7	123.0
70 - 74	333.3	173.8	176.7
75+	168.7	227.5	228.5
ASM	**53.9**	**33.2**	**33.7**

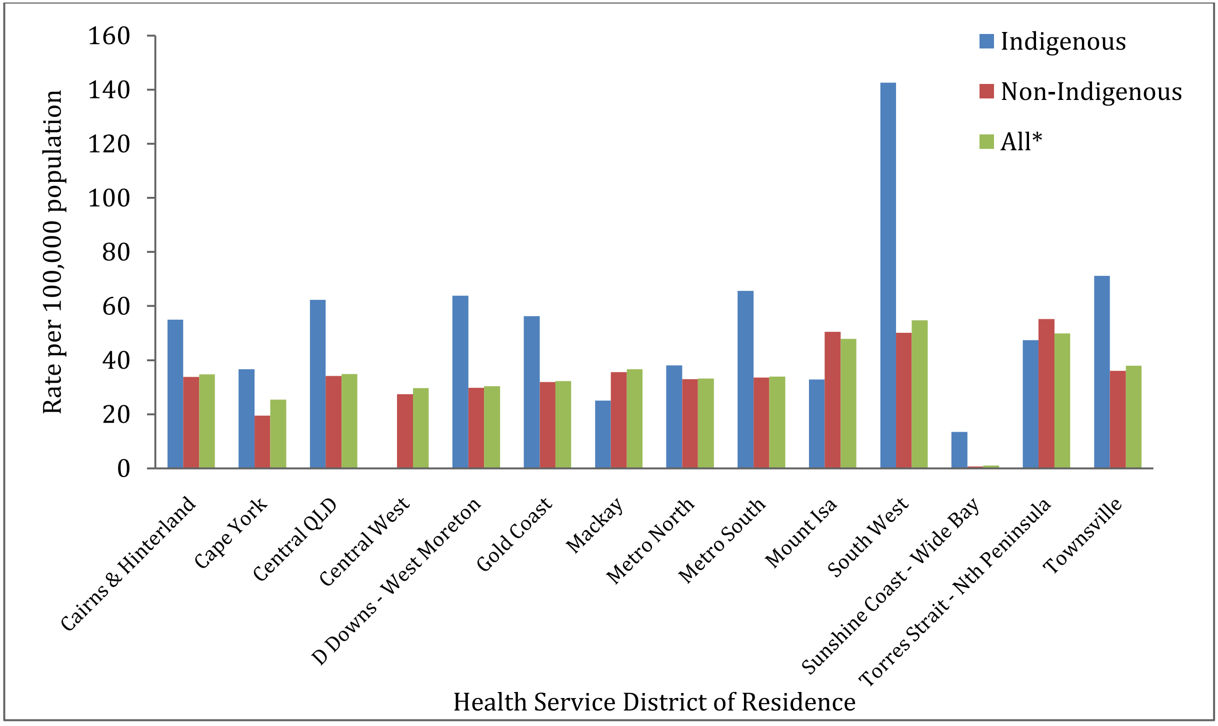
¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Total includes 57 deaths in which Indigenous status was not stated

≠ Denominator: 2006 Estimated resident population, ABS 47130DO003_2006

ASM: Age standardised mortality rate (directly standardised to the Australian population).

Figure 9: Average annual Lung Cancer mortality rates per 100,000 population[≠] by HSD of Residence and Indigenous status, Queensland, 2003 – 2007[¥]



¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Includes 57 deaths in which Indigenous status was not stated

≠ Denominator: 2007 Estimated resident population, ABS unpublished data provided by Queensland Health

Age standardised mortality rates directly standardised to the 2007 Queensland population.

4.2.4 Obstructive sleep apnoea

Obstructive sleep apnoea (OSA) is a condition associated with symptoms of snoring, witnessed apnoeas and excessive daytime sleepiness. It is present in an estimated 2 – 6% of Australian men.[48, 49] While there are some limitations with the study, particularly selection bias, a recent pilot of a sleep disorder screening programme in Australian community pharmacies that involved 84 participants (50% of those invited to participate; 67% female) found that 33.3%, 21.4% and 27.4% of participants were at risk of having or developing insomnia, OSA and restless legs syndrome (RLS) respectively.[50] OSA odds increased 12.8 times (95% CI: 3.2-50.4) with diabetes and 4.9 times (1.2-20.9) with opioid use. The Busselton Health Study reported moderate-to-severe OSA was independently associated with greater risk of all-cause mortality (fully adjusted hazard ratio [HR] = 6.24, 95% CL 2.01, 19.39) than non-OSA.[51]

There are virtually no data on sleep health in Indigenous Australians,[1] despite the high prevalence of associated conditions such chronic upper and lower respiratory infections, chronic lung disease, overweight and other chronic conditions such as diabetes and renal disease. There appears to be only one published study that has examined sleep health; conducted in 1650 children aged 0 – 17 years in five communities of the Torres Strait during 1999.[52]

Prevalence

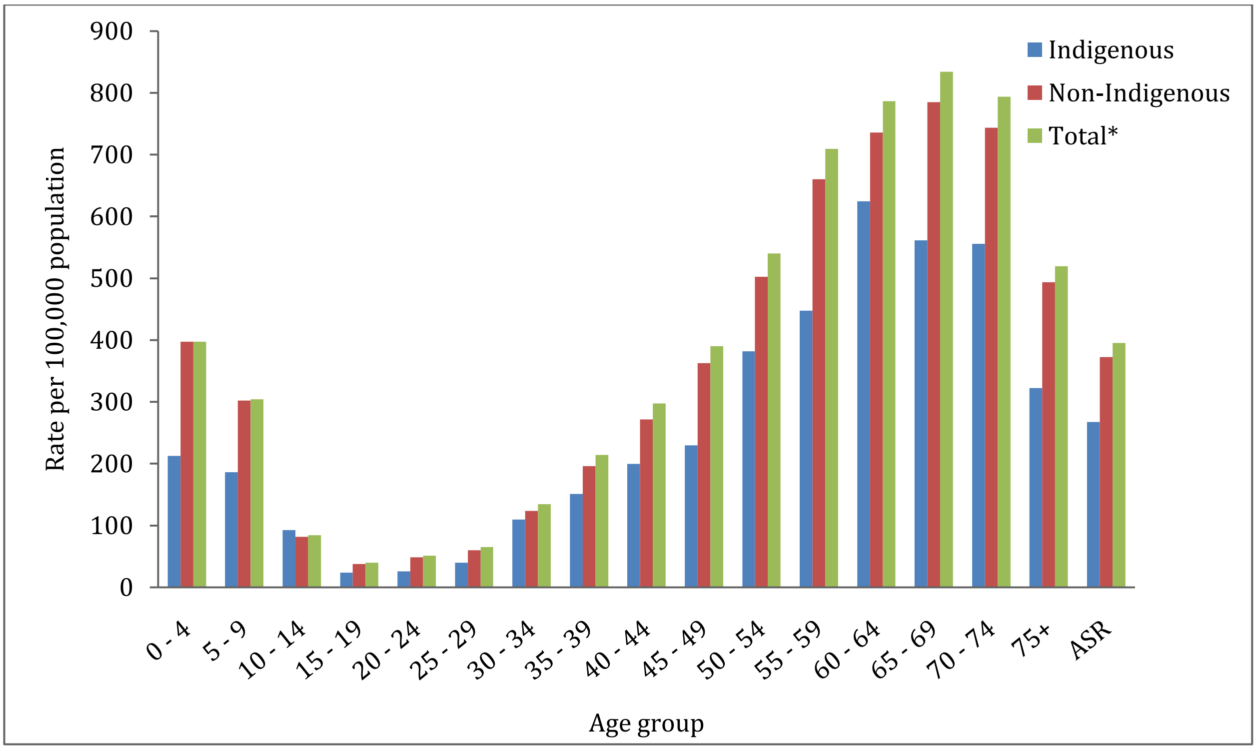
As above, the prevalence of OSA in Indigenous Australians is unknown. The study conducted in the Torres Strait identified the prevalence of snoring was 14.2% (95% CI 12.5-15.9); 3.6% (95% CI 2.7-4.6) reported snorting, and 6% (95% CI 4.9-7.2) reported restless sleep.[52] The prevalence of snoring was significantly higher among males (17.1% for males and 10.8 for females, P = 0.005), and strongly associated with reported wheezing in the past 12 months.

Hospitalisations

As sleep studies are often performed without inpatient admission, OSA is not accurately represented in hospital separation data.[1] The TSANZ report provided data for sleep breathing disorders overall for the year 2004/2005; in Queensland there were 42 separations for Indigenous males and 18 separations for Indigenous females, with the corresponding age-standardised separation rates being 0.69 and 0.27 per 1,000 population respectively. In comparison, the rates for non-Indigenous Queenslanders were 2.9 per 1,000 population for males and 1.1 per 1,000 population for females. Given the high prevalence of associated lung diseases in the Indigenous population, it is unlikely that the lower hospital separation rates reflect a lower burden of sleep disorders than in the non-Indigenous population. Lack of screening and access to sleep services (particularly for those in rural and remote areas) are the more probable explanations.

Figure 10 presents annual average age-specific OSA hospitalisation rates per 100,000 population in Queensland for the period 2005 – 2009. During this period there were 4,799 hospitalisations in which Indigenous status was not stated and the data should therefore be interpreted with caution. The data suggest an average annual age-standardised hospitalisation rates of 231.1 per 100,000 Indigenous persons, 324.2 per 100,000 non-Indigenous persons and 344.4 per 100,000 Queenslanders overall.

Figure 10: Obstructive sleep apnoea average annual age-specific hospitalisation¥ rates and age-standardised hospitalisation rates per 100,000 population by Indigenous status, Queensland, 2005 - 2009



¥ Source: *Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)*

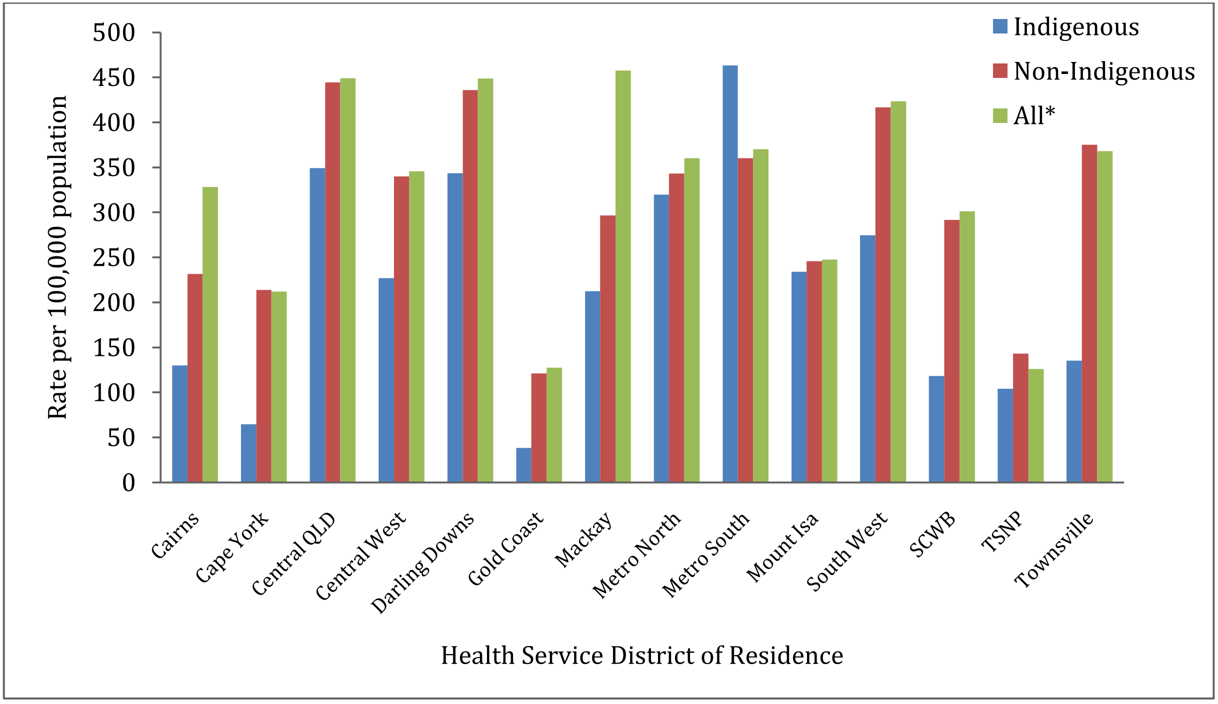
* Total includes 4,799 OSA hospitalisations in which Indigenous status was not stated.

≠ ASR: Directly age-standardised rate per 100,000 population, standardised to the 2006 Estimated Resident Australian Population

Figure 11 presents annual average age-standardised OSA hospitalisation rates per 100,000 population per year by HSD of residence for the period 2005 – 2009. The overall pattern of OSA hospitalisation rates differs remarkably to asthma, COPD and lung cancer, and this is likely to reflect the even greater variability of Indigenous identification in OSA hospitalisations. Overall, there were 4,799 hospitalisations (6.6% of all OSA hospitalisations) in which Indigenous status was not reported. This ranged from 0.6% of hospitalisations for residents of the Mt Isa HSD to a high of 36.1% of hospitalisations for residents of the Mackay HSD (footnote figure 11). Of note is that in 32.3% of OSA hospitalisations for residents of the Cape York HSD and 31.5% of those for residents of the Cairns & Hinterland HSD did not have Indigenous status reported despite capture of Indigenous status within hospitals within these regions being amongst highest in the State. A possible explanation is that residents of these regions who have OSA are hospitalised for treatment in other regions where identification is suboptimal.

The highest OSA hospitalisation rates were for Indigenous residents of the Metro South HSD. The reason for this is unclear but may reflect more ready access to sleep diagnosis and inpatient management than residents of other regions.

Figure 11: Average annual age-standardised obstructive sleep apnoea hospitalisation rates per 100,000 population per year by HSD of residence and Indigenous status, Queensland, 2005 – 2009.



Source: Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)

* Includes episodes in which Indigenous status was not stated

≠ Directly standardised to the 2007 Queensland Estimated Resident Population.

% of OSA hospitalisations for HSD residents in which Indigenous status was not stated: Cairns & Hinterland (31.5%), Cape York (32.3%), Central Queensland (1.7%), Central West (2.3%), Darling Downs – West Moreton (3.5%), Gold Coast (5.4%), Mackay (36.1%), Metro North (4.9%), Metro South (2.6%), Mt Isa (0.6%), South West (5.0%), Sunshine Coast – Wide Bay (4.1%), Torres Strait-Northern Peninsula (16.7%), Townsville (0.8%)

Hospital activity – TII Dataset

Table 23 presents OSA hospital activity for the period 2005 - 2009 for the regions for which data were available from the TII dataset. The data reflect any inpatient episode of care in which a DRG of OSA was reported. As noted previously, the data do not represent Queensland residents only and should be interpreted in the context of completeness of Indigenous reporting in hospital datasets. Over the five year period, there were a total of 66 patients and 69 discharges for Indigenous OSA patients in these facilities, an average of 1.0 discharge per patient, the same as for non-Indigenous OSA patients. The highest activity was in the Metro North, Townsville and Cairns and Hinterland HSDs. No patients were recorded in the Gold Coast and Mackay regions. A notable feature of this table is that while average length of stay was slightly lower for non-Indigenous than Indigenous OSA patients (2.2 vs 2.7 days), there was considerable variation in the average cost per discharge both within and between regions. The overall average cost per discharge was higher for Indigenous OSA patients than non-Indigenous OSA patients ($3,356 vs $1,886 respectively).

ED and OPOOS data are presented in tables 24 and 25. Over the five year period there was an overall average of 1.8 ED presentations per Indigenous persons known to have OSA compared to 2.1 presentations for non-Indigenous persons. Of note with these data is that Indigenous OSA patients were over-represented relative to the population size for all HSDs except the Gold Coast and Mackay.

Table 23: Obstructive Sleep Apnoea hospitalisations, TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	Central QLD	Children's Health Services	Darling Downs – West Moreton	Gold Coast	Mackay	Metro North	Metro South	Sunshine Coast-Wide Bay	Townsville
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total OSA patients										
Indigenous (%)	9 (34.6)	4 (7.1)	4 (4.5)	3 (4.9)	0 (0)	0 (0)	24 (2.1)	8 (4.2)	1 (1.4)	13 (30.9)
Non-Indigenous (%)	17 (65.4)	52 (92.9)	84 (95.5)	58 (95.1)	21 (100)	15 (100)	1,126 (97.9)	181 (95.8)	73 (98.6)	42 (69.1)
Total OSA discharges										
Indigenous (%)	9 (34.6)	4 (6.8)	4 (4.1)	3 (4.9)	0	0	26 (2.0)	8 (4.1)	1 (1.3)	14 (25.0)
Non-Indigenous (%)	17 (65.4)	55 (93.2)	93 (95.9)	59 (95.1)	21 (100)	15 (100)	1,295 (98.0)	188 (95.9)	78 (98.7)	42 (75.0)
Av disch/patient										
Indigenous	1.0	1.0	1.0	1.0	-	-	1.1	1.0	1.0	1.0
Non-Indigenous	1.0	1.0	1.1	1.0	1.0	1.0	1.2	1.0	1.1	1.0
Av length of stay										
Indigenous	3.8	1.4	1.1	2.0	-	-	1.6	3.2	1.0	4.2
Non-Indigenous	7.9	2.3	1.3	1.0	2.7	1.0	2.6	2.2	2.3	2.7
Av cost/discharge ($)										
Indigenous	6,232	2,563	2,603	424	-	-	2,351	4,275	1,123	7,278
Non-Indigenous	2,412	1,144	813	1,798	2,144	1,179	2,521	2,201	1,887	2,310
All discharges*										
Indigenous	629	7	22	13	0	2	87	19	1	34
Non-Indigenous	55	137	265	220	61	24	3,140	454	676	137
Readmit < 28 days**										
Indigenous	608	4	9	2	0	0	43	5	1	8
Non-Indigenous	18	48	73	96	19	8	1,722	201	532	43
Readmit < 28 days as % of all discharges.										
Indigenous	96.7	57.1	40.9	15.4	--	-	49.4	26.3	100	23.5
Non-Indigenous	32.3	35.0	27.5	43.6	31.1	33.3	54.8	44.3	78.7	31.4
Deaths										
Indigenous	0	0	0	0	0	1	0	0	0	0
Non-Indigenous	0	0	1	0	0	8	5	1	1	0

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs**. All discharges:** Number of inpatient admissions for the group of individual patients who had at least one admission for Obstructive Sleep Apnoea during the same period). **<28 days since last admission:** Number of Obstructive Sleep Apnoea Inpatient Admissions which commenced within 28 days of discharge from a previous inpatient admission. Note that the previous admission may not have been directly related to the patient's respiratory status. *per 1000 Sleep Apnoea discharges,**per 1000 Sleep Apnoea patients

HSD (hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Emerald, Gladstone, Rockhampton Base); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Ipswich, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Mackay Base, Proserpine); Metro North (Caboolture, Ellen Barron Family Centre, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Logan, Princess Alexandra; QEII, Redland); Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Gympie, Hervey Bay, Maryborough, Nambour General), Townsville (Ayr, Townsville)

For most of the regions Indigenous representation in ED presentations was higher than Indigenous representation in inpatient episodes of care described above.

For OPOOS for persons known to have OSA, again there was over-representation of Indigenous persons in several regions, although in regions such as Cairns, Townsville, Metro North and Metro South this is likely to reflect referral to specialist outpatient sleep facilities from other regions. The overall average OPOOS per patient was similar for Indigenous and non-Indigenous patients (4.3 vs 4.8 respectively)

Table 24: Obstructive Sleep Apnoea ED presentations, TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	**Central QLD**	**Children's Health Services**	**Darling Downs – West Moreton**	**Gold Coast**	**Mackay**	**Metro North**	**Metro South**	**Sunshine Coast-Wide Bay**	**Townsville**
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total OSA patients										
Indigenous (%)	14 (42.4)	5 (9.8)	5 (6.3)	12 (12.5)	0 (0)	1 (4.3)	11 (3.5)	12 (8.3)	5 (4.7)	20 (25.6)
Non-Indigenous (%)	19 (57.6)	46 (90.2)	75 (93.7)	84 (87.5)	29 (100)	22 (95.7)	304 (96.5)	133 (91.7)	102 (95.3)	58 (74.4)
Total ED episodes for OSA patients*										
Indigenous (%)	30 (53.6)	7 (5.1)	16 (9.3)	40 (15.4)	0 (0)	1 (2.0)	22 (3.9)	23 (8.0)	5 (2.3)	45 (24.1)
Non-Indigenous (%)	26 (46.4)	130 (94.9)	156 (90.7)	220 (84.6)	53 (100)	49 (98.0)	547 (96.1)	265 (92.0)	214 (97.7)	142 (75.9)
Av ED episodes per patient										
Indigenous	2.1	1.4	3.2	3.3	0	1.0	2.0	1.9	1.0	2.3
Non-Indigenous	1.4	2.8	2.1	2.6	1.8	2.2	1.8	2.0	2.1	2.4

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs
*Episodes for patients known to have a diagnosis of OSA. Reason for presentation may not necessarily be for OSA

Health Service District (Hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Gladstone, Rockhampton Base, Yeppoon); Darling Downs – West Moreton (Ipswich, Toowoomba); Gold Coast (Gold Coast Hospital); Mackay (Mackay Base); Metro North (Caboolture, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Bundaberg, Caloundra, Gympie, Hervey Bay, Maryborough, Nambour General), Townsville (Townsville).

Table 25: Obstructive Sleep Apnoea Outpatient Occasions of Service (OPOOS), TII dataset, by HSD and Indigenous status, 2005 - 2009

	Cairns & Hinterland	**Central QLD**	**Children's Health Services**	**Darling Downs – West Moreton**	**Gold Coast**	**Mackay**	**Metro North**	**Metro South**	**Sunshine Coast-Wide Bay**	**Townsville**
% Population Indigenous≠	10.2	5.2	-	3.6	1.2	4.2	1.6	2.0	2.1	7.2
Total OSA patients										
Indigenous (%)	22 (35.5)	11 (6.3)	11 (6.3)	14 (8.7)	0 (0)	2 (6.5)	69 (2.6)	13 (5.0)	6 (3.2)	33 (21.1)
Non-Indigenous (%)	40 (64.5)	164 (93.7)	165 (93.7)	147 (91.3)	51 (100)	31 (93.5)	2,613 (97.4)	245 (95.0)	182 (96.8)	123 (78.9)
Total OPOOS for OSA patients*										
Indigenous (%)	89 (36.8)	56 (6.1)	67 (7.6)	77 (11.0)	0 (0)	5 (4.6)	278 (2.5)	33 (3.7)	40 (3.9)	213 (16.7)
Non-Indigenous (%)	153 (63.2)	859 (93.9)	812 (92.4)	623 (89.0)	249 (100)	104 (95.4)	10,775 (97.5)	865 (96.3)	998 (96.1)	1,065 (83.3)
Av OPOOS episodes per patient										
Indigenous	4.0	5.1	6.1	5.5	0	2.5	4.0	2.5	6.7	6.5
Non-Indigenous	3.8	5.2	4.9	4.2	4.9	3.4	4.1	3.5	5.6	8.7

≠ Hospital activity does not necessarily represent activity only for residents of that area, particularly in areas with tertiary facilities, and those that are catchment hospitals for other HSDs
OPOOS: Number of other encounters with the hospital by OSA chronic disease population. This includes specialist Outpatients clinic attendances, pathology, imaging or other diagnostic procedures (excluding those performed during inpatient admissions).
Health Service District (hospitals contributing data): Cairns & Hinterland (Cairns Base); Central QLD (Biloela, Emerald, Gladstone, Rockhampton Base, Yeppoon); Children's Health Services (Royal Children's Hospital); Darling Downs – West Moreton (Ipswich, Oakey, Toowoomba, Warwick); Gold Coast (Gold Coast Hospital); Mackay (Bowen, Clermont, Mackay Base, Proserpine, Sarina); Metro North (Caboolture, Kilcoy, Redcliffe, Royal Brisbane and Women's, The Prince Charles); Metro South (Beaudesert, Logan, Princess Alexandra; QEII, Redland; Wynnum); Sunshine Coast – Wide Bay (Biggenden, Bundaberg, Caloundra, Childers, Gaynah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Nambour General), Townsville (Ayr, Charters Towers, Ingham, Joyce Palmer (Palm Island), Townsville).

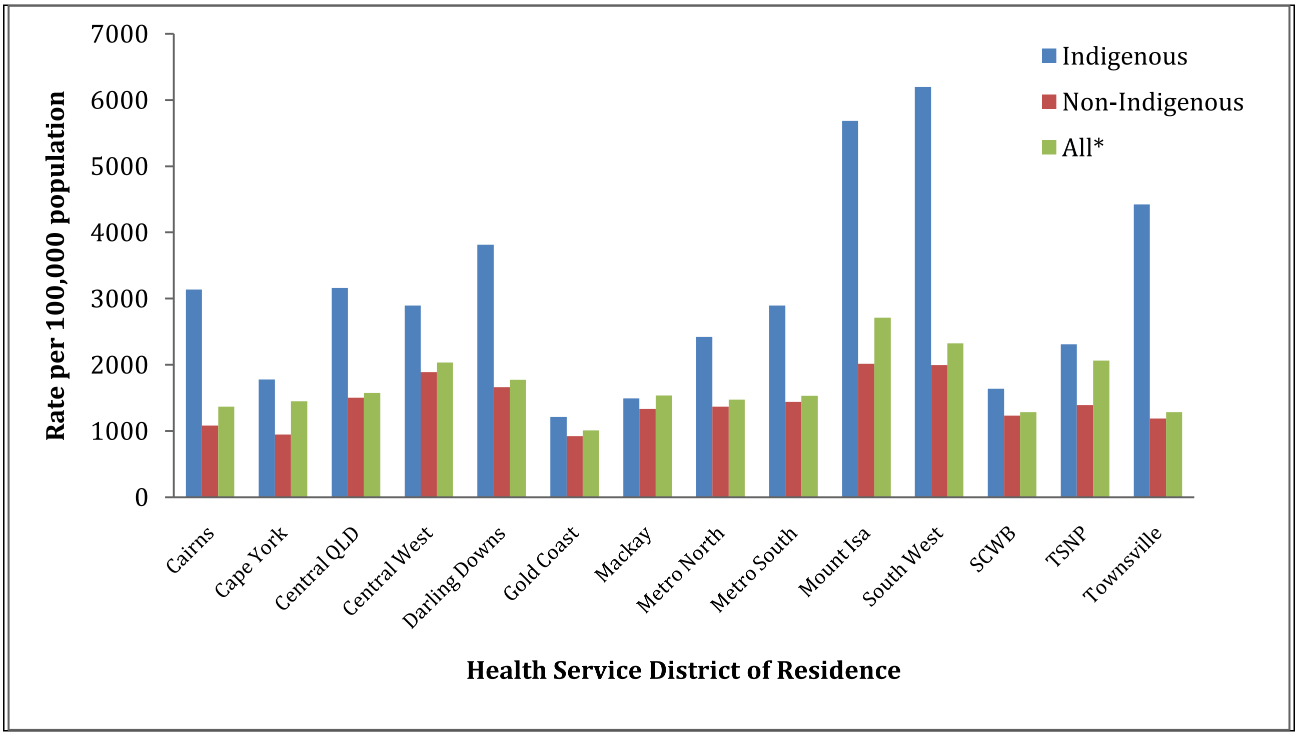
Mortality

Reported deaths due to OSA are rare, largely due to the fact that the cause of death is more likely to be reported as one of the conditions associated with OSA, such as cardiovascular disease.[1] No published data on deaths in Indigenous Australians were found, with the exception of the TSANZ report that reported a zero death rate per 100,000 Indigenous persons for sleep breathing disorders for the years 2002 – 2004.[1] For the period 2003 – 2007, there were 11 deaths with OSA recorded as the cause of death in Queensland; 10 were reported as occurring in non-Indigenous persons and not stated in the remaining death. This equated to an overall average annual mortality rate of 0.05 per 100,000 Queenslanders. All deaths occurred in persons aged 30 – 85+ years. The deaths occurred in residents of the Metro North, Metro South, Gold Coast, Mackay, South West and Sunshine Coast – Wide Bay HSDs.

4.2.5 All four diseases combined

As the four diseases selected for this report comprise the majority of chronic lung disease, combining the data provide an overall picture of lung health in Indigenous and non-Indigenous Queenslanders. Overall, Indigenous Queenslanders were 2.65 (95%CI 2.59 – 2.71) times more likely to be hospitalised for a chronic lung disease than non-Indigenous Queenslanders. Figure 12 presents the average annual hospital separation rates per 100,000 per year by HSD of residence and Indigenous status for the period 2005 – 2009. Rates were directly age-standardised to the 2007 Queensland estimated resident population. Despite on average more hospitalisations each year with Indigenous status unknown than there were in which it was recorded, across all districts Indigenous persons were more likely to be hospitalised for chronic lung disease than non-Indigenous persons. The highest rates were for residents of the South-West and Mt Isa HSDs, both Indigenous and non-Indigenous.

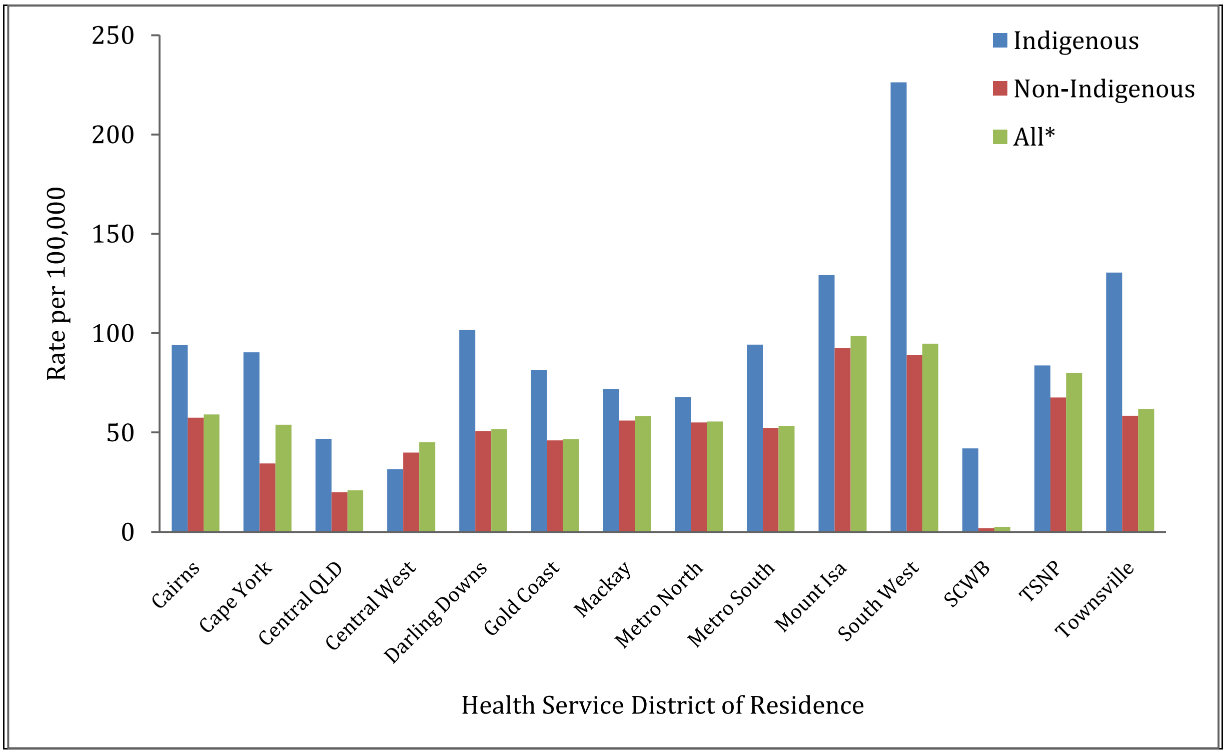
Figure 12: Average annual age-standardised hospital separation rates per 100,000 population per year for asthma, COPD, OSA and lung cancer combined, by Indigenous status and HSD of residence, 2005 - 2009



*Includes an average of 3,687 hospitalisations per year in which Indigenous status was not stated.

For all four diseases combined, Indigenous Queenslanders were 2.0 (95%CI 1.8 - 2.3) times more likely to die from these diseases than non-Indigenous Queenslanders. Overall regional mortality patterns differ to hospitalisations. Figure 13 presents average annual age-standardised mortality rates for the four diseases combined by HSD of residence for the period 2003 – 2007. Overall mortality was highest for those living in the South-West and Mt Isa HSDs.

Figure 13: Average annual age-standardised mortality rates per 100,000 population[≠] for asthma, COPD, OSA and lung cancer combined by HSD of Residence and Indigenous status, Queensland, 2003 – 2007[¥]



¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Includes deaths in which Indigenous status was not stated

≠ Denominator: 2007 Estimated resident population, ABS unpublished data provided by Queensland Health

Age standardised mortality rates directly standardised to the 2007 Queensland population.

4.2.6 Bronchiectasis

While the focus of this report is on asthma, COPD, lung cancer and sleep disordered breathing, data are presented on bronchiectasis in Queensland given increasing recognition both in Australia and elsewhere of the importance of the disease in lung pathology, particularly in Indigenous populations in Alaska, New Zealand and Australia.[53-55] Bronchiectasis is usually defined as irreversible bronchial dilatation and is often progressive but is also significantly under-diagnosed.[1]

The only published data on bronchiectasis prevalence amongst Indigenous Australians is from a study of children aged less than 15 years in Central Australia which identified a prevalence of 143 per 10,000 population.[56] This compares to an average live-birth prevalence of cystic fibrosis in Australia between 1989 and 2006 of 3.28 (95% CI 2.97 to 3.63) per 10,000 live births.[57] Repeated respiratory infections and hospitalisation for pneumonia have been identified as important risk factors for bronchiectasis in Indigenous children.[58] Comparing the data from Central Australia to Indigenous children in Queensland is problematic, particularly given the rates of hospitalisation for acute respiratory illness and pneumonia in the former are amongst the highest yet reported worldwide.[5, 6]

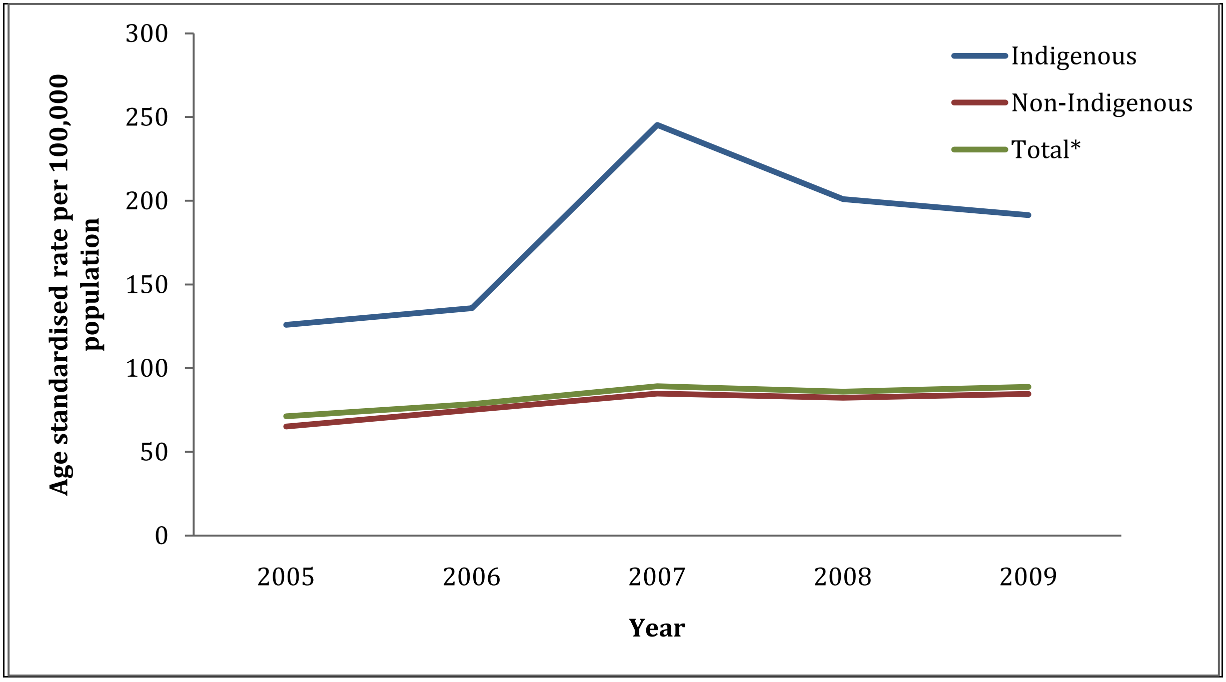
Hospitalisations

For the period 2005 – 2009, there were 17,014 inpatient episodes of care for bronchiectasis in Queensland. Of these 520 were for Indigenous persons, and Indigenous status was not stated in 690 episodes. The age-standardised hospital separation rate was 2.3 times higher for Indigenous Queenslanders than non-Indigenous Queenslanders (table 26). Of note is that rates were higher for Indigenous persons in all age groups with the exception of those aged 15 – 34 years. Over the five year period, hospitalisation rates for bronchiectasis increased amongst all Queenslanders but most noticeably for Indigenous Queenslanders (figure 14).

Table 26: Bronchiectasis average annual age-standardised hospitalisation rates per 100,000 population≠ by Indigenous status, Queensland, 2005 - 2009£

	Indigenous	Non Indigenous	Total
0 - 4	45.9	14.9	17.4
5 - 9	29.4	28.7	29.0
9 - 14	56.4	36.5	37.9
15 - 19	26.1	44.4	43.5
20 - 24	25.7	50.6	51.6
25 - 29	26.6	39.0	41.2
30 - 34	19.2	31.0	30.7
35 - 39	40.8	19.4	20.9
40 - 44	47.6	18.8	20.2
45 - 49	104.4	16.2	18.9
50 - 54	179.7	33.3	37.2
55 - 59	223.9	87.6	94.7
60 - 64	292.5	123.6	130.8
65 - 69	280.7	200.3	211.1
70 - 74	203.7	310.7	325.1
75+	1,487.7	423.0	450.0
ASR Total	**179.9**	**78.4**	**82.8**

Figure 14: Age-standardised hospitalisation rates per 100,000 population for bronchiectasis, by year and Indigenous status, Queensland, 2005 - 2009



Source: Queensland Hospital Admitted Patient Data Collection, Queensland Health (Extracted May 20, 2010)

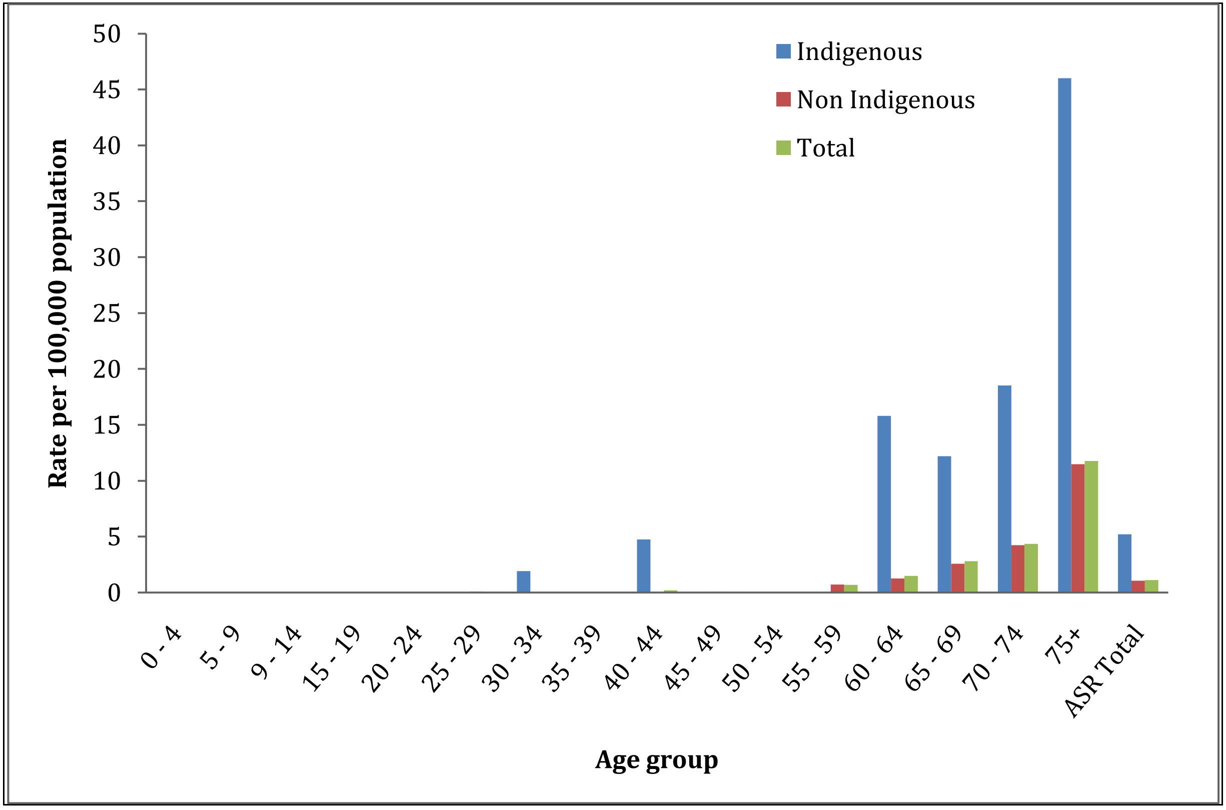
* Includes 690 episodes in which Indigenous status was not stated

≠ Directly standardised to the 2007 Australian Estimated Resident Population.

Deaths

From 2003 to 2007 there were 222 deaths for Queenslanders with bronchiectasis reported as the cause of death; 10 in Indigenous Queenslanders, 209 in non-Indigenous Queenslander and three in which Indigenous status was not reported. While the actual numbers were small and the data must therefore be interpreted with caution, the overall age-standardised mortality rate was 4.9 times higher for Indigenous Queenslanders than non-Indigenous Queenslanders (figure 15).

Figure 15: Age standardised bronchiectasis mortality rates per 100,000 population, by age group and Indigenous status, Queensland, 2003 - 2007



¥ Source: *Cause of Death File, Queensland Health (Extracted May 19, 2010).*

* Includes 3 deaths in which Indigenous status was not stated

≠ Denominator: 2007 Estimated resident population, ABS unpublished data provided by Queensland Health

Age standardised mortality rates directly standardised to the 2007 Australian population.

4.3 Summary

Indigenous people in all regions of Queensland experience morbidity and mortality due to chronic lung diseases at much higher rates than non-Indigenous Queenslanders, with only OSA rates not exceeding those of the later. The reasons for the different pattern for OSA are unknown but are likely to reflect differences in access and/or under-diagnosis.

Of note is that the highest rates appear to be in regions outside of the traditional regions of focus such as Cape York and the Torres Strait. Areas of particular concern include the Mt Isa, South West, Darling Downs-West Moreton and Townsville HSDs. While hospitalisation and deaths data provide an indication of morbidity, they do not accurately reflect the true prevalence or incidence of disease in the population. Policy, funding and service delivery decisions are therefore severely limited by a lack of knowledge about how many people in Queensland actually have disease and hence where the most efficient and effective gains in health status can be achieved.

There are limitations to these data that necessitate caution in their interpretation, with the major impact on certainty around the findings being the poor identification of Indigenous status in the datasets. In all conditions reviewed, there were more cases in which Indigenous status was not recorded than there were in which the data were complete. Given both numerators and denominators in some regions were small, even small changes in the classification of cases by Indigenous status would have substantial impacts on the data.

Despite the limitations, it is clear that chronic lung disease in Indigenous Queenslanders is a major health issue, with substantial implications for the health care system, individuals, their families and their communities. Reducing the burden of disease will require sustained, culturally appropriate and effective primary, secondary and tertiary intervention across Queensland. While the substantial disadvantage of the discrete, remote communities in Queensland cannot be discounted, the data presented here indicate that substantial effort is required in all areas of the state.

5. Initiatives, programmes, services and their monitoring and evaluation

5.1 Introduction

This aspect of the project focussed on identifying programmes, services and initiatives that have been formally evaluated or those for which performance indicator reports were publicly available. A further objective was to identify programmes addressing a broader range of issues relating to services for Indigenous people that would have relevance to chronic lung disease initiatives and potentially provide mechanisms for the monitoring and evaluation of those services.

5.2 Major Findings

5.2.1 Urbis Keys Young.

This was a 12 month project conducted in 2005/2006 on behalf of Medicare Australia and the Department of Health and Ageing to provide a picture of Indigenous access to major health programmes and included consideration of Australian Government initiatives with respect to access to Medicare and the Pharmaceutical Benefits Scheme (PBS).[59] The project included extensive stakeholder consultation, field visits and surveys across a range of organisations and services in Australia; several of whom were based in Queensland.

The study found that several key initiatives aimed at improving service delivery were widely seen as appropriate and valuable. These included initiatives such as:

- the appointment of Medicare Liaison Officers for Indigenous Access within Medicare Australia
- establishment of a specialist free-call Indigenous Medicare information line
- increased use of an exemption under subsection 19(2) of the *Health Insurance Act 1973* that enables Indigenous Health Services in certain circumstances to claim Medicare rebates for services they provide
- higher Medicare rebates for certain services, eg services provided in remote areas and to holders of health care concession cards
- entitlement for GPs employed in ACCHOs to claim Medicare rebates relating to certain tasks performed by nurses and, in the NT, by IHWs
- arrangements under S100 of the *National Health Act 1953* which enable eligible approved ACCHOs in remote areas to supply PBS medication, free of charge at the time of consultation, for the use of their patients
- the creation of certain Enhanced Primary Care items intended to meet specific Indigenous health needs, such as the health assessment for Indigenous people aged 55 and over and the adult health check for Indigenous Australians aged 15-54

However, as a type of incentive to services to improve the management and care of their Indigenous clients, the report also identified varying awareness of the initiatives and varying capacity amongst services to capture income to which they were entitled. Furthermore, eligibility criteria for access to Practice Incentive Programmes (PIP) cannot be met by some community-based organisations in particular, and even if there were eligible, difficulties in achieving the required structured contact with patients create further barriers. A particular example of this was ACCHO access to the former Asthma 3+ Plan initiative (discussed below), with poor uptake of incentives relating to asthma and hence little effect on disease management in that context.[60] The Urbis Keys Young report produced 38 recommendations for addressing the issues identified. Future planning of services for Indigenous persons with chronic lung conditions that, in particular, have PIPs and other Medicare and PBS schemes as a component of the model of care will need to account for these issues and actively facilitate addressing the barriers that exist to successful outcomes.

In May 2010, a new PIP "Indigenous Health" incentive commenced, providing payments to GPs and ACCHOs caring for Indigenous patients, and benefits to registered patients with chronic disease who identify as Aboriginal. However, some of the issues identified in the Urbis Keys Young report still persist and several issues and challenges to the PIP having an impact on Indigenous health remain unresolved.[61] Indicatively, albeit acknowledging the problems inherent with the use of Medicare claims to monitor services provided, from July 2006 – June 2007 claims against the Medicare Benefits Schedule (MBS) Health Assessments and Health Checks for Indigenous Queenslanders suggest that only 4.5% of the target population of children aged 0 – 14 years, 4.8% of those aged 15 – 54 years and 10.1 of those aged 55 years and over had received those services.[2]

While a single measure such as a PIP cannot be considered in isolation of sustained, multi-pronged interventions to improve Indigenous access to health services and health outcomes, there is a dearth of research on the effectiveness of PIPs and other Medicare initiatives in reducing morbidity and mortality in the Indigenous population. While there are methodological limitations, a randomised controlled trial that used retrospectively collected data from a single community health survey and well person health check/intervention and linked these data with morbidity and mortality registers reported increased health service contact but no difference in mortality.[62] An evaluation of the use of the Medicare item number 701 (Adult Health Check) at the Inala Indigenous Health Service in Brisbane did identify a number of new diagnoses detected and interventions performed that would not have been detected without the health check.[63] The Kanyini Audit found that although the receipt of a Medicare preventive health check did improve the screening of individuals for cardiovascular disease, it was not significantly associated with improved prescribing of antihypertensives or statins for individuals at high risk.[64]

Prospectively designed studies to monitor the impact of the new PIPs and other MBS items on Indigenous health and chronic disease care are required.

5.2.2 Better Practice for Child Health Service Delivery to Queensland Indigenous Communities

This project was conducted by the Indigenous Health Programme at the University of Queensland between October 2000 and September 2001 and examined the healthcare of Queensland Indigenous children aged less than five years from a functional or process perspective.[65] The project documented existing service delivery models and the interrelationships between local service providers, the Indigenous community and workforce development strategies within the context of Indigenous health policy at the time. While the project had the broad arena of child health as its focus, much of the report's findings are relevant to the successful and sustainable provision of holistic models of care for all Indigenous Queenslanders.

The project identified 13 factors that must be evident in the delivery of health services for those services to be successful and to ensure Indigenous participation in those services:

1. Community consultation before and during the life of the project/service

2. Community involvement in the delivery of the project/service
3. Empowerment of clients and community service providers that is embedded in the project/service via a community development model
4. Documentation of the context and monitoring of progress of the project/service
5. Appropriate research which contributes to both scientific and community understanding of the health problem and advances knowledge of intervention effectiveness
6. Targeted enhancement of workforce development and community skills in relation to programme delivery
7. Development of culturally secure and locally appropriate service provision guided by local area input
8. Continuity of care across health service levels
9. Role delineation within multi-disciplinary teams
10. Integration of services across health sectors
11. A holistic approach
12. A population health approach
13. The development of partnerships between health services and other providers with communities.

The project identified key programmes that provided examples of the approaches outlined above; programmes that could be adapted to a range of health issues and services. These included the SIDS/Babyhelp project, the Family CARE project and the Torres Strait Island Respiratory Project. Detailed information about the first two programmes can be obtained from the project report; the Torres Strait Islander Respiratory Project is discussed below.

5.2.3 Baseline evaluations of the Queensland Chronic Disease Strategy

This was a series of five baseline reports prepared by the University of Queensland for Queensland Health relating to the *Queensland Strategy for Chronic Disease 2005 – 2015.* The series reported on:

1. Mortality, prevalence, incidence, health status and quality of life;[66]
2. Hospital separations, avoidable admissions, health services utilisation and quality of care;[67]
3. Health risk behaviours & supportive environments for healthy behaviour;[68]
4. Health service quality improvement and partnerships;[69]
5. Key informant interviews with clinicians.[70]

A sixth report on self-management that was described in the project overview does not appear to have been published. The project did not have an Indigenous focus however many of the findings, particularly with respect to reports 3 – 6 can be considered broadly applicable to issues that may also apply to Indigenous Queenslanders with chronic diseases. It is not within the scope of this report to summarise the detailed findings of all six projects, however it is recommended that future planning of services incorporates the issues identified.

5.2.4 Evaluation of the Asthma 3+ Visit Plan

The Asthma 3+ Plan was a federally funded initiative involving GP incentive payments, GP divisional infrastructure support and a national awareness campaign to encourage doctors to address their clients' asthma management over at least 3 visits with the provision of an individualised asthma action plan.

A national project evaluated Indigenous access to the plan in 2004[71] with a summary of findings published in 2005.[60] While there was some limitations with respect to response rates from ACCHOs identified as eligible to participate in the study (ie. had to have a least one full-time equivalent GP on staff), the report identified significant barriers for ACCHOs to access the plan and for Indigenous people's capacity to benefit.

Key issues with respect to uptake of the plan were perceptions of programme inflexibility, difficulties in implementing the programme in a remote environment, lack of staff training and insufficient resources to understand and implement the programme and the practical barriers to meeting the requirement for patients to attend all three visits. Key recommendations included further reform of Medicare funding (particularly issues around eligibility for PIP funding) the inclusion of IHWs in the development of plans, and reform to pharmaceutical access and the inclusion of spacer devices in the Pharmaceutical Benefits Scheme.

The Asthma 3+ visit plan has now been replaced by The Asthma Cycle of Care initiative.[72] The Asthma Cycle of Care involves at least two asthma related consultations within 12 months for a patient with moderate to severe asthma, noting that at least one of these visits (the review visit) must be planned. It is not clear if and how the problems identified with the former programme have been addressed and is an important issue that needs to be addressed as a matter of priority.

Of note, the 2008 Aboriginal and Torres Strait Islander Health Performance Framework Report identified from the NATSIHS that in 2004 – 2005, 22.3% of Indigenous persons with asthma living in non-remote areas of Queensland had a written Asthma Action Plan, comparable to the 20.4% of non-Indigenous Queenslanders with Asthma in non-remote areas without a plan.[2]

5.2.5 Asthma Spacers Ordering System

The Asthma Spacer Ordering System (ASOS) was another initiative of the Australian government, implemented in 2006, that provided Indigenous health services with access to low cost asthma spacers for their clients.[73] ASOS is a cooperative arrangement between the OATSIH, the National Aboriginal Community Controlled Health Organisation (NACCHO) and the Asthma Foundations of Australia. The Asthma Foundation of Victoria coordinates the system. ASOS was initially federally funded for three years up to 2009 but is now operating on a self-funding mechanism (Paula Murray, Asthma Foundation Victoria, personal communication, 2010). ASOS can only be accessed by health services receiving OATSIH funding to provide primary health care to Indigenous clients. The kit available has been updated in 2010 to include additional materials and equipment, providing a greater range of options for services and their clients. Permission was not obtained to access data on the uptake of the ASOS in Queensland.

5.2.6 Australian Primary Care Collaboratives (APCC)

The APCC is a federally funded initiative aimed to help GPs and primary health care providers work together to:

- Improve patient clinical outcomes
- Reduce lifestyle risk factors
- Help maintain good health for those with chronic and complex conditions
- Promote a culture of quality improvement in primary health care[74]

The programme uses a quality improvement model based on collaborative methodology, designed by the Institute for Healthcare Improvement in the USA. The method relies on the distribution and adaptation of existing knowledge to multiple settings, to achieve a common aim. It involves "waves" of training programmes and workshops constructed around specific health care or disease themes. In 2010, new waves on COPD and Chronic Disease Prevention and Self Management (CDPSM) are being implemented.

The programme is monitored through a series of ongoing measures and performance indicators for each wave, with regular reports available through web portals for participating practices; the measures for COPD as an example are presented in table 27.

Table 27: COPD measures in the Australian Primary Care Collaboratives programme

Measure	Description
COPD register	The number of people within the clinical database that are coded with a diagnosis matching the COPD definition
Smoking status	The percentage of people on the COPD Register whose recorded smoking status indicates they are: Non Smokers (i and ii) i) Never Smoked ii) Ex Smoker iii) Current Smoker
Smoking status assessment	The percentage of people on the COPD Register whose recorded smoking status indicates they are a Current Smoker OR Ex Smoker AND who have had their smoking status assessed within the previous 12 months
Screening	The percentage of people at risk of COPD who have had a Spirometry screen recorded within the previous 24 months
Spirometry	The percentage of people on the COPD Register with a recorded Spirometry screen at any time
Influenza vaccine	The percentage of people on the COPD Register who are recorded as receiving an Influenza vaccine within the previous 12 months
Pneumococcal vaccine	The percentage of people on the COPD Register who are recorded as receiving a Pneumococcal vaccine

APCC has currently been delivered to 1,000 practices and health services in WA, SA, NT, NSW, QLD, ACT, VIC & TAS and more than 80 GP Divisions Australia-wide. Data reported on the web indicate substantial progress and achievements in diabetes care and coronary heart disease waves. Further information about the APCC can be accessed at: http://www.apcc.org.au/. Queensland specific data could not be accessed for this report.

5.2.7 Audit and Best Practice in Chronic Disease (ABCD)

The ABCD project was a Cooperative Research Centre for Aboriginal Health (CRCAH) research programme that commenced in 2002 and aimed to assist Indigenous primary health care centres to improve their systems for the delivery of best practice chronic disease care using a continuous quality improvement (CQI) approach.[75] Project staff work with health centre staff to identify strengths and weaknesses in their systems, set goals for improvement, develop strategies to achieve these goals, and assess the effectiveness of these strategies.[75] The programme involves primary care centres in the NT, WA, NSW and north Queensland; at the end of 2009, approximately 26 Indigenous primary health care centres (predominantly in north Queensland) had participated (Jenny Haines, One21seventy, personal communication, April 2010). The initial programme achieved considerable success in chronic disease management, although less so for preventative activities for generally well adults,[76] but with some indicators that sustainability required ongoing development and investigation.[77, 78]

Key findings of the initial phase of the programme included:

- The importance of partnerships at all levels of the health care system in developing CQI activities
- The need to embed CQI processes in state health business plans and position descriptions;
- Multi-disciplinary chronic disease teams require an inter-professional, cross-cultural skills mix that include Indigenous staff
- AHW career pathways need to be developed to include specific roles in chronic disease prevention, early identification and management
- Uniform reporting frameworks support the implementation of system-wide best practice in care and create efficiencies for services
- The need to improve communication of data across health sectors

The ABCD project has now evolved to a National Centre for Quality Improvement in Indigenous Primary Health Care, known as “One21seventy”.[79] In addition to comprehensive CQI tools, ongoing, centralised reporting mechanisms are managed by the Centre, including reports that enable participating practices to monitor their improvement and compare themselves with other jurisdictions. Over 120 Indigenous primary health care centres have now participated in the programme, with access to the One21seventy cycle and tools obtained through regional, State or Territory health authorities. In March 2010, Queensland Health signed a new contract with the Centre which will enable up to 60 sites in Queensland to access the services provided by One21seventy (Jenny Haines, One21seventy, personal communication, April 2010). At the time of writing this report, clinical audit tools used in the programme did not cover chronic lung disease other than recurrent chest infection in children and the appropriate follow-up. It is however something that is currently under consideration and input from the Respiratory Clinical Network with respect to the outcomes of this project would be welcome (Ross Bailie, Director One21seventy, personal communication, 2010).

5.2.8 COAG National Indigenous Reform Agreement: Queensland Indicators and Initiatives

The COAG National Indigenous Reform Agreement forms the basis of the national “Closing the Gap in Aboriginal and Torres Strait Islander Disadvantage” reforms that are underpinned by five funded National Specific Purpose Payments in the areas of health, schools, skills and workforce development, housing and disabilities.[11] The key targets of the Agreement are:

- closing the life expectancy gap within a generation;
- halving the gap in mortality rates for Indigenous children under five within a decade;
- ensuring all Indigenous four years olds in remote communities have access to early childhood education within five years;
- halving the gap for Indigenous students in reading, writing and numeracy within a decade;
- halving the gap for Indigenous students in Year 12 attainment or equivalent attainment rates by 2020
- halving the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade

Within the area of health, the major focus is on improving access to effective, comprehensive primary and preventative health care, particularly with respect to the prevention, management and treatment of chronic disease. Performance indicators against the targets have been articulated and jurisdictions are required to report against those targets on a regular basis. Sustained improvement in the quality of the data sources is recognised as a priority for the performance indicators to accurately reflect activity and trends over time.

Queensland indicators and initiatives were published in 2009.[20] Specific initiatives either directly or indirectly related to chronic lung diseases include:

- the provision of Indigenous cardiac outreach services across 16 sites in Central and Western Queensland
- $18 million over four years in child and maternal health services in Cape York, including the popular Baby Basket initiative
- the SmokeCheck Programme which provides specialist training and brief intervention resources to health workers with Indigenous clients. In 2008/09, 205 health workers were trained to undertake the SmokeCheck Programme
- the Events Support Programme which provides small grants for initiatives that will raise awareness of the health effects of smoking
- a range of sport and recreation programmes such as: the Community Activities Programme through Education (operated by the Police Citizen’s Youth Club) provides sport and recreation services to promote healthier lifestyles and reduce the incidence of anti-social behaviour in several remote Indigenous communities. In 2008/09, there were 12 sport and recreation officers employed to run programmes in Aurukun, the Northern Peninsula Area and Woorabinda; 2.12 million per annum over three years (from 1 January 2009) to employ 34.5 Indigenous Community Sport and Recreation Officers in remote, rural and urban Indigenous communities (there are currently 30.5 officers employed); over $420,000, under the Local Sport and Recreation Programme, to enhance sporting opportunities in Doomadgee, Kowanyama, Palm Island and Yarrabah
- providing $6.1 million in 2008/09 for the Local Area Coordinators programme to enable 1,180 people to access support and 760 people to access information and referral services. The programme coordinators work in rural and remote communities across the state, linking people with a disability to a range of different support networks and services, depending on individual needs and interests. Approximately 23 per cent of people registered with the programme identify as Aboriginal and/or Torres Strait Islander
- the delivery of targeted Home and Community Care (HACC) services to Indigenous peoples across Queensland, consistent with the *Home and Community Care Queensland Triennial Plan.*[80] During 2008/09, 4,020 Indigenous clients accessed HACC services
- providing over $2.5 million to operate ambulance stations servicing Indigenous communities, as well as to operate field offices and support first responder groups

5.2.9 Queensland Health, HSD Level Agreements

The Health Statistics Centre, Performance and Accountability Division, Queensland Health has developed indicators that can be used at HSD level to drive improvements in Indigenous health and to identify the gains required to meet the “Closing the Gap” national intent. The indicators are drawn primarily from the Queensland Health Patient Admitted Data Collection and the Queensland Perinatal Data Collection. The intended purpose of the reports is to stimulate discussion between

District and Performance and Accountability management. In addition to monitoring the estimated level of capture of Indigenous status in the data collections, the following indicators are reported:

- Indigenous women who attended 5 or more antenatal visits during pregnancy
- The direct standardised rate of potentially preventable hospitalisations (acute, chronic and vaccine-preventable conditions). While the data are reported at the aggregate level under each of these headings, respiratory conditions that are captured in the reports include influenza and pneumonia, asthma and COPD
- Indigenous patients who discharge from hospital against medical advice
- Low birthweight babies (<2500gms at birth) born to Indigenous women
- Indigenous pregnant women who quit smoking by 20 weeks gestation
- Indigenous women who smoked at any time during pregnancy

Reports are available for each of the HSDs individually as well as overall Queensland summaries. Currently the reports are only available to Queensland Health staff via the intranet.

5.2.10 Aboriginal and Torres Strait Islander Health Performance Framework

The Aboriginal and Torres Strait Islander Health Performance Framework (HPF) is an ongoing Australian Government process of monitoring the progress of the health system and broader determinants of health in improving Indigenous health. It essentially monitors a range of key performance indicators across three tiers: health status and health outcomes; determinants of health status; and health systems performance. Biannual, comprehensive reports are produced with the latest being the 2008 Report. Data for the report are derived from multiple sources and considered in the context of the quality of Indigenous identification, biases in data sources such as health provider and consumer surveys and the timeliness of available data.

While the overall report generally provides national, aggregate results, jurisdictional data can be accessed from the AIHW website (http://www.aihw.gov.au/publications/index.cfm/title/10664). With respect to health outcomes, for lung diseases specific attention is paid to pneumonia and lung cancer and COPD is highlighted in analyses of avoidable mortality in Indigenous Queenslanders. With respect to key determinants of lung health status, there are detailed analyses of tobacco use and exposure, physical activity, overcrowding and overweight/obesity. Of particular note is that in the data provided on health system performance, Queensland data are not reported for chronic disease management and access to prescription medicines due to the data either not being available or it was considered of inadequate quality for reporting. Data are available on Indigenous Queenslanders with Asthma Action Plans, accredited General Practices in Queensland relative to the proportion of the population within the GP Division that are Indigenous (and therefore relevant to PIP) and other system indicators such as the type of health services accessed by Indigenous Queenslanders.

5.2.11 The North Queensland Indigenous Chronic Disease Strategy (NQICDS).

The NQICDS was first implemented in north Queensland in 2000 to address the growing burden of chronic disease in the northern population. It combines interventions at the primary health centre level with supporting measures at the regional health system level, including a computerised patient recall system (known as Ferret), evidence-based health care protocols and a workforce management plan. A detailed background to the project can be accessed at http://www.abc.net.au/rural/events/ruralhealth/2005/papers/reorientingservices.pdf and an extensive evaluation framework was developed.[81] Conditions targeted under the strategy are: CVD, diabetes, renal disease, COPD, asthma, pelvic inflammatory disease, mental ill-health and sexually transmitted diseases. In recognition of the high prevalence of risk factors for these diseases (eg.

tobacco smoking, poor nutrition, obesity, physical activity etc) the NQICDS is also intended to reduce the levels of those risk factors. Four HSDs were targeted (Cairns, Cape York, Mt Isa, Torres Strait and Northern Peninsula) with the strategy implemented in 49 health care centres or facilities in these regions. A Clearing House for Indigenous Rural and Remote Projects (CHIRRP) was established in the Queensland Health Northern Zone office to oversee strategic planning, information sharing and project management.

A pilot evaluation was conducted in two Cape York communities between August and December 2005 to test the implementation of the evaluation framework developed for the NQICDS.[82] A process evaluation with health centre staff was carried out, and an outcome evaluation was undertaken using clinical audits of random samples of the adult population, performance indicators and ethnographic fieldwork. While the study was designed to evaluate the methods for evaluating the strategy, it provided some important insight into issues on the ground (table 28).

Table 28: Process evaluation, qualitative findings from an evaluation of the NQICDS*

Health system, organisation of care: staff in both communities had assigned responsibilities with respect to chronic illness. Staff in Community A expressed concern that external service providers did not fully understand the circumstances of their clients. Both communities drew attention to a need for funding of chronic disease activity. Neither health service was claiming for enhanced primary care (EPC) items, and no system was in place for revenue generated through EPC claims to be returned to the community.

Links with the community and external services: In Community A, links had been established with a local healing centre, and quarterly reports were provided to the Community Council, although there was said to be little community interest in information made available to the Council. A key issue in Community A was a perceived lack of community-based service providers to refer people for assistance with primary and secondary prevention of diabetes, or to offer peer support for people with diabetes. In Community B, the Senior Health Worker also provided regular updates to the Council. Staff considered that they linked well with visiting services, but felt that they were only minimally involved in regional planning efforts. They considered that they had few links with the community and external services.

Client self-management support: Both communities reported that there were no systems in place to support client self-management, although pamphlets and other resources were available to help inform clients about diabetes.

Access to evidence-based information: In both communities, staff were orientated to using evidence-based guidelines. Staff also reported good integration with specialist care and visiting services. One area that did not score well in either community was care planning. Care plans were assigned by Ferret to all patients with diabetes, but there was little evidence of joint staff–patient involvement in activities such as setting goals or strategies to help clients self-manage their chronic disease.

Delivery system design: In both communities, staff reported that there was a well-organised team approach to chronic disease care. In Community A, a key problem identified was transport of pathology. Community B identified weaknesses in case management and care planning.

Clinical information systems: Both centres reported having adequate population lists, and a diabetes register could be produced broken down by subgroups. Information systems were said to meet all of the requirements for effective support of diabetes care. In Community B, the Ferret system was said to be slow and not always able to provide information when needed.

Integration of chronic care model components: In both communities, chronic illness care was found to be integrated as a core component of care within the service. At the same time, opportunities for improvement were identified in each community. These included the need for a systematic approach to claiming of EPC items and having revenue generated through EPC claims returned to the community to fund primary and secondary prevention strategies in the community. Another was a dearth of services or groups within the community with which to form linkages to address risk factors. Goal setting to enhance self-management was not occurring systematically in either community, and training was required for staff to incorporate this as routine practice.

*Source: D'Abbs P, Schmidt B, Dougherty K, Senior K. Implementing a chronic disease strategy in two remote Indigenous Australian settings: a multi-method pilot evaluation. A J Rural Health, 2008. 16: 67 -74

Overall the project identified the major weaknesses with the implementation of the strategy related to linkages between health centres and other groups in the community, and health centre support for client self-management of chronic diseases. The ethnographic exploration of key issues from clients' perspectives identified in particular reluctance to undergo screening for fear of being diagnosed with new diseases, and concerns about confidentiality, especially with respect to sexually transmitted diseases.

5.2.12 Tobacco brief intervention programmes for Indigenous people in Queensland.

SmokeCheck is a brief intervention programme delivered by health workers to identify, encourage and support Indigenous people who smoke tobacco to make positive and healthy behaviour changes.[83] A *SmokeCheck* brief intervention involves making the most of opportunities to raise awareness and help a smoker to stop or reduce their smoking. Not smoking around children, family and friends is also strongly encouraged.[83] Health workers are trained in methods to encourage clients to stop or reduce their smoking via a one day training course and follow-up refresher training if required.

The programme was developed by Queensland Health with north Queensland Indigenous communities and the process of programme development and implementation was formally evaluated prior to its roll-out across the state.[84, 85] These studies identified the barriers to successful tobacco brief interventions by health workers related to the role of tobacco in inter-personal relationships in Indigenous communities, the mixed messages arising due to the high incidence of smoking amongst Indigenous health care workers and cultural barriers such as respect for autonomy and the avoidance of conflict.

In 2005/ 2006, an evaluation of the *SmokeCheck* brief intervention was conducted with 217 workers trained in *SmokeCheck* and 143 Indigenous clients of primary healthcare services in Queensland urban, regional and remote communities.[86] The training evaluation indicated gains in self-efficacy, role legitimacy and confidence in delivering the intervention at the time of training and at follow-up three months later; 75% of those trained reported using *SmokeCheck* at that time. The report did however identify several challenges which may limit the sustainability of training outcomes for some workers, particularly with respect to workplace constraints that could influence a worker's ability and confidence in maintaining use of the intervention.

The *SmokeCheck* evaluation examined whether the programme increased client motivation to change smoking behaviour, reduced tobacco consumption and nicotine dependence, and increased the number of attempts at smoking cessation.[86] This component of the evaluation was limited by marked participant attrition (only 41% completed the survey at one month follow-up and 20.7% at month three. The results should therefore be interpreted with caution given those who completed the study may be different in motivation and attempts to quit smoking than those who did not. The study did report that those in the intervention group were more likely to report reductions in nicotine dependence and daily cigarette intake, and increased motivation to change. Given the limitations of the study, further work is required to verify the findings.

There are a range of *SmokeCheck* materials to support health workers in delivering the *SmokeCheck* brief intervention, including client booklets for each stage of change, as well as a specific resource for smoking and pregnancy. There are also health worker prompts (tear-off pads) and a smoking and pregnancy poster to support the intervention. To date over 900 health workers across Queensland had participated in the training programme.

5.2.13 Palliative Care for Indigenous Queenslanders

Palliative care for Indigenous Australians presents particular challenges, particularly in rural and remote areas. Qualitative studies conducted in the NT suggest the ability to die at home connected to land and family is of paramount importance,[87] that services presently available lack local, cultural appropriateness [88] and there is a serious lack of IHWs with the appropriate training and skills to delivery palliative care in their communities.[89]

National Indigenous Palliative Care Needs Study (NIPCNS)

The NIPCNS was a federally funded project conducted in 2002 in the context of the National Palliative Care Strategy that aimed to provide an understanding of:

- what palliative care services were being delivered to Indigenous people
- what the real needs of Indigenous clients were (whether they were in urban or remote areas)
- how well current services met the needs (especially in relation to culturally appropriate service delivery and ability to access appropriate services)
- how the National Strategy could be focussed to ensure that its aims are achieved in relation to Indigenous people [90]

The project utilised a mixed-methodology approach combining initial scoping surveys and key stakeholder consultation, key informant interviews and then followed up with field work in all Australian States and Territories. Field work in Queensland was conducted in Mt Isa, Cairns and District, Rockhampton, the Torres Strait and Brisbane. The project covered issues ranging from the socio-economic and cultural contexts of palliative care needs through to workforce issues, information, education and training, aspects of good practices and access to palliative care services.

The findings and recommendations arising from the study are extensive, with a detailed report available at http://www.health.gov.au/internet/main/publishing.nsf/Content/5619BFE763995E17CA256F410011C5C3/$File/needall.pdf. A table of key findings is presented on pages 21 – 37, including consideration of the implications of the study's findings for the National Strategy.

Programme of Experience in the Palliative Approach (PEPA) for Indigenous Health Workers in Queensland

The Programme of Experience in the Palliative Approach (PEPA) was established through Queensland Health to provide primary health care workers an opportunity to develop skills and knowledge in the palliative approach. The programme recognised that specific training and resources would be required for IHWs with clients requiring palliative care. A survey was therefore conducted amongst Queensland Health and four ACCHOs to inform the development of a training package and what that package should include.[91] Courses have subsequently been developed in collaboration with the Cancer Council of Queensland and remain current.

Indigenous Palliative Care Project

This project aimed to respond to the findings of the NIPCNS described above [90] for practice principles and educational resources to support mainstream health providers in providing culturally appropriate palliative care to Indigenous peoples. A key outcome of the project was a resource kit specifically developed to assist with the provision of culturally appropriate palliative care for Indigenous peoples.

The resource kit can be accessed at: http://www.caresearch.com.au/Caresearch/Portals/0/Documents/WhatisPalliativeCare/NationalProgramme/IndigenousPCproject/Resource.pdf

5.2.14 Home and Community Care (HACC)

There is a specific Indigenous Programme Unit within HACC Queensland, with Indigenous project officers based in Cairns and Townsville and other HACC coordinators in each of the Queensland HSDs. Queensland has membership on the National Indigenous HACC Reference Group and there is a specific HACC Indigenous Information Strategy working group. The Programme also provides HACC audio information in two Aboriginal and four Torres Strait Islander languages (the "Listen Up" resource).[92]

In 2008, the Queensland Government released the *Home and Community Care Queensland Triennial Plan.*[80] Indigenous Queenslanders are a specified priority group within the plan following the implementation in 2007 of a comprehensive mapping and review of HACC services for this population. The results of that review do not yet appear to have been published. The Plan specifies a range of initiatives to be implemented under the broad areas of improving: access; information for, and consultation with, communities; efficient and effective management; and coordinated, planned and reliable service delivery.

5.2.15 Culturally specific education and intervention programmes for asthma

Education for Indigenous persons with asthma

There appears to be little data on specific education programmes for Indigenous people with asthma, and limited evaluation of the programmes that do exist.[31] A recent Cochrane Review of the effectiveness of culture specific programmes identified four randomised controlled trials with a total of 617 patients aged 5 – 59 years.[93] While the authors concluded there was a lack of evidence given the small number of studies identified and lack of reported outcomes within the trials, the review found the use of a culture-specific programme was superior to generic programmes or usual care, in improving asthma quality of life scores in adults, pooled WMD 0.25 (95% CI 0.09 to 0.41), asthma knowledge scores in children, WMD 3.30 (95% CI 1.07 to 5.53), and in a single study, reducing asthma exacerbation in children (risk ratio for hospitalisations 0.32, 95%CI 0.15, 0.70).[93]

The use of Indigenous health workers in asthma management has also been systematically reviewed.[94] That review identified two studies although one study was not strictly Indigenous. Children's asthma knowledge score was significantly better in the group that had IHW education compared with control (mean difference 3.30; 95% CI 1.07 to 5.53), parents' asthma knowledge score (standardised mean difference (SMD) 1.23; 95% CI 0.59 to 1.87), parents' asthma skill score (SMD 0.67; 95% CI 0.28 to 1.06) and days absent from school (100% school-aged children in the intervention group missed <7 days, 21% of controls missed 7-14 days, difference = 21%, 95%CI 5-36%). There was no significant difference in mean number of exacerbations (per year) between groups. There was no difference in quality of life or children's asthma skill score; both were limited to one study only and the direction favoured the IHW group.[95] Only one outcome (asthma knowledge in children), demonstrated statistical evidence that favoured the IHW involvement group.

The Cochrane review above included a randomised trial conducted amongst Torres Strait children aged 1 – 17 years that examined the benefits of an education intervention lead by IHWs on asthma outcomes.[96] Of note, given several asthma initiatives have been in place for some time in Australia, baseline data indicated asthma knowledge and possession of written asthma action plans in the study cohort was poor: 18% of the children knew what a written Asthma Action Plan was and 8.5% had one; carers' assessment of knowledge of medications showed that 52% could not name any asthma medication used by their child, 40% could not explain dosage, and 67% could not explain how beta2 agonists worked.[97]

The trial enrolled 113 children with asthma diagnosed by a respiratory physician of whom 88 completed 12 month follow-up.[96] The intervention consisted of three additional asthma education sessions with an IHW beyond a baseline session that all participants received; controls received no further sessions after baseline. The primary endpoint was number of unscheduled visits to hospital or a doctor caused by asthma exacerbation. While there were no differences between groups with respect to the primary outcome at 12 months, children in the intervention group missed fewer school days due to wheezing, more carers in the intervention group had more knowledge of asthma medications (names, dosages and how they worked), knew where their Asthma Action Plans were kept (84% vs 56%) and were able to describe the plan (62% vs 33%). While there were certain limitations to the study, the trial demonstrated the value of culturally appropriate education to improving health outcomes and provides a model for the development of further initiatives across a range of health issues.

A pilot study (before and after design) of didgeridoo playing and singing lessons for Aboriginal people with asthma or difficulty breathing in a rural town in Queensland has been conducted. [98] Asthma diagnosis was on the basis of medical history and clinical assessment by an Aboriginal medical officer. The intervention consisted of weekly singing lessons for females and didgeridoo playing lessons for males for 26 weeks. Participants also received information about asthma and its management from AMS staff and from culturally appropriate educational materials. Outcomes included respiratory function determined by spirometry at 0, 3 and 6 months. Morning and evening peak expiratory flow was performed by participants using peak flow metres and were recorded along with asthma symptoms and medication. A short qualitative report of the participant's experience with the programme was also obtained.

Forty people signed up for the programme and 33 attended the first lesson. There were nine children aged 5 to 8 years, 18 young people aged 13 to 18 years and five adults aged 50 to 77 years. Overall retention at 6 months was 72%. Return of daily diaries was suboptimal: 9 participants recorded 20 weeks or more and 4 returned fewer than 10 weekly sheets. With respect to respiratory function, FEV1 increased between the first and third tests for males from a mean of 2.27 (89%) to 2.70 (108.5%), $p < 0.01$. FVC also rose from 79.3 ± 7.4% to 101.3 ± 5.3% ($P < .01$) and PEF from 67.7 ± 5.5% to 81.2 ± 5.5% ($P < .05$). There were no changes in FEV1 or FVC in females; PEF increased from 70.8 ± 7.7% to 98.4 ± 4.9% but was this change was not supported statistically. There were several positive qualitative outcomes reported by participants, including individual enjoyment, enhanced socialisation and enhanced cultural awareness. These findings should be explored further, preferably in a randomised controlled trial to confirm the benefits this study suggests.

The Asthma Foundation of the Northern Territory has developed a range of educational materials for Indigenous persons with asthma, known as the "Short Wind" resources.[99] These include brochures, CDs and videos covering topics such as asthma medication, the use of puffers and spacers and support for families and form the basis of the Remote Indigenous Asthma Action Plan. The resources have been widely distributed and used around Australia and are available on national and State/Territory Asthma Foundation websites. Specific published evaluations of Short Wind were not identified, however they were used in a project at an Aboriginal Medical Service in South Australia known as the "Asthma Innovative Management Project: Putting Asthma In the Picture", that was conducted over 2002/2003.[100] An objective of that project was to identify what other resources needed to developed. Qualitative evaluations of the Short Wind resources within the project were generally positive, however the Short Wind action plan was not considered useful as it was "...considered too simple and outdated for the local community". The ACCHO involved in the project went on to develop its own action plan specific to its local community, known as the Every Day Asthma Action Plan which is available on the National Asthma Council website. (http://www.nationalasthma.org.au/content/view/249/639). Adaptations of the Short Wind resources were also used in the trial in Torres Strait Island children reported above.[96]

Education for health care professionals

The Rural Health Education Foundation has a series of 38 programmes aimed at educating health professionals on the cultural and medical issues surrounding a range of subjects in Indigenous health. These include asthma management, chronic diseases, youth health, child health and tobacco smoking and palliative care. Most of the programmes are accessed online or through the purchase of DVDs. Some programmes are free, others must be purchased, and some programmes contribute to CPD/CPE points for various professional associations. Some free programmes are restricted to specific organisations such as Indigenous Health Organisations or rural/remote Divisions of General Practice. Each of the programmes has specific learning objectives and users have the capacity to evaluate the resources on the Foundation's website. Published evaluations of the programmes were not identified.

5.2.16 Interventions in Sleep Apnoea

Only one evaluation of an intervention in sleep apnoea that may be of relevance to Indigenous Australians could be identified. This was a small randomised controlled trial of didgeridoo playing as an alternative treatment for obstructive sleep apnoea that was conducted in Switzerland.[101] The study involved 25 participants aged 18 years and over with an apnoea-hypopnoea index between 15 and 30 and who complained about snoring. Participants were recruited from the private practice of a didgeridoo instructor and a sleep medicine centre. The intervention involved didgeridoo lessons and daily practice at home with standardised instruments for four months; participants in the control group were put on a waiting list for lessons. The primary outcome was daytime sleepiness; secondary outcomes included sleep quality, partner rating of sleep disturbance, apnoea-hypopnoea index and health-related quality of life.

Eighty-four percent of participants were male and the mean ages in the intervention and control groups were 49.9 and 47.7 years. Participants in the didgeridoo group practised an average of 5.9 days a week (SD 0.86) for 25.3 minutes (SD 3.4). Compared with the control group in the didgeridoo group:

- daytime sleepiness improved (difference -3.0, 95% confidence interval -5.7 to -0.3, P = 0.03)
- apnoea-hypopnoea index improved (difference -6.2, -12.3 to -0.1, P = 0.05)
- partners reported less sleep disturbance (difference -2.8, -4.7 to -0.9, P < 0.01)
- there was no effect on the quality of sleep (difference -0.7, -2.1 to 0.6, P = 0.27)
- there was no effect on health related quality of life
- the combined analysis of sleep related outcomes showed a moderate to large effect of didgeridoo playing (difference between summary z scores -0.78 SD units, -1.27 to -0.28, P < 0.01)

While the study was small, the findings are interesting and are worthy of further research in the Australian Indigenous population, particularly given the effects of music lessons and didgeridoo playing on asthma outcomes described above.

5.2.17 Medical Specialist Outreach Programmes

The Medical Specialist Outreach Assistance Programme (MSOAP) is funded by the Australian Government Department of Health and Ageing[102] and was established as a mechanism for improving the health outcomes for rural Australians by increasing access to medical specialist services. The programme aims to improve the access of regional, rural and remote communities to medical specialist services.

Fundholders in Queensland include Queensland Health and General Practice Queensland (GPQ). For the financial year 2009 to 2010, GPQ contracted 36 specialists to deliver services in 54 communities from the Torres Strait Islands in the north, Cunnamulla in the south and Mount Isa in the west.[103] The services provided cover 13 specialties, including: Dermatology; Endocrinology, Gastroenterology, General and Respiratory Physicians; Gynaecology; General, ENT and Paediatric Surgery; Ophthalmology; Paediatrics; Psychiatry and Urology. From July 2008 to June 2009, 12,315 patients (of which 1,398 (11.3%) were identified as Indigenous) had been provided with services through the programme.

In 2009/2010 the Australian Government is expanding the MSOAP to introduce Indigenous Chronic Disease (ICD) Multi-Disciplinary teams comprised of specialists, general practitioners and allied health professionals in rural and remote Indigenous communities. Service delivery is aimed to commence from 1 July 2010.[102] The MSOAP-ICD has chronic lung disease as one of its major focus areas and all health professionals providing services through the MSOAP-ICD must demonstrate that they have undertaken appropriate Cultural Awareness and Safety Training prior to commencing service delivery.

Guidelines specific to the initiative were published in 2010.[104] Indigenous communities eligible for the services fall within the Australian Standard Geographical Classification (ASGC) – Remoteness Areas 2 (Inner Regional) to 5 (Very Remote). However, the guidelines also indicate the measure will focus the delivery of outreach services in communities situated in remote (RA 4) and very remote (RA 5) locations. Of note, the guidelines specify the primary focus of the MSOAP- ICD measure will be to deliver services to *"...locations with a majority Aboriginal and/or Torres Strait Islander population with a high prevalence of complex and chronic health conditions or where a significant proportion of the Indigenous community in the location have chronic health conditions*".[104] Advisory Forums have been established in each State and Territory to advise the Department on these locations and the relative needs. This latter point is of particular interest given the dearth of data on these conditions outside of the northern regions of the country, and the data that are available are ageing. This is of particular relevance in Queensland where reliable data from communities outside of the Northern Peninsula/Torres Strait are extremely limited.

There is limited description of how the programme will be evaluated, other than being included in the Australian Government's plan to evaluate the Commonwealth's Indigenous Chronic Disease Package in 2012/2013. Given existing specialists in Queensland are already at capacity (see Section 7), it is not clear where respiratory specialists will be sourced, how frequently the services can be delivered and how they can be sustained.

Data on where the current GPQ MSOAP is operating in Queensland and where the new MSOAP – ICD will be targeting from 1 July 2010 are outlined below. Data were not available from Queensland Health with respect to the current MSOAP and sites for the MSOAP-ICD are currently the focus of a needs analysis being conducted by the Office of Rural and Remote Health.

Table 29: MSOAP activity in QLD coordinated by General Practice Queensland*

Provider	Location	Frequency of clinic	Patients seen 1 Jul – 31 Dec 2009
2 Respiratory physicians**	Longreach	3 per year	28 (3 Indigenous)
	Mt Isa	6 per year	20 (0 Indigenous)
General Paediatrician	Emerald	10 per year	86 (2 Indigenous)
	Kingaroy	10 per year	63 (7 Indigenous)
	Ingham	9 per year	59 (9 Indigenous)
General Physician	Biloela	8 per year	24 (4 Indigenous)
	Clermont	6 per year	29 (2 Indigenous)
	Emerald	9 per year	74 (4 Indigenous)
	Monto	5 per year	13 (0 Indigenous)
	Woorabinda	7 per year	29 (22 Indigenous)
	Alpha	4 per year	7 (0 Indigenous)
	Barcaldine	4 per year	15 (1 Indigenous)
	Charleville	9 per year	61 (5 Indigenous)
	Longreach	3 per year	19 (0 Indigenous)
	Winton	3 per year	8 (0 Indigenous)

*Services are provided by private practice physicians. Decision to bulk-bill is up to the physician
**Adult physician but will see children.

Table 30: MSOAP – ICD sites in Queensland to commence 1 July 2010, coordinated by General Practice Queensland*

Provider	Location	Frequency of clinic
Respiratory physicians**	Cunnamulla	3 per year
	Charleville	3 per year
	Roma	3 per year
	St George	3 per year
	Mt Isa	6 per year
	Eidsvold	2 per year
General Paediatrician	Emerald	4 per year
	Cherbourg	4 per year
	Goondawindi≠	4 per year
General Physician	Cherbourg	4 per year
	Mt Isa	4 per year

*Services will be provided at local Aboriginal Medical Services where available
**Adult physician but will see children.
≠ Reserved site, i.e. not yet confirmed as awaiting funding decision

5.2.18 General Practice Queensland – The Map

A service that must be mentioned in this report is a comprehensive online map of programmes, services and resources operating or available throughout Queensland that address chronic diseases. "The Map" is a result of an extensive mapping exercise conducted by General Practice Queensland to assist in identifying needs and to provide an easily accessible resource for identifying and locating chronic disease programmes and services throughout the state (http://www.GPQ.com.au/map/search/resource/). Users can search by disease, programme type, programme location, stage of intervention and funding stream. The site includes initiatives and programmes specific to Indigenous health.

5.3 Summary

The information presented above is by no means an exhaustive analysis of what has been done, what is currently in place, what has been evaluated and what systematic monitoring of service provision is currently in place. It is clear that there has been, and continues to be, a large body of work addressing models of health service delivery and system performance for Indigenous Queenslanders. These range from federal financing initiatives and performance indicators to individual, targeted studies addressing specific aspects of chronic lung disease care. There are also a range of Indigenous specific resources for disease management and the education of both Indigenous persons with chronic diseases and the health professionals that care for them. A key point to consider in light of the information above is how well all of these various programmes, initiatives, data sources and lessons learned cross-fertilise and inform both new initiatives and the evaluation of existing ones.

A further issue identified in the preparation of this section of the report is that identifying programmes, initiatives and resources specific to respiratory health in Indigenous Queenslanders (and Indigenous Australians) overall was a major exercise. Finding the evidence to support the effectiveness of them was even more complex. While sites such as the Indigenous HealthInfoNet, the Closing the Gap Clearinghouse and GPQs Indigenous Health Programme area web-pages provided a substantial amount of information, others were discovered incidentally through other avenues. Ready access to information and the evidence base is critical, particularly at the primary care level where time is scarce and information systems are either fragmented, scarce or do not exist at all. Indeed, in discussions with one Division of General Practice in Queensland it was identified that many General Practices do not have access to the internet as some of the medical software companies that provide computers and information systems to the practices do not permit such access or it is restricted to specific sites.

6. Respiratory services by HSD in Queensland

6.1 Introduction

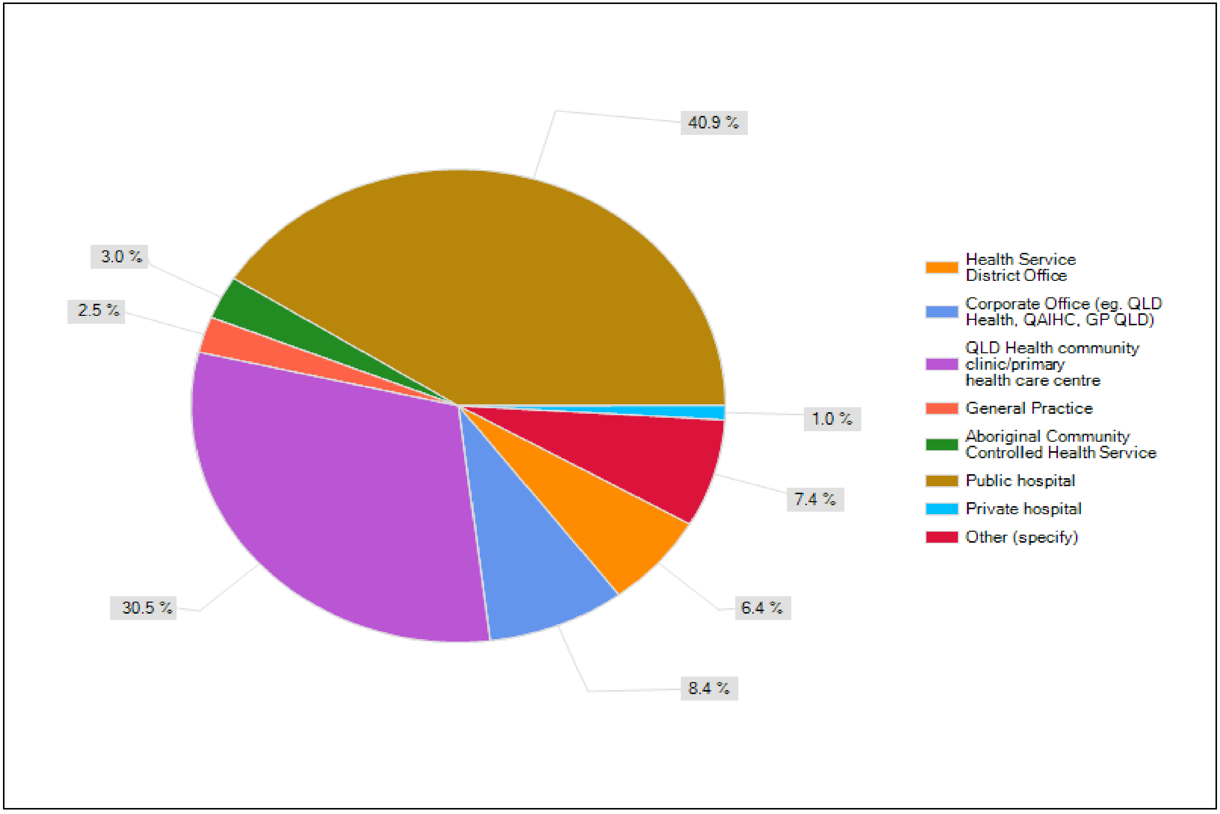
This section of the report presents the results of the online stakeholder survey that was distributed around clinical networks and other key stakeholders in Queensland. It identifies the lung health services available within public and private hospitals, general practices, Queensland Health Community Clinics/Primary Health Centres and ACCHOs by HSD.

6.2 Queensland overall

6.2.1 Survey participants

The survey was distributed to an estimated 600 individuals, 219 commenced the survey and 137 provided complete data. Some sections of the survey were only needed to be completed by those working in a clinical setting and some individuals completed the survey on behalf of their workplace or organisation. Seventy-three percent of respondents worked in a clinical setting, 24.2% worked in other settings and 4.6% did not answer the question. The majority of respondents worked in either a public hospital or community clinic/primary health care centre (figure 16).

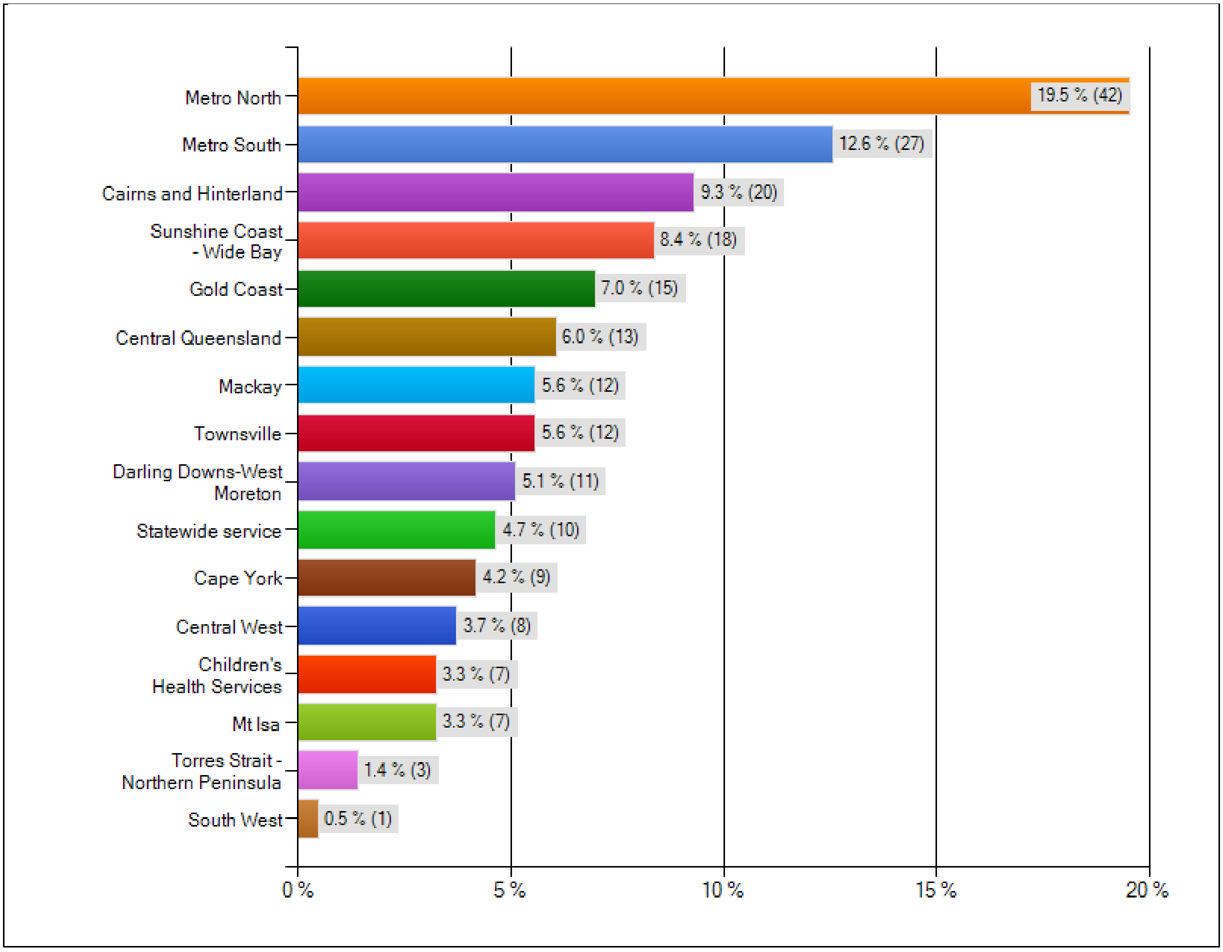
Figure 16: Survey respondents by place of employment (n=219)



Reflecting the predominance of respondents who worked in clinical settings, the majority were nurses (42.6%), IHWs (18.1%) and doctors (18.1%). Other respondents included Respiratory Scientists (5.4%), Physiotherapists (5.4%), Administrators and Managers (3.4%), Project Officers and Managers (3.4%), Occupational Therapists (2.5%), Programme Coordinators (2.5%), Education and Training Specialists (2.0%), Exercise Physiologists (1.0%) and others including a pathologist, social worker, pharmacist and policy officer.

Respondents were asked to nominate the HSD in which they performed the majority of their work. Responses were received from all HSDs, although only one was received from the South West HSD (figure 17).

Figure 17: Survey respondents by HSD of employment (n=215)*



*Four participants did not specify region

6.2.2 Identification of, and support for, Indigenous clients

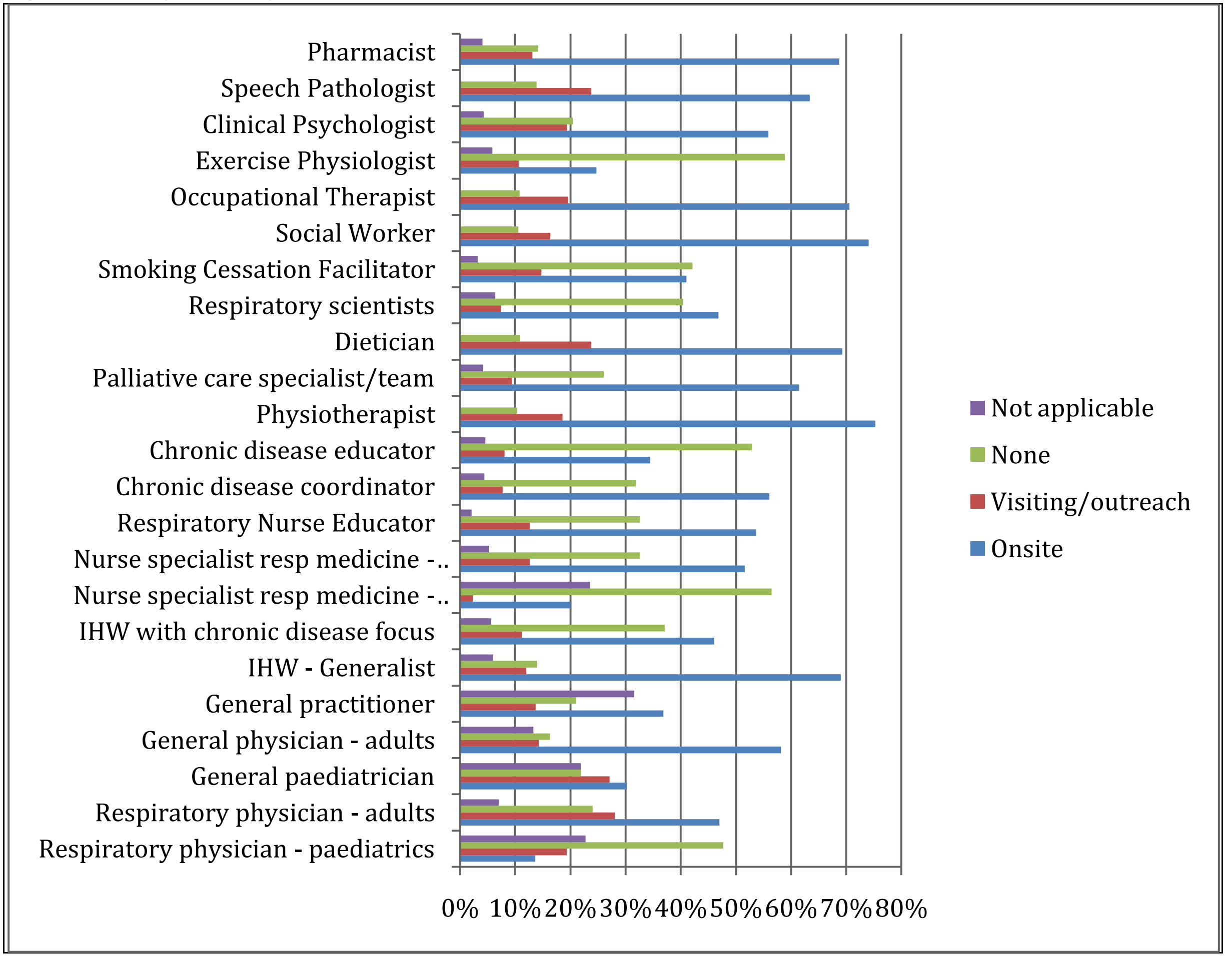
Of the 156 respondents working in clinical settings that provide direct patient care, 116 (74.4%) completed the section of the survey addressing Indigenous identification and access to Indigenous support staff. Of these, 75.9% indicated their service routinely collects information on Indigenous status from their clients, 7.8% did not and 16.4% were not sure. Six of the nine respondents who answered no provided a reason as to why this did not occur; three indicated it was collected on admission, two replied that the population was too small and one replied that nearly all of their clients were Indigenous hence it was not done.

IHWs, Indigenous Outreach Workers and Indigenous Health Coordinators were employed in 67.8%, 21.7% and 34.8% of the 116 clinical settings respectively. Respondents were not sure in 13.9% of settings and none of these staff were employed in 16.5% of services. Of the latter, 94.7% were either a Queensland Health Community Clinic/Primary Health Care Centre or public hospital. The majority of these were located in the Metro North (21.1%), Townsville (15.8%), Gold Coast (10.5%), Metro South (10.5%) and Mt Isa (10.5%) HSDs. However, 70.6% of those who did not employ Indigenous health staff directly indicated they had ready access to such staff if needed.

6.2.3 Overall access to key health professionals

Overall access in Queensland by clinical services to key health professionals necessary to the best practice standard of care for Indigenous clients with chronic diseases is presented in figure 18. Of note is a lack of exercise physiologists, smoking cessation facilitators, respiratory scientists, respiratory nurse specialists, chronic disease educators, IHWs with a chronic disease focus and paediatric respiratory physicians.

Figure 18: Key health professionals available to clinical services in Queensland



6.3 Services by region

This section of the survey asked respondents a variety of questions about access to health professionals necessary to best practice standards of care for clients with chronic diseases, access to and use of Spirometry, tobacco control programmes, pulmonary rehabilitation and other programmes and initiatives specific to Indigenous clients with chronic lung diseases. Response rates varied widely within and between regions for each question. It is not known if non-response means the services were not available (a “no” or “unknown” choice was provided for all questions) or the question was just not answered. Similarly, the number of respondents in some regions was very small and hence representative of only a particular service in that area.

6.3.1 Cairns and Hinterland

Of the 20 respondents in the Cairns and Hinterland HSD, 11 worked in a clinical setting providing direct patient care. Seven were employed in a Queensland Health Community Clinic/Primary Health Care Facility, five in a public hospital, one in an ACCHO and five in regional offices. Eight respondents were nurses, seven were IHWs and three were doctors. The remainder were comprised of allied health, administration, education and health promotion professionals.

Seven of the 11 respondents working in a clinical setting provided information about the health professionals available to their service (figure 19); not all categories were completed by all respondents. Services available to clinical settings are presented in figure 19. There was a considerable lack of access to most specialties, in particular paediatric services, chronic disease and respiratory disease educators, smoking cessation facilitators, respiratory scientists and some allied health staff. Given the small number of responses in some categories, the data on frequency of services and waiting times are not presented.

Eleven respondents answered general questions about respiratory services for Indigenous persons at their centres. Thirty-six percent indicated their service routinely screened Indigenous clients for chronic lung diseases, 18% screened on an infrequent basis, 18% did not screen at all and the remainder were not sure or it was not applicable. Forty-five percent of services did not have any client information/educational materials specific to Indigenous clients with chronic lung disease, and only 2 services had a dedicated programme for Indigenous people directed to improving care in a chronic lung disease (both COPD focussed). With respect to pulmonary rehabilitation programmes, 27% of services provided programmes onsite and 72% had access to them in the area; one service did not have access at all.

Five of six services in which Spirometry would be indicated had a spirometer onsite; four of these had staff trained in the correct use of spirometers and 3 had staff trained in the correct interpretation of Spirometry results. With respect to tobacco control, 10 respondents provided information about the activities the service undertakes to address tobacco use amongst Indigenous clients; the most common was provision of educational materials (figure 20). Sixty percent of respondents indicated their services were not running any programmes/activities that addressed tobacco use specifically amongst Indigenous people.

Sixty percent of respondents were aware of other services in the region that assist Indigenous persons with chronic diseases. These included Wuchopperen Health Service, a chronic disease programme run at a Queensland Health Primary Health Care Centre, Indigenous health clinics at Mareeba, Atherton and Ravenshow and IHWs associated with pulmonary rehabilitation programmes.

Two services had implemented, or participated in, programmes that specifically address risk factors for respiratory illness in Indigenous people in the past 12 months including a health fair at Kuranda and participation in the CAPERS programme. Two services were currently participating in collaborative partnerships that either directly or indirectly address respiratory illness in Indigenous people in the region; a memorandum of understanding with the local health service at Kuranda and initiatives to increase the Indigenous workforce in the region.

Figure 19: Key health professionals in clinical services in Cairns & Hinterland HSD

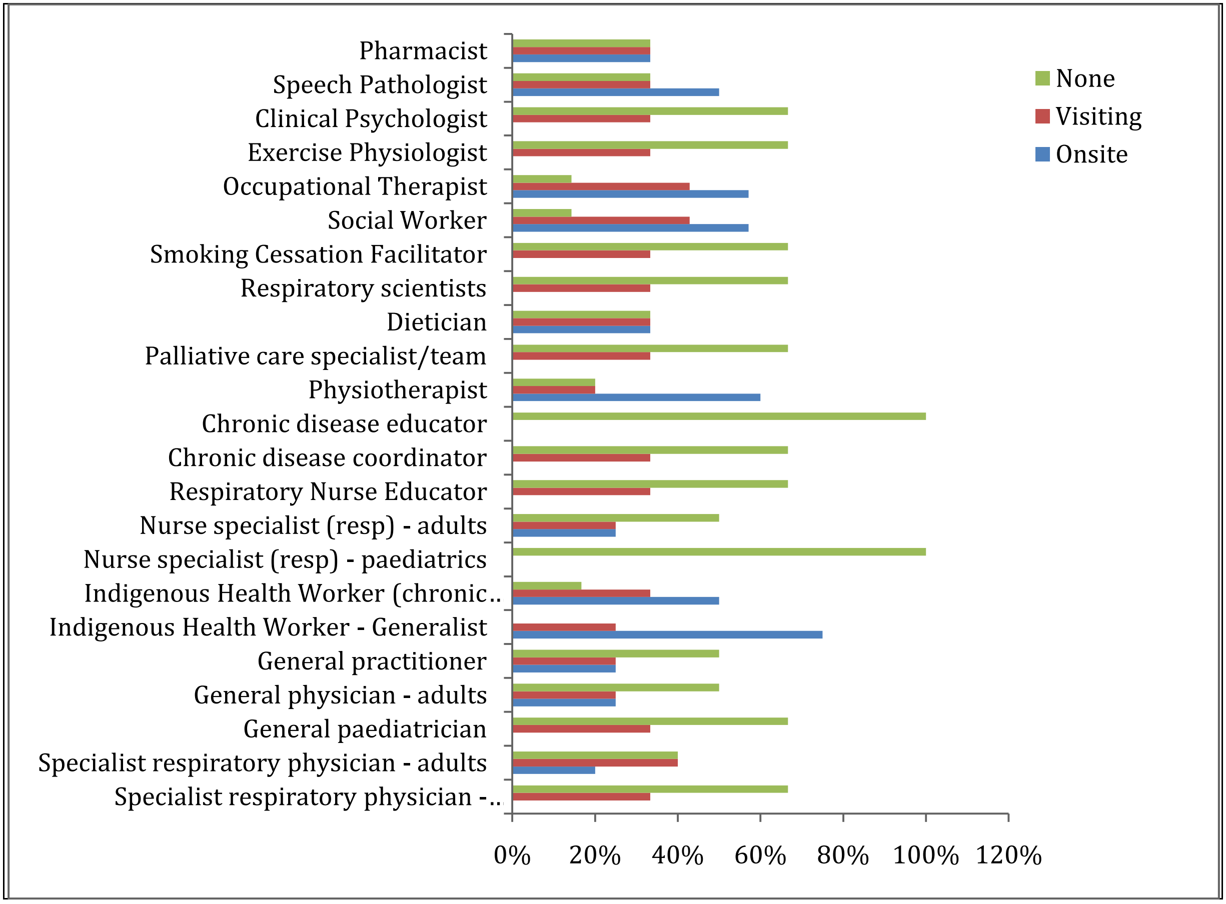
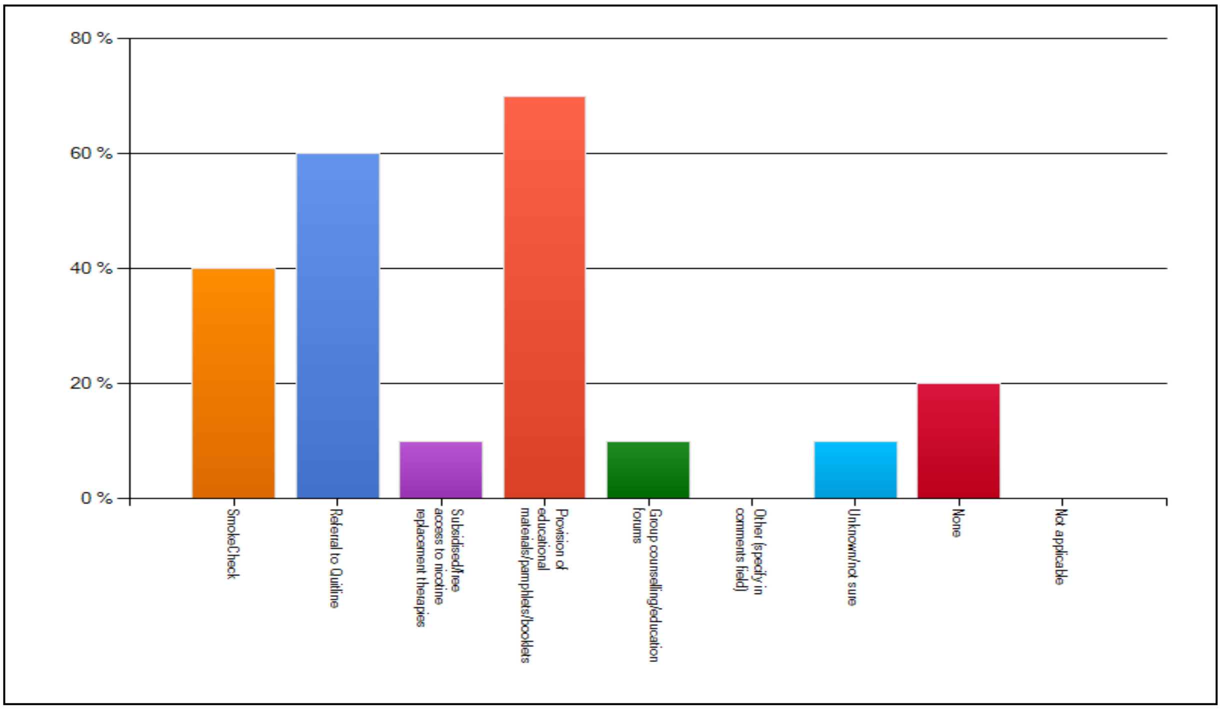


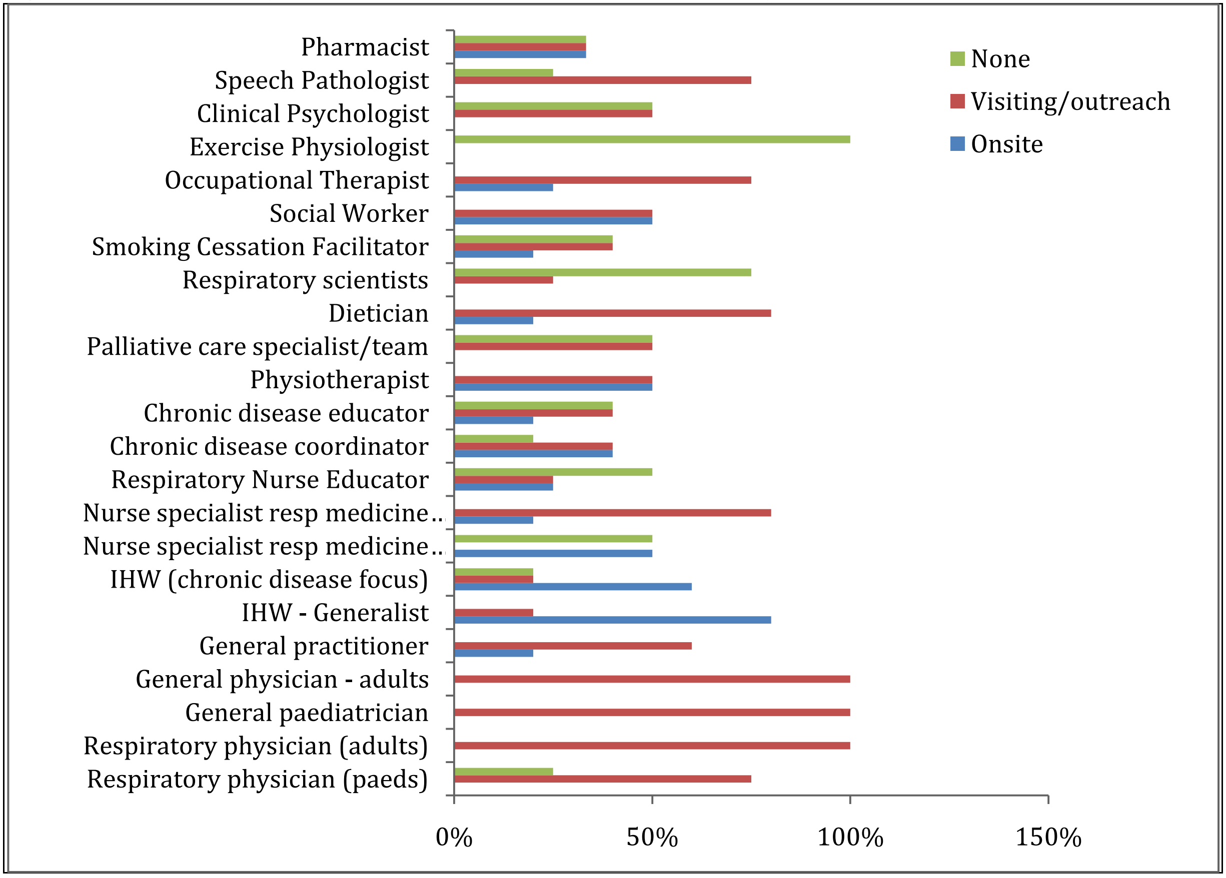
Figure 20: Initiatives in tobacco control, Cairns & Hinterland HSD



6.3.2 Cape York

Nine persons in the Cape York region completed the survey, of whom 66.7% worked in a clinical setting and five were based in a Queensland Health Primary Health Care Centre. Respondents were comprised of three IHWs, two doctors, three nurses and an Indigenous project officer. Services available to clinical settings are presented in figure 21. The majority of respiratory specialist services were on a visiting/outreach basis. Of note in this region was that 2 services did not employ an IHW and one of these indicated they did not have ready access to one.

Figure 21: Key health professionals in clinical services in the Cape York HSD

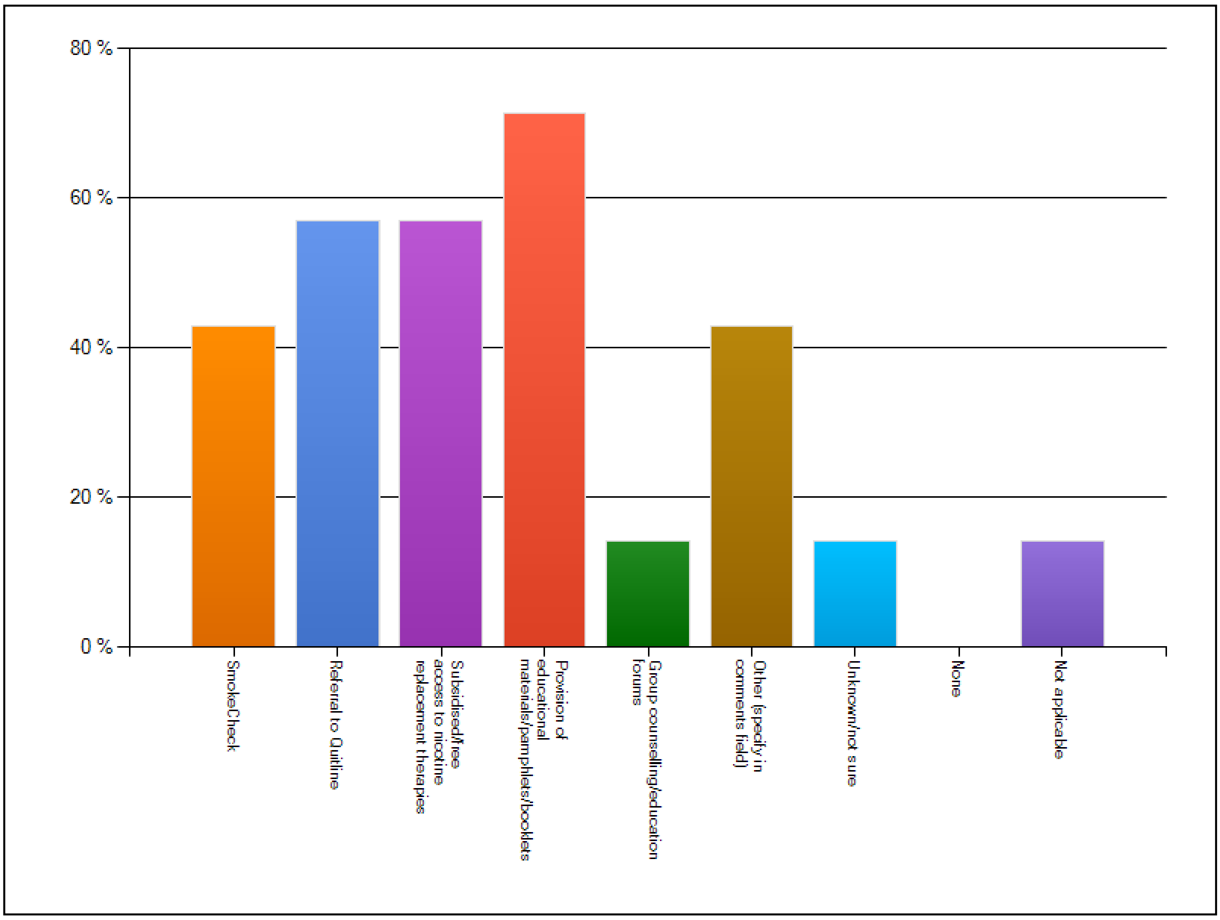


With respect to general respiratory services, 80% of those working in a clinical setting routinely or occasionally screened Indigenous clients for chronic lung diseases, however 57% did not have any client information/educational materials specific to Indigenous clients with chronic lung disease. Similarly, 57% did not have a dedicated programme for Indigenous people directed to improving care in COPD, Asthma, Lung Cancer or OSA and none of the services had access to pulmonary rehabilitation programmes. Two services indicated that they did have a long history of visiting specialists for clients with chronic diseases.

Three of the five clinical settings indicated they had spirometers on-site with a further respondent indicating that the visiting respiratory specialists took the spirometers with them. One service indicated that their staff had been trained in the use of spirometers but none had been trained in the correct interpretation of spirometry results.

The activities undertaken by the services to address tobacco control amongst Indigenous clients are presented in figure 22. The “Other” category included referral to ATODS and one-on-one brief interventions. One service ran programmes/activities that addressed tobacco use specifically amongst mothers, men, youth and young people and two services had programmes directed at pregnant women.

Figure 22: Tobacco control activities undertaken by services in the Cape York HSD.

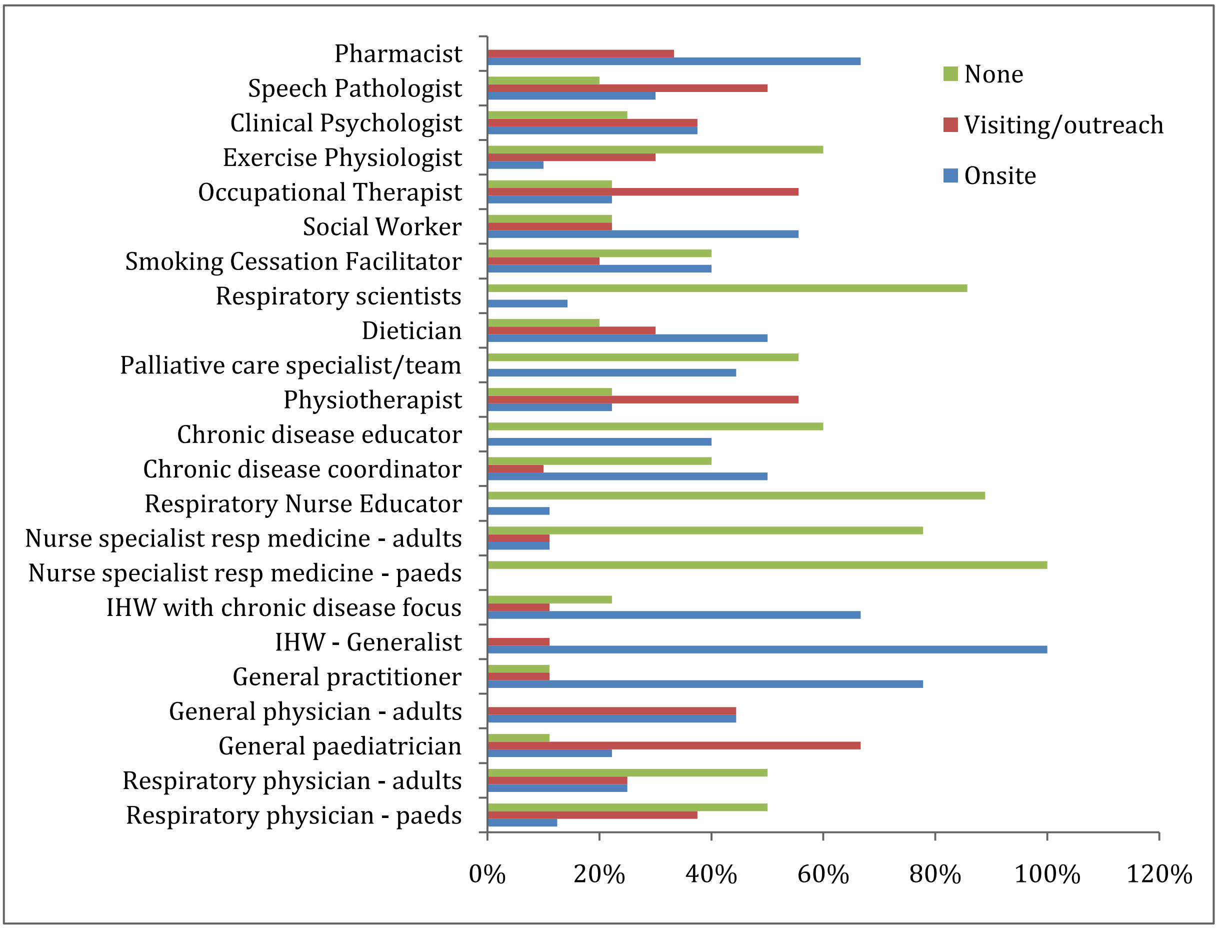


Eighty-seven percent of respondents indicated that there were a range of other programmes in the region that provided support to Indigenous people with chronic diseases, with the majority nominating HACC services as the major contributor. One service indicated they ran regular programmes once a month within the clinic that specifically addressed risk factors for chronic lung disease in their Indigenous clients. Two services indicated ongoing collaborative arrangements with other service providers that either directly or indirectly addressed respiratory diseases in Indigenous clients. These included inpatient's discharge planners, allied health, review in the community in collaboration with local primary health care centre and HACC, and routine interaction between respiratory specialists and the local doctors, nurses and health workers.

6.3.3 Central Queensland

There were 13 respondents from the Central Queensland HSD; six nurses, four IHWs, a physiotherapist, managers and a child health worker. Six were based in a Queensland Health primary health care centre, one in a public hospital and one in an ACCHO; 84% worked in a clinical setting. Services available to clinical settings are presented in figure 23. Of note is the lack of access to respiratory nurses, respiratory scientists and limited access to respiratory physicians.

Figure 23: Key health professionals in clinical services in the Central Queensland HSD

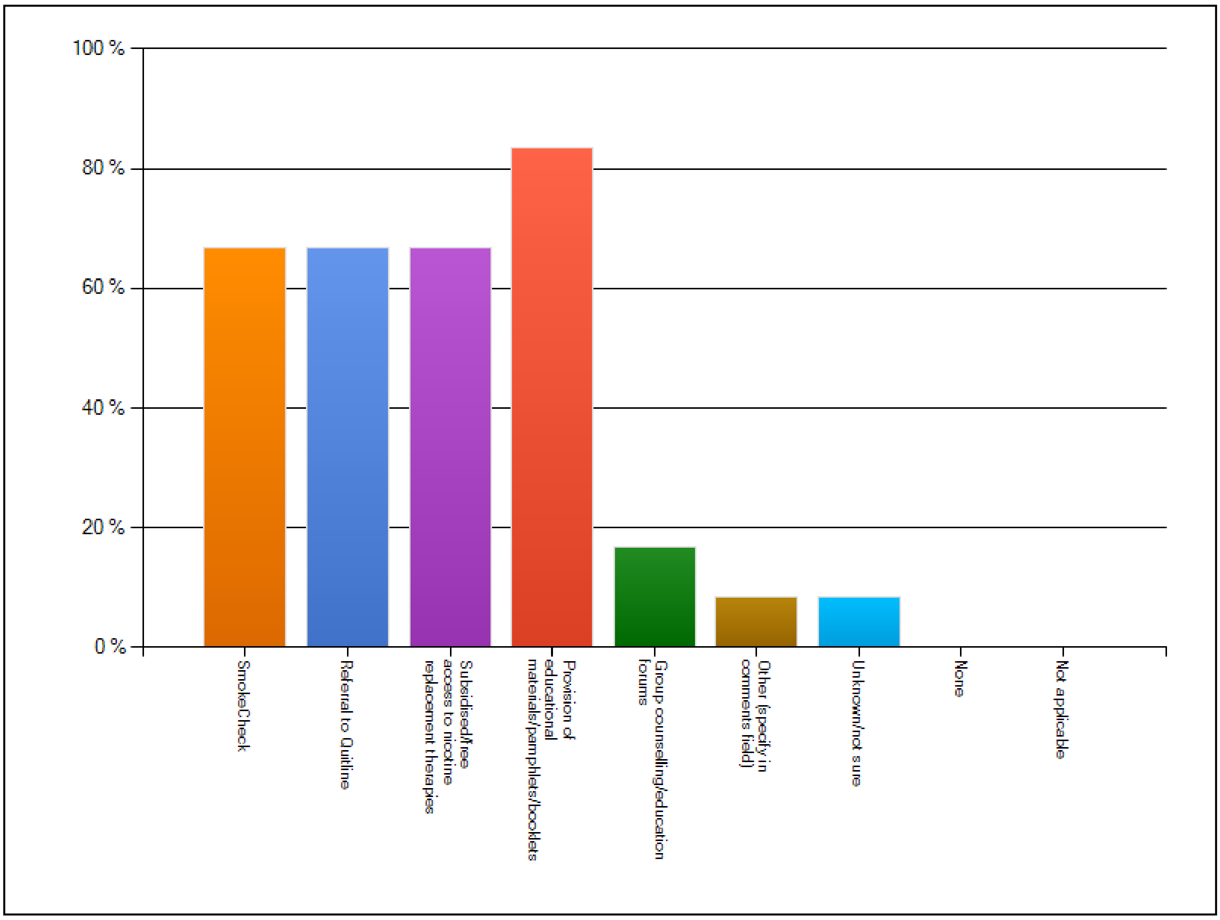


With respect to respiratory services, only 33% routinely screened all Indigenous clients for chronic lung diseases, with a further 33% not sure, and only 42% had access to educational materials specific to Indigenous clients with chronic lung diseases. Dedicated programmes directed towards Indigenous clients with asthma were conducted in 3 settings (27%), and in one setting (8%) each for COPD, lung cancer and sleep disorders. None of the services had onsite pulmonary rehabilitation programmes; 50% indicated there were programmes in the area that clients could access and 42% of respondents were not sure about whether there were any available.

With respect to Spirometry, 45% of services had spirometers onsite and of these, 60% had staff trained both in the use of spirometers and the interpretation of Spirometry data. These services also indicated they routinely performed Spirometry on clients with chronic lung diseases. Activities undertaken to address tobacco use amongst Indigenous clients are presented in figure 24. All responses in the “Other” category referred to ATODS. Forty-six percent of services ran programmes specifically targeting tobacco use amongst mother, men and pregnant women and 36% had programmes for youth/young people; 36% were not sure if these were available.

Sixty-seven percent of respondents indicated that there were other Indigenous specific services within their service area that provided support to people with chronic illnesses. These were predominantly transport services, ATODS and the local ACCHO. Three respondents indicated their service had specifically undertaken an activity to address risk factors for respiratory disease in the last 12 months, all of which were SmokeCheck programmes. Three services nominated ATODS as currently operating collaborative programmes to address respiratory disease in Indigenous clients in their region

Figure 24: Tobacco control activities undertaken by services in the Central Queensland HSD.

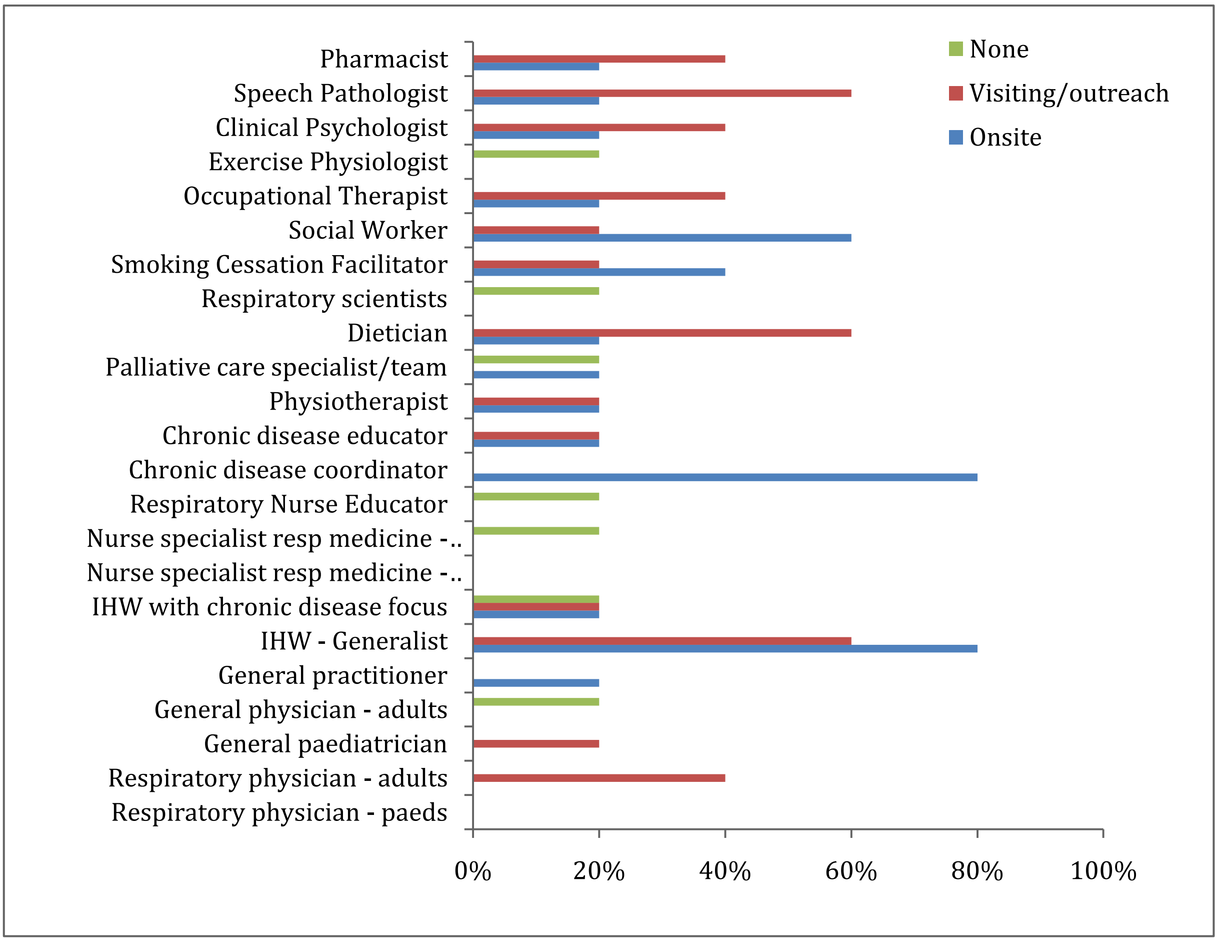


6.3.4 Central West

There were eight respondents from the Central West HSD, five of whom worked in a Queensland Health primary health care centre and two were based in a public hospital. Two were IHWs, three were nurses, one was an occupational therapist and one worked in administration; profession was not specified by one person. Five respondents answered the question regarding access to health professionals in the area although not all fields were completed (figure 25). It is therefore not certain as to whether the services were not available or it was not known. Specialist services were however very limited. The frequency of visits of the respiratory and general physicians/paediatricians was not known.

With respect to respiratory services, only one service routinely screened all Indigenous clients for chronic lung diseases; three indicated they did so infrequently. All respondents indicated they had access to educational materials specific to Indigenous clients with chronic lung diseases. Dedicated programmes directed towards Indigenous clients with asthma were conducted in one setting only, with none in any setting for COPD, lung cancer or sleep disorders. None of the services had onsite pulmonary rehabilitation programmes; one service indicated there were programmes in the area that clients could access and three indicated there were none in the area that their clients could access. One respondent was not sure what pulmonary rehabilitation was.

Figure 25: Key health professionals in clinical services in the Central West HSD



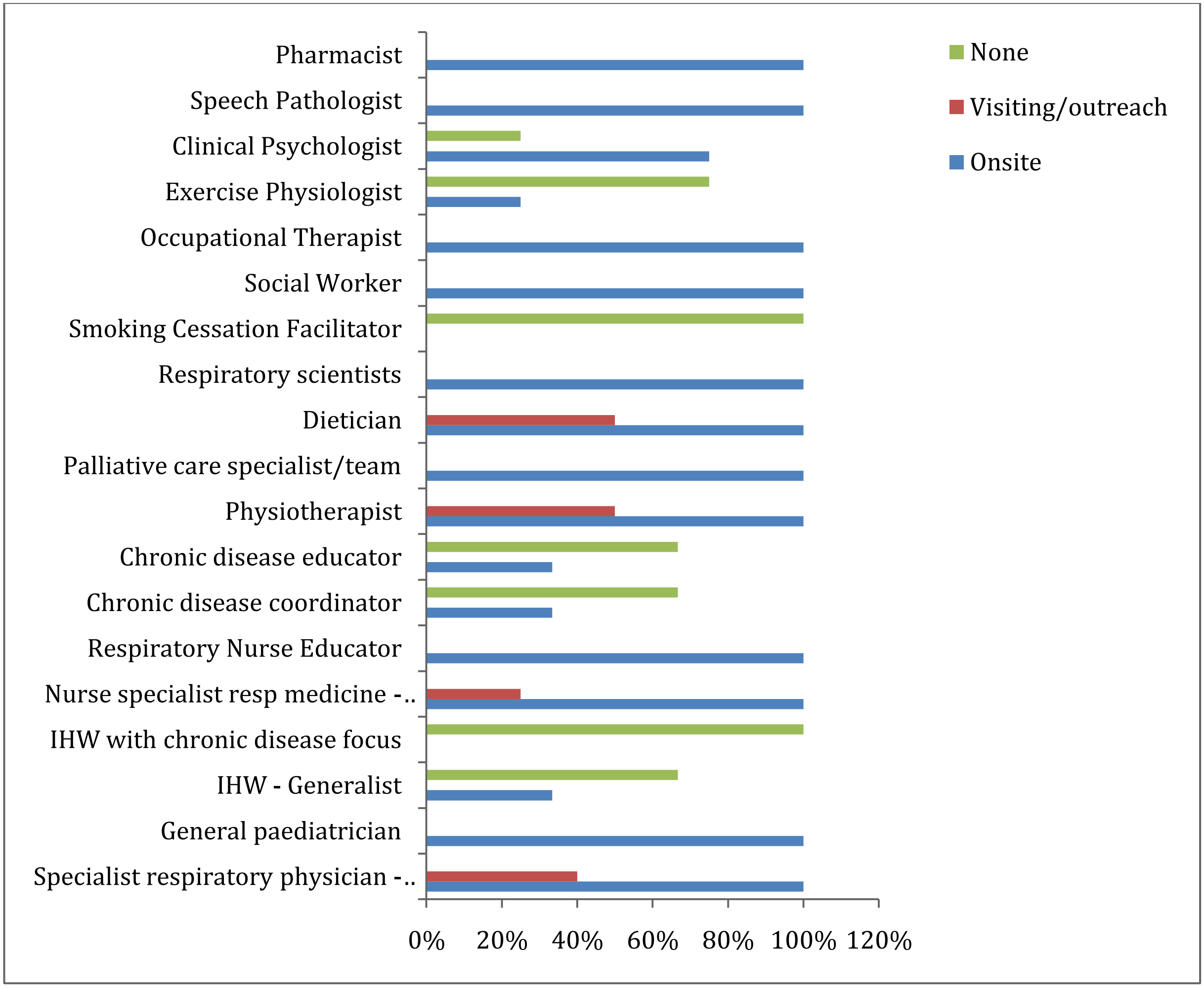
With respect to Spirometry, no services had spirometers onsite (although three respondents were not sure) and none had staff trained both in the use of spirometers and the interpretation of Spirometry data. All services indicated they used SmokeCheck to address tobacco use amongst Indigenous clients; 71% also referred to Quitline and/or provided educational materials. Fifty percent of services ran programmes specifically targeting tobacco use amongst mother, men and pregnant women and 33% had programmes for youth/young people; 17% were not sure if these were available.

Only one respondent could identify other Indigenous specific services within their service area that provided support to people with chronic illnesses and this was the region's Indigenous Chronic Disease Coordinator. The respondent was not however sure what services that position provided. Two services had implemented programmes in the last 12 months that specifically addressed risk factors for respiratory illness in Indigenous people, both of which were SmokeCheck training programmes for health workers. Only one service was working collaboratively with other organisations to address respiratory illness and, again, this was the delivery of SmokeCheck and brief interventions.

6.3.5 Children's Health Services

There were seven respondents from Children's Health Services; three nurses, two doctors, a respiratory scientist and a physiotherapist, however only five answered all questions. All worked in a clinical setting delivering patient care. Access to key health professionals is presented in figure 26. Of particular not here is the lack of chronic disease educators/coordinators, IHWs and a smoking cessation facilitator. The latter may be of particular relevance to the care of young people with chronic lung diseases who smoke.

Figure 26: Key health professionals in clinical services in the Children's Health Services District.



Three respondents indicated they had access to educational materials specific to Indigenous clients with chronic lung diseases, two said no and two did not answer the question. A dedicated programmes directed towards Indigenous clients with asthma was available but there were none for sleep disorders. Four respondents indicated the service had other programmes/services specifically designed for Indigenous clients with chronic lung disease which were outreach services to the Torres Strait and education of health workers. Three respondents reported no access to pulmonary rehabilitation programmes and two indicated such a service was not applicable.

As expected, Spirometry was available onsite and all relevant staff had been trained both in the use of spirometers and the interpretation of Spirometry data. Only one respondent reported using educational materials to address tobacco use amongst their clients and the service was not running any programmes specifically directed at Indigenous youth/young people who smoke.

Only one respondent could identify other Indigenous specific services within their service area that provided support to people with chronic illnesses and this was the services Aboriginal Liaison Officer. As above, the service provides outreach services to the Torres Strait Islands that specifically address respiratory disease. Collaborative partnerships that were identified included the Torres Strait MSOAP and programmes run with Queensland Health, QIMR and the Asthma Foundation of Queensland.

6.3.6 Darling Downs – West Moreton

There were 11 respondents from the Darling Downs – West Moreton HSD. Of these, eight (73%) were employed in a clinical setting. Respondents were based in a public hospital (2), ACCHO (2), Queensland Health primary health care centre (3), Division of General Practice (1) and Corporate Office (1). Five respondents were nurses, three were IHWs and the remainder were doctor (1), project officer (1) and exercise physiologist (1). Access to key health professionals is presented in figure 27, although only five persons answered this question. There was limited access to respiratory specialists, particularly for children.

Only two respondents indicated their service routinely screened all Indigenous clients for chronic lung diseases with one further respondent indicating it did occur but infrequently. Sixty percent had any client information/educational materials specific to Indigenous clients with chronic lung disease and 20% were unsure. Only one respondent indicated their service had a dedicated programme for Indigenous people directed to improving care in asthma and two reported a programme for COPD. One service provided pulmonary rehabilitation on-site and two respondents indicated they could access pulmonary rehabilitation services in the area.

Seventy-one percent of respondents in a relevant clinical setting reported they had spirometers on-site. Of these 57% indicated staff had been trained in the use of spirometers, 43% had been trained in the correct interpretation of Spirometry data and 28.6% reported Spirometry was regularly performed on Indigenous clients with chronic lung diseases. Activities undertaken to address tobacco use in Indigenous clients are presented in figure 28. Three respondents indicated their services had programmes specific to tobacco use amongst Indigenous pregnant women and youth, two had programmes directed at mothers and one had a programme directed at men.

With respect to broader programmes and services for Indigenous clients with chronic diseases, six respondents nominated transport services provided by the local ACCHO. The local ACCHO also provided QUMAX (Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islanders) for medication, diabetes support and physical activity programmes (aqua aerobics and walking group). Five respondents indicated their service had implemented, or participated in, programmes that specifically addressed risk factors for respiratory illness in Indigenous people in their area. These included TB screening, immunisation programmes, an asthma education project, exercises to increase lung function, brief community based interventions around smoking, asthma and COPD by the senior health worker that can be done in five minutes and facilitating access to a respiratory nurse.

Six respondents also indicated their service was currently participating in collaborative partnerships that either directly or indirectly addressed respiratory illness in Indigenous people in their area. These included an asthma project in partnership with the ACCHO, participation in the APCC waves, education programmes at Kambu and Cherbourg and collaboration with a respiratory nurse.

Figure 27: Key health professionals in clinical services in the Darling Downs – West Moreton HSD.

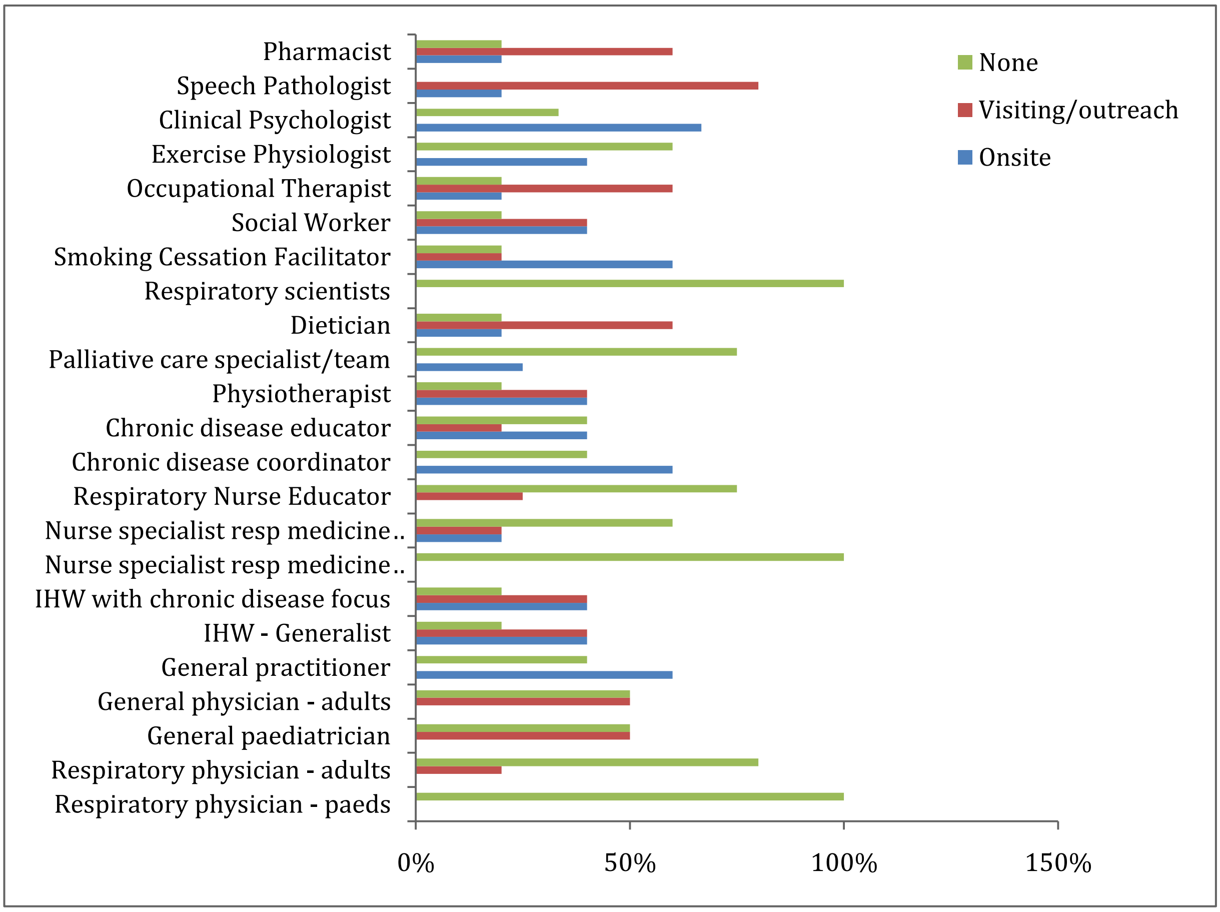
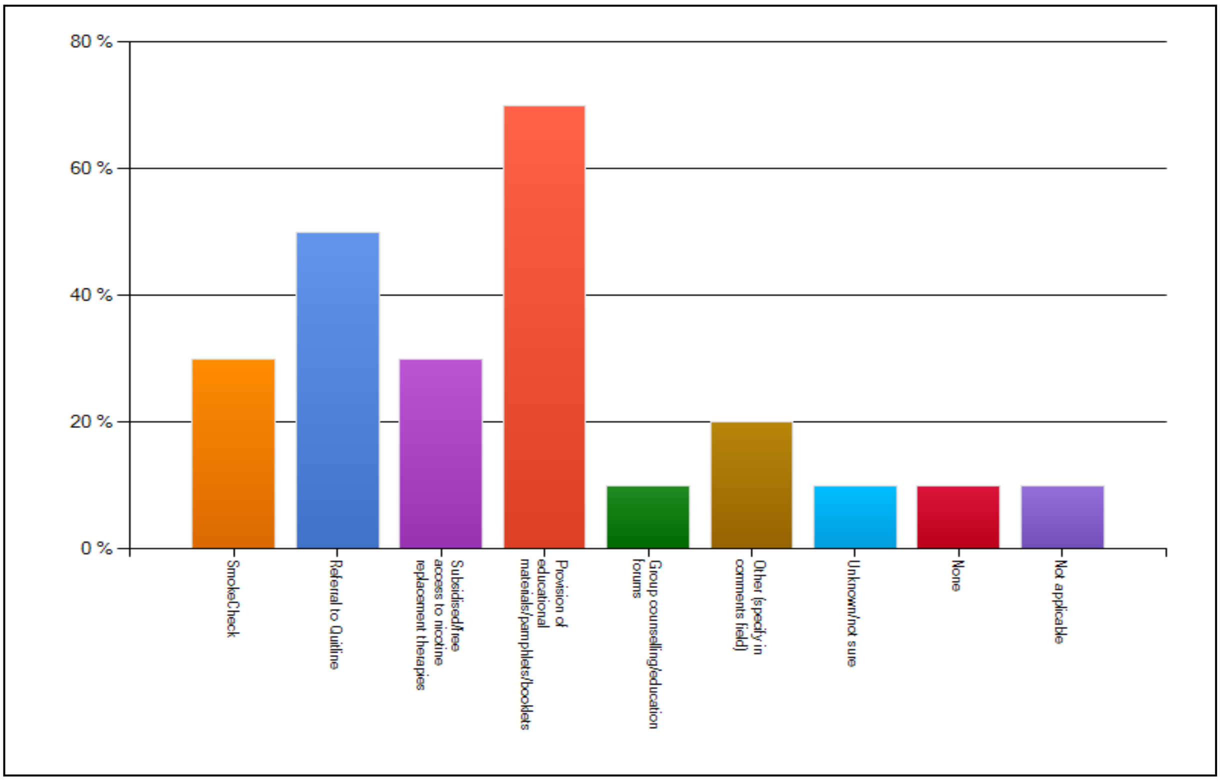


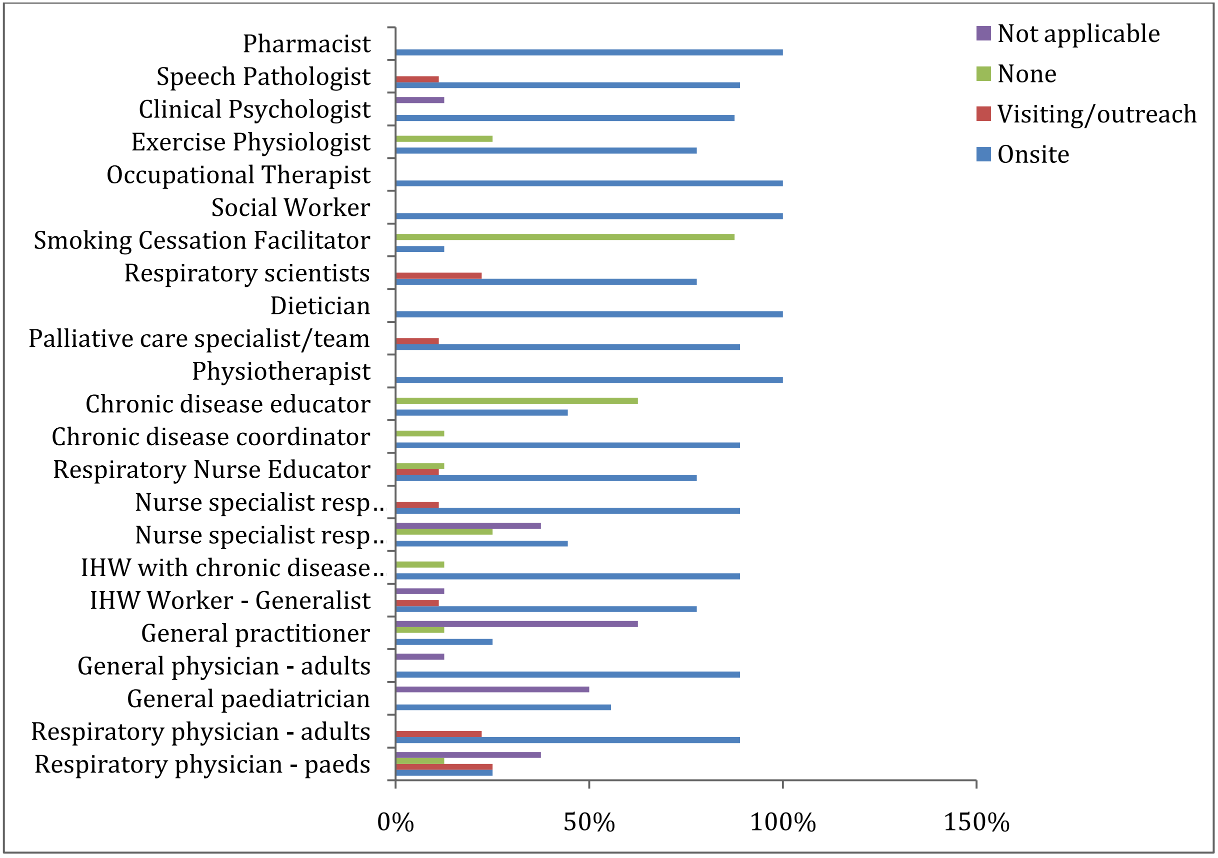
Figure 28: Tobacco control activities undertaken by services in the Darling Downs – West Moreton HSD.



6.3.7 Gold Coast

The survey was completed by 15 respondents in the Gold Coast HSD of whom 13 (87%) were employed in a clinical setting and two were based in the HSD office. Of the clinical settings, four were employed in a Queensland Health community clinic and six were employed in a public hospital; one participant also worked in a private hospital. Six respondents were nurses, four were doctors, one an Indigenous Health Worker, one an Indigenous Health Coordinator and one an exercise physiologist. The key professionals available to the services in which respondents were employed are presented in figure 28. Of note is the lack of a smoking cessation facilitator, limited paediatric services and access to a chronic disease educator.

Figure 29: Key health professionals in clinical services in the Gold Coast HSD

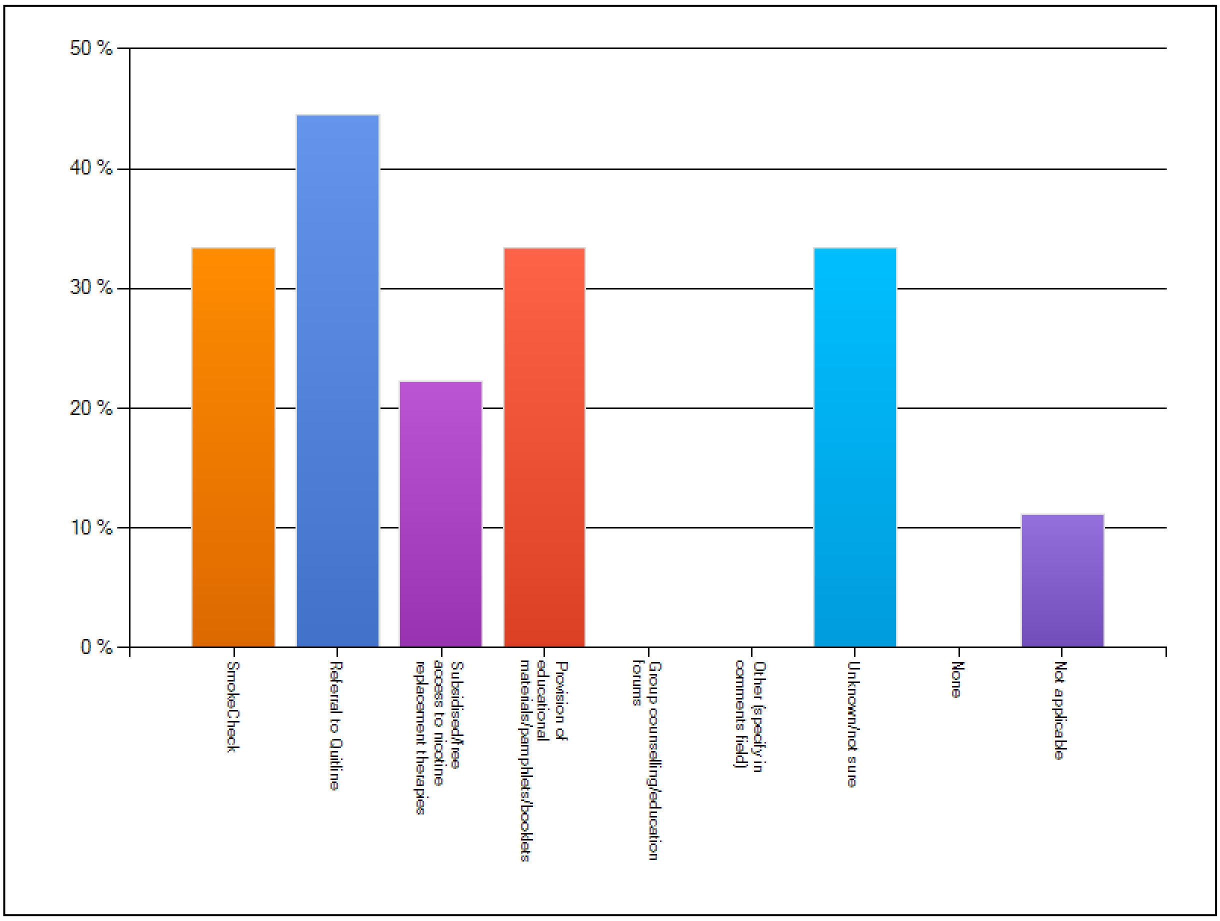


Nine respondents answered the questions about general respiratory services. Three respondents indicated their service routinely screened all Indigenous clients for chronic lung diseases, one indicated it was done occasionally and one indicated it was done infrequently; two were not sure. Four indicated they had access to client information/educational materials specific to Indigenous clients with chronic lung disease, four were not sure and one had none. One respondent stated their service had a dedicated programme for Indigenous people directed to improving care in asthma and COPD but none for lung cancer and sleep disorders. Six indicated their service did not have these programmes and two were not sure. Three indicated they had access to pulmonary rehabilitation programmes onsite and all indicated they had access to them in their area.

With respect to Spirometry, all respondents indicated their services had spirometers on site and all but one indicated staff had been trained in the use of spirometers and the interpretation of Spirometry data. Spirometry was routinely performed on clients with chronic respiratory illnesses.

The activities undertaken to address tobacco use amongst Indigenous clients are presented in figure 30. One service had programmes specifically directed at pregnant women, mothers and youth/young people, two had programmes directed at men. In one of these centres these programmes were run as part of Heart Screening Clinics. A further service indicated these programmes would commence once health workers had completed the SmokeCheck training programme.

Figure 30: Tobacco control activities undertaken by services in the Gold Coast HSD.



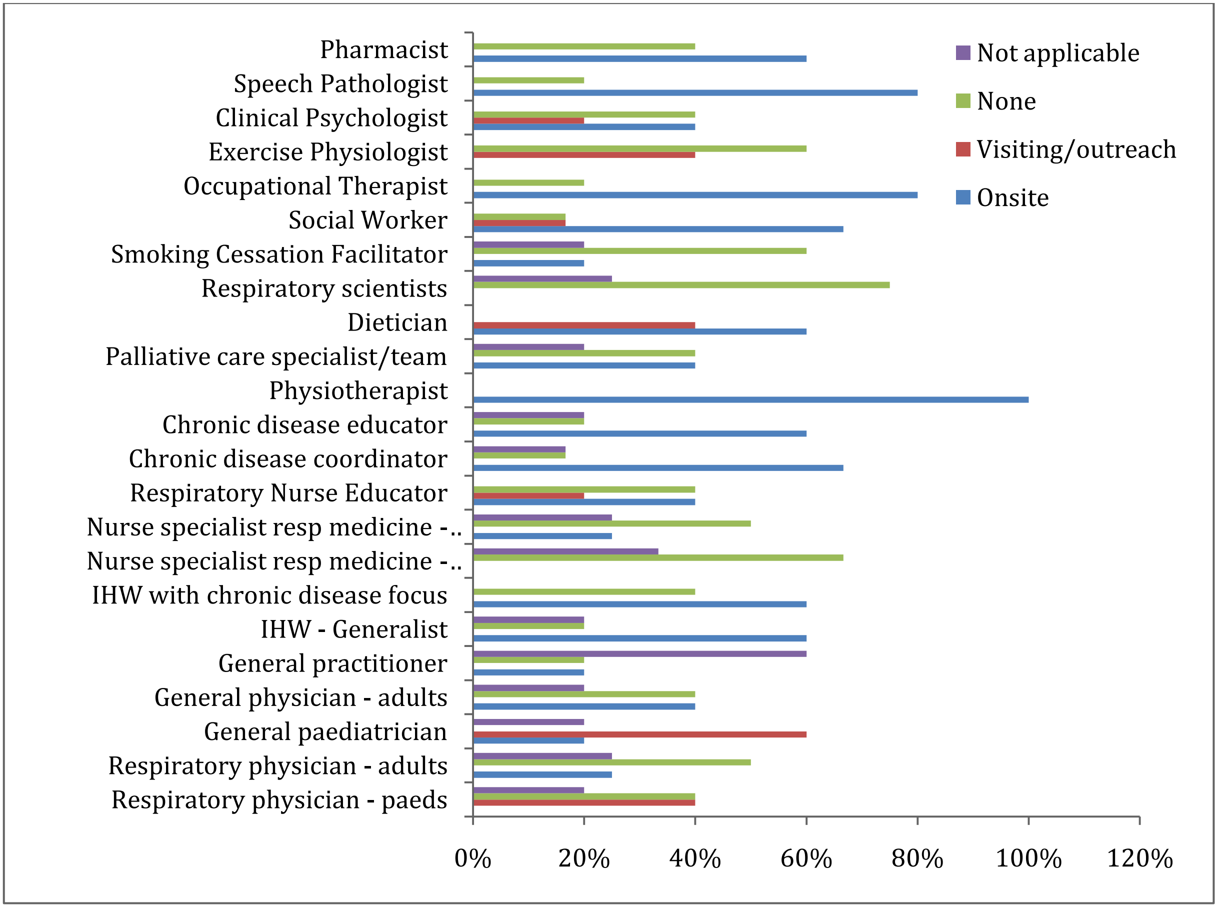
With respect to broader programmes and services, three respondents could identify other Aboriginal and/or Torres Strait Islander specific services within their service area that provided support to people with chronic illnesses. These included the Heart Screening Clinic in which Spirometry and smoking activities were performed and the ACCHO that runs chronic disease self management programmes. The Indigenous health service also conducts a kidney health education programme and diabetes self management camp. Indigenous clients were also referred to mainstream heart and COPD clinics.

Three respondents indicated their service had implemented, or participated in, programmes that specifically addressed risk factors for respiratory illness in Indigenous people in their area. These included opportunistic Spirometry and conducting screening programmes every two months. Four respondents indicated participation in collaborative programmes including specialist outreach services to a remote community three times a year, partnerships with mainstream chronic disease programmes, the MDT approach to delivering Indigenous programmes and a cardiac disease screening programme with collaboration with Kalwun Development Corporation (the regions ACCHO) which includes Spirometry.

6.3.8 Mackay

There were 12 respondents from the Mackay HSD, of whom 11 were employed in a clinical setting. The settings included a public hospital (7), a Queensland Health community clinic/primary health care centre (2), an ACCHO (1) and a private hospital (1). Eight respondents were nurses, two were IHWs and one performed clinical measurements in cardiac, respiratory and neurological patients. Key health professionals available to services are presented in figure 31. There was limited access to paediatric specialities, smoking cessation facilitators and respiratory scientists.

Figure 31: Key health professionals in clinical services in the Mackay HSD

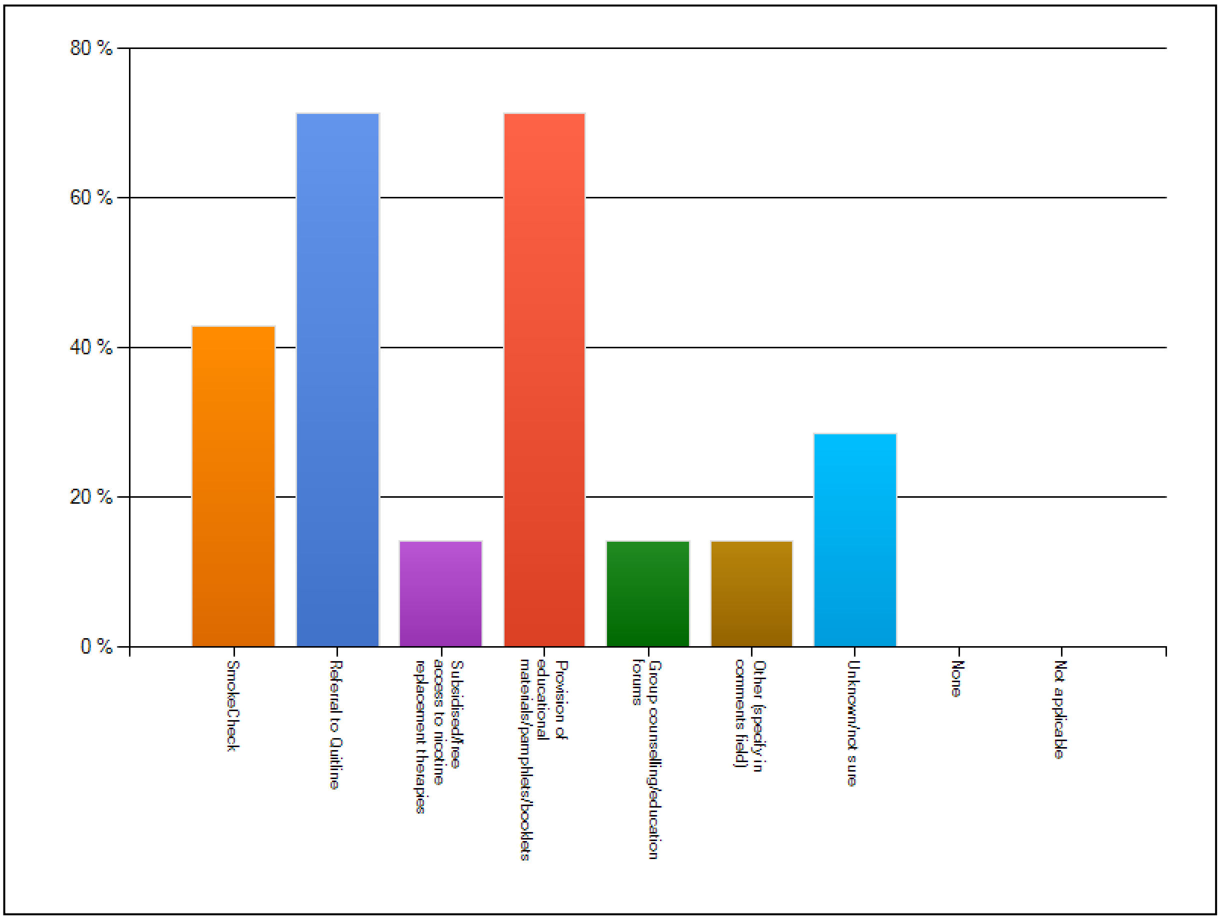


Seven respondents provided information about general respiratory services for Indigenous clients. Only one indicated their service routinely screened Indigenous clients for chronic lung diseases (3 were unsure). Only two indicated they had access to client information/educational materials specific to Indigenous clients with chronic lung disease (2 were unsure) and only 1 indicated their service had a dedicated programme for Indigenous people directed to improving care in asthma and COPD. None of the respondents indicated their services had programmes/services specifically designed for Indigenous clients with chronic lung disease, although 2 indicated they had such services for anyone in the community. Only three respondents indicated they had access to pulmonary rehabilitation programmes, of which two were onsite. One respondent from a public hospital indicated they were currently running a pulmonary rehabilitation pilot programme.

Five of seven respondents indicated Spirometry was available onsite however in two of these staff had not been trained in the use and interpretation of spirometers and Spirometry data. All indicated Spirometry was performed routinely on clients with chronic lung diseases.

Activities undertaken by services to address tobacco use amongst Indigenous clients are presented in figure 32. Two services were providing running programmes that addressed tobacco use specifically amongst Indigenous youth, pregnant women and mothers and one was providing programmes for men; two respondents were not sure.

Figure 32: Tobacco control activities undertaken by services in the Mackay HSD.

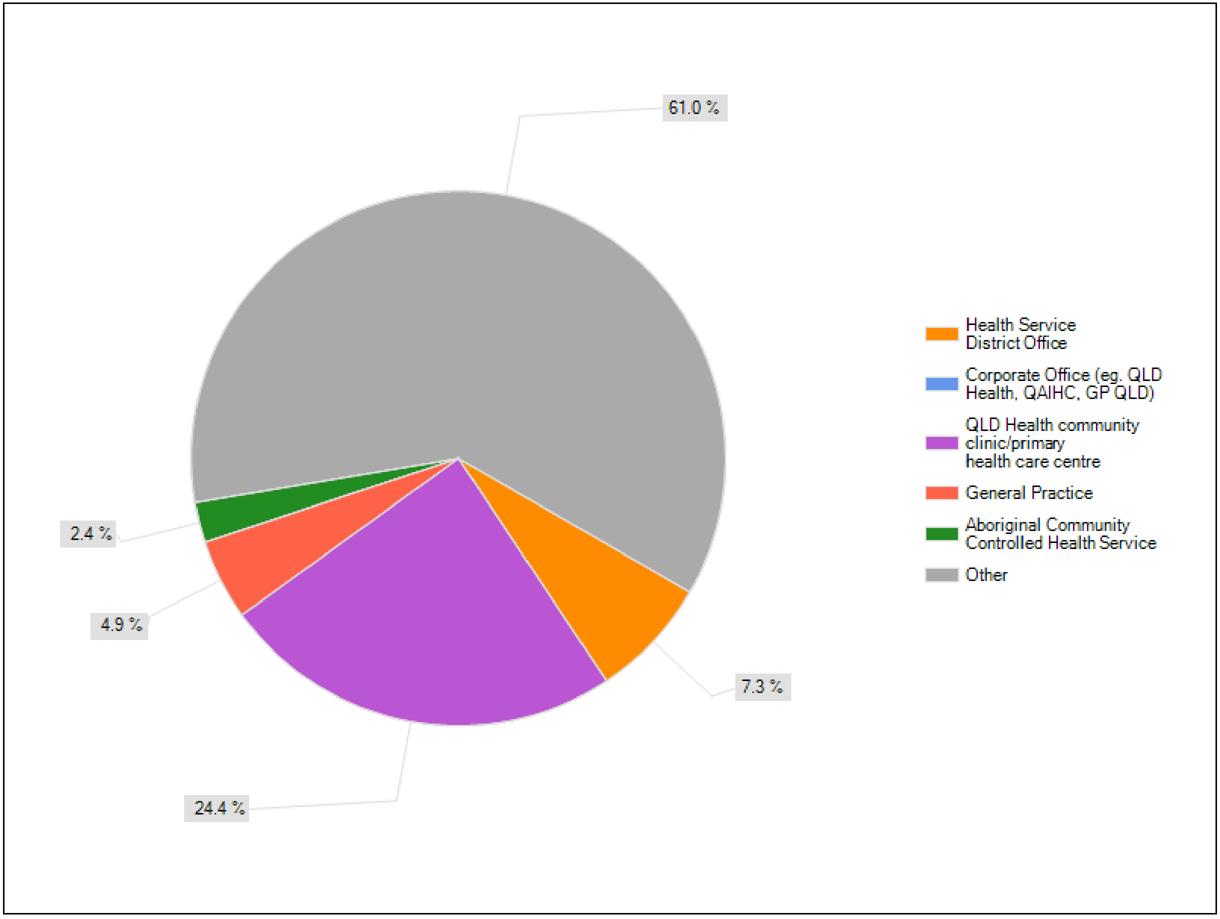


Four of six respondents indicated other Aboriginal and/or Torres Strait Islander specific services within their service area that provided support to people with chronic illnesses; all nominated transport services. Two of five respondents indicated their service had implemented, or participated in, programmes that specifically address risk factors for respiratory illness in Indigenous people in the past 12 months. This was identified as the Respiratory Nurse at Mackay Base Hospital who has implemented programmes to minimise risks within the district, although these were not further specified. One respondent indicated their service was currently participating in collaborative partnerships that either directly or indirectly addressed respiratory illness in Indigenous people in the area but did not specify what these partnerships were.

6.3.9 Metro North

A total of 42 persons from the Metro North region contributed data to the survey. Of these, 83% were employed in a clinical setting. The majority were located in a public hospital (figure 33). Twenty-eight percent of respondents were doctors, 28% nurses, 20% Allied Health, 13% Indigenous Health Workers, 10% were respiratory scientists and the remainder were project officers and management.

Figure 33: Organisations in which Metro North HSD survey respondents were employed.



Access to key health professionals is presented in figure 34. The data reflect the location of major tertiary facilities in the region, primarily the Royal Brisbane and Women's and the Prince Charles Hospitals. Apparent gaps in this region are access to chronic disease educators and coordinators and smoking cessation facilitators. While paediatric services are reportedly low, this would reflect these services being provided by the Royal Children's Hospital which, while it is physically located in the Metro North region, is categorised as a separate HSD.

Thirty-five respondents answered questions about general respiratory services for Indigenous clients. Forty-two percent were not sure if their service screened Indigenous clients for chronic lung diseases, 26.5% indicated it was done routinely and 14.7% indicated it was done occasionally or infrequently. Fifty-three percent were not sure whether their service had information/educational materials specific to clients with chronic lung disease; 29% indicated they did. Whether services had dedicated programmes for Indigenous clients with respiratory diseases is presented in figure 35; the majority of respondents were unsure.

Figure 34: Key health professionals in clinical services in the Metro North HSD

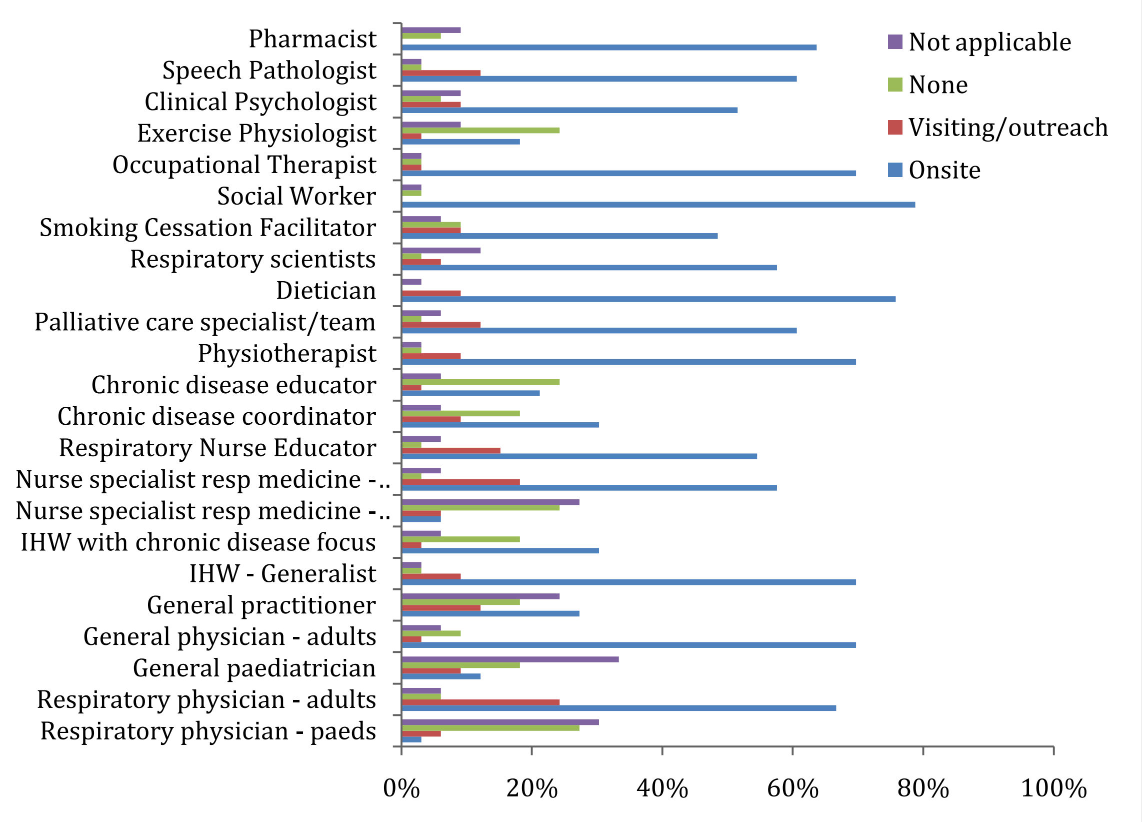
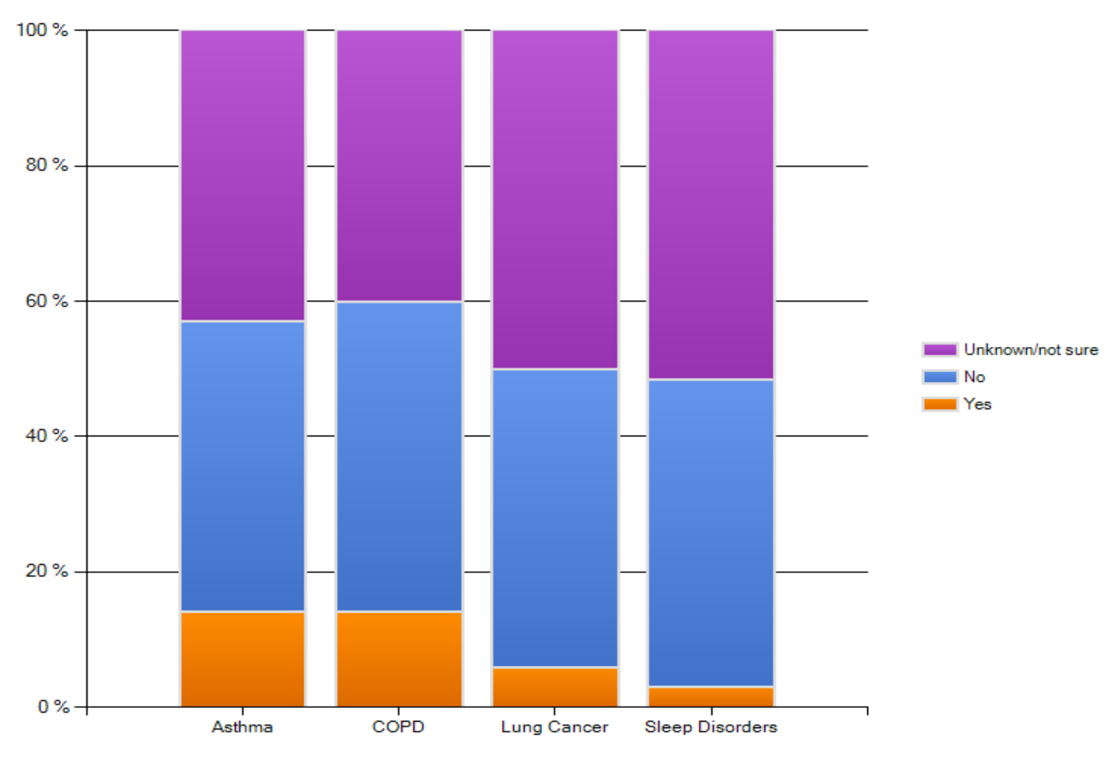


Figure 35: Services providing dedicated programmes for Indigenous clients with chronic lung diseases in the Metro North HSD.



Seventeen percent of respondents indicated their service had programmes/services specifically designed for Indigenous clients with chronic lung disease; 30% said no but that there were services available to anyone in the community. Three respondents provided detail of these services which included health education programmes that linked to other services, the Nalingu Respite Centre and the *Isobel Intervention & Prevention Programme* reported by an Indigenous Health Service in the region (Box). One respondent from a Division of General Practice indicated they were currently in the process of mapping those services for Indigenous persons amongst general practices affiliated with the Division.

Two-thirds of respondents indicated their services provided pulmonary rehabilitation programmes onsite and 53% indicated there was also access to those programmes in their area. Spirometers were available onsite in all but one location. Amongst these, 81% reported staff had been trained in the use of spirometers, 70% had been trained in the interpretation of Spirometry data and 64% indicated Spirometry was routinely performed on clients with chronic lung diseases. One respondent from an ACCHO indicated they had a spirometer but it was broken

Isobel Intervention & Prevention Programme

The name 'Isobel' is in respect of 2 strong prominent Aboriginal women, who lived with and suffered long term chronic illnesses and eventually succumbing to their illnesses. These women were very active in promoting Aboriginal women, families, education and the need for change. This is a tribute to all the strong Aboriginal women and men in Australia. IIPP has been evolving over the past 4 years into the 5 components below.

a) Service Improvement

- *Team Leader/Chronic Disease Coordinator – coordination, development, implements and hand over chronic disease programmes and activities aligning with Queensland Chronic Disease Strategy 2005 – 2015, as well as contributing to Government commitments in Closing The Gap for Indigenous people.*
- *Advanced Health Worker – Diabetes – diabetes coordination of care and support, diabetes recall, oral health for diabetes clients, renal support, gestational diabetes coordination of care and support and diabetes support group.*
- *Advanced Health Worker – Nutrition Promotion – Murri and Islander Women's Group, health promotion and community education sessions.*
- *Physical Activity Health Promotion Officer – co-facilitate physical activities, health promotion activities and community education sessions.*

b) Physical Activities – encouraging Indigenous participation in physical activities to improve their health, decrease their chances of suffering chronic illnesses, decrease incidents in fall preventions.

c) Behavioural Changing Programmes – providing information to guide Indigenous participation in changing their 'mindset' regarding their health care, health issues and encouraging ownership of their health.

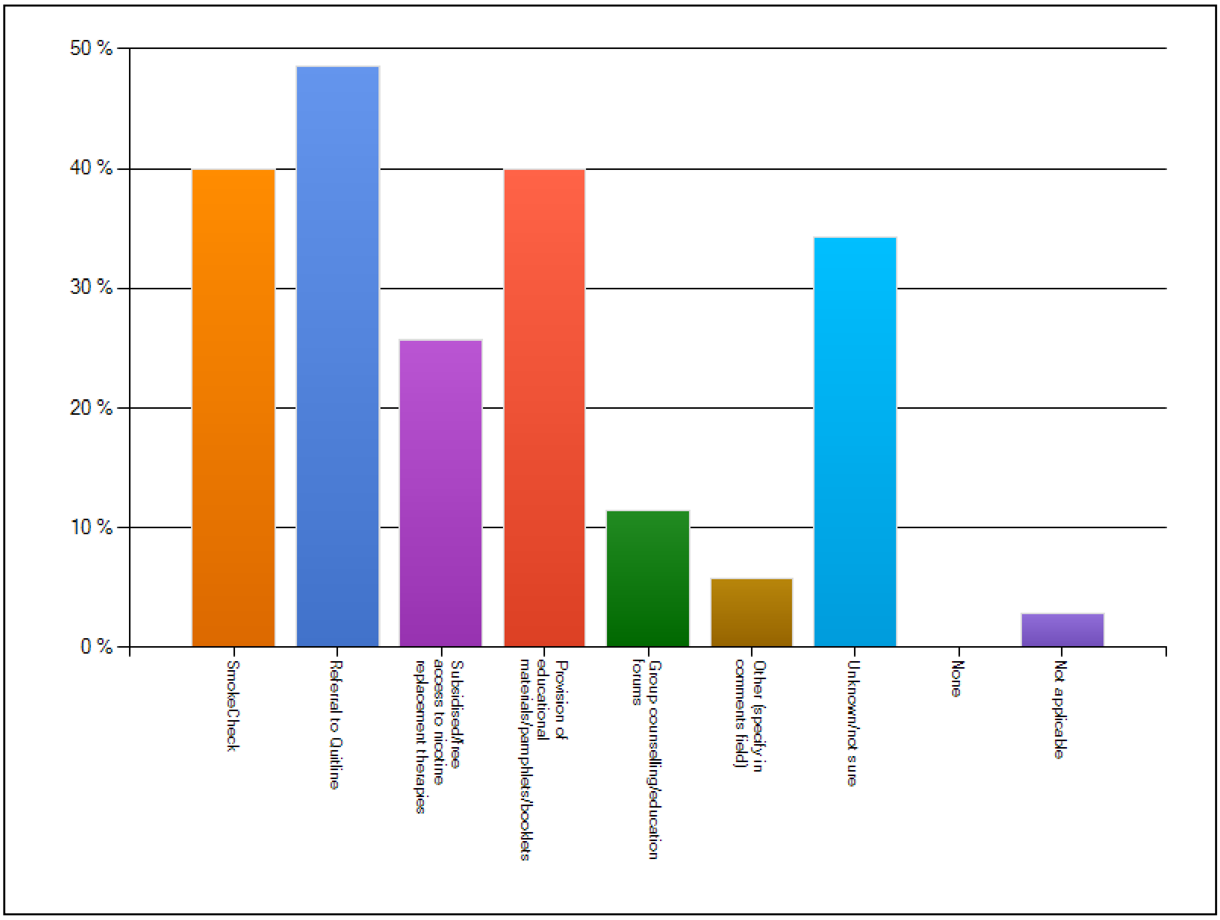
d) Education Sessions – providing information to participants enabling them to make an informed decision regarding their health.

e) Support Groups – providing an intimate educational avenue, social outlet, networking opportunity and a 'safe' group for those with health related illnesses.

Tobacco control strategies being utilised by services are presented in figure 36. Responses in the “other” category included:

- Occupational therapy smoking cessation clinic two days a weeks for outpatients and five days a week for in inpatients. Smoking cessation counselling & NRT is provided (public hospital)
- A dedicated Indigenous Health Clinic that provides SmokeCheck and possibly access to ongoing NRT. There are also dedicated IHWs that have been trained in SmokeCheck within the HSD (public hospital)
- Referral to the COACH programme and Quit programme (Indigenous Health Service)
- Individual sessions with a smoking cessation facilitator available (Queensland Health primary health care centre)

Figure 36: Tobacco control activities undertaken by services in the Metro North HSD.



Sixty-percent of respondents were able to identify other Indigenous specific services within their service area that provided support to people with chronic illnesses. These were predominantly the Chermside Indigenous Health Service, HACC services, Nalingu Respite and Home Care Service, the Murri Heart Programme and Murri Gym, Spiritus Nursing, the Isobel Programme, the new Indigenous Health Service at Northlakes and transport services provided by various organisations.

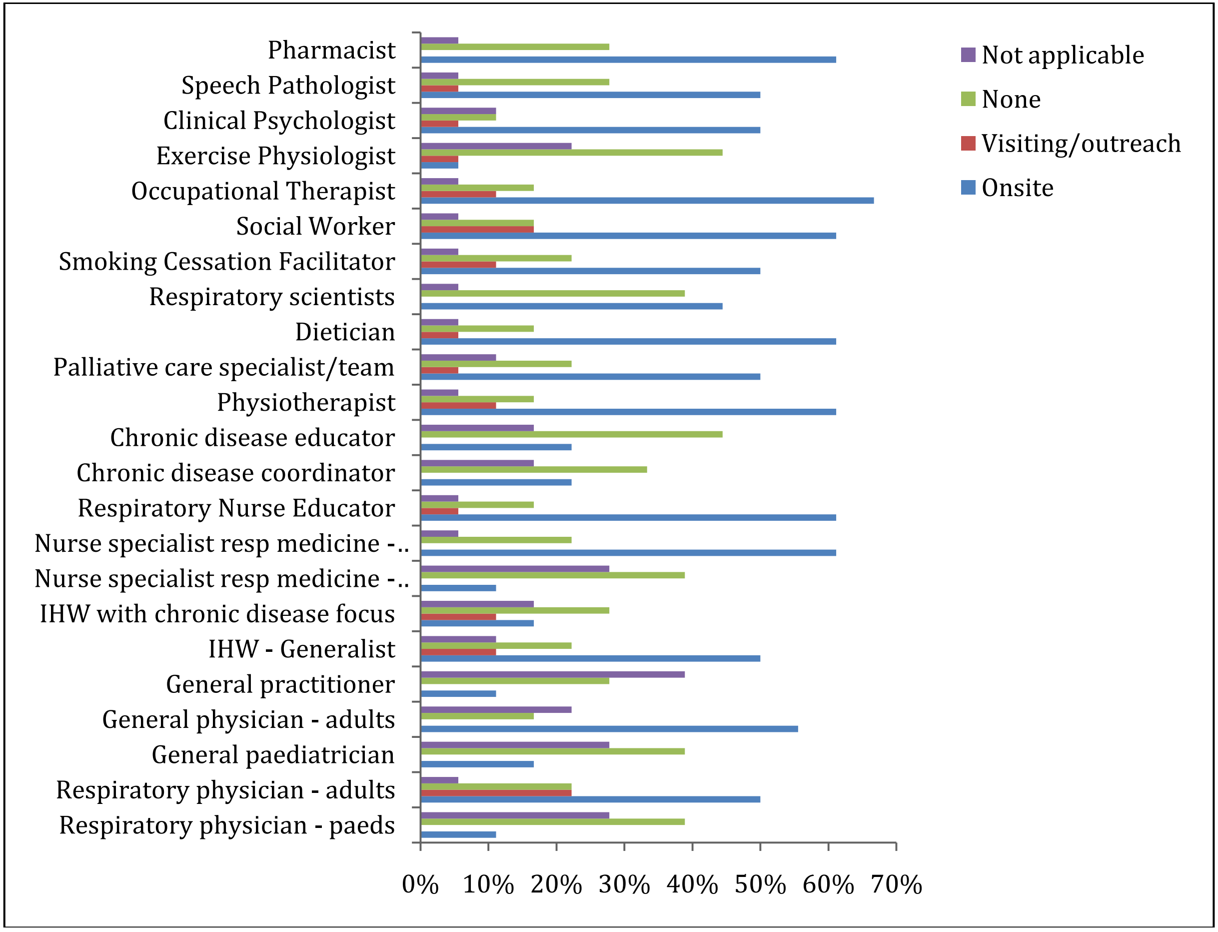
6.3.10 Metro South

There were 27 respondents to the survey from the Metro South HSD; 85% of these were based in a clinical setting. The majority of respondents were located in a public hospital (52%) with a further 19% located in a Queensland Health Community Clinic/Primary Health Care Centre. There were no respondents from an ACCHO. The majority of respondents were nurses (48%), followed by doctors

(24%), allied and other health professionals (16%), respiratory scientists (12%) and there was one IHW.

Eighteen persons responded to the question regarding access to key health professionals by their services (figure 37). Of note is a lack of exercise physiologists, chronic disease educators and paediatric services, although the latter may reflect the Metro South HSD having paediatric specialist services provided by the Mater Children's and/or the Royal Children's Hospital.

Figure 37: Key health professionals in clinical services in the Metro South HSD



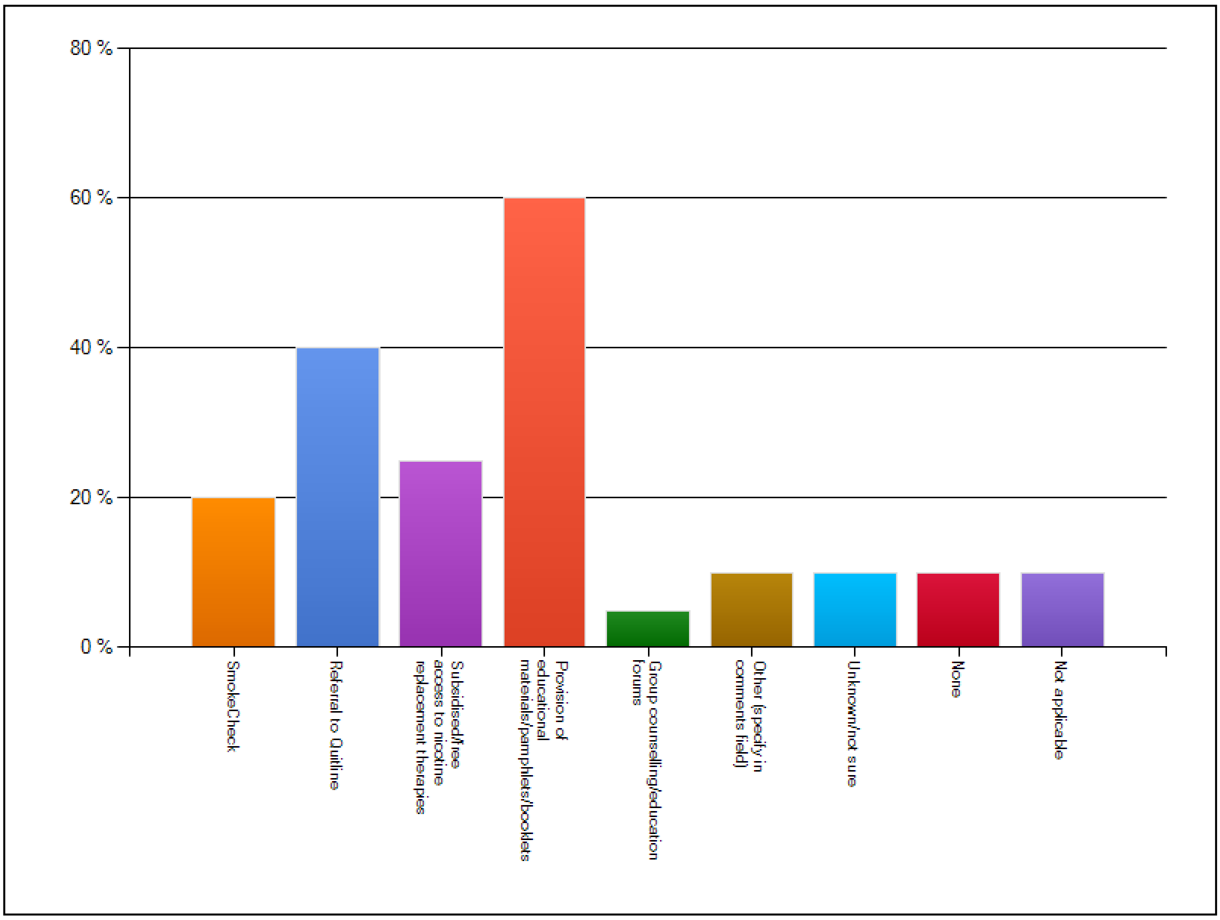
Routine screening of Indigenous clients for chronic lung diseases was reported by 27% of 15 respondents, with a further 13% reporting this was done occasionally or infrequently; 33% were not sure. With respect to access to information/educational materials specific to Indigenous clients with chronic lung disease, 50% of respondents indicated they had some of these materials available and a need for these resources was specifically articulated. An Indigenous Health Project Officer from a General Practice indicated the practice was in the process of developing these resources.

Only two services had dedicated programmes for Indigenous people directed to improving care in asthma (2) and COPD (1); there were none for lung cancer or sleep disorders. Forty percent indicated there were programmes in their area that were available to anyone in the community. One respondent from the General Practice mentioned above indicated the service was running a programme to increase the attendance of Indigenous people in the community at the practice and to encourage attendance for health checks.

Ninety-four percent of respondents indicated that spirometers were available on site, with 94% of these reporting that staff had been trained in the use of spirometers and 88% had been trained in the correct interpretation of Spirometry data. One respondent from a Queensland Health community clinic indicated that another spirometer and more training was required.

With respect to tobacco control initiatives, the majority of respondents used educational materials (figure 38). Only one respondent indicated their service ran programmes specifically directed at Indigenous youth, mothers, pregnant women and men. Two respondents indicated clients were more likely to attend Inala Health Service for smoking cessation support given free access to nicotine replacement therapies.

Figure 38: Tobacco control activities undertaken by services in the Metro South HSD.

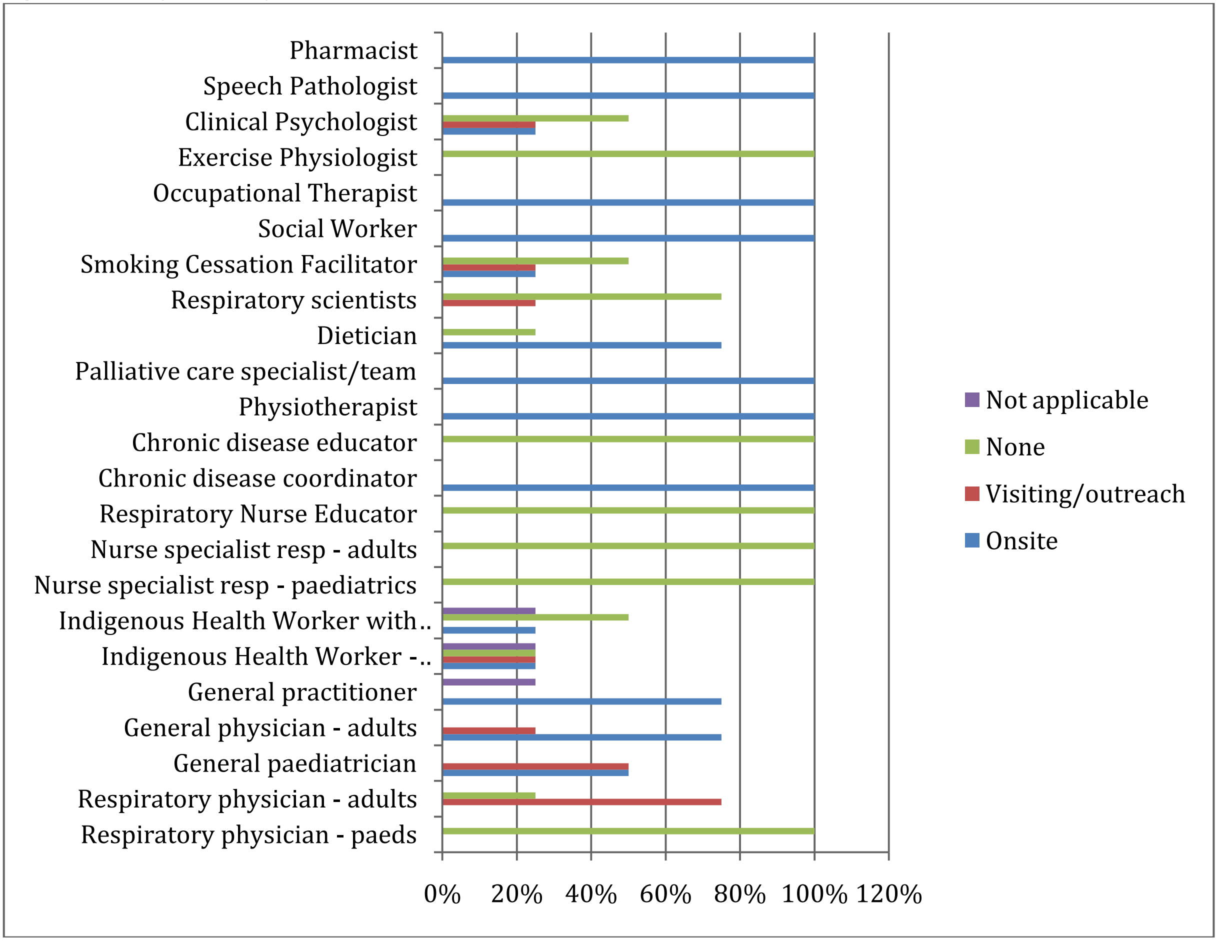


With respect to other Indigenous specific services within their service area that provided support to people with chronic illnesses, eight (40%) could identify those services and predominantly nominated the Inala Health Service. Three respondents indicated their service had implemented, or participated in, programmes that specifically addressed risk factors for respiratory illness in Indigenous people in the past 12 months. These included Asthma Education workshops for carers in Respite and Day Care Centres and networking with local Indigenous health services. Similarly, three respondents indicated their service was currently participating in any collaborative partnerships that either directly or indirectly address respiratory illness in Indigenous people in their area, with one nominating the new APCC wave for COPD. A Queensland Health community clinic/primary health care centre indicated it would like more space and resources to undertake such activities.

6.3.11 Mt Isa

There were seven respondents from the Mt Isa HSD; 86% were based in a clinical setting. Five were located in a public hospital, one in a Queensland Health community clinic/primary health care centre and one in a HSD office. There were four nurses, one physiotherapist, one IHW and one person from administration. Four persons responded to the question about access to key health professionals in their service (figure 39). Of particular note in this HSD, is the lack of respiratory nurses, a chronic disease educator, an exercise physiologist and specialist respiratory physicians.

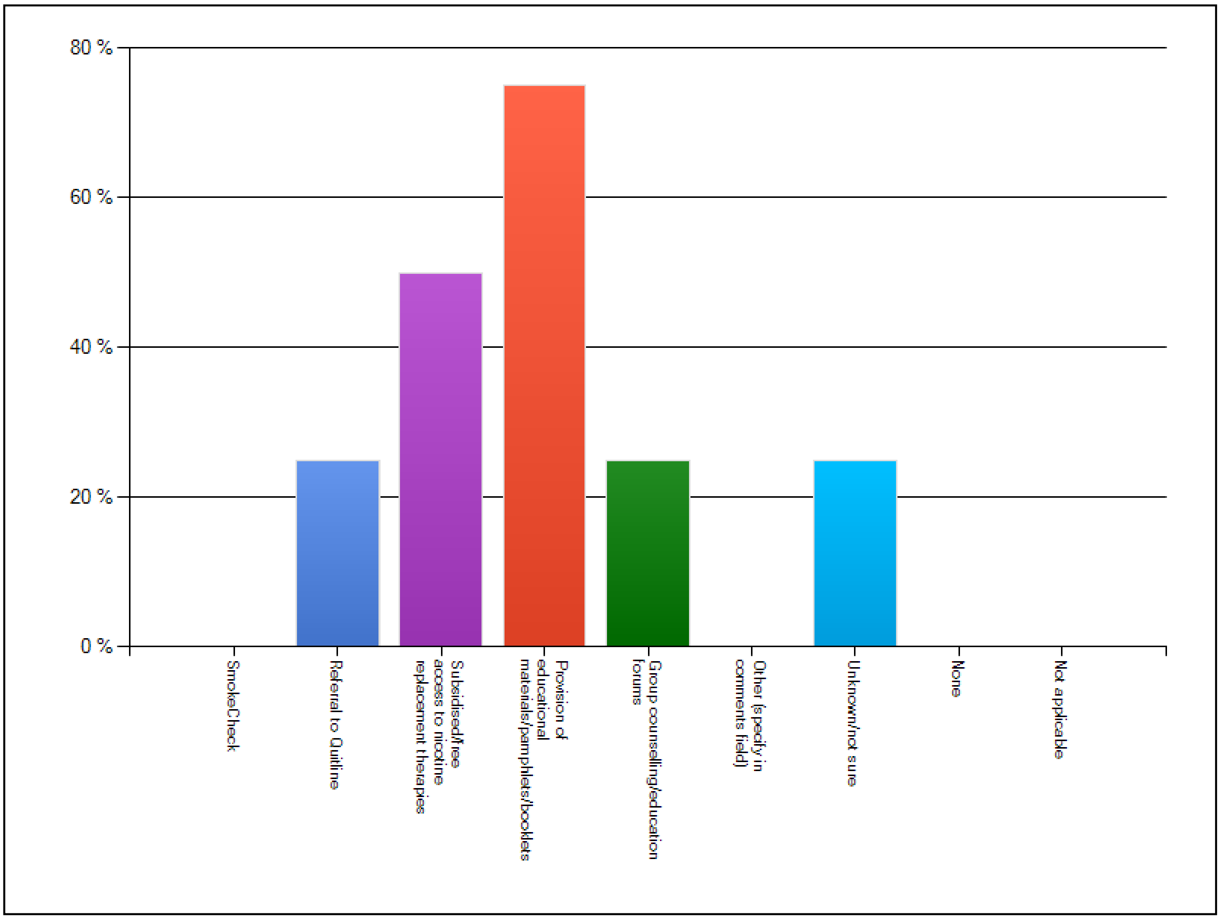
Figure 39: Key health professionals in clinical services in the Mt Isa HSD



Only two respondents indicated their service routinely screened Indigenous clients for chronic lung diseases and none of the respondents indicated their service had access to educational materials for Indigenous clients with these diseases, although it was articulated these resources were needed. One of four respondents indicated their service had a specific programme in asthma and COPD directed at Indigenous clients, with the remainder unsure. There were no programmes for sleep disorders and none were identified for lung cancer. Three of four respondents indicated they had access to pulmonary rehabilitation programmes either onsite or in the area.

Three of four respondents reported onsite access to a spirometer however only two of these indicated staff had been trained in the use of spirometers or interpretation of Spirometry data. Tobacco control activities undertaken by services in the Metro South HSD to address tobacco use amongst their Indigenous clients are presented in figure 40. Of note is that none of the services reported using SmokeCheck. One respondent indicated that tobacco use was addressed in cardiac rehabilitation programmes. One service indicated they had specific tobacco initiatives for youth, men and pregnant women.

Figure 40: Tobacco control activities undertaken by services in the Mt Isa HSD.



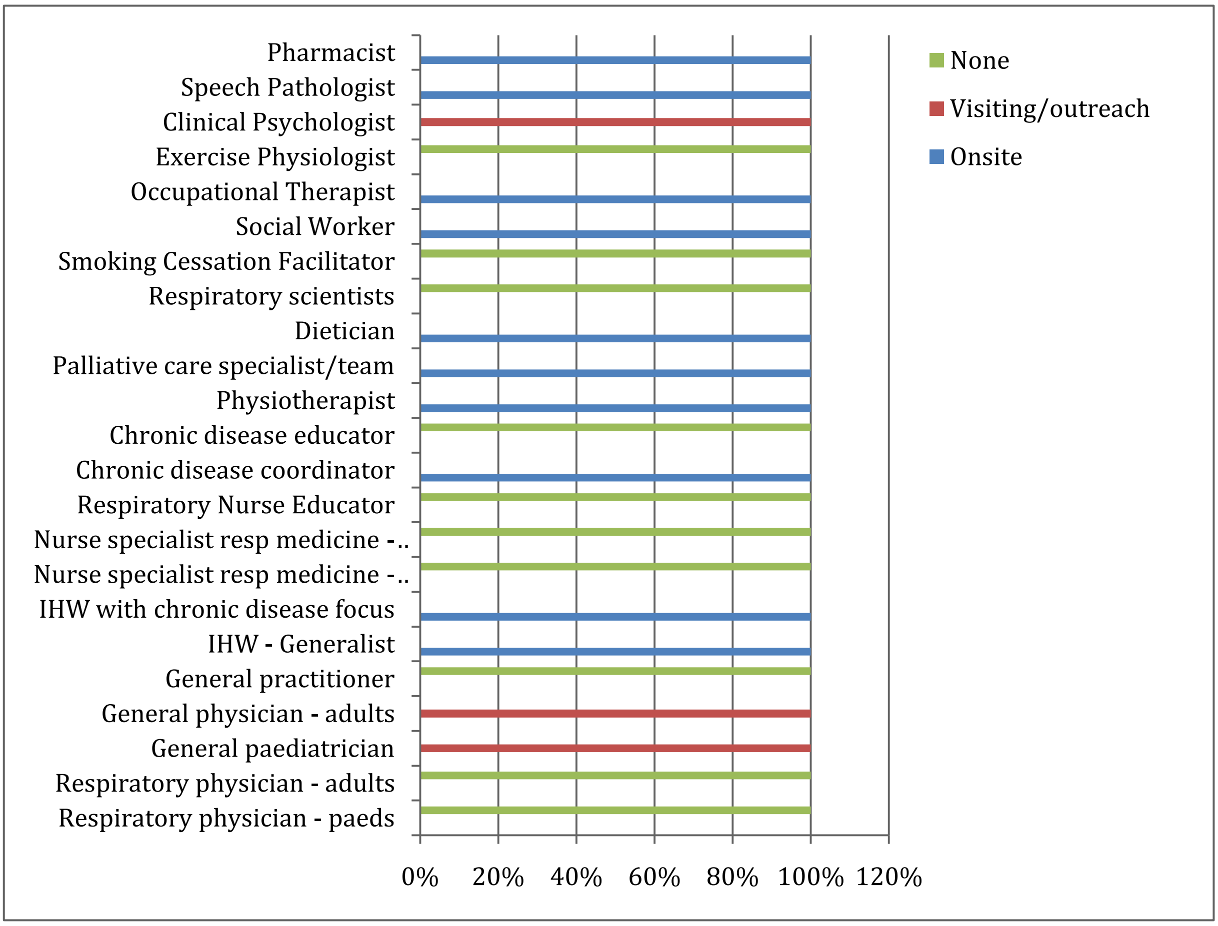
With respect to broader programmes and services, three respondents could identify other services in their area that supported Indigenous people with chronic diseases, all of whom referred to the local ACCHO. One service indicated they had implemented, or participated in, any programmes that specifically addressed risk factors for respiratory illness in Indigenous people in the area or were involved in collaborations but these programmes were not specified.

6.3.12 South West

There was only one respondent from the South West HSD, an IHW based in a Queensland Health community clinic/primary health care centre. As such, representation of the region in this report is limited. This clinic was located in a regional town with a population of approximately 7000 people. The access to key health professionals by this service is presented in figure 41. There was no access to respiratory specialists (nursing, medical or scientists) and no access to a smoking cessation facilitator.

The respondent indicated that in his/her service there was no screening of Indigenous clients for chronic lung disease, no educational materials specific to Indigenous clients with chronic lung diseases, no general programmes or services for these clients and no access to pulmonary rehabilitation in the area.

Figure 41: Key health professionals in clinical services in the South West HSD



A spirometer was available onsite but staff had not been trained in its use or the interpretation of Spirometry data. With respect to tobacco initiatives, the service used SmokeCheck, referral to Quitline and educational materials to address tobacco use amongst Indigenous clients. The service also had specific programmes directed at tobacco use amongst Indigenous young people, mothers, pregnant women and men.

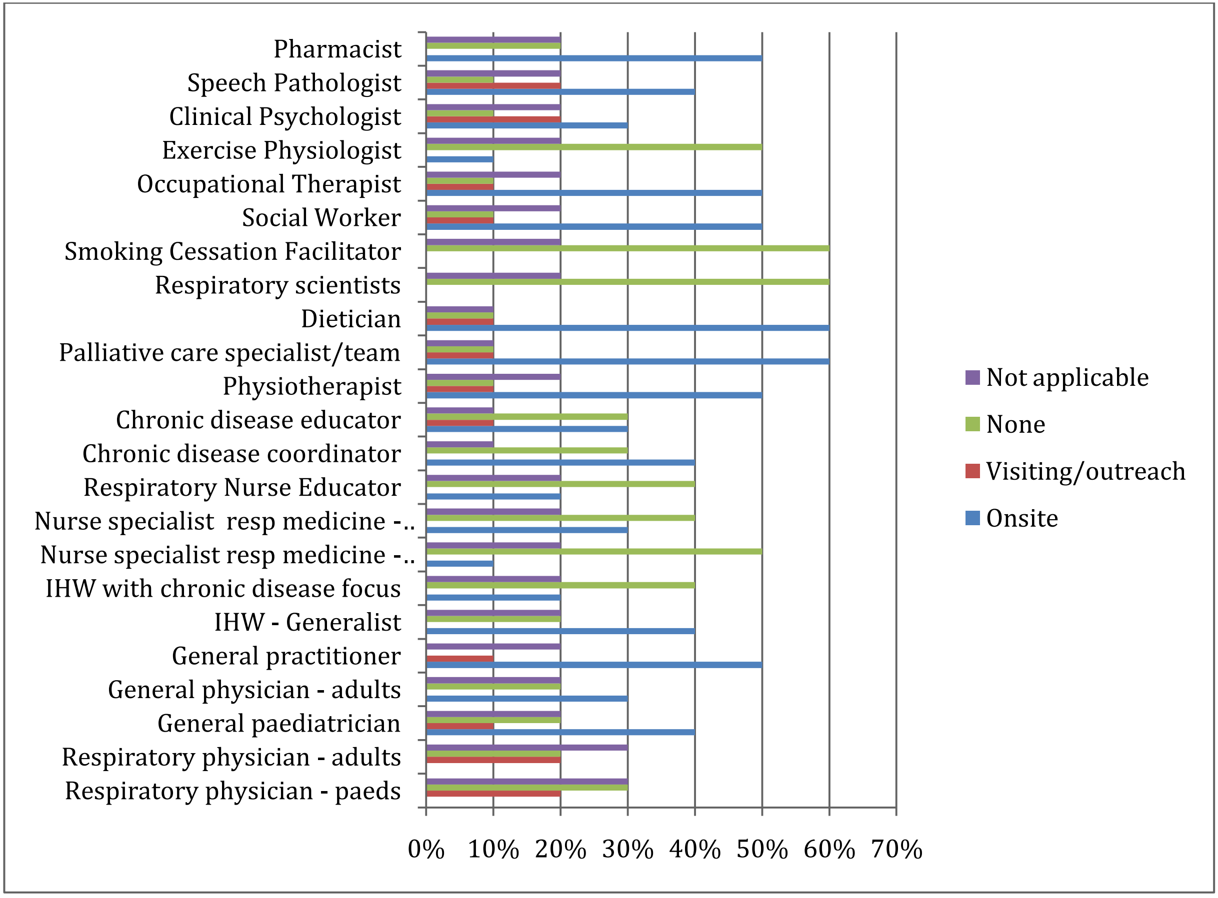
The respondent indicated his/her service had not participated in any programmes or initiatives to address respiratory disease amongst Indigenous clients over the past 12 months, nor was it involved in any collaborations/partnerships to do so. The respondent nominated the local ACCHO as another service in the area providing support to Indigenous clients with chronic diseases.

6.3.13 Sunshine Coast – Wide Bay

There were 18 respondents from the Sunshine Coast – Wide Bay HSD, 10 (56%) of whom worked in a clinical setting. Respondents were based in a Queensland Health community clinic/primary health care centre (47%), public hospital (13%), Division of General Practice (20%), general practice (7%), HSD office (7%), mental health and a HACC service. There were six nurses, four IHWs, one physiotherapist, two Indigenous HACC coordinators and the remainder were project officers and administrators.

Ten persons provided information about their service's access to key health professionals (figure 42). Of note was the lack of access to respiratory scientists, exercise physiologists, smoking cessation facilitators, nurse specialists and respiratory physicians.

Figure 42: Key health professionals in clinical services in the Sunshine Coast - Wide Bay HSD.

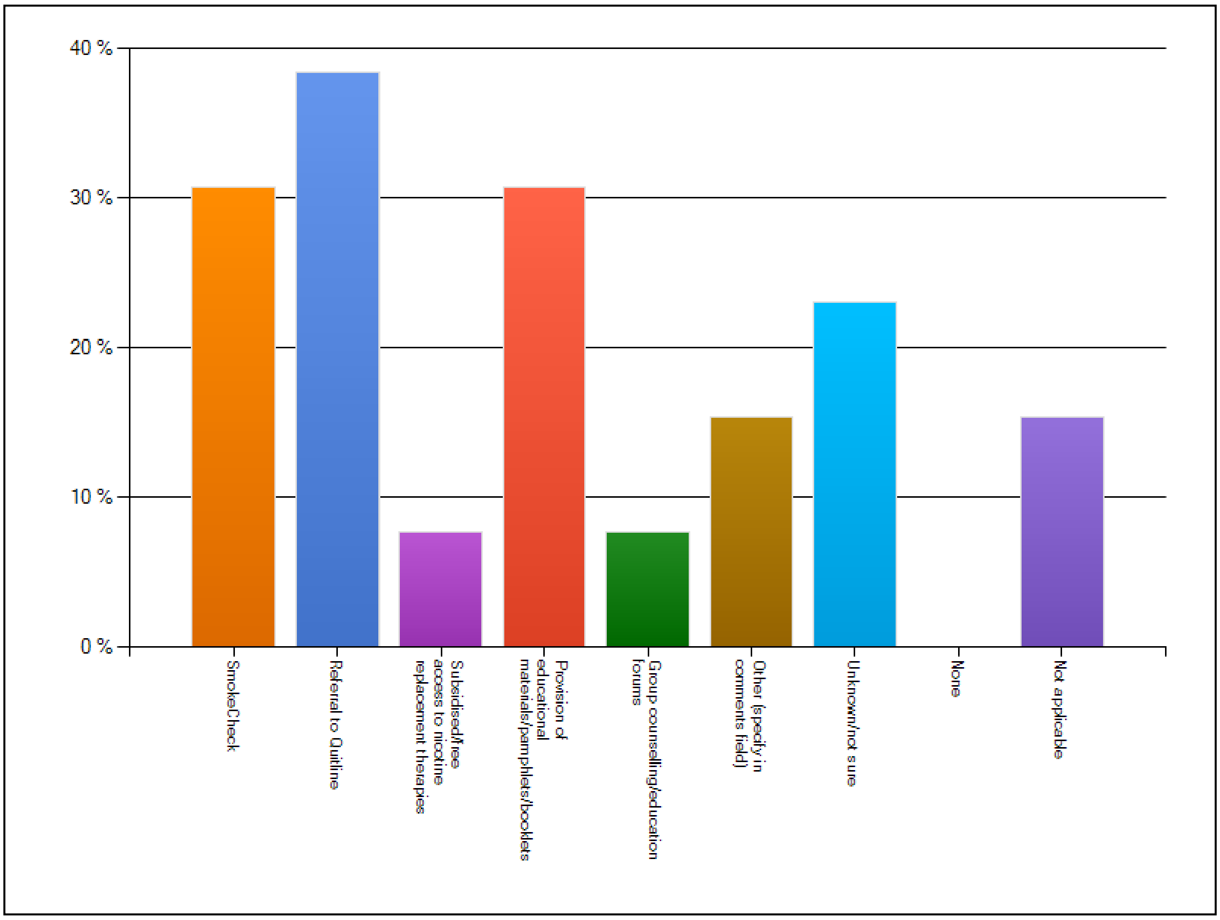


Forty-six percent of respondents indicated their service screened Indigenous clients for chronic lung diseases either routinely or occasionally. Only 21% indicated they had access to educational materials specific to Indigenous clients with chronic lung diseases although 36% were not sure. These materials were an articulated need. One service had a dedicated programme for Indigenous people directed to improving care in asthma, lung cancer and sleep disorders and two had programmes for COPD. Only one respondent indicated their service had any other programmes/services specifically designed for Indigenous clients with chronic lung disease; a further seven (54%) indicated there were programmes within the area that were available to anyone in the community. The former was from a Division of General Practice that indicated it had conducted a programme to raise awareness about Indigenous health in general and are currently planning further work to address respiratory diseases.

One respondent indicated his/her service conducted pulmonary rehabilitation programmes on site and four indicated there was access to these in the area; five were not sure and two did not know what these programmes were. In clinical settings, 63% of respondents reported the service had spirometers onsite, of which 100% indicated staff had been trained in the use of spirometers but only 67% indicated staff had been trained in the interpretation of Spirometry data. Thirteen (72%) persons responded to the question of tobacco initiatives for their Indigenous clients, the most common being referral to Quitline (figure 43). One respondent from a Queensland Health community clinic/primary health care centre provided detailed information about tobacco programmes within his/her service and area:

> *" We have been waiting for smoke check to become available for us. We have also been working alongside the local Indigenous Organisation NCACCH - as they have said they are going to fund each Indigenous Person who requires it $600 to help quit smoking. This can be used in the area of counselling support, hypnotherapy, nicotine replacement therapies etc. We have been waiting since last year and this is still not available. There is very little available for the people in our district. In February the Indigenous Health team held a health promotion day at Tin Can Bay in partnership with the local sailing club. We invited local school aged children and their families along for the day, providing lots of educational and health promotion materials. Leading up to this the Indigenous Health workers visited the local schools and worked with the children to have them design a 'sail' and paint messages to help them 'not smoke' on it. Prior to doing this the health workers would provide education to the children and encourage them to not take up smoking. We had local media work with us and do a cartoon of the event with non smoking messages. The overall idea of the day was that to run a boat you need to have strong sails that can catch the wind- and to run your body you need to have strong lungs to be able to breathe well. This was a very positive and well attended day!"*

Figure 43: Tobacco control activities undertaken by services in the Sunshine Coast – Wide Bay HSD.



Three services ran programmes/initiatives/educational activities that address tobacco use specifically amongst Indigenous youth, two for mothers and men and one for pregnant women.

Six (46%) respondents could nominate other Indigenous specific services within their service area that provided support to people with chronic illnesses, of which transport was the most commonly identified. One respondent reported "...NCACCH - North Coast Aboriginal Corporation for Community Health - this organisation provides funding for Indigenous People to have access to GP, Podiatrist, Physiotherapist, Dentist, Counselling". Four respondents reported activities undertaken by their service in the past 12 months to address respiratory disease amongst Indigenous clients. These include chronic disease workshops, partnership between the Indigenous Health Team at a Queensland Health community clinic/primary health care centre and the local Division of General Practice and ACCHO and one respondent reported:

"We have been visited by a representative of Smoke Check and have been invited to attend meetings / training sessions. This is the only programme, apart from the one mentioned earlier about NCACCH offering financial support to clients to help stop smoking, that I am aware of. We are also involved in the 'Well Person's Health Check Day' in which all Indigenous People are invited to attend a day at the local Civic Centre. There are all specialist services there including respiratory nurse, diabetes educator, sexual health clinic, flu and pnuemovax, etc. The clients are also given from this day a voucher for $50 groceries per person if they then visit their local GP and have a full health screen attended."

6.3.14 Torres Strait – Northern Peninsula

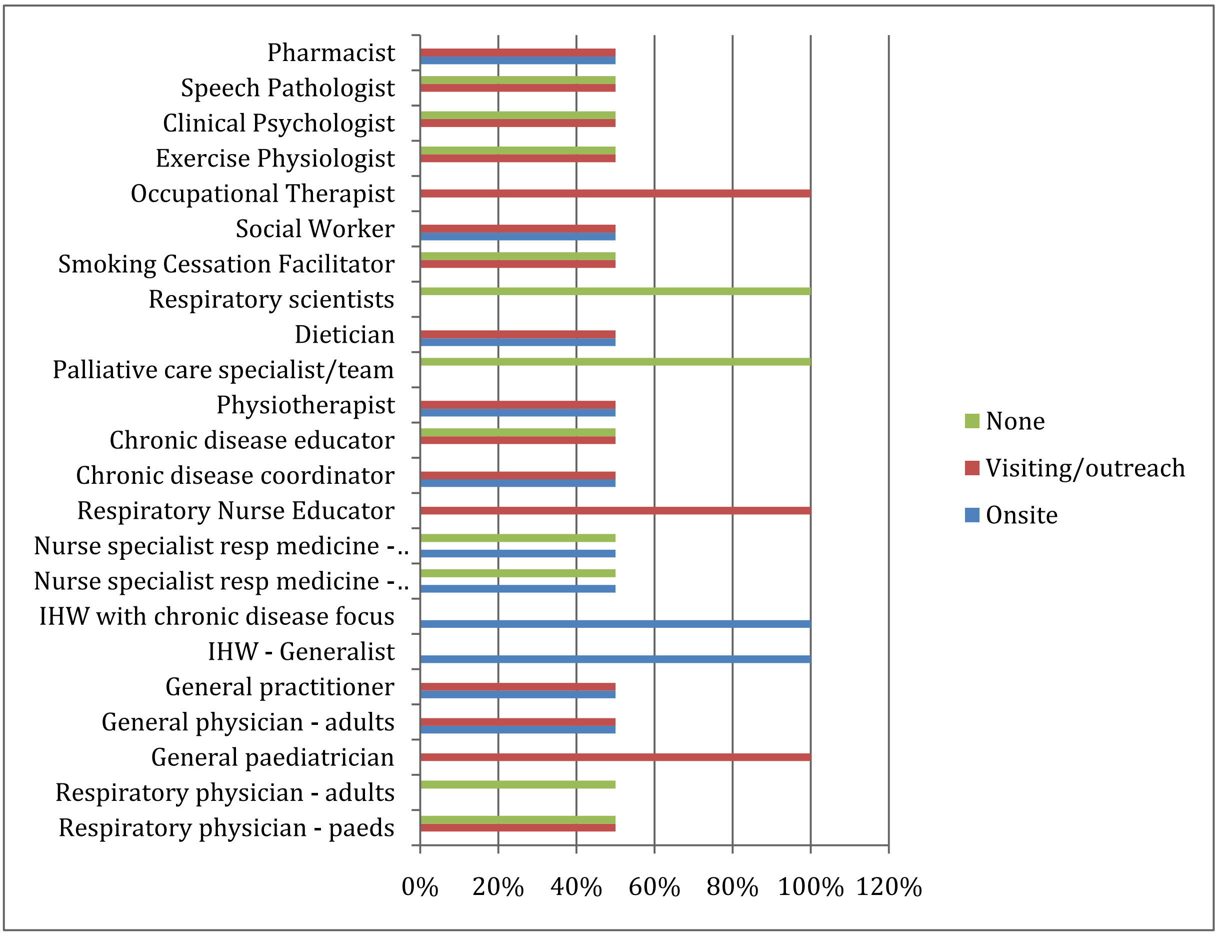
There were three respondents from the Torres Strait – Northern Peninsula HSD; all were IHWs located in Queensland Health community clinic/primary health care centres. Two worked directly in clinical care. Access to key health professionals is presented in figure 44. As anticipated, there were limited specialists onsite although one service appeared to have visiting professionals. There was no access to respiratory scientists and palliative care specialists and one did not have any access to respiratory physicians (adult or paediatric).

One of the two respondents in a clinical setting indicated they screened clients for chronic lung diseases but only occasionally. All had access to educational materials specific to Indigenous clients with chronic lung diseases and one ran programmes specific to improving care in asthma, COPD and lung cancer but not sleep disorders. One respondent indicated there was access to pulmonary rehabilitation in their service area.

One setting had a spirometer onsite and staff had been trained in its correct use and in the interpretation of Spirometry data. Both settings utilised SmokeCheck to address tobacco use amongst their Indigenous clients and one also utilised Quitline, the provision of free/subsidised nicotine replacement therapy and the provision of educational materials. One service ran programmes specifically directed at tobacco use amongst Indigenous youth, mothers, pregnant women and men.

There were no other services in the service areas that provided support to Indigenous people with chronic illnesses and one respondent reported the Outreach Respiratory Specialist Clinic as the programme and/or collaborative partnership that his/her service had been involved with in the past 12 months to address respiratory disease amongst Indigenous clients.

Figure 44: Key health professionals in clinical services in the Torres Strait – Northern Peninsula HSD.



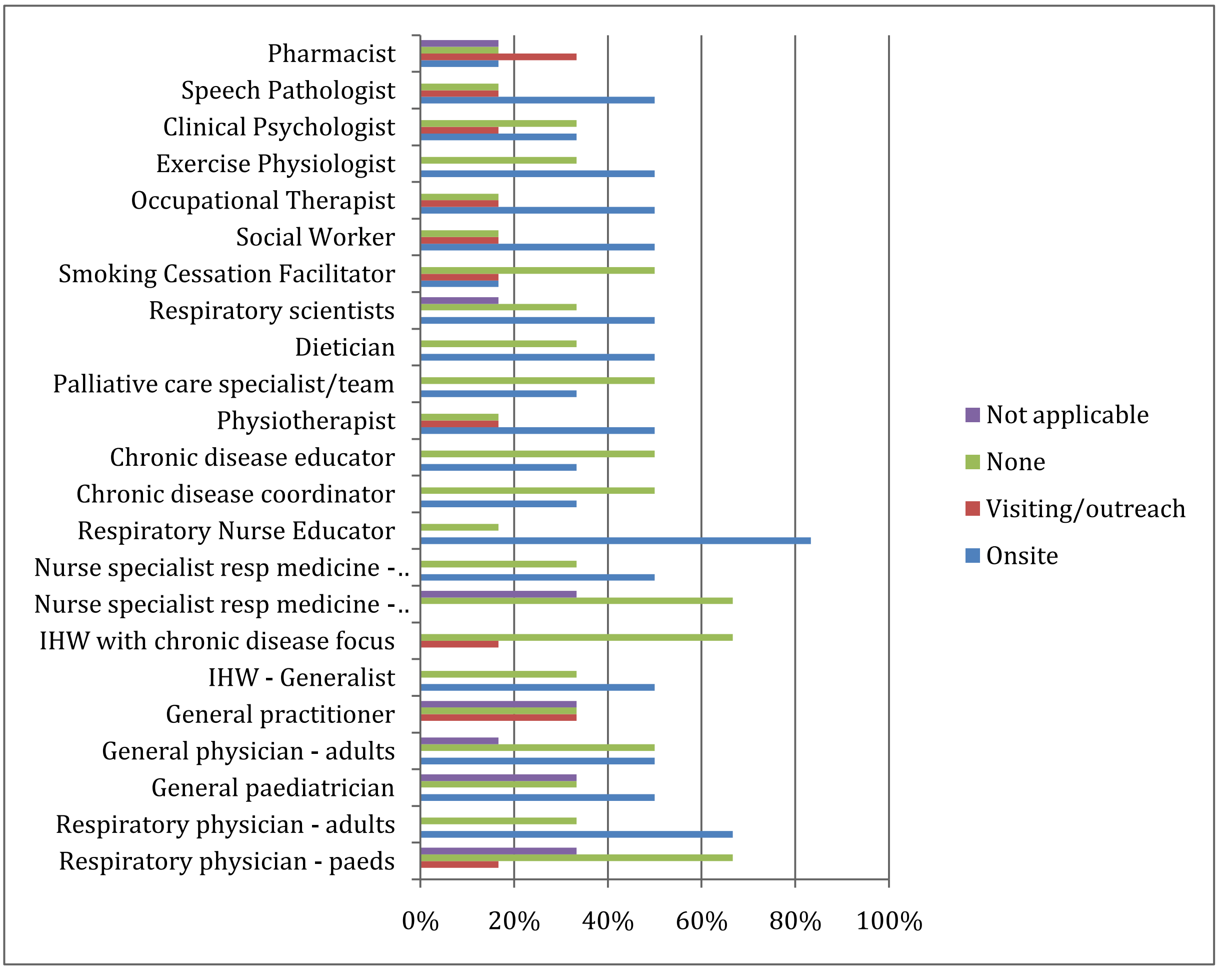
6.3.15 Townsville

There were 12 respondents from the Townsville HSD of whom 75% were based in a clinical setting; 54% in a public hospital and 27% in a Queensland Health community clinic/primary health care centre. Of the respondents there were seven nurses, two physiotherapists, one doctor, one respiratory scientist and one manager. There were no IHWs. Six persons provided information about key health professionals available in their clinical service (figure 45).

Nurse specialists, smoking cessation facilitators, paediatric respiratory physicians and IHWs with a chronic disease focus were lacking.

Only 38% of respondents from a clinical setting indicated their service screened Indigenous clients for chronic lung diseases, only 50% had access to educational materials specific to Indigenous clients with chronic lung diseases and only one respondent indicated their service ran any programmes specifically directed at improving care amongst Indigenous clients and this was for COPD. Three (38%) of respondents indicated there were pulmonary rehabilitation programmes on site or in the area with the remainder reporting these were not available.

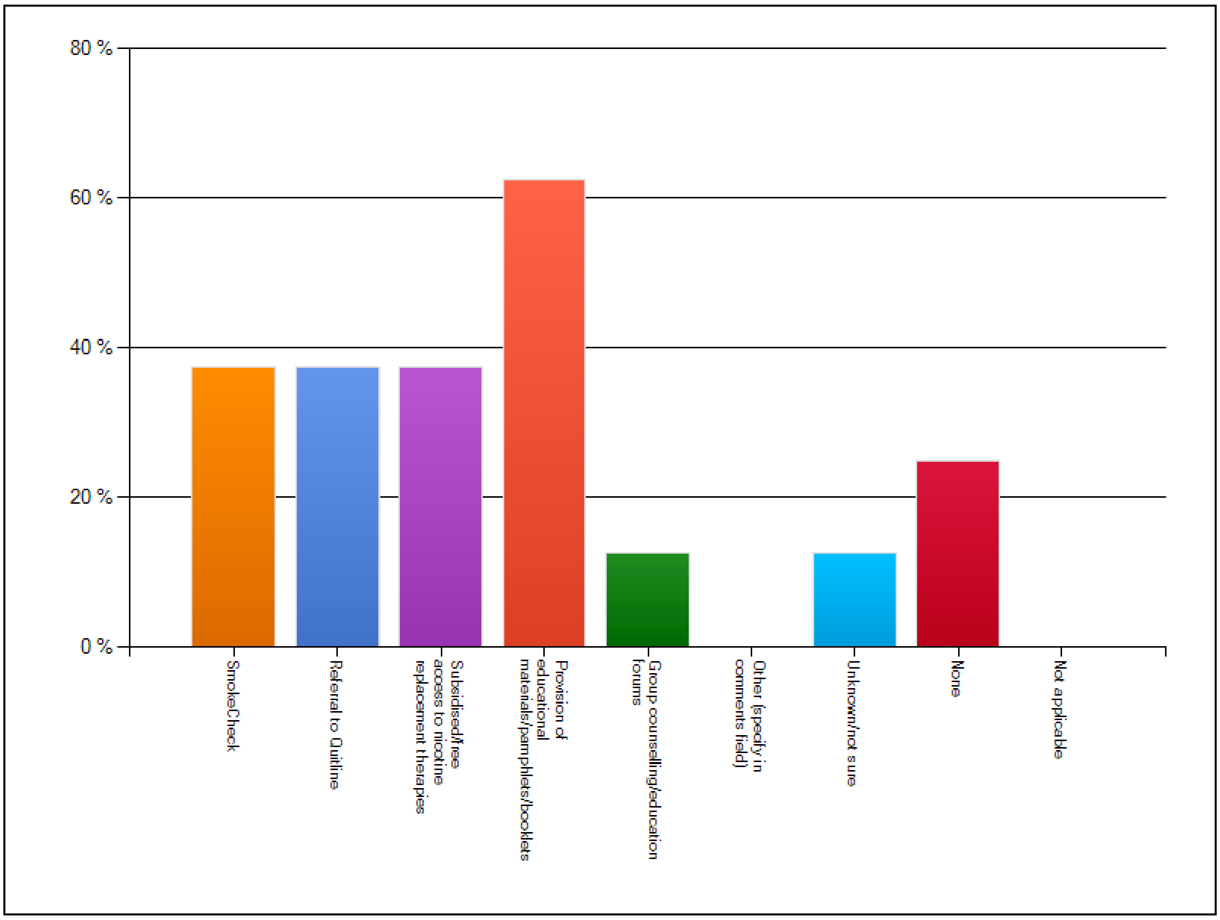
Figure 45: Key health professionals in clinical services in the Townsville HSD.



Seventy-five percent of those in a clinical setting reported their service had spirometers on site and of these, 67% reported their staff had been trained in the correct use of spirometers and the interpretation of Spirometry data.

Activities undertaken to address tobacco use amongst Indigenous clients are presented in figure 46, with the most common being provision of educational materials. None of the services were running any programmes/initiatives/educational activities that addressed tobacco use specifically amongst Indigenous youth, mothers, men or pregnant women; one respondent indicated this was the responsibility of ATODs but they were not sure what that department was providing. Fifty percent of respondents could identify other Indigenous specific services within their service area that provided support to people with chronic illnesses. These included the Townsville ACCHO, a visiting Indigenous nurse and staff from Spiritus and hospital liaison officers. No respondents reported their service had implemented, or participated in, any programmes that specifically addressed risk factors for respiratory illness in Indigenous people in their area and only two reported partnerships with other organisations (both being with the local ACCHO).

Figure 46: Tobacco control activities undertaken by services in the Townsville HSD.



6.4 Key gaps

Respondents were asked to describe what, in their opinion and experience, were the key gaps in services for Indigenous clients with chronic lung disease. The responses received are documented in table 31. With the exception of spelling errors, the responses have not been edited and are presented as written. Several common themes emerged from the commentary including:

- A lack of culturally specific programmes, particularly support groups
- Cultural awareness amongst health staff, particularly with respect to the Indigenous concept of health and well being and how that impacts on care and management
- Access to specialist services
- A need for training and upskilling of health workers and nurses (particularly with respect to Spirometry)
- Lack of access to preventative programmes
- A clear need for more resources and culturally specific programmes/education regarding smoking cessation
- Individual, community and health staff awareness raising about the importance of chronic diseases and the burden and impact of chronic lung disease on individuals, their families and the health system
- A lack of coordination amongst services, particularly with respect to follow-up
- The need for more IHWs in multi-disciplinary chronic disease teams

- A general lack of multi-disciplinary teams
- Transport issues
- A lack of resources and staff to address all the health issues

Table 31: Expressed gaps in services for Indigenous Queenslanders with chronic lung diseases.

1. More awareness of the culture is needed
2. I have only been in the region for a year, but there is only a handful of GPs that really do chronic care with the community in a systematic, gold standard manner - this would include respiratory matters. There are very few services that deal with smoking cessation in any way other than the minimum effort required. I doubt whether the community are proactive with their conditions - although the model of care this way is all about mainstreaming.
3. Not enough respiratory educators in primary care to care for respiratory patients
4. Lack of co-ordination of community health, which leads to lack of direction to indigenous health workers.
5. Chronic resp disease needs to be incorporated into a general indigenous chronic disease programme rather than run separately as high frequency of concurrent chronic diseases needs to be run holistically
6. Transport to specialist services and lack thereof in the district - meaning they have to go away to be treated by a specialist
7. Outreach clinics into Indigenous communities. Specific smoking-cessation interventions targeted for Indigenous communities. Low levels of patient expectation - unfortunately many patients "put up with" respiratory symptoms and fail to act on symptoms. An education campaign for recognition of symptoms is required.
8. Indigenous centred approach to addressing investigation and treatment of Indigenous people
9. Access to tiotropium on SDL
10. The Aboriginal and Torres Strait Islander population in our area is 0.07% and we don’t get sufficient numbers of clients to run group based programmes; educations and treatment are on a one-on-one basis and I question if the approach during this contact is culturally sensitive / appropriate.
11. No specific anti smoking programmes especially for young people
12. no specific COPD care planning
13. Lack of access to preventative respiratory health programmes, clinical staff understanding re barriers to access and cultural issues to allow them to best respond to needs.
14. No services outside main regions.
15. That the information is not simplified for this population and that it doesn't talk about how this effects their story but that we focus on the bad and that’s all the person hears not how we can help. We need to look at the information delivery process and make it more user friendly with outcomes that Indigenous patients can assimilate into their lives and have culturally sensitive ways of asking what we need.
16. Lack of culturally sensitive chronic disease groups e.g pulmonary rehab, cardiac rehab and diabetes groups.
17. Access to specialised and dedicated respiratory care for Indigenous people
18. The lack of coordination of their care.
19. As a small service we give best evidence based care to ALL clients. When the liaison nurse accesses our service we are more than willing to provide culturally sensitive education and resources. The liaison nurses offer very good support to the Indigenous clients who are inpatients but I am not sure of the outreach services or how accessible they are in the community. Like all disadvantaged groups transport to services and financial constraints are often the most restrictive impediments to access.
20. Access to well trained medical support staff.
21. Access to services for pulmonary rehab.
22. Community and Individual perceptions of wellness
23. We have an excellent Heart Lung Team in the community that has an exceptional multi-disc team (psych, social worker, AH assistant, respiratory nurse, physio, ex physiologist, OTs, dietician etc) - but it does not have an Indigenous Liaison officer or Health Worker in it. This to me is a huge gap. Rather than recreate separate services (as facility access for programmes is an issue) this discipline should be a regular part of any community health team - especially those focussed on chronic disease.

24. Our service provides 5 full day GP clinics toward the Indigenous community. As a result Indigenous clients have readily accessible referrals with very little waiting time. My concern is not the Gaps in service, but educating Indigenous clients to realise that it is their own health that it is a priority, instead of putting family members first.
25. From an Acute services perspective a lack of coordinated approach, ie assessment tools, guidelines that are indigenous specific.
26. No Spirometry interpretation available, No visiting respiratory physician available
27. Good things - respiratory and general specialists visit very regularly and have done so for many years, many more GP hours available per week in the last few years. Bad things - very high smoking rates and an apparent lack of regard for the seriousness of risks associated. High unemployment amongst men and associated substance abuse. Gaps - lack of long-term general practitioners to drive long-term health improvement programmes by being that community's doctor - the Australian norm
28. Aboriginal specific services to assist with smoking cessation
29. Transport. Services not available in this area. No culturally appropriate mentoring/support
30. Their access to 24 hour emergency care.
31. These groups need to be targeted in their own Town as transport in the rural area is a big problem for the Indigenous population therefore compliance is often due to not having transport. Programmes need to be Indigenous specific to make an impact. Encouragement to take ownership of their conditions and seek help in a timely fashion is needed.
32. I think there are gaps for all Australian's not just indigenous in this region for chronic respiratory conditions as there are currently no programmes addressing this.
33. Yes there is a lack of specific multidisciplinary team approach.
34. Limited access to early identification and appropriate treatment of respiratory tract infections, and preventive approaches eg recognising changes in breathing, cough, and other respiratory signs, early teaching of nose-blowing, effective coughing, expectoration, handwashing / hygiene, minimisation of cross infection, reduction of smoke exposure, using physical activity and exercise for preventive lung health and as integral part of the management of ongoing chronic respiratory illnesses; teaching basic positioning and chest percussion and/or vibration to assist airway clearance when people have excess secretions; teaching other methods of airway clearance as appropriate to the condition, age, and other individual aspects.
35. As a scientist in a major respiratory lab, I see very little call for our services beyond the confines of the lab, & nothing specifically for Indigenous people. At the same time, the proportion of Indigenous people attending the lab is quite relatively low. Whether this indicates an unmet need is hard to say, given the presence of another major hospital in the same area that might be meeting some of the need.
36. Ensuring access to culturally appropriate services and removing the barriers to health and well-being that would lead to symptoms of chronic lung diseases being recognised as abnormal and requiring action.
37. Not kidding but - wear shoes in the wet season to decrease the amount of melioidosis
    Run some adverts on basic hygiene like is being shown on NT TV
    We need to get the information out to the communities themselves - but we also need the indigenous health care workers to see the acute side of illness so that they have a better idea of adverse outcomes.
38. No real gaps in service. Clients can access the same services as everyone else. There are however, not specific Indigenous Chronic Disease Self Management services.
    Culturally appropriate communication re programmes and services.
39. I am an Oncology Nurse of indigenous background, and have yet to know of any activities specifically targeting my people in respiratory illness. Multiple responses of Unknown/Unsure should not be a reflection of the service I work with, rather, my own lack of knowledge of what is happening around me.
40. Lack of staff to provide a regular inpatient and outreach clinics
41. Not enough specialised help for A&TSI people.
42. Unable to answer for region, but our specific service is under manned, and there is no capability to offer specific services of this nature at all.
43. I am unaware of any specific initiatives or programmes to tackle resp health in aboriginal people - therefore a huge gap in our understanding of the magnitude of the problem and no available mechanism to make any difference with current service provision that is not geared toward aborigines.

44. Lack of trained Indigenous Health Workers
45. Access, comprehension of their condition and what to do about it, and what follow up has been arranged.
46. Qualified staff to fill vacant positions.....
47. Respect for their culture. Take the service to where they are- they will rarely come to the big centres unless they have to.
    If they do, give them somewhere to come that's appropriate for them. Appropriate literature at an appropriate level.
    Training for Indigenous people to be the service providers.
48. referral pathways that are acceptable by Indigenous clients
49. CULTURALLY APPROPRIATE DELIVERY, RELY ON OTHER PEOPLE TO REFER TO THE SERVICE, SHOULD BE AUTOMATICALLY, ANYONE WITH A DIAGNOSIS OF ASTHMA, OR COPD, ALSO STRUGGLING TO ENGAGE THE COMMUNITY AS THERE ARE NOT ENOUGH HEALTH WORKERS AND THEY FEEL THE STRESS AS THERE ARE SO FEW OF THEM.. THEY ARE DIFFICULT TO RECRUIT. ALSO VERY HARD FOR THE HEALTH PROFESSIONALS TO ENGAGE AS THEY DONT UNDERSTAND THE CULTURE.. EG "MRS J IS STRESSED AGAIN BECAUSE SHE SPENT HER MONEY GAMBLING BUT CAN STILL AFFORD CIGS BUT NOT HER SUSTOGEN...OR MEDICATIONS" THERE IS A HUGE GAP IN CULTURAL KNOWLEDGE FOR HEALTH PROFESSIONALS TO TEACH THEM WHAT OTHER TOOLS APART FROM ENFORCING HEALTH, THEY ARE TRADITIONALLY IGNORED BY THIS HEALTH SERVICE AS THEY ARE "TOO HARD" TO ENGAGE. "NEVER HOME" SO PARTNERSHIP WITH HEALTH PROVIDER CANCELLED, AS IS SEEN AS DISMISSAL OF THE HEALTH SERVICE. THE HISTORICAL RELATIONSHIP ALSO WITH THE HEALTH SERVICE IS POOR AND AUTHORITARIAN. TRADITIONAL HEALTH/MEDICINE TEACHING IS NOT USUALLY EFFECTIVE WITH ABORIGINAL AND TORRES STRAIT ISLANDERPEOPLE, AS THEY DON'T SEE THEMSELVES AS MORE IMPORTANT THAN THE NEEDS OF THEIR FAMILIES COMMUNITY ETC, AND DO NOT HAVE THE SAME ADVANTAGE AS OTHERS IN THEIR KNOWLEDGE AND TRUST OF MEDICINES AND PHYSICAL BODY. ILLNESS IS NOT JUST ABOUT TAKING A PILL.
50. Specific target programmes do not seem to exist. The mindset of clinicians vs mindset of target group. Inequality to service access due to poor transport, funding, education and in some cases apathy to service provision (family/clan/tribal/outsider issues)
51. Not enough training for the field workers, working with the chronic disease programme, not enough/very limited resources. Need more of and regular training not annually
52. Lack of medical intervention therefore I am in the process of trying to get more clients on the Chest Clinic list which I am told by visiting GP's should be managed by the GP but they aren't managed well except for our fortnightly Chronic Disease GP who does it well. So this is a gap. Also no one in the District focuses on it . The Adult health check only asks under the subject breathing "Do you get short wind?" - there is a section for smoking but it doesn't run parallel. Our computer care plans don't have any cues on "breathing health" except if the client is allocated a CXOPD or asthma care plan.
53. I still feel we are missing support services to help Indigenous People to stop smoking. Unfortunately we have very limited resources in our area to be able to provide this intensive supports needed for clients to either give up, or education to help stop smoking in an environment where many of them do smoke. We also recognised the lack of Indigenous Specific Brochures available when conducting the education sessions at the schools that encourage Indigenous People to either 'not take up smoking' or 'quit smoking' and the harmful effects of 'passive smoking' eg in car for children etc. Within our service, we have not had the human resources needed to support clients in all different areas of chronic disease. We have been fortunate to have a very recent increase in hours for the Indigenous Health workers, which is fantastic, however this still does not give enough time to address all needs in the community, eg, Child and Family Health, Chronic Disease (respiratory, heart, diabetes, kidney etc), sexual health, as well as keeping up with all immunisations.
54. Support group in each community. Education to carers. Allied Health - Physiotherapists and also Occupational therapists - regular consults and health promotion /well being exercises etc.
55. Lack of funds. Lack of intensity of application to address Indigenous Health. Lack of staff dedicated to building awareness and educating the public
56. Case finding
57. Housing and isolation for families who have to leave their communities to travel down to larger facilities for treatment. Discharge plans that are sent back to the community where the client comes from so there could be continuity of care and follow up with Health Workers and other professionals.
58. Access to specific chronic lung disease programmes through mainstream primary health care

services.

59. Lack of co-ordinated care in the local area, poor follow up on appointments, cost of treatments, waiting lists, access to reliable transport
60. Lack of trained staff access to specialists
61. We are limited to the services due to our locality and services being in bigger centres.
62. I don't believe there are specific programmes targeting chronic lung disease at all.
63. Access to education including spirometry upskilling for general practice nurses/ahw's. Clear referral pathways to support groups etc that pts with risk factors or chronic respiratory conditions could access. Care coordinators
64. Access to health care
65. Follow-up for people / needs to be consistent (workers)
66. In our service cost of medication, transport to services, including hospital specialist appointments, culturally appropriate groups, under diagnosed conditions due to not a target health problem, lack of respiratory education and resources (spirometers) clinic space for nursing staff to educate and interpret spirometery results.
67. Smaller communities not having easy access to specialist education on management of respiratory diseases
68. There is no Indigenous services other then mainstream to support and follow up with clients who have chronic lung disease
69. Resources and staff.
70. Access, Transport, Specialist services, resources, Education.
71. Health workers trained or teams to service the needs in the Community. Transport for appointment back to the clinics or to education programmes. Family support - look at the whole family being educated on the disease.
72. Access to specialists, knowledge and education
73. Taking too long to see doctors about their illness. Afraid to visit these services.
74. Somebody who specialises in that field and has a whole community partnership approach, access to services, culturally appropriate programmes and sustaining of programmes, resources.
75. Effective education of pregnant women to understand that not only will smoking in pregnancy produce a small baby, but that baby will experience a high rate of morbidities in early life and will go on to be at high risk for chronic diseases. Effective education regarding the effects of passive smoking, on children.
76. Indigenous specific positions funded in chronic respiratory programme, not enough promotion and awareness especially in the community
77. Access to transport to get to appointments
78. We do not have a respiratory healthworker to service the district; this role is shared between Qhealth and the local Aboriginal Medical Service.

6.5 System enablers to best practice standards of care

Respondents were asked to document what, in their opinion and experience, were the major system enablers to the provision of best practice standards of care for Indigenous persons with chronic disease. The responses are presented in detail in table 32 (unedited with the exception of spelling errors). Overwhelmingly, the common themes that emerged were:

- Well trained IHWs that are an integral part of multi-disciplinary teams;
- Collaboration between services;
- Culturally appropriate services;
- The commitment of the health team to Indigenous health;
- Education of health professionals with respect to Indigenous Health and education of the community;
- Good data and culturally appropriate research practices
- The availability of appropriate resources.

Table 32: Expressed health system enablers to best practice standards of care for Indigenous persons with chronic diseases.

1. Collaborative practise between the Chronic Disease teams and the Aboriginal Health Practice. Information is generally shared. Client access is always an issue ie Medication, transport, accommodation.
2. Happy to facilitate any available and opportunities for resources and training.
3. Ongoing care and follow-up with Indigenous healthworkers
4. Transport to services
5. Very limited and difficult due to system barriers.
6. Skilled clinicians and multi-disciplined team and partnerships
7. Hospital ,GP, Indigenous Health Workers
8. Having the time to explain what disease the client has and how it can be managed by correct use of medications and the equipment to administer medication.
9. Culturally appropriate health clinics with Indigenous staff. Not having a medicare card at our service is not a problem as staff will help access one. A service with both Indigenous artifax and art work to make the place inviting is necessary to create a welcoming atmosphere.
10. * well trained, knowledgeable and mentored Indigenous Health Care Workers
    * well trained, knowledgeable and mentored health care providers (e.g. nurse, doctors, allied health professionals)
    * research into the particular issues associated with providing care that is specific to Indigenouss (following all due processes that enable ownership by/empowerment of Indigenous people in such research processes etc)
    *flexible and adaptable service delivery (e.g. location and timing of issues)
11. Quality care
12. Cultural communication
13. I think that the systems in general practice are there, they just need to be improved and utilised better. Practice Nurses have a wonderful breadth of knowledge and the majority (given time) will upskill in specific areas of education if made available to them.
14. The processes and services available to service clients
15. Unsure but experience is usually one side of the Hospital specialist does not interlink information with another specialist. Then any discharge planning to ensure the GP and other team care coordination is not always considered important for the patient or their family.
16. Also culturally appropriate data and research practices
17. Recognition of client readiness to change. Indigenous appropriate educational material - with regular Allied Health support programmes
18. NCACCH - the provision of $300 per person through this organisation for people to be able to access care of dentist, GP, podiatrist, etc has meant a lot of people now are able to get the care they need. This service also does provide some transport for clients.
    2. Outreach service - this year we have offered a home visiting service for all Indigenous Clients to have the flu and pneumovax. We have excelled so far on last year's numbers and we are still only in May. We are also finding the number of childhood vaccinations is increasing as we are offering the home visiting service 'Jabba Jabba'.
    3. Support by Health workers who are trusted by members of the community. When people feel 'safe' with a worker they are happy to access care and ask for assistance when needed. This obviously is relative for 'female to female' and 'male to male' when needed to ensure cultural appropriateness.
19. Good supported care providers. The relative ease at which the Indigenous Health Workers can progress within the Health system to improve the access to services of Indigenous clients and target groups.
20. * PEOPLE: INDIGENOUS STAFF, INVOLVED IN ALL ASPECTS OF CARE DELIVERY INCLUDING PLANNING EVALUATION AND CARE DESIGN
    * ABORIGINAL AND TORRES STRAIT ISLANDERREPRESENTATIVES ON ALL BOARDS AND COMMITTEES.

* LOCAL ABORIGINAL AND TORRES STRAIT ISLANDERKNOWLEDGE,
* RESOURCES: TRANSPORT TRANSPORT TRANSPORT!
* DELIVERY OF THE SERVICE TO THE COMMUNITY: NEED TO HAVE ALREADY ESTABLISHED COMMUNITY GROUPS, NEED MEETING PLACES, APPROPRIATE PRACTICAL SENSITIVE CULTURAL TRAINING FOR ALL HEALTH STAFF,
* PARTICIPATION IN RESEARCH- PUSH THE CLINICIANS TO MONITOR THIER EFFORTS; MEASURE THEIR RESULTS
* BEST PRACTICE GUIDELINES; SELF MANAGEMENT
* REAL SUPPORT $$$$ INCORPORATION INTO STRATEGIC PLANNING, FROM SENIOR EXECUTIVE
* RECOGNITION OF SUCCESSFUL ENGAGEMENT

21. Indigenous health clinics
22. Culturally appropriate services in real locations with transport to get there
    Access to trained Indigenous health care providers
    Cultural training for staff
    Incentives for rural and remote secondments/ care provision
23. Indigenous Health Workers who have mandatory quals as per career structure.
    Staff who have worked in an Indigenous setting and have had cultural awareness.
    Staff who are consistent and that community members feel safe.
24. Townsville has recently employed a Nursing Director to the new position for increasing the Indigenous workforce. This is a very exciting position and hopefully one day Indigenous clients will have more Indigenous staff available to assist them.
25. Indigenous and non Indigenous workers working together
26. Having Aboriginal and/or Torres Strait Islander spokes person, or social worker who can help us understand the cultural differences
27. Resource and access to aboriginal healthcare workers to coordinate education, diagnostic and treatment strategies. Will require aboriginal community and elders to engage and work with medical services.
28. Nurse led initiatives
29. Employ A&TSI Project Officer to encourage A&STI access and participation
30. Engaged Respiratory Physicians
31. Dedicated chronic disease self management teams are available in the community, as well as indigenous health workers.
    Funding for pulmonary rehab to be set up and currently happening.
    Mobile chronic diseases self management team.
32. Recognition that our indigenous people are great wonderful people who deserve a better life than they have ended up with.
    Recognition too in the genetic differences - ie susceptibility to heart disease but along with that we HAVE to give them things to be proud of first.
33. Being able to have indigenous clients freely discuss with you the barriers they perceive in accessing your clinic services. This can be difficult but is possible if one is ready to answer the challenges that will arise.
34. Education of all health care workers to ensure understanding of the specific needs of Indigenous people, from which will flow better programmes to meet these needs.
    Funding of specific programmes.
    Community support to help access health care programmes.
35. Community access to a range of services at all levels, with assessment and input from tertiary centres but taught to and delivered mainly by local people. Support for local people would be through a range of things such as education materials, on-site visits and mentoring, and close communication links between health care professionals, local healthcare workers, and families / persons with chronic respiratory illnesses.
36. There are health workers and clinicians trying to achieve good things that need specific executive

support.

37. Availability and accessibility of equipment.
    We get training in things fairly readily.
38. Funding and for to go out to the areas to deliver education and screening, plus transport needs to be accessible and affordable.
39. Have access to an aboriginal liaison nurse.
40. Implementation and a must do.
41. Increasing commitment to equitable funding for remote populations - pity it gets spent on fashionable ideas rather than standard Australian services
42. Involving relevant people, adequate resources and consistency
43. As stated above I work with a committed Indigenous health management multidisciplinary team that is dedicated to the needs of the Indigenous Community.
44. Clinician willingness to provide services
45. Increased community awareness of available services
46. Training support medical staff in remote areas and providing mentoring and support services for such staff.
47. Good communication to clients regarding appointment times...reminders etc
    Supportive open communication
48. Dedication to health care for all
49. Inala indigenous health- dedicated staff/team
50. Senior Health Workers and how they can easily put a patient at ease just by sitting in the room and explaining if there is a loss in communication. They are god sends but they have to know information regarding differing respiratory conditions and the brief interventions that the service that I work for make it easy and focused for the SHW.
51. Education
    Engagement vital with the consumers rather than the programme itself
52. Available resources
53. Dedication of local chest clinic and general medical staff to conduct outreach programme against the continued opposition of Queensland Health bureaucrats
54. Recruitment of a community "champion" to assist organisational linkage
55. govt Q Health employing a project officer and promoting the activity including community area/ lobby groups to have ownership
56. Willingness to improve the current dire situation - so long as there is adequate leadership.
57. Ensuring access through transport and culturally appropriate services, having community input into service delivery.
58. Provide support to clients self management & support for clinical decision making.
    MDT & care plan follow up from clinics.
59. Plenty of IT and Information available, HWs willing to provide the education and services.
60. Good guidelines for chronic disease management
    Consistent interface with indigenous community ensuring that programmes comprehensive, sustained and culturally appropriate
61. Good training
62. Young go getting passionate practitioners that work as a team, integrate best practice, systems and CQI in place for recalls and reminders, and are set up to work with prevention, early detection and self management.
63. Education of staff
    Appropriate number of staff

6.6 System barriers to best practice standards of care

Respondents were asked to document what, in their opinion and experience, were the major system barriers to the provision of best practice standards of care for Indigenous persons with chronic disease. The responses are presented in detail in table 33 (unedited with the exception of spelling errors). The responses were in many instances, the opposite of the enablers identified. Overwhelmingly, the common themes that emerged were:

- Lack of appropriate funding, staffing and resources
- Lack of well trained IHWs
- Lack of cultural awareness and communication issues
- Problems with information systems that do not facilitate coordinated care and follow-up
- Lack of commitment, particularly at the executive level
- Lack of regular and appropriate training
- Access barriers: financial, transport and physical barriers to services

Table 33: Expressed health system barriers to best practice standards of care for Indigenous persons with chronic diseases.

1. Lack of funding.
2. Documentation on systems.
3. Resources , indigenous specific positions allocated to mainstream areas
4. Many of the staff smoke and are seen by the locals as smoking.
5. Resources, access to specialist services. Not recognised as independent of tertiary hospital which impacts on our community.
6. need more indigenous health workers trained in these areas
7. limited resources and access to services, communication of multidisciplinary team (passing the buck)
8. Staff Barriers, Access Barriers, referrals process, Communication.
9. Access to definitive care.
10. Lack of Indigenous Health Workers and Resources
11. Transport, cost of medications. However in some other services not having a Medicare card is a major problem no Medicare card no service.
12. * physical accessibility - can they get to the service can the service get to them
    * cultural accessibility - does the service/service provider make them feel safe, welcome, respected
    * history of interaction with government service provision
    * (family/social?) politics associated with Community Controlled Health Service
    * family/social politics with who is employed as an Indigenous Health Worker
    * enough staff, resources etc to support service delivery
13. Education/training not just any training but accredited (we are the most trained people in Australia)
14. Access to health care
15. General practices could improve their systems, e.g. recall reminders. They could drastically improve their uptake on undertaking Indigenous Health Checks, identifying whether a pt is of Aboriginal or Torres Strait islander descent and addressing pts identified with risk factors into lifestyle intervention programmes etc. These are all things that I am hoping to address with General Practices through the closing the gap programme. any ideas??
16. serious lack of HW resource to do some of the on the ground stuff with community
17. lack of staff prevents continuity of care and delivery of follow up services to clients
18. Communication
19. Cultural awareness of indigenous peoples about how they view their health and support needs
20. Team Care Plan coordination from primary health care general practitioner for every Indigenous person with chronic lung disease. Information systems that simple do not talk to each other and/or gap processes where the patient's journey is disjointed. Which means 'drop out' effect of

programmes, etc., due to the lack of support

21. Non -Indigenous managers making decisions about Indigenous health
    Lack of funds and commitment by non-Indigenous Managers
    Lack of having Indigenous Managers
    Indigenous identification of clients presenting to hospitals, GP's, etc - how are health services going to plan and deliver targeted health care to Indigenous people if that don't know that they are of Aboriginal or Torres Strait Islander origin
    Services need to be friendly and welcoming to Indigenous people - at the moment this is not happening
22. Lack of Allied health
    Lack of Allied health aides - trained Health workers.
23. Lack of resources - being mainly human resources!! There are so many issues that Indigenous People require extra assistance with in being able to improve general health and we often feel like there is just too little time to give the focus needed to each area, and we thereby skim the surface and hopefully plant some seeds for future improvement in health care.
    2. Transport - is a major barrier in our district for Indigenous People to access health care. A great number of people need to travel to Nambour or Brisbane for specialist appointments. These clients often do not have the money to be able to pay for this and we certainly do everything in our power to help, however often the barriers to getting transport can mean people not attending appointments. Because a lot of people live out of the township in more rural areas, often simply accessing health care at the local hospital can prove problematic as far as transport is concerned.
24. All the above...When you have employees working with a important programme like Chronic Disease Programme and not having the knowledge and experience, it becomes very hard for HW to work confidently with our clients.
25. Perceived variation in treatments of different groups by care providers.
    Lack of respect due to socially developed prejudice of groups. (eg "all white fellas the same", "all indigenous the same", "all refugees the same") This can be exacerbated by sensationalist news reporting which leave out facts so as not to ruin a good story.
26. INSTUTUTIONAL RACISIM
    LACK OF HEALTH WORKERS, OR A DECENT STRUCTURED LOCAL APPROPRIATE REWARDING HEALTH WORKER TRAINING, POOR PAY FOR HEALTH WORKERS, A STATE WIDE BODY FOR HEALTH WORKERS, TIME AND MONEY TO TAKE EXTRA CARE AND LOCAL PLANNING FOR THE NEEDS OF ABORIGINAL AND TORRES STRAIT ISLANDERPEOPLE.
    LACK OF STRUCTURE/STRENGTH IN THE COMMUNITY TO LINK TO FOR THE HEALTH SERVICES.
    LACK OF INDIGENOUS HEALTH STAFF, DRS NURSES, PHYSIO,OT,EP,DIET, CNC, ...
    NEED TO CONSUMER ENGAGEMENT TO HELP DIRECT THE LOCAL HEALTH SERVICE WITH REAL OUTCOMES AND FEEDBACK TO THE COMMUNITY
27. Location of services eg. locating an Indigenous Health Clinic in a centre, known by the people, to be an old mental health unit where many of their family members were admitted and/or died.
    Access to transport
    Access to pseudo culturally appropriate services- once experienced never forgotten
    Misconceptions of their culture, therefore the approach of services
    Limited or lack of Indigenous health care providers
28. Transport
    Qualified Staff and recurrent funding
    Lack of Training opportunities for staff
    Indigenous Career Structure
29. Queensland Health employees are not allowed to transport non-QH staff in QH vehicles. When we are in Mount Isa on an outreach clinic I can ask a HCW to visit a client and tell us what is happening but we can't ask a HCW to bring the client to the clinic. It is essential that we see clients particularly for Tuberculosis follow up. Despite cultural awareness training many staff still do not take on board that

some indigenous clients need a different communication style. I think every indigenous client should be offered a liaison officer/ HCW/educator who can see the doctor with them to help them communicate and to help them remember what has been said later.

30. Cultural barriers
31. Resource and cultural barriers
32. Staffing levels
33. Not enough trained A&TSI specialists in this area of health
34. Finance
35. Identification of indigenous people
    Meaningful interaction between indigenous people and health care providers.
36. Only doctors can refer to pulmonary rehab. No current pulmonary rehab programme. No specific Indigenous Pulmonary Rehab programme.
37. Recognition from the people themselves about care for themselves. But you cannot care for yourself if you have no self-esteem. We are losing the elders so it is vitally important we turn this around. WE constantly have them leaving hospital early because they do not want to go through the "grog sickness" (alcohol withdrawal) and there is very poor attendance at outpatient and other disease management strategies. Perhaps transport to and from appointments would facilitate this
38. Inability to communicate in culturally appropriate manner and a readiness to accept low health status as the norm for indigenous clients. Finally, it is important to understand that differences in perception of time as it relates to disease duration and to ability to adhere to fixed time schedules.
39. Lack of programmes specifically targeted to meet the needs of Indigenous people.
    Poor access to any health care programmes.
40. No multidisciplinary team access to Aboriginal and Torres Strait people in their own communities or close to home: When people have to attend a city facility for tertiary multidisciplinary team input, there are many additional stressors which may make transfer of understanding and learning far more difficult. Conversely, if this occurs in their local areas, teaching and using their own health care workers, there is greater likelihood of follow-through of learning and ongoing adherence to chronic disease management.
41. Specific drive towards this area of health it is an adjunct or a separate service. It should be a key service for all.
42. distance, travel time, availability of cars
43. Rural areas do not get funding to be able to educate staff to deliver services and follow up for these groups of people who do not have transport.
44. no barriers in Emergency care
45. Culturally appropriate support
    Appropriate referral system
46. Insufficient Aboriginal health care workers, or staff with a detailed knowledge of Aboriginal culture and values
47. Sustainable general practice - critical mass for each community
48. Visiting specialists have no incentive to come out here
    Low staff numbers
49. Lack of material resources and staff resources.
50. I am privileged to work with a committed Indigenous health management committee, that is dedicated to the needs of the Indigenous Community. From my perspective, there are no system barriers in Chermside Community Health.
51. Money and ignorance. There is still an expectation that different cultures should fit one pigeon hole.
    Poor marketing - always portrayed as separate and "added on"
    Example - the recent Health Reform - COAG documents - where is indigenous health in this????
52. Operational hours of existing services.
    Identification of Indigenous status.
    Physical access to existing services

Awareness of services from both community and GP's
General practice electronic compatible templates for referral

53. Training opportunities for support staff in remote areas. Regular change of medical support staff
54. trained staff with cultural awareness
55. Transport accessibility, Venue availability, Appointment times are not always suitable esp for those folk who have a chronic disease and work.
56. Lack of established resources
57. The assessment process: it’s not focused on how to illicit the information via a yarn/talking but very clinical and off-putting. This is the feedback that many of the Indigenous patients tell me and that we ask to many questions instead of talking.
58. Lack of specific services and facilities
59. non computerized notes
    clients often have several sets notes
    infrequent specialists visits
60. Strong links to communities from organisations providing information
61. Funding and space to provide chronic disease management programmes.
62. People accessing the system, having a service that is valued, role of health promotion and value of preventive health care
63. support for client self-management of chronic lung diseases
    time required to provide additional education required
64. Not enough funding for indigenous health workers that liaise with the public health system to ensure continuity of care for any type of chronic disease in this population
65. Lack of targeted interventions for Indigenous population
    Poor understanding of the overall problem
    Lack of quality and experienced Indigenous healthcare workers
66. Not getting input from the Aboriginal & Torres Strait Islander community. Access to culturally appropriate services. Access (transport)
67. Health Education & Promotion.
68. The inability to share data with other Health care providers due to privacy issues.
69. Tendency to focus on individual chronic diseases as a disease stream.
    Lack of consistent programmes leads to lack of trust
70. Poor education of staff
71. Workforce shortage, apathy to change in older practitioners, lack of interest in certain areas, long waiting lists for specialist services. and intractable
72. Lack of staff

6.7 Client enablers to best practice standards of care

Respondents were asked to document what, in their opinion and experience, were the major client enablers to receiving and sustaining best practice management of their respiratory disease.
The responses are presented in detail in table 34 (unedited with the exception of spelling errors).
Overwhelmingly, the common themes that emerged were:

- Active engagement with proactive IHWs and ACCHOs
- Wanting to learn and being actively engaged in their health care in environments that are culturally safe
- Empowerment, self-determination and the willingness of communities to achieve better health outcomes
- Accessible transport

- Local, social support mechanisms
- A belief that they deserve good health and access to the structures and mechanisms that support and encourage this belief
- Learning from others with a similar condition
- Ownership of prevention, intervention and management programmes
- Positive ongoing feedback when things are going well and constructive, culturally appropriate feedback when things are not going well
- Good quality, culturally safe care in the community

Table 34: Expressed major client enablers to receiving and sustaining best practice management of their respiratory disease

1. Chronic Disease health workers from the local Aboriginal Medical Service are very proactive in their work. This has enabled me to work with them, share information in turn clients can maintain their health and not relapse back to the hospital.
2. Awareness of one's health.
3. Communities willing to learn or increase knowledge for better health outcomes.
4. follow-up and home visiting
5. seeking knowledge, wanting access and resources
6. AMS partial assistance with transport.
7. General physician and medical team working collaboratively with nursing and allied health professionals.
8. Hospitals, GPs and Heath Workers
9. Client being interested/motivated in managing their respiratory disease.
   Clients having an awareness that their disease can be managed better with correct use of medications and equipment to administer medications and regular exercise
10. Culturally appropriate services/and simple language explanations of respiratory disease and treatments.
11. * enabling the treatment process to fit in with their life
    * support with transportation
    * cultural support (e.g. Indigenous Health/Liaison Workers)
    * empowerment and understanding of the treatment process
12. Good communication skills with liaison officers
13. The NCACCH brokerage model is fantastic for providing clients with access to mainstream services.
14. Increasing interest and engagement in self managing own health care
15. Unsure
16. not sure
17. There are dedicated individuals in both Hospital and primary health care settings that are willing to developed cultural safety and competency processes unfortunately they are not recognised or bullied out of the system by Corporate office projects that never take into account of current practices.
18. Education
    Willingness to accept health care advice and management
19. Education
20. Recognition of client readiness to change .
    Local support group with allied health support
21. 1\. Feeling 'safe' with service provider.
    2\. Empowerment and taking responsibility for their own health and treatment programme
    3\. Education!!
    4.Understanding of the treatment and outcomes.
    5\. Transport to be able to attend treatment programmes.
    6\. Money needed to get transport to the programme

7. Food
8. Social support - Support for people in the care of this person eg children - if it is the carer that needs to attend appointments or need to take time out to manage their illness then they may require extra assistance to arrange care for their children so they can attend. If it is an elderly person, they may need assistance or support if they care for their partner / even more elderly parents.

22. Being informed better on their illness..More trained staff and more resources...
23. RESULTS!
    REWARDS ACHIEVEMENT OF MEASURABLE GOALS. SHARED GOALS IDENTIFIED BY THE CLIENTS,
    WORKING IN PARTNERSHIP WITH HEALTH PROFESSIONALS,
    MAKING IT FUN, INCLUDING THIER FAMILY ESPECIALLY GRANCHILDREN!
    IDENTIFYING STRATEGIES FOR WHEN THINGS GO WRONG: PLAN B,C,D,E,F
    SEEING OTHERS AND HEARING THIER STORIES,
    HOLISTIC HEALTH CARE: ESP PSYCHOLOGIAL ASSISTANCE, MULTIDISCPLINARY FOCUS.
    ANXIETY ACTION PLANS,
    RELATIONSHIP BUILDING WITH THEIR GP/HEALTH CARE TEAM
    DELIVERY OF PROGRAMME IN APPROPRIATE SETTING.
24. Make it relevant- work with the Indigenous Health Workers to support the client and go by their lead. Respect their culture and do things the way they see as appropriate. Use Indigenous based resources that are relevant to the group (Murrie V's Koori people) and the area (rural V's city).
25. Well respected Indigenous Health Workers who assist their clients
    Well trained staff who can assist the client
26. Public transport where it exists
27. Ongoing follow up
28. Education, encouragement of self-management, case finding.
29. Employing A&TSI specialists and project officers
30. Health Care workers
31. Spouses assist with helping loved ones get well, particularly women to men.
32. Support through chronic disease self management team, education, feedback, indigenous health workers.
33. Culturally relevant access to health services from a young age
34. Education.
    Support within the community.
35. Believing that they are worth the effort of self care.
    Believing that good health is accessible to them.
36. the cultural drive and influence of significant members of the community
37. People appear more willing to give things a go, even if they think it won't work.
38. Indigenous people accept assistance if it is delivered to them in their own environments, Towns and do not have to travel to other areas as it will not happen with the vast majority of client who could benefit from care and education for prevention.
39. access to liaison nurse
40. Care and consideration and understanding
41. not sure
42. Small, fairly immobile populations which can become well known individually to long-term health care providers
43. Everyone is seen and assessed by a nurse when they turn up
44. Unsure
45. We have a dynamic proactive team that plan and initiate interventions in consultation with our clients, good recall systems, initiate brief interventions with opportunistic presentations
46. Stronger voice as younger generation comes through
    Better technology - eg mobile phone messaging for appointments
47. A well informed clinical advisor

An empowered client
Accessible services
48. Not experienced to answer this question
49. having health care workers from the same community and cultural background
50. A willingness to change behaviours esp around smoking
Family support networks
51. Dedicated coordinator who becomes the parents/child's advocate. Giving information to the parents on daily basis of expected discharge, results of tests, and education.
52. Local community focus - Indigenous health services at Chermside
53. Ditto
54. Senior Health Workers
55. Engagement and involvement
56. all medications free within service area
57. potential to have individualised care plans
58. Desire to improve personal health outcomes
59. promoting the activity including community area/ lobby groups to have ownership - invite the target group to be the key stakeholders and then keep the promised support and motivation for extended period of time to gain success
60. None
61. I have usually found this group very affable and willing to be involved in short-term treatment. Things fall over when looking at the long-term strategy for an individual patient.
62. Accessible and appropriate services
63. Maintaining care plans.
Uptake & maintenance of preventative measures.
64. Increased contact with community leaders and engagement of the community in perceiving health as own issue
65. Having good quality respiratory care available in the community. More respiratory educators and health workers that can provide best practice management and coordinate their care.
66. Active and positive work with the community and the Indigenous Health teams to educate them and to inspire whatever area - like respiratory that they can in their work schedule. Increase Indigenous workforce and mentor and enable more AHWs to work within practices.

6.8 Client barriers to best practice standards of care

Respondents were asked to document what, in their opinion and experience, were the major client barriers to receiving and sustaining best practice management of their respiratory disease.
The responses are presented in detail in table 35 (unedited with the exception of spelling errors). The common themes that emerged were:

- Lack of knowledge and education
- Lack of culturally appropriate and safe services
- Financial barriers and transport issues
- The interplay and influence of multiple social, environmental, economic and health factors impacting on health and the ability of Indigenous persons with chronic diseases to manage these.

Table 35: Expressed major client barriers to receiving and sustaining best practice management of their respiratory disease

1. In my opinion clients are well supported in the hospital and in the community however when client`s refuse to make changes to their health ie cease smoking, this can lead to further increase in their ill health.
2. Lack of culturally appropriate services therefore not accessing services. lack of awareness and appropriate education/management of respiratory disease
3. Access to services, time restraints due to respiratory disease impacting on client health outcomes. Poor education and acceptance of respiratory health.
4. lack of knowledge for the medications needed and no money to pay for the medications
5. education and knowledge, when accessing services accommodation, and families
6. Culturally appropriate Service. Education, Access to services. Visiting services, Respect. First point of contact.
7. Access to definitive care as outpatient
8. Transport, lack of resources, Gp referring to Brisbane or other places as clients have to pay up front for travel and accommodation
9. Not understanding how the medications work and how to use the equipment to administer medications.
   Not wanting to quit smoking
10. Early diagnosis/understanding of diagnosis/ cost medication /education of proper use of medication/ transport to services.
11. * transportation
    * community and family responsibilities/activities etc
    * power within the medical relationship
    * cultural appropriateness of service/medical management of disease
12. Access to health care
13. Money, transport, lack of knowledge and understanding about the risk factors and/or their respiratory condition. General practices are busy places.
14. Social determinants of health (i.e. lifestyle factors such as smoking) will always make it hard for some of our clients to change their behaviour.
15. transport, lack of education
16. simplicity of information and process
17. cultural awareness of indigenous peoples about how they view their health and support needs
18. Cultural Safety for Indigenous people into mainstream general practices and mainstream Hospital systems.
19. Low level of knowledge / interest about health matters in some indigenous groups
20. People identifying and not identifying as an Aboriginal or a Torres Strait Islander or both
    Education of harmful activities and changing the culture of caring for yourself and your health
    Access to adequate care - remoteness and accessibility of health services - eg non-Indigenous managers expect Indigenous people to travel kms to cities/towns to access health services when most people don't have money, or a vehicle for transport.
21. poor housing, overcrowding,
    Clinic queues
    Insufficient outreach allied health
    transport
    depression
22. 1. Lack of motivation to cease smoking!!!!!
    2. Lack of education / understanding about the importance of healthful eating, exercise, not smoking, drinking alcohol, drugs etc.
    3. Role modelling by many family members and friends of smoking, unhealthful eating, etc
23. The lack of responsibility from the patient of their own health needs & this in turn fails in the chain of

events for their care & treatment of disease.

• Is it they don't understand the disease so they ignore the follow up for treatment??

• Is it as soon as they feel better they think they no longer need treatment??

Education to patient in their time & environment to educate where they are now with their disease

(a) what will happen to their body with treatment

(b) what will happen to their body without treatment

24. Transport, resistance to change
25. SOCAL FACTORS, STRESS, ALCOHOL, UNABLE TO SELF MANAGE, PSYCHOLOGICAL FACTORS, $$ FOR MEDICATIONS, PREVIOUS HISTORY WITH PUBLIC HEALTH SERVICE, INAPPROPRIATE GP'S
    SMOKING AND THE SHAME WITH BEING UNABLE TO GIVE UP
26. transport to the pulmonary rehab services/
27. As some of my clients have fed back- there's a lot of white fellas trying to be black, and doing a really bad job of it. People don't listen to what the real issues are- they may not be health related in the first instance. Unless you deal with their main issue, you won't engage them.
28. Other priorities in the client's life.
    Transport
    Budget
29. Failure to attend rate seems much higher among this group. When we do outreach in Mount Isa this is a major issue. Transport, Ability to read and comprehend, Ability to communicate what they understand
30. No follow up
31. lack of trust
32. Lack of education, poor understanding, socioeconomic status. Healthcare professionals on the ground.
33. Racial, social expectations
34. No A&TSI specialist to follow up with A&TSI clients
35. access to the service
36. Indigenous people that don't want anything to do with tertiary health care providers.
    Indigenous people that only wish to participate in their own terms, transport provided, drugs provided.
37. Depression, education, motivation, substance abuse, generation gap re education, thinking, and self worth. Self belief systems.
38. distrust of "white medicine"
    Lack of basic understanding of health let alone disease
    alcohol
    Peer pressure
    Movement of indigenous from the "dry" communities to the towns - concentrated the drinkers within the towns and increased peer pressure to conform to alcoholism
39. The major barrier is the low expectation for what is perceived as good health. This requires increasing access to good health services as early stages and using preventive strategies that may lead to a higher expectation for good health
40. Cultural perspectives at odds with those inherent in mainstream health care.
    Distance from health care programmes.
    Lack of education regarding health issues.
41. Lack of immediacy of effect: treatments do not necessarily make a person "feel better"- so they are less likely to persist unless given plenty of assistance, support, and encouragement, with health management embedded in daily life activities.
    Lack of concern about lung health: When many people in the community have bad lungs, it becomes the norm: whereas the desire to have "good" lungs needs to be brought to awareness.
42. Same as all barriers faced by all cultures just 40 years ago for indigenous levels
43. Knowledge and understanding of their condition and how it integrates with the body and their other conditions.

Ability to see clients regularly if they live a long way away.
44. Not enough take ownership of their conditions and action for follow up care.
45. Coming back for follow up.
46. Not enough indigenous staff employed in the region for the right reasons.
47. Lack of education, employment and wider life experience
48. People not turning up for appointments/forgetting
49. Unsure
50. Educating Indigenous clients to realise that it is their own health that it is a priority, instead of putting family members first. Client barriers include not showing up for appointments, not able to communicate via mobile phone (phoned turned off), Not being able to provide transport for more than three clients per day, given the amount of requests.
51. Lack of knowledge
Lack of transport
Lack of flexibility in service times
52. Individual capacity to attend services
53. Education
54. Transport available but unable to be accessed because of dyspnoea caused by the walk at either end of their journey
Financial constraints, cost of medication
Budgeting priorities and organizational skills
Failure to attend appointments
Perceived lack of empathy from health care workers
55. Often the distance from their homes and families when a child needs to be admitted
56. Transport and information
57. ditto
58. Assessment and Intake process.
59. Engagement and involvement
60. Mainly due to not having enough indigenous health workers on the programmes
61. mobile patients difficulty accessing regular medications
poor education of health workers re chronic resp disease
poor understanding risk smoking in community
62. Non-engagement in management.
Small Indigenous population
63. Understanding, personal responsibility, alcohol ,tobacco
64. Trust of organisations
Acceptance of resources
65. individuals value system desire to improve health possible market cost saved related to improved health
66. self care ability
adherence to appointments
67. Patients do not access health care in the same ways. Need to facilitate care in own communities and together with people who understand the dynamics of such communities
68. Low levels of patient expectation
2. Poor Educational levels - leads to poor compliance
3. Unreliable or uncontactable Indigenous health workers - despite efforts to involve them in the care of a patient, I have rarely found them helpful.
4. Transport to appointments
69. Lack of understanding of disease and its impact, lack of access.
70. Keeping appointments.
Transport services.
71. Lack of support in the community of the existing HWs, inability to secure any form of "free" or low

cost public transport

72. Small indigenous community locally with 2 different community groups within local geographic area
73. Homelessness, poor education, lack of appropriate support persons
74. Not being able to afford quality primary care and not having the transport in place to go to the GP or hospital appointment
75. Lack of pride, lack of trust, lack of knowledge, family norms, community norms, resistance, resistance to change behaviours, self destruction, lack of resources, transport issues, poverty.
76. distance
    cost

7. Key Informant Perspectives

7.1 Introduction

This section of the report details the perspectives of service providers based in public hospitals, ACCHOs, Community Health Services and other organisations from across the state. All discussions were held with one or more key staff from each of the regions using a semi-structured interview format, during which time the services available in hospitals were also mapped against the proposed best practice standards of care matrices sourced from the Hunter New England Area Health Service (Appendix E).[105]

The information presented here represents the views of those who participated in the interviews and may not necessarily reflect in entirety the scope of services or the enablers and barriers to services for Indigenous clients within each of the facilities. Similarly, it does not reflect all facilities in the state. However, the facilities were selected to provide a broad representation of urban, rural and remote locations in the northern, southern, central and western regions of the state and to capture areas with a relatively high proportion of Indigenous persons in the area.

7.2 Aboriginal Health Services

7.2.1 Inala Health Service, Brisbane

Discussions at Inala were held with the Medical Director and the Nursing Unit Manager.
Inala Health Service in Brisbane is well recognised as a provider of Indigenous Health services in Brisbane and the development of the service and the factors influencing its success has been published in the peer review literature.[63, 106] Inala has approximately 4000 clients, some of whom are non-Indigenous due to family connections and access to the service is highly valued with clients often recommending the service to others. Follow-up and attendance at appointments is good and this is thought to be a reflection of the pride the community has in the service. Despite this, transport issues and the cost of medications persist as client barriers to care and self-management.

Inala provides a range of services and from a lung health perspective provides access to general physicians, emergency non-invasive ventilation, allied health staff including physiotherapists, domiciliary oxygen assessment and provision, routine immunisation status assessment, Spirometry and 24 hour emergency contact if required. With respect to Spirometry, there is only one and if that breaks down then clients need to be referred. More spirometers and training in Spirometry was an identified, important need. In addition, the service does not have access to culturally appropriate educational materials and resources to facilitate the care of their clients with lung diseases. Asthma, COPD and pneumonia were identified as key lung health problems in the community.

There is not a focus on chronic lung disease but there are programmes for diabetes and heart disease. Limited space, staff and resources hamper efforts to expand the scope of services provided. There is a lack of access to culturally appropriate educational materials and resources specific to lung health which was identified as an important system barrier. In addition, culturally appropriate training on lung health for nurses and IHWs was needed to increase awareness of the problem and to facilitate appropriate management of their clients, as was additional funding to support tobacco use initiatives such as access to subsidised nicotine replacement therapy.

Further discussions were held with Inala Health staff at a later meeting held at the South Brisbane Division of General Practice as part of that organisation's COPD reference group. The lack of culturally appropriate resources was raised again. Furthermore, while the area was considered *"service rich*" it remained "*access poor*". This remained particularly relevant for services such as pulmonary rehabilitation which, even though there are several available, clients do not attend for reasons that are not well understood. Transport, the cost of services and other items necessary to the management of disease (eg. medications) and that mainstream services are not appropriate for Indigenous clients, were identified as key issues. The multiplicity and fragmentation of services are seen as major issues, particularly for those with multiple medical problems; *".....it becomes overwhelming for people.....being referred in multiple directions for multiple things"*. In addition, the age differentials between Indigenous and non-Indigenous clients with chronic diseases (given Indigenous persons develop these diseases at a much earlier age) may be an important influence on whether they attend services; young people have to go to services where everyone else is much older.

The Inala Health Service is in the process of developing a centre of excellence in research and teaching and has on staff a research director. Getting the perspective of consumers was seen as an important research need.

7.2.2 Barambah Regional Medical Service (Aboriginal Corporation), Cherbourg

The Barambah Regional Medical Service (Aboriginal Corporation) services the Aboriginal community of Cherbourg and the surrounding communities in the South Burnett region. Discussions at Barambah were held with the acting CEO and the Indigenous Health Coordinator. Barambah functions as a general practice clinic and is staffed by doctors, registered nurses, and IWHs and some allied health professionals. As per discussions with the Gold Coast Hospital, an adult respiratory specialist does provide outreach services to Barambah on a voluntary basis. Adult and child health checks are performed although screening specific to lung health is not performed routinely. Asthma, TB, COPD and smoking were identified as lung health concerns in the community.

The major problems with respect lung health in their community were the lack of timely access to specialists, the need for clients to be sent to Brisbane, the Gold Coast or Toowoomba hospitals for care and limited funding to do any more than brief interventions. There was also limited staff knowledge and training in regards to lung health, particularly with respect to Spirometry. Transportation issues for clients and a lack of adherence to management plans were common problems.

It was felt that more staff and client education, better access to specialists, smoking cessation programmes, better transport services, rehabilitation programmes in the community and empowerment of the people were seen to be the major factors that would improve respiratory health in their community.

7.2.3 Townsville Aboriginal and Islander Health Service (TAIHS)

TAIHS is a self-governing, independent, community-controlled Indigenous organisation providing primary health care services to Indigenous people in the Townsville region. It provides general practice services staffed by doctors, nurses and IHWs and a range of ancillary services. The interviewee at TAIHS was the acting practice manager. Asthma, smoking, COPD and cardiac diseases were identified as important health problems in the community.

With respect to lung health, the service considers it provides good education and access to culturally appropriate programmes and services. However, while smoking cessation programmes are available there is no funding to support additional initiatives such as access to free nicotine replacement therapy. Similarly the cost of managing and treating lung disorders was considered to be a major barrier, particularly with respect to items such as medications and nebulisers etc.

Specific programmes targeting lung health in the community that were appropriately resourced (both staff and materials) were needed, including specific positions dedicated to lung health. Furthermore, programmes should be funded in a manner that ensures sustainability, rather than just one off activities.

7.3 Hospitals

7.3.1 The Gold Coast Hospital

The interview at the Gold Coast Hospital was held with two respiratory specialists and a senior pathologist. The Gold Coast Hospital has a specialist respiratory service for adults only; children are referred to Brisbane. The catchment area for the hospital also includes areas in Northern NSW. Inpatient and outpatient services include specialist services for cancer, general respiratory medicine and sleep, with the later being a new service in 2010 that includes two dedicated sleep medicine beds (to be increased to four beds in the future). Outpatient clinics for each of the specialties are held once a week with a minimal waiting list. COPD clinics that focus on pulmonary rehabilitation are run weekly by nurses in off-site centres in Palm Beach, Helensvale and Bundall; respiratory physicians attend the clinics once a month. A COPD workshop, with a focus on the early detection of COPD has been developed for general practitioners, and is organised through the local Division of General Practice.

The team indicated that they were not aware of any Indigenous persons in either their inpatient or outpatient client base, including the off-site pulmonary rehabilitation services. Indigenous status is not routinely assessed during client care as “everyone is treated the same”. Similarly Indigenous specific services at the hospital were not considered necessary for those reasons. With respect to the proposed standard of care (Appendix E) for a Tertiary hospital, the Gold Coast hospital meets all criteria for adult services with the exception of:

- A dedicated acute respiratory failure unit
- A formal outpatient respiratory failure service
- A formal outpatient smoking cessation service
- Advanced sleep and bronchoscopy diagnostics (particularly stenting) although these are in the pipeline for 2010
- Pleuroscopy is not performed
- There is only one surgeon available for cardiothoracic services which creates some delays
- Onsite radiation oncology is not available.
- Nuclear medicine facilities are privately operated

A voluntary specialist outreach programme from the Gold Coast to Cherbourg, that includes an adult respiratory physician, has been in operation for approximately four years and was initiated by an orthopaedic specialist at the hospital. Clinics are conducted at the ACCHO once every two months, with specialists usually accompanied by a nurse and occasionally an allied health worker. Approximately 8 – 10 clients are seen at each clinic.

The programme is not funded separately, staff volunteer their time, although the specialists are indemnified by Queensland Health. The current respiratory specialist has been involved with the programme for approximately two years. The voluntary nature of the programme means that some scheduled clinics may not occur if the physician has other priorities at the hospital or must cover other specialists on leave.

The gaps and barriers identified by the team at The Gold Coast Hospital include:

- No onsite specialist paediatric service (there is a visiting service but the scope of that service was not known)
- Access to physiotherapists is problematic with a shortage of staff available
- A dedicated smoking cessation facilitator was identified as an important need
- Problems with integration and coordination of clients from Cherbourg, particularly fragmented referral systems and a lack of communication between the local hospital and the ACCHO
- Outreach service to Cherbourg should be formally recognised by Queensland Health with the appropriate resources provided to sustain the service (including the integration of paediatric services)

7.3.2 The Prince Charles Hospital

Information from The Prince Charles Hospital was obtained by a staff physician via informal interviews with Respiratory Medicine Department staff. The hospital provides both inpatient and outpatient adult general respiratory medicine serves and specialist cystic fibrosis services. Paediatric services are not provided. There are minimal waiting lists for inpatient services and an average of a four week wait for outpatient clinics. Outreach clinics for cystic fibrosis are provided by the department to Cairns, Townsville and Mackay on a six-monthly basis. It was estimated that Indigenous persons represent approximately 2% of the department's client base. Lung transplant outreach clinics are also provided by hospital's Thoracic Department. Department staff are also members of the Statewide Lung Cancer Clinical Network. While the majority of clients come from the Metro South and North HSDs, the hospital provides state-wide services for cystic fibrosis, lung transplantation and pulmonary vascular diseases.

Indigenous status is reportedly routinely collected and reviewed for clients but there are no Indigenous specific services provided by the hospital. Staff were not aware of reasons why data suggest differential treatment of Indigenous clients and considered there was no difference in service provision. Staff were not aware of any programmes or initiatives designed to improve the detection, treatment and ongoing management of chronic lung disease for Indigenous clients, nor were they aware of any initiatives to improve the coordination of services. Access to culturally appropriate resources to support the care and management of Indigenous clients was limited to access to the hospital's Indigenous Liaison Officer and SmokeCheck information sheets.

With respect to system enablers and barriers, it was felt that more resources directed to the training of IHWs to allow community activities such as case finding, education regarding smoking cessation and resources to support the coordination of such activities using telehealth and central databases would be logical. The role of IHWs, particularly with respect to the introduction of any health care initiatives was seen as important to addressing cultural barriers that may exist. These factors were also viewed as important and necessary changes to service delivery if improvements in Indigenous lung health were to occur.

7.3.3 The Princess Alexandra Hospital

The information obtained from The Princess Alexandra Hospital (PAH) was via an interview with a respiratory specialist with over 20 years service at the hospital. PHA has a specialist respiratory service for adults only and also provides specialist services to QEII Hospital. It has a catchment area that covers South East Queensland, Northern New South Wales and also receives patients from as far as Cunnamulla in the South West of the State. Respiratory medicine services include general and specialist respiratory physicians including Sleep Medicine. They do not provide Cystic Fibrosis services. Waiting lists for non-emergency admissions fluctuate but are not considered long. Outpatient clinics include general respiratory medicine (caters for Asthma, COPD, interstitial lung disease (ILD) and occupational lung disease), sleep medicine and a lung cancer multidisciplinary clinic. A difficult asthma service will be available in the near future. Outpatient referrals are triaged according to category of urgency. All category 1 and 2 patients are seen within 8 weeks but urgent cases will generally be seen within a week.

With respect to the matrices of care for a Tertiary facility, PAH meets all of the criteria with the exception of:

- Laser and stenting bronchoscopy diagnostics
- PET scanner (one will be available in 2011)
- Dedicated smoking cessation facilitator. Smoking cessation is incorporated within the role of the respiratory nurse who runs the pulmonary rehabilitation programme.

PAH provides respiratory medicine outreach clinics at Redland, Logan and the QEII hospitals once a week. The department also provides services to TB control and Metro South Respiratory Community Services twice a week. The services provided include pulmonary rehabilitation programmes, access to physiotherapists, occupational therapists and dieticians, and Hospital in Home programmes are in place.

The Brisbane South Respiratory Service was also identified during the interview. This service is based at Corinda and aims to support General Practitioners by enhancing access to Respiratory Nurse Educators and Allied Health Providers (in both the public and private system), and providing regular feedback to the GP/Specialist. Indigenous status is collected on the referral form. There is also a community respiratory service in Ipswich that includes pulmonary rehabilitation programmes.

The service does not have any respiratory programmes or initiatives specific to Indigenous patients.

Indigenous status is not routinely reviewed at the clinical level ("*everyone is treated the same*") and the interviewee estimated that Indigenous persons comprised approximately 3% of their client base. The interviewee was not able to provide a reason for why there are differentials in the proportion of respiratory inpatients that have procedures formed compared to non-Indigenous patients and was not aware this disparity existed. The interviewee stated there was good access to culturally appropriate resources to support the care and management of Indigenous clients, including the Indigenous Liaison Service based within the hospital.

Overall, the interviewee felt the coordination of respiratory services within the Metro South HSD was good but that services across the state were fragmented (for all clients with respiratory disease not just Indigenous clients). There are large areas of the State that have no access to specialist respiratory services at all. Another major issue identified was the inadequacy of information systems, particularly how data are stored, accessed and linked between centres and services. This results in significant difficulties in consolidating client histories and in planning ongoing care.

The interviewee felt that what was needed was much greater focus on the provision of services at the community level, including coordinated and well resourced outreach programmes. In particular, it was felt that advocating for and developing these services should be an important function of the Statewide Respiratory Clinical Network, rather than the Network focussing on clinical practice improvements in existing services.

7.3.4 Royal Brisbane and Women's Hospital

The interview at the RBWH was held during a team meeting that included physicians, nurses, allied health staff and respiratory scientists. RBWH has a specialist respiratory service for adults only. It has a catchment area that covers south-east Queensland and northern New South Wales. Respiratory medicine services include general and specialist respiratory physicians including Sleep Medicine. There are eight dedicated respiratory beds. Waiting lists for non-emergency admissions fluctuate but are not considered long with the exception of Sleep Medicine. Only two of four dedicated sleep beds are currently open and a non-urgent consultation with a sleep specialist can be as long as 15 months.

Outpatient clinics include general respiratory medicine (caters for Asthma, COPD, ILD and occupational lung disease), sleep medicine, pulmonary rehabilitation and a lung cancer multidisciplinary clinic. With respect to the matrices of care for a tertiary facility, RBWH meets all of the criteria with the exception of:

- A dedicated acute respiratory failure unit
- Laser bronchoscopy diagnostics
- A dedicated smoking cessation facilitator. Smoking cessation is incorporated within the role of the respiratory nurse educator in the hospital

The service does not have any respiratory programmes or initiatives specific to Indigenous patients. Indigenous status is not routinely reviewed at the clinical level *("...everyone is treated the same and it doesn't make any difference to clinical care*"). It was noted that the Indigenous Liaison Officer at the hospital does make an attempt to visit all Indigenous patients and the officer was accessed if needed for patient education. Staff were not aware of what proportion of their patient base were Indigenous. The team was not aware of why there were differentials in the proportion of respiratory inpatients that have procedures formed compared to non-Indigenous patients, although it was suggested that a potential reason may be reluctance on the patient's part for more invasive procedures. It was felt that access to procedures was the same for all clients.

There are no outreach services provided by the department at RBWH (either Indigenous or non-Indigenous). While there has been interest in providing this service, particularly with respect to some subspecialties, these have not been funded or resourced. If they were to be developed it was felt that effective outreach programmes should include a multi-disciplinary team consisting of at least a physician, respiratory scientist, nurse and physiotherapist.

Again, fragmentation of services and deficient information systems were seen as major impediments to the provision of respiratory services in Queensland. Fragmented information systems contribute to losses to follow-up, difficulties in obtaining detailed and up to date patient information and duplication of services. It was felt that a coordinated, publicly funded, state-wide respiratory service should be established, with the appropriate resources and funding to provide high quality outreach and inpatient services for all Queenslanders. In addition to this, services and information systems that facilitate contact with, and follow-up of, Indigenous clients were seen as needed as non-attendance at booked appointments was common. The lack of dedicated smoking cessation facilitator positions was seen as a major deficit in service provision and one that needed to be urgently addressed.

7.3.5 Royal Children's Hospital

The interview was held with six respiratory physicians at the RCH. The RCH is one of only two tertiary paediatric facilities in Queensland (the other being Mater Children's) and as such has a catchment population of the entire state. Respiratory medicine services include both respiratory medicine and sleep medicine, although diagnostic facilities for the latter are only available at the Mater Children's. Despite the importance of respiratory illnesses in children and young people, there are no dedicated respiratory beds and there is no adolescent ward or unit. Similarly, access to cardiothoracic services is limited. Subspecialist outpatient services are incorporated into general respiratory medicine clinics. With respect to the matrices of care for paediatric tertiary services, at the RCH:

- There are no dedicated respiratory medicine beds
- There is no dedicated acute respiratory failure unit
- There are no diagnostic sleep services
- There is not a full range of cardiothoracic services
- PET scanning is only available at the RBWH
- There is an absence of discharge planning services
- There is a major deficiency in allied health services, particularly physiotherapists, with disparities in access to physiotherapists in particular between children with CF and those with non-CF bronchiectasis
- There is disparity in access to free pneumococcal polysaccharide vaccine between children with CF and others with chronic lung disease

The team estimated that less than 5% of their client base was Indigenous. RCH is the referral centre for children from the Torres Strait given outreach services provided in that region. A small number of Indigenous children are also referred from Murgon, Cherbourg and Ipswich. Outreach services are provided regularly to the Torres Strait and occasionally to the Cairns and Hinterland HSDs. Outreach services are not funded by Queensland Health and there has been resistance to the provision of those services outside of the Torres Strait in the past. Outreach services used to be provided to Ipswich however that has ceased given resource limitations. Similarly there have been unsuccessful attempts to establish paediatric respiratory outreach services to Cherbourg. The outreach experiences of the team suggest there are ongoing issues with the coordination and integration of services for Indigenous patients, particularly planning for travel, ensuring patients and their escorts have the necessary items such as money, appropriate clothing and somewhere to stay. It was felt there was little appropriate support for patients when they arrive.

While Indigenous status is collected administratively at the time of admission at the hospital, clinicians did not routinely review the Indigenous status of their patients as this was considered by certain members of the team as "...*irrelevant to clinical care*". They were not aware of the data regarding differences in procedure rates between Indigenous and non-Indigenous patients and did not consider this applied to children. A possible explanation for the difference was provided. It was thought that these procedures (particularly those requiring informed consent from parents/guardians) may be delayed as children may not be accompanied by an authorised carer. The team also reported that access to the Indigenous Liaison Service at the hospital is problematic as it is a position that is shared with RBWH and can be difficult to contact.

The fragmentation of services and problems with health information systems identified at other centres also applied at RCH. The lack of Queensland Health support for outreach programmes continues to present problems in providing care to rural and remote areas.

With respect to providing high quality, coordinated clinical services across the state it was felt that the Statewide Respiratory Clinical Network should focus on the distribution of those services throughout the state and that a proper paediatric component of the network should be developed and supported. However it was noted that the disproportionate allocation of funds to the various clinical networks has presented some limitations to what the Respiratory Network can achieve. Furthermore, it was stated that the gross deficiency of allied health staff in the state needs to be addressed as a matter of priority, particularly paediatric specific staff.

7.3.6 The Mater Adults

Given time constraints, the discussion with a respiratory physician from the Mater Adults was relatively brief. The interviewee indicated that Indigenous clients probably represented approximately one percent of the patient population and that they were predominantly from around the Brisbane South area. Torres Strait Islanders were rarely seen. The interviewee indicated that alcohol related respiratory conditions were more often the reason for hospitalisation amongst Indigenous patients.

While there was good access to an Aboriginal Liaison Officer at the hospital, there were no specific services or programmes dedicated to Indigenous clients. The interviewee was not aware of any outreach services being provided by the hospital although respiratory physicians conduct an outpatient clinic at Ipswich once a week. An Indigenous Health Clinic conducted by local GPs at Woolloongabba was identified as a local resource but was not sure of the detail of the service. Coming back for follow-up post-discharge was considered to be problematic amongst Indigenous clients although the reasons for this were not clear other than transport issues.

With respect to the matrices of care for a tertiary facility, the Mater Adults meets all of the requirements with the exception of:

- Dedicated respiratory beds (although access to beds for respiratory patients is not problematic)
- Dedicated acute respiratory failure unit
- Subspecialist outpatient clinics with the exception of cystic fibrosis. Subspecialties are managed within the general respiratory clinics
- Sleep diagnostics are not available

- Nuclear medicine and PET scanners are not onsite but is available at the private hospital nearby
- Cardiothoracic services, clients needing these are referred to Princess Alexandra or RBWH
- A formal discharge planning service (although discharge planning is done within the team and is considered to be very good)

7.3.7 The Mater Children's

The discussion at the Mater Children's was held with a senior paediatric respiratory physician. The interviewee indicated that Indigenous clients probably represented approximately five percent of the patient population and come from all of Queensland, particularly given the hospital provides home oxygen, ventilation and sleep programmes.

There is reportedly active engagement of the hospital's Indigenous Liaison Officers with all Indigenous patients admitted to the hospital. This is primarily facilitated by the respiratory team's nurses who ensure Indigenous status is reviewed for all clients and was seen to be a factor of comprehensive cross-cultural training that is mandatory for nurses at the hospital and a commitment of the team to Indigenous health. Access to the liaison staff was less comprehensive for outpatients but this was an issue of workload. In addition, there are times when the liaison officer is not considered as the most appropriate person given kinship and/or avoidance issues. There are also reportedly active approaches to ensuring that Indigenous clients and their families from regional and remote areas have appropriate accommodation and support when they are in Brisbane for medical care.

The interviewee was not aware of the data suggesting Indigenous patients with respiratory diseases are less likely to have procedures performed but indicated this was probably a factor of the extent to which Indigenous clients are actively engaged in their care and that follow-up is consistent and persistent; *".....you need to chase, chase, chase and hound".* The interviewee also felt that compliance and adherence issues commonly raised in discussions about Indigenous health was not a patient factor but a lack of education of providers about Indigenous people and the issues impacting on their ability to maintain good health.

With respect to achieving best practice standards of care for Indigenous clients, it was felt that education of both providers and patients was critical and that this needs to be consistent, persistent and sustained over long periods of time. In particular, this needs to occur in the community more than the hospital setting as the stress of hospitalisation of a child will more often result in many messages not being absorbed or retained. In particular, action plans *"...need to be implementable....communities know better how things will work....we should know these things so we know management plans will work."*

The major gap in services for Indigenous clients with respiratory diseases is a lack of outreach services and a historically poor commitment from Queensland Health to well trained and resourced outreach teams. Outreach services should not just be a physician attending a clinic every few months; it should be the respiratory team as a multi-disciplinary approach is critical. A core function of that team should be providing training to local staff so that up-skilling occurs across the board and that effective care of the client in the community is sustained. Furthermore, it was felt that the lack of highly trained and skilled nurse specialists was a major barrier to the provision of best practice standards of care in both the community and hospital settings.

With respect to the matrices of care for a paediatric tertiary facility, the Mater Children's meets all of the requirements with the exception of:

- Dedicated respiratory beds and a dedicated acute respiratory failure unit. However, the interviewee indicated that, as respiratory medicine was viewed as priority within the hospital that access to beds for respiratory patients is not a problem. Furthermore, the interviewee questioned the feasibility of such services, particularly given the major problem with access is the lack of skilled nurses to enable those facilities to function. Furthermore, there are differentials in payments between medical specialties which act as disincentives for physicians to be available 24 hours for an acute respiratory failure service (ICU and emergency department physicians get an extra 50% loading for call that is not available to other staff specialists)
- Subspecialty outpatient clinics, however the hospital has trained nurse specialists in each of the subspecialty areas that provide specific services as required
- Nuclear medicine facilities although these are available at the private facility nearby
- PET scanning is not available
- No advanced bronchoscopy services such as e-BUS

7.3.8 Townsville General

Paediatrics

A telephone interview was held with one paediatrician who has been at the hospital for two years. Townsville General is the largest hospital in North Queensland and has a broad catchment area from the far west, the Cape and Central Queensland regions. Given the high proportion of Indigenous persons in the region, Indigenous patients represent a large proportion of their client base and the capture of Indigenous status is high.

Townsville General does not have a specialist paediatric respiratory and/or sleep physician on staff. Chronic lung diseases are managed by the general paediatricians however advice can be sought from specialists in Brisbane. With respect to the paediatric matrices for a base hospital/regional referral centre hospitals, Townsville meets all of the criteria listed and also has access to nuclear medicine facilities. Limited sleep studies can also be done but reporting is performed by the Mater Children's Hospital. A sleep physician from the Mater conducts clinics at Townsville twice a year and teleconferences (for both case management discussion and physician education) occur in-between. Paediatric bronchoscopies can be performed however these are generally not done for diagnostic purposes; they are usually performed for foreign body removal. Children requiring diagnostic bronchoscopies are usually referred to Brisbane. A specific expressed need was a paediatric intensive care and/or high dependency unit with isolation facilities. Children requiring ICU are currently managed in the main ICU and infants with severe acute illness (eg. bronchiolitis) are admitted to the neonatal intensive care unit that has an isolation room.

Paediatricians from the hospital conduct outreach clinics at the following locations and frequency:

- Palm Island: 1 – 2 times a month
- Townsville Aboriginal Health Service (TAHS): once a month (relatively new service)
- Ayr, Ingham and Charters Towers: once a month
- Richmond, Julia Creek and Hughenden: every three months

There is also an outreach nursing service that includes home visiting. Waiting lists for the outreach clinics are prioritised and an average of 10 – 20 patients is seen at each clinic. Waiting lists were not considered to be overly long. The provision of services to Palm Island and TAIHS was considered to have had a positive impact on the coordination and integration of paediatric services in the region. The amount of additional activities (such as education, health promotion, self-management programmes) that can be undertaken in both hospital outpatient and outreach clinics are limited by a lack of space.

Overall, access to resources specific to Indigenous patients was considered to be good with active Indigenous Liaison Officers available. The major barrier and/or gap in optimal care for Indigenous patients was the suboptimal follow-up capacity and the lack of a systematic approach to care with respect to how and where client follow-up occurs (eg. Some patients go to TAIHS, others to GPs, others not at all). Follow-up gets particularly difficult if the Indigenous Liaison Officers are not involved early in the process. *"There is a lot of focus on child health checks. Everyone is writing down lots of stuff but the follow-up is poor".* It was also emphasised that if any new services were to be provided (for example visiting respiratory paediatricians) these would need to be well integrated with current activities and not occur in isolation for them to be successful. Similarly funding for outreach programmes would not necessarily need to be directed at employing doctors, many activities could be successfully undertaken by nurses.

The interviewee stated that they were well supported by a good infectious diseases service and noted that "*...we are seeing lots of empyema and staph sepsis. Bronchiolitis and asthma are common but we don't see much chronic suppurative lung disease in children.*"

Adults

To capture adult lung health services, a discussion was held with a senior respiratory and sleep physician who had been employed at the hospital for approximately five years. An estimated 30 – 40% of clients in both the inpatient and outpatient settings are Indigenous and, as for paediatrics, are derived from a large region of north Queensland. Waiting lists for non-emergency admissions were not considered long and were estimated to be approximately two months for outpatient clinics. Outreach services are provided to Mt Isa every two months and to, Ayr, Bowen, Ingham and Charters Towers every three months. Again, waiting lists for these clinics were not considered problematic.

With respect to lung health in Indigenous persons in the region overall, the interviewee indicated there was a lot of respiratory illness around but getting access to specialist respiratory services is dependent on referral from a GP. Hence, access to GPs, GP recognition of disease and referral for specialist follow-up are important determinants of specialist care. The interviewee questioned the accuracy of the data suggesting differential management of Indigenous patients while in hospital and felt that everyone was treated the same.

The interviewee was aware of programmes and initiatives to address the early detection, intervention and management of chronic lung diseases in Indigenous people such as vaccination programmes, school health checks, adult health checks and COPD programmes but the specialist team at the hospital was not involved in these directly given the lack of resources and staff to enable active engagement in these and other activities.

Positively, the interviewee felt the exchange of information between service providers was good, with excellent, well coordinated, referral processes. However, with respect to system enablers and barriers to high quality, evidence based care it was felt the health service was under-resourced and under-staffed, in particular for implementing the initiatives and programmes that are required to address the burden of respiratory illness in the Indigenous population. There needs to be increased efforts to get Indigenous patients to access GPs and other health services more frequently and then to ensure that clients needing specialist care are appropriately referred.

7.3.9 Cairns Base Hospital

Information on services provided by Cairns Base Hospital against the proposed best practice standard of care was obtained from senior nursing staff of the medical ward and the chest clinic. Information was not obtained from respiratory physicians in the timeframe available. The hospital meets all of the requirements for a base/regional referral hospital for both paediatric and adult lung services, including having culturally appropriate education resources available.

Discussions were also held with an Indigenous Health Coordinator for the Cairns and Hinterland HSD who had been working with Queensland Health for approximately eight years. The HSD provides services to the hospitals located at Cairns, Yarrabah, Gordonvale, Innisfail, Atherton and Mareeba as well as the Multipurpose Health Centres at Douglas Shire, Tully and Babinda. There are five ACCHOs within the District, each delivering a range of health services, some in partnership with Queensland Health. Queensland Health also delivers some services on site at ACCHOs including Breastscreen and some mental health services.

Compared with Queensland as a whole, the HSD has higher rates of hospitalisation for cardiovascular disease, communicable diseases, diseases of the respiratory system, diabetes mellitus, and injury and poisoning. The major causes of illness and death in the HSD are coronary heart disease, stroke, chronic obstructive pulmonary disease, depression, lung cancer, dementia, diabetes, colorectal cancer, asthma and osteoarthritis. Health determinants of significant impact include harmful alcohol consumption, smoking, poor nutrition, overweight and obesity, physical inactivity, and risk and protective behaviours for mental health.

Cairns City contains the largest number of Indigenous persons (9,920 persons) followed by Yarrabah Aboriginal Council (2,297 persons). Of the 15,434 persons usually resident in Cairns who stated they were of Indigenous origin, 9,674 persons stated they were of Aboriginal origin, 3,623 persons stated they were of Torres Strait Islander origin, and 2,137 persons stated they were of both Aboriginal and Torres Strait Islander origin. Data collected since 2006-2009 for the HSD indicates that there is a fairly high capture of Indigenous identification representing around 90-95%.

The health workers screen for respiratory diseases via the adult health check. The adult health check is usually performed every 12-18 months in this district through various health facilities. With respect to lung health awareness in the region, the interviewee indicated that many Indigenous community members are aware that smoking contributes to cancer, however did not consider they associated smoking with other respiratory diseases. There is some awareness of asthma within Indigenous communities but most community members are not aware of the triggers of asthma. It was felt that more awareness of respiratory diseases needed to be implemented with both the community and

IHWs, with better access to inservice training in particular for IHWs. The response to such health promotion campaigns in the region was likely to be significant.

7.3.10 Rockhampton Base

The discussion with a physician from Rockhampton Base occurred opportunistically at a Clinical Network Forum. There are few specialist services at the hospital, with access to respiratory physicians for either adults or children limited to a visiting paediatrician from the Royal Children's Hospital approximately once every six months. Waiting lists for non-urgent consultations are long. There are no publicly funded sleep disorder services but services can be accessed through the Queensland Sleep Disorder Service. Similarly the hospital does not have sleep diagnostic facilities. Access to culturally appropriate educational materials and resources was poor.

There are no outreach services provided by the hospital to communities in the region, although there is one physician that has a private service operating through MSOAP. There are preliminary discussions underway for a service to be provided to Woorabinda but this has not been confirmed. There is no formal discharge planning service; this activity is undertaken to some extent within teams.

The interviewee indicated there was little interaction with the local Indigenous community and that the hospital was not a culturally appropriate environment for effective care. It was felt that outpatient services in particular should be taken to the community rather than expecting clients to present in Rockhampton. Clearly identified needs for the hospital and region were respiratory nurses to work as the interface between the hospital and community, pulmonary rehabilitation programmes at the district level and smoking cessation facilitators.

7.3.11 Mt Isa Base

Discussions with staff from Mt Isa Base Hospital occurred opportunistically at a Clinical Network Forum and consisted of a physiotherapist, senior chronic disease coordinator and senior executive of Indigenous health services for the region. There is a large Indigenous population in the area but several problems with the provision of care to Indigenous clients with chronic diseases were identified, in particular access to services and transport issues that impact on follow-up and transfer to the larger centres for specialist care.

There are no onsite respiratory physicians at Mt Isa Base Hospital and only locum paediatricians. An adult respiratory physician from Townsville conducts a clinic at the hospital once every three weeks. The Queensland Sleep Disorder Service does provide some services but they are not free. There are some outreach services provided by allied health, particularly via the Royal Flying Doctor Service. With respect to other aspects of the matrices of care, Mt Isa Base Hospital does not have:

- a dedicated smoking cessation facilitator
- DCLO and bronchial provocation testing diagnostic facilities
- CT guided FNA
- Thoracic surgery

Mt Isa Base is currently in the process of developing a pulmonary rehabilitation programme that will incorporate self-management strategies however the service is considered to be under-resourced with respect to qualified staff. Clients can also be referred to the North Queensland Primary Health Care team and COPD action plans have been facilitating these processes to some degree. Key needs for the hospital were a dedicated respiratory nurse, an additional physician, an exercise physiologist, more spirometers and Spirometry training.

With respect to potential reasons for problems with access, follow-up and the data on procedures performed in hospital, the interviewees indicated they regularly see clients who flatly refuse to leave the community to go to hospital when needed. It was felt that the major reasons were:

- Dislocation from family
- Fear and prior bad experiences
- The inflexibility of patient transport assistance schemes with respect to escorts
- There have been anecdotal reports of Indigenous clients being denied access or specific treatments because they continue to smoke

There is a process underway to develop strategies and forms to address the transport issues, improve patient flow and facilitate patient journeys.

Overall it was felt the major problems in the region were the lack of good links between the hospital and community services, with poor communication between the sectors. These included both government and non-government agencies. There is fragmentation of services and a lack of understanding of key roles and functions within and between services. There needs to be much greater emphasis on community engagement and ownership.

7.3.12 Cherbourg Hospital

Cherbourg Hospital is a small district hospital in the Darling Downs – West Moreton HSD that is located in an area in which the majority of the population are Indigenous. It provides both inpatient and outpatient services. The key informant interview was conducted with the Acting Director of Nursing. With respect to the proposed best practice matrices of care for a local/district hospital, Cherbourg Hospital meets most of the criteria with the exception of:

- culturally appropriate educational materials and resources for lung conditions
- there is no dedicated smoking cessation facilitator at the hospital but smoking cessation programmes are run by ATODS
- mainstream combined cardiac/pulmonary rehabilitation programmes are available at Wondai (approximately 9km away)
- Laboratory services are provided by Kingaroy
- There is no onsite pharmacist (currently being run by a RN)

Asthma, COPD, lung cancer and smoking were perceived to be important lung health issues in the community, although screening for these conditions amongst clients does not occur routinely. Major barriers to the service and their clients with respect to lung health were a lack of access to specialist services (note comments from Gold Coast Hospital above), transport issues and client adherence to management and follow-up. To improve respiratory health in the community, it was felt that education, culturally appropriate care and focus and the empowerment of the community were the major issues that needed to be addressed. More specialist services, a respiratory health specific staff member at the hospital and the resources needed for Indigenous focussed care were identified as priority needs for the area.

7.3.13 Chinchilla Hospital

Chinchilla Hospital is a local facility located in the Darling Downs – West Moreton HSD that provides general inpatient and outpatient care. The population of the town of Chinchilla is approximately 3,600 people, of whom approximately 300 are Indigenous. The interview was held with the Director of Nursing. As this person had completed the online survey, the focus of the meeting was mapping services against the proposed standards of care for a local/district facility. The hospital meets all requirements against these standards for adults and children (including the recent purchase of a spirometer). There is a chronic disease client focus at the hospital and proactive approaches to tobacco use. IHWs are not available on site but are accessible at Dalby (83kms west).

7.3.14 Roma Hospital

Roma Hospital is a local/district facility located in the South-West HSD. The town has a population of approximately 6,700 persons, of whom an estimated 700 people are Indigenous. Discussions were held with the hospital DON, the Indigenous Health Coordinator and the Indigenous Child Health Early Intervention Coordinator. With respect to the standards of care for a this size facility, Roma Hospital meets all of the criteria for adults and children with the exception of culturally appropriate educational materials specific to lung health, and GP/Physician management plans for lung disorders.

Asthma, smoking and lung cancer were identified as important lung health issues in the community. Screening programmes in general are performed at the hospital for adults but these are not specific to lung health and none are performed on children. The interviewees indicated that positive aspects of Indigenous health care in the community were the practice incentive payments and reduced costs for medications. However poor educational resources, poor access to services (including transport issues) and the lack of specialist services were identified as major issues. More education, more timely access to specialists and more smoking cessation initiatives were required for improvements in lung health to occur in the community. In addition, the role of Indigenous Health Coordinators in the community needs to be better understood by service providers and the community.

7.3.15 Woorabinda Hospital

Woorabinda Hospital is a local/district facility located in the Central Queensland HSD. Woorabinda is an Aboriginal community of approximately 1000 people and is the only DOGIT community in the Central Queensland HSD. Medical services are provided by a general practitioner. The discussion at the hospital was conducted with a team comprised of senior nursing staff, chronic disease and Indigenous health coordinators and an aged care worker. Ear, nose and throat conditions, smoking (particularly in pregnancy), lung cancer and asthma were identified as lung health issues of concern in the community. With respect to the proposed standards of care, the hospital meets all of the criteria for this size facility with the exception of physician-provided management plans for lung disorders and Spirometry. Screening in relation to lung health is not performed routinely.

It was indicated that the diagnosis of lung disorders was good in the community and that patients were presenting earlier in the course of illness and receiving treatment earlier. This was attributed to improvements in road conditions in the area and visiting multi-disciplinary teams. ATODS was introduced 12 months ago and smoking cessation programmes are now commencing. However, due to the workload of health staff, there is little scope or resources to direct efforts at the community level.

The key issues identified with respect to lung health in the community were a lack of understanding about the effects of smoking and other triggers such as burning fires. There is a lack of recreation or other activities that can contribute to improving lung health, poor lung health promotion and inadequate community infrastructure for these activities to occur.

With respect to improving lung health in the community the following needs were identified:

- More activities/exercise programmes
- Alternatives for youth
- Culturally appropriate health promotion, education and management
- Specific targeted programmes such as for the elderly
- Empowerment of the community, building coping skills, resilience training and addressing peer pressure
- More efforts directed at smoking cessation

Consequently, specific resources needed in the community to address lung health were visiting respiratory specialists, a dedicated lung health staff position, culturally appropriate health education and promotion resources and programmes, exercise programmes and more resources directed at smoking cessation.

7.3.16 Thursday Island and the Torres Strait

Information on the Torres Strait and Northern Peninsula was obtained from resident medical officer based at Thursday Island. The region consists of 21 communities, 15 of which have health centres. The region is divided into four clusters, three of which currently have doctors providing services. Thursday Island has a 20 bed district hospital. From a lung health perspective, outreach services are provided by respiratory physicians from Brisbane however the adult team tends to focus on tuberculosis rather than the range of chronic lung diseases. The paediatric service was considered to be well organised and implemented.

From a clinical perspective, the major issues for health service providers in the region with respect to the management of chronic diseases were the poor information systems, the increasingly administrative roles of IHWs in particular and the lack of culturally appropriate educational materials and guidelines on chronic lung disease.

There are no electronic health records in the region and the current paper based system is considered to be the *“...number one clinical risk from a medical and nursing point of view and presents a major safety issue*”. The current system means that everything needs to be written in duplicate or triplicate and simple issues such as a printer or fax machine breaking down means important clinical information gets lost in the system or is substantially delayed in reaching another clinic. This presents frequent and major issues for client care in a region where mobility between islands is common and people will often present at several different clinics. It has been an identified, major concern for over 10 years but clinicians and health service managers have *“....met with considerable resistance from Queensland Health to rectify the problem*”. At one stage, the Medical Director attempted to implement the system currently used in the NT but was told to wait until Queensland Health provided its own package; “....*we are still waiting*”.

With respect to culturally appropriate care, it was felt that while the IHWs employed in clinical services were well trained, they are not being utilised effectively and have increasingly become “*cubby-holed*” into administrative tasks. IHWs are not effectively being involved in cultural liaison and client consultation/education and this could be improved. Some suggestions for how this could be achieved included more workshopping and training that involved the entire team so that everyone was aware of each others' roles and how the role of the IHW can be enhanced and supported. This was considered a particularly good aspect of visiting paediatric respiratory services as the clinics involved all health care providers and included multi-disciplinary teaching.

The interviewee was not aware of any specific programmes or initiatives operating in the region that specifically addressed chronic respiratory diseases in the Indigenous population. There was a programme known as *Inside Out* that was focussed on diet and exercise for individual families but it was not certain whether the programme was still running.

With the exception of the Indigenous Asthma Action Plan and the *Short Wind* resources the interviewee could not identify any other culturally appropriate resources to support the care and management of Indigenous clients with chronic respiratory diseases. It was felt however that a centralised "warehouse" of resources, including evidence-based clinical practice guidelines that were readily accessible and identifiable on-line would be valuable.

7.4 Other key informants

Interviews were held with a range of other key informants including Indigenous Health Coordinators, nurses, IHWs, Policy Officers and others from services in Rockhampton, Ipswich and the Gold Coast. The issues raised through the discussions were common and hence are presented in aggregate.

In some regions, interviewees felt there were signs of improvement in Indigenous health care in the, with clients presenting earlier, getting treatment earlier and a want to be healthy. However this continues to be complicated by high smoking rates and other issues such drug and alcohol abuse. As with other settings, major client and system barriers to improving lung health in Indigenous communities were:

- A lack of knowledge and training (for both health staff and clients) or shame in having to ask which hampers education
- A lack of dedicated respiratory positions
- A lack of culturally appropriate education and management material, programmes and resources
- Inadequate identification of Indigenous clients and recognition of, and intervention with, the *"frequent flyers"*
- There is a need for more culturally appropriate educational materials, programmes and resources, including specific staff positions dedicated to respiratory health
- There is a lack of knowledge amongst some service providers about how bad the problem is in the Indigenous community and getting good data is difficult
- Access and transport issues, particularly with respect to specialist services, remain major problems
- The role of IHWs need to be promoted and more IHWs that are appropriately skilled and remunerated are required in services
- Much greater effort is needed to tackle smoking in the Indigenous community
- Much better communication between hospitals and community services is needed

7.5 Summary

There are clear and consistent messages arising from discussions with key health service providers across the state with respect to the issues and needs relevant to lung health in the Indigenous population. Irrespective of the size of the facility and its Indigenous client base there are important gaps in services, knowledge, skills and resources. Overwhelmingly, the most common of these are:

- A lack of culturally appropriate resources and educational materials to support prevention, intervention and long term management strategies for Indigenous persons with chronic lung disease
- A lack of culturally appropriate programmes such as pulmonary rehabilitation
- Much greater effort is required to tackle Indigenous smoking, with a clearly articulated need for appropriately resourced and readily accessible smoking cessation facilitators in almost all jurisdictions
- Dedicated lung health staff, particularly nurses and IHWs that can provide an interface between hospital and community
- There is a deficit of respiratory specialist outreach services, particularly with respect to paediatrics
- There is a deficit of respiratory specialists within hospitals outside of the major urban centres
- There is a deficit of IHWs and other Indigenous health professionals in the Queensland health workforce that can provide culturally safe health care for Indigenous Queenslanders. The inclusion of IHWs in multi-disciplinary teams is critical and the lack of these workers in many areas is a major issue
- There is a lack of training and education of health staff in almost all areas outside of the major tertiary facilities on lung health
- Fragmentation and lack of coordination between services, particularly with respect to the referral and follow-up of clients. This is exacerbated in many areas by inadequate information systems particularly with respect to electronic health records

There are also some aspects of Indigenous care, particularly in the large tertiary facilities, that need further consideration. Of note, is that the identification of Indigenous status for inpatients was, in many cases, considered the role of admissions and not relevant to clinical care. The belief that “everyone is treated the same” is prevalent. It is however a subject that requires further debate. While a person’s ethnicity or cultural background may not be relevant to a purely biomedical approach to the treatment of the disease at a pathophysiological level, it is relevant to a holistic approach to health care at the individual level. This is of particular importance for Indigenous people where concepts of health and well-being differ to that of a biomedical approach.

Indentifying whether a person is Indigenous during clinical consultations (inpatient or outpatient) is likely to be of benefit in how messages, advice and treatment strategies are conveyed and received and also to devising appropriate action and follow-up plans. It is also likely to guide history taking and the identification of important determinants of treatment and management success and failure.

8. Conclusions and recommendations

This project has documented the burden of chronic lung disease in Indigenous Queenslanders, identified programmes and resources directed at addressing the burden, explored the evidence to support various initiatives, documented available services specific to lung health and identified gaps and needs from a health service provider perspective. It does not identify the issues and needs from a consumer perspective, an important limitation to the comprehensiveness and representativeness of lung health needs for Indigenous Queenslanders.

With the exception of sleep disordered breathing, the burden of chronic lung disease in Indigenous Queenslanders is substantially higher than non-Indigenous Queenslanders across almost all age groups and geographical regions. Data quality and access issues are the most likely explanations for the patterns observed for sleep disordered breathing differing to that of other chronic lung diseases. Although the substantial data limitations need to be considered in the interpretation of morbidity and mortality data, overall, Indigenous Queenslanders are approximately 2.7 times more likely to be hospitalised with a chronic lung disease than non-Indigenous Queenslanders and 2.0 times more likely to die of chronic lung disease.

Hospital and deaths data do not accurately represent the true burden of disease and will under-represent prevalence, incidence and the impact on health services and the community. Furthermore, there are large differences in morbidity and mortality rates within Queensland (Chapter 4); the common reporting of aggregate data ignores this variation and presents a significant risk of inequitable and ineffective distribution of resources. The lack of any recent data on prevalence and incidence in the various regions of the state effectively precludes an evidence-based approach to policy and funding decisions. This is further compounded by the substantial data limitations with respect to the identification of Indigenous persons in administrative datasets; for both hospital and deaths data there are more episodes in which Indigenous status is unknown than there are episodes in which it has been identified.

While Queensland Health has embarked on strategies to improve Indigenous identification, it should be considered a major priority with reliable outcomes being achieved as a matter of urgency. Furthermore, the existing data needs to be validated as it is unknown how much misclassification has occurred. It is not known what proportion of episodes is coded as non-Indigenous when they may be Indigenous because the question has not been asked and assumptions have been made based on appearance. Indigenous identification should not be considered simply the domain of admissions personnel; healthcare professionals have a responsibility to assess the cultural/ethnic and/or religious backgrounds of all clients (irrespective of Indigenous status) as part of a holistic approach to health care. This becomes particularly important in the domain of chronic diseases where long-term management and client outcomes will be dependent on a multitude of factors that define health and well-being. Cross-cultural awareness programmes should be a mandatory component of staff induction, including those at the most senior levels of the system.

It is clear from this project that, while there are several federal, state and local initiatives underway that will directly or indirectly impact on lung health in Indigenous Queenslanders (Chapter 5), there is much that needs to be done. Furthermore, any new initiatives and strategies should take into account the lessons learned from past and current experiences, particularly those that have been formally evaluated. The difficulty in identifying these initiatives during this project suggests that many of these will be unknown to service providers and overlooked by decision makers. This is highlighted in many areas of this report by the differences in what is reported by key informants to what is known or available; mismatch between the two was common. This runs the risk of duplication or, more seriously, ineffective development and implementation of programmes and strategies.

The review of the literature, existing programmes and evaluations of various strategies and programmes identified some initiatives that should positively impact on lung disease in Indigenous Queenslanders. However, the survey of health service providers and key informant interviews identified common needs and gaps. Resources and personnel specifically dedicated to chronic lung disease detection, intervention and management are lacking in many regions of the state. Of particular need are: smoking cessation facilitators and evidence-based, culturally appropriate smoking interventions that go beyond one-off brief interventions; trained and empowered IHWs that are actively involved at the primary, secondary and tertiary levels; multi-disciplinary outreach times that are culturally sensitive, regular, located in areas of need and well resourced and supported by Queensland Health; trained respiratory nurses, respiratory scientists, chronic disease educators, and; specialist paediatric services. Furthermore, the services that do exist are largely considered fragmented, uncoordinated and substantially hampered by inadequate information systems that support the continuum of care.

There is a paucity of culturally appropriate educational materials and resources specific to lung disease for use with Indigenous clients. Those that do exist are not well recognized and/or do not account for the diversity of Indigenous backgrounds and/or are not readily accessible. This is particularly relevant for the long-term management of clients with chronic disease and is a critical gap in programmes such as pulmonary rehabilitation and self-management action plans. Furthermore, while SmokeCheck is an important initiative, the data presented in this report suggest it is not the predominant smoking cessation approach used by health service providers. The reasons for this are unclear and need to be investigated.

In many areas IHWs are not actively engaged in multi-disciplinary teams or are not being effectively utilized in the care of Indigenous clients, even in services that have them on staff. The opinions of survey respondents suggest the reasons for this under-participation include a lack of training, a lack of recognition of their skills and roles, devaluation of their skills and roles over time and/or the sheer lack of numbers of IHWs in the workforce means that their workloads are at a limit. Given the available evidence suggests that the active involvement of IHWs in client care positively impacts on client outcomes, substantial efforts are required to engage IHWs at all levels of the system and for their skills and roles to be appropriately recognized and rewarded. Similarly, the numbers of Indigenous Liaison Officers within hospital settings are limited and under-resourced and, given identification of Indigenous status by clinical staff is poor, their services are probably not being effectively utilised.

While the views of health service providers do not necessarily reflect the views of Indigenous people with chronic respiratory disease, access to services remains problematic, despite this being a known problem for decades. The cost of chronic disease care, lack of transport to and from services, fear and distrust of services and a lack of available, culturally safe services in many regions are considered common barriers. Service providers consider these issues are compounded by a lack of knowledge and understanding amongst Indigenous people with chronic lung diseases about what they need to do to maintain optimal health. However many service providers also acknowledge that chronic disease management is also hampered by the multiplicity of social, economic, cultural and health problems that exist amongst the Indigenous population and the difficulties these present when they are expected to focus on one particular problem.

In conclusion, there is a clear and pressing need to address lung health in Indigenous Queenslanders at the primary, secondary and tertiary levels. The response should be multi-pronged, multi-disciplinary and, most importantly, culturally appropriate and safe. It is important however that lung health initiatives do not operate in a silo, independent of the myriad of factors contributing to the health and well-being of Indigenous people. The multiplicity of complex social, economic and health issues affecting the Indigenous community should be considered, particularly in light of other pressing and often inter-related health issues such as mental health, substance misuse and environmental health. Furthermore, while there are several promising programmes in place or being planned, these should take account of the lessons learned in past programmes and strategies and ensure there is high quality monitoring and evaluation in place. While there will always be the need for more resources and more staff, resource and funding decisions should be evidence-based and implemented in a manner that maximizes efficiency and effectiveness.

Recommendations

Some of the recommendations below are based on those developed by the Thoracic Society of Australia and New Zealand, the Australian Lung Foundation and the Australasian Sleep Association in their 2010 report on respiratory and sleep health in Indigenous Australians.[1] Those recommendations are directly applicable to Indigenous Queenslanders. They are further informed by the burden of disease, health service mapping, health care utilisation and key informant interviews outlined above.

1. Respiratory and sleep health should be clearly articulated, incorporated as a priority and addressed within overarching strategic frameworks for Indigenous health in Queensland. These frameworks should encompass socio-political strategies, improved housing and environmental health, public health measures, workforce development, education, chronic disease management and appropriate research.

2. Culturally appropriate education strategies to combat lung diseases are required as a matter of urgency. They should be readily accessible and widely available to health services, communities and Indigenous people with chronic diseases. These programmes should target pregnant women, mothers, youth and the elderly. This should include reducing the exposure of children to environmental tobacco smoke. The relevant resources required should be formally evaluated with respect to effectiveness and efficiency. Financial incentives should be considered.

3. Innovative and tailored, multi-layered approaches to tobacco control are required. They should be appropriately developed and resourced so that they extend beyond one-off brief interventions and are sustainable in a broad range of settings. Smoking cessation clinics staffed by specialist smoking cessation facilitators (preferably Indigenous) are required across the state, including regular outreach clinics to the smaller and/or more remote regions. Initiatives should include ensuring health care providers have the capacity to

identify, counsel and locally refer people for intensive smoking cessation support. This should include training and support of community-based tobacco workers to provide ongoing support and counselling and facilitate access to pharmacotherapy. Centralised expertise is required to support and advise these local providers. Such programs should provide leadership and support to workplace and household smoke-free initiatives, limitations on tobacco marketing and the involvement of children and young adults in diversionary community-based smoke-free initiatives.

4. Much greater integration of service delivery at all levels of the system, including primary care, is required. Existing primary care initiatives (such as adult and child health checks) need to be of sufficient quality to allow effective prevention of lung disease and thorough enough to detect lung problems at an early stage. There should also be the appropriate resources to ensure that the appropriate follow-up occurs for individuals identified through the health checks as being at risk of, or having been diagnosed of, chronic lung disease. These and other primary care activities (eg. self management strategies, smoking cessation, improving physical activities) need to be linked with optimal management of chronic lung disease. This should be supported by high quality information systems and adequate resources (particularly the availability of multi-disciplinary teams that include Indigenous Health Workers) that are sustainable and fully integrated across the continuum of care.

5. Major initiatives are required to increase the participation of Indigenous people in the health workforce and for this participation to be effective and appropriately rewarded. More Indigenous personnel are required at all levels of the health care system. The apparent shift in the role of current Indigenous Health Workers to largely administrative functions in many areas should be addressed. The training of Indigenous staff with respect to chronic disease prevention and management should occur in collaboration with non-Indigenous staff so that cross-fertilisation of knowledge and experience occurs.

6. Clinical settings should become more culturally safe to facilitate willingness to enter the system, receive the appropriate care and return for follow-up if required. Successful models of Indigenous friendly organisations and initiatives should be used as a guide. More Indigenous Liaison Officers are required in almost all hospitals and they should be more readily visible to clients. This should include positioning Indigenous staff and Liaison Officers at admission and reception areas within clinical settings.

7. There is a clear need to increase adult and paediatric specialist respiratory services at all levels across the state, with paediatric services even more under-resourced than adult services. Teams should be multidisciplinary, provide outreach services across the state and have a role in the training of primary care workers with respect to the detection, intervention and treatment of lung diseases.

8. Improving Indigenous identification in health datasets and at the clinical level is critical and should be undertaken as a matter of urgency. Existing data collections should be evaluated for their accuracy and the degree of misclassification identified. Cross-cultural awareness programmes should be mandatory for all health staff (including senior staff in the organisation) to improve awareness of the importance of accurate identification and to

improve client care. Failure to address identification issues will perpetuate policy and funding decisions that are based on poor evidence.

9. Areas of the state with the highest burden of disease are also those with services least equipped to deal effectively with the continuum of care required for chronic lung diseases. Regions requiring urgent attention are the Mt Isa, South West and Darling Downs-West Moreton Health Service Districts, followed by Townsville and Cairns and Hinterland. Targeted research is required in these regions to confirm burden estimates, identify risk factors, design and evaluate interventions and monitor progress. This research should include rigorously designed and implemented qualitative research that addresses consumer perspectives. Much greater collaboration between Queensland Health, Divisions of General Practice and Aboriginal Community Controlled Health Organisations is required. It is important however that the considerable need of Indigenous people living in larger urban centres, particularly Brisbane, is not overlooked.

10. There is a need to address the inadequacy of health information systems in Queensland, particularly with respect to the continuum of care for clients with chronic lung diseases. There are considerable implications with respect to client safety and outcomes, and the ineffectiveness and inefficiency of services, in the state. The current information systems are considered major contributors to the fragmentation and lack of coordination of services in the State.

11. A centralised data and resource repository with respect to lung health in Indigenous people, including Queenslanders, which provides ready identification of evidence based resources and research outcomes and one that facilitates information sharing should be developed. This could be based on successful initiatives such as the EarInfoNet and Indigenous HealthInfoNet. Health services need easy access to such resources. Such a system should be appropriately resourced for the long-term.

12. The increasing body of evidence implicating acute respiratory infections in infancy and childhood as important antecedents for chronic lung disease later in life translates to a need to develop an evidence-based focus on these infections early in life in Queensland. This should be derived from targeted research that determines risk factors, incidence (at the hospital and community level) and outcomes in Indigenous children.

13. There is an urgent need for high quality, well-designed research into the perspectives of Indigenous people with chronic lung diseases to inform strategies and initiatives. This research should be appropriately funded and conducted according to the national standards and frameworks for Indigenous health research.

14. A continuous quality improvement framework and research strategy is required. Existing primary health care-based CQI initiatives (eg ABCD) should be complemented by region and state-wide systems which include the quality of, and access to, specialist and tertiary level services. This process should facilitate service refinement, identify areas which require targeted research and encompass a process of ongoing review and engagement with primary and specialist health care providers.

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Appendix A: Queensland HSD Map

Appendix B: Key informant interview guide

Meeting date:
Meeting attendees:

A) Introduction Questions:
   1. What is your current position?
   2. Role in current position?
   3. Length of time in current position
   4. What specialist services do you provide
      a. Inpatient
         i. Adult
         ii. Paediatric
         iii. Waiting list for non-emergency admissions
         iv. Estimated number/proportion of Indigenous clients
      b. Outpatient
         i. Adult
         ii. Paediatric
         iii. Waiting list for clinics
         iv. Estimated number/proportion of Indigenous clients
      c. Outreach
         i. Adult
         ii. Paediatric
         iii. Location of outreach clinics
         iv. Frequency of clinics
         v. Waiting list
         vi. Estimated number of clients seen at each visit
         vii. Estimated number of Indigenous clients

B) Indigenous client base
   1. Is Indigenous status routinely collected/reviewed for your patients
   2. Which areas of the State do your clients come from
   3. Do you have any other general comments to make initially about the provision of services for Indigenous clients with chronic respiratory illnesses
   4. Data from Queensland hospital morbidity datasets suggest that Indigenous inpatients with chronic illnesses are much less likely to have procedures performed than non-Indigenous patients...do you have any understanding of why that may be the case?

C) Are you aware of, or implementing, or involved with any initiatives that have been designed to improve the early detection of chronic lung diseases in the Indigenous population in Queensland?
   a. If yes, can you tell me a little about them?

D) Are you aware of, or implementing, or involved with any initiatives designed to improve the management of chronic lung diseases in the Indigenous population in Queensland?
   a. If yes, can you tell me a little about them?

E) Are you aware of, implementing or involved in any initiatives specifically designed to improve the self-management of chronic lung disease for your Indigenous patients?
    a. If so, please tell me a little about them

F) Are you aware of, implementing or involved in and initiatives to improve the transfer of health information across the continuum of care for Indigenous patients with chronic lung diseases?
    a. If so, please tell me a little about them

G) How would you describe your access to culturally appropriate resources to support the care and management of Indigenous clients with chronic lung diseases (eg. Aboriginal Health Workers, Educational Materials, Liaison Services, ACCHOs)

H) Broadly speaking, how would you describe the level of coordination and integration of services for Indigenous patients in your area of specialty?

I) Can you describe any system enablers that you have encountered that allow for the successful implementation of activities targeted towards Indigenous clients with chronic lung diseases? (examples, increase in funding, quality of care, information systems, workforce, continuum of care activities etc)

J) Can you describe any system barriers that allow for the successful implementation of activities targeted towards Indigenous clients with chronic lung diseases? (lack of funding, lack of workforce, continuum of care problems etc)

K) Can you suggest any changes that need to be made within your area of speciality that are necessary to facilitate improvement in the prevention, early detection and management of chronic respiratory illnesses in the Queensland Indigenous population?

Appendix C: Online survey

Queensland Indigenous Respiratory Needs Survey

1. Introduction

Thank you for taking the time to complete this survey. No personal identifying information is being collected. The survey results will be presented in aggregate form only and a copy of the project report will be available from the Queensland Respiratory Clinical Network on its completion.
It will take you about 10 - 15 minutes to complete. Feel free to ask your colleagues to help with completing the survey. Some of the questions will only be relevant if you are working in a clinical setting. If they are not applicable to your service, then please just tick the "Not Applicable" field.
You can enter and leave the survey at any time, meaning you can come back to it at a later time to complete it. The final date and time for completion of the survey is 21 May 2010 at 1700 hours.

2. Respondent information

1. In which Queensland HSD are you located? If you work in more than one area, for the purpose of this questionnaire, please choose ONE district only (eg, the one you spend the most time in)

☐ Statewide service
☐ Cairns and Hinterland
☐ Cape York
☐ Central Queensland
☐ Central West
☐ Children's Health Services
☐ Darling Downs-West Moreton
☐ Gold Coast
☐ Mackay
☐ Metro North
☐ Metro South
☐ Mt Isa
☐ South West
☐ Sunshine Coast - Wide Bay
☐ Torres Strait - Northern Peninsula
☐ Townsville

2. Do you work in a clinical setting that provides direct inpatient or outpatient clinical care?

☐ Yes
☐ No

3. What type of organisation are you employed with?

☐ HSD Office
☐ Corporate Office (eg. Queensland Health, QAIHC, GP QLD)
☐ Queensland Health community clinic/primary health care centre
☐ General Practice
☐ Aboriginal Community Controlled Health Service
☐ Public hospital

☐ Private hospital
☐ Other (specify)

4. What is your role in the organisation?

5. What is your profession?
☐ Indigenous Health Worker
☐ Medical
☐ Nursing
☐ Allied Health (specify in box below)
☐ Respiratory Scientist
☐ Other (specify in box below)

Questions 6 and 7 only need to be answered by those working in a clinical setting. If you do not work in a clinical setting, please go to the next page.

6. If you work in a clinical setting, does your service employ or have regular visiting/outreach services provided by the following? (tick all that apply)

	Onsite	Visiting/Outreach	None	N/A
Specialist respiratory physician – paediatrics	☐	☐	☐	☐
Specialist respiratory physician – adults	☐	☐	☐	☐
General paediatrician	☐	☐	☐	☐
General physician – adults	☐	☐	☐	☐
General practitioner	☐	☐	☐	☐
Indigenous Health Worker – Generalist	☐	☐	☐	☐
Indigenous Health Worker with chronic disease focus	☐	☐	☐	☐
Nurse specialist in respiratory medicine – paediatrics	☐	☐	☐	☐
Nurse specialist in respiratory medicine – adults	☐	☐	☐	☐
Respiratory Nurse Educator	☐	☐	☐	☐
Chronic disease coordinator	☐	☐	☐	☐
Chronic disease educator	☐	☐	☐	☐
Physiotherapist	☐	☐	☐	☐
Palliative care specialist/team	☐	☐	☐	☐
Dietician	☐	☐	☐	☐
Respiratory scientists	☐	☐	☐	☐
Smoking Cessation	☐	☐	☐	☐
Facilitator	☐	☐	☐	☐
Social Worker	☐	☐	☐	☐
Occupational Therapist	☐	☐	☐	☐
Exercise Physiologist	☐	☐	☐	☐
Clinical Psychologist	☐	☐	☐	☐
Speech Pathologist	☐	☐	☐	☐
Pharmacist	☐	☐	☐	☐

8. Does your service routinely collect Indigenous status data from all clients?
☐Yes
☐ No,
If no, is there a reason why this is not done

9. Does your service employ the following staff? Tick all that apply
☐ Indigenous Health Worker
☐ Indigenous Outreach Worker
☐ Indigenous Health Coordinator
☐ Unknown/not sure
☐ No

10. If no, does your service have ready access to one or more of these service providers?
☐ Yes
☐ No
☐ Unknown/Not sure
Comments

11. Does your service have access to an interpreter service that includes local Indigenous languages?
☐ Yes
☐ No
☐ Unknown/not sure
Comments

12. If you work in clinical setting, does your service screen all Aboriginal and/or Torres Strait Islander clients for chronic lung diseases (eg. as part of well person checks?
☐ Yes, routinely
☐ Yes, occasionally
☐ Yes, but infrequently
☐ No
☐ Unknown/not sure
☐ Not applicable
☐ Yes
☐ No
☐Unknown/not sure
Comments

13. Does your service have any client information/educational materials specific to Indigenous clients with chronic lung disease?
☐ Yes
☐ No
☐ Unknown/not sure
Comments

14. Does your service have a dedicated programme for Indigenous people directed to improving care in:

	Yes	No	Unknown/not sure
Asthma	☐	☐	☐
COPD	☐	☐	☐
Lung Cancer	☐	☐	☐
Sleep Disorders	☐	☐	☐

15. Does your service have any other programmes/services specifically designed for Indigenous clients with chronic lung disease?

☐ Yes
☐ No
☐ No, but there are programmes/services available to anyone in the community
☐ Unknown/not sure

If yes, please provide a brief description

16. Does your service operate or have access to pulmonary rehabilitation programmes for clients with chronic lung disease? Please tick all that apply

☐ Yes, provide programmes onsite
☐ Yes, have access to programmes in the area
☐No, our service does not have the capacity to provide pulmonary rehabilitation
☐ No, there are no pulmonary rehabilitation programmes in our service area that clients can access
☐ I do not know or am not sure what pulmonary rehabilitation programmes are
☐ Unknown/not sure
☐ Not applicable

Comments

This section only needs to be completed by those working in a clinical setting. If you do not provide a clinical service, please tick "not applicable" to question 17 and go to the next page

17. Does your service have spirometers on site?

☐ Yes
☐ No
☐ Unknown/not sure

18. If yes, please answer the following questions:

Have staff been trained in the correct use of spirometers?

☐ Yes
☐ No
☐ Unknown/not sure

Have staff been trained in the interpretation of spirometry?

☐ Yes
☐ No
☐ Unknown/not sure

Is spirometry routinely performed on clients with chronic lung diseases at each visit?
☐ Yes
☐ No
☐ Unknown/not sure
Comments

19. This question addresses programmes/initiatives targeting tobacco use. What activities does your service undertake to address tobacco use amongst your Indigenous clients (tick all that apply)
☐ SmokeCheck
☐ Referral to Quitline
☐ Subsidised/free access to nicotine replacement therapies
☐ Provision of educational materials/pamphlets/booklets
☐ Group counselling/education forums
☐ Other (specify in comments field)
☐ Unknown/not sure
☐ None
☐ Not applicable
Comments

20. Does your service run any programmes/initiatives/educational activities that address tobacco use specifically amongst Indigenous(tick all that apply):
☐ Youth/young people
☐ Pregnant women
☐ Mothers
☐ Men
☐ Unknown/not sure
☐ None
☐Not applicable
Comments

21. Are there any other Aboriginal and/or Torres Strait Islander specific services within your service area that provide support to people with chonic illnesses (for example, transport services, support groups etc)?
☐ Yes
☐ No
☐ Unknown/not sure
If yes, please provide a brief description

22. In the past 12 months, has your service implemented, or participated in, any programmes that specifically address risk factors for respiratory illness in Indigenous people in your area?
☐ Yes
☐ No

☐ Unknown/not sure
If yes, please provide a brief description

23. Is your service currently participating in any collaborative partnerships that either directly or indirectly address respiratory illness in Indigenous people in your area?
☐ Yes
☐ No
☐ Unknown/not sure
If yes, please provide a brief description

This section asks YOUR opinion on what are the good things, bad things and key gaps about services for Indigenous people with chronic lung diseases in your area.

Definitions:
System enablers refer to the processes, services and functions that allow the system to function effectively. System enablers include, but are not limited to human resources management, information technology, leadership, and accountability mechanisms. In a chronic disease care model, system enablers include how well the system is organised to care for Indigenous people with respiratory diseases, community linkages that exist, support for client self-management of chronic lung diseases, support for clinical decision making (eg. access to evidence based guidelines, education in evidence based care) how well health care is delivered (eg multidisciplinary teams, care planning and follow-up, continuity of care) and the type and usefulness of clinical information systems. System barriers are therefore those processes, services and functions that limit the ability of the system to function effectively.

Client/patient enablers are those factors that help individuals overcome barriers to things like seeking care when needed, keeping follow-up appointments, maintaining care plans, effective self-management and the uptake and maintenance of preventative measures

24. In your opinion and experience in your region, what are the KEY GAPS in services for Indigenous people with chronic lung disease?

25. In your opinion and experience, what are the major SYSTEM BARRIERS to the provision of best practice standards of care?

26. In your opinion and experience, what are the major SYSTEM ENABLERS to the provision of best practice standards of care?

27. In your opinion and experience, what are the major CLIENT BARRIERS to receiving and sustaining best practice management of their respiratory disease?

28. In your opinion and experience what are the major CLIENT ENABLERS to receiving and sustaining best practice management of their respiratory disease?

Appendix D: Proposed best practice standards of lung health service delivery for Indigenous Queenslanders

Paediatrics

Service type	**Primary/Tier 1 services (including local/district hospitals)**	**Secondary/Tier 2 services (including Base Hospitals)**	**Tertiary/Tier 3 services (Tertiary referral centre)**
Inpatient clinical	1. Provision of care by GPs, general physicians 2. Access to general physician 3. Culturally appropriate education (Asthma, BE, sleep) 4. Domicillary oxygen use	1. Provision of inpatient care with a respiratory/general physician at a minimum providing cover 7 days 2. Dedicated general medical care ward	1. Access to specialist respiratory physician (24hrs) 2. Dedicated respiratory beds 3. Dedicated acute respiratory failure unit independent of ICU 4. Access to full ICU facilities and 24hr support
Outpatient clinical	1. Culturally appropriate education (asthma, BE, sleep) 2. Smoking cessation programmes 3. Combined cardiac/pulmonary rehabilitation programmes or separate programs 4. Access to allied health, particularly physios 5. GP/Physician provision of care for respiratory disorders (management plans) 6. Immunisation status assessment	1. Access to general respiratory physician consultation 2. Access to sleep physician consultation 3. Culturally appropriate education: asthma, BE 4. Smoking cessation 5. TB diagnostic and assessment 6. Chronic disease management 7. Supported early discharge programme 8. Access to allied health, particularly physios 9. Immunisation status assessment	1. Access to general respiratory physician consultation 2. Subspecialist clinics (difficult asthma, BE, sleep disorders, TB) 3. Respiratory failure service 4. Access to allied health, particularly physios 5. Immunisation status assessment
Diagnostic	1. Spirometry (access to interpretation) 2. Arterial blood gases 3. Chest radiology 4. Overnight oximetry 5. Access to microbiology services including mycobacterial diagnostics	1. Spirometry, DLCQ, flow volume loops, bronchial provocation testing (access to interpretation) 2. Arterial blood gases 3. Chest radiology, CT Scan 4. Overnight oximetry 5. Access to microbiology services including mycobacterial diagnostics	1. Complex pulmonary function tests 2. Full diagnostic radiology services (24hrs) 3. Full polysomnography 4. Advanced sleep diagnostics 5. Advanced bronchoscopy diagnostics 6. Nuclear medicine studies 7. Full range of microbiological diagnostics
Interventional		1. Pleural aspiration	1. CT guided FNA 2. Pleural biopsy and aspiration 3. Access to advanced bronchoscopy diagnostics (laser, stenting, transbronchial) EBUS 4. Full range of cardiothoracic services, inc rigid bronchoscopy and mediastinoscopy 5. Video assisted thoracoscopy 6. Pleuroscopy
Affiliated	1. Onsite radiology service for chest xray 2. Discharge planning	1. Onsite radiology, including CT scan 2. Discharge planning	1. Onsite palliative care/ intensive care 2. Onsite medical/radiation oncology 3. Onsite thoracic surgery 4. Onsite interventional radiology 5. Onsite advanced medical imaging, including CT scan, nuclear medicine, PET scanning 6. Discharge planning

Adults

Service type	Primary/Tier 1 services (Local/district hospitals)	Secondary/Tier 2 services (Base Hospitals)	Tertiary/Tier 3 services (Tertiary referral centre)
Inpatient clinical	1. Provision of care by GPs, general physicians 2. Access to general physician 3. Culturally appropriate education (Asthma, BE, sleep, COPD) 4. Access to emergency department non-invasive ventilation	1. Provision of inpatient care with a respiratory/general physician at a minimum providing cover 7 days 2. Dedicated general medical care ward 3. Access to NIV, provision in HDU/ICU on site	1. Access to specialist respiratory physician (24hrs) 2. Dedicated respiratory beds 3. Dedicated acute respiratory failure unit 4. Access to full ICU facilities and 24hr support
Outpatient clinical	1. Culturally appropriate education (asthma, BE, sleep, COPD) 2. Smoking cessation programmes 3. Combined cardiac/pulmonary rehabilitation programmes or separate programmes 4. Access to allied health, particularly physios 5. GP/Physician provision of care for respiratory disorders (management plans) 6. Immunisation status assessment 7. Domicillary oxygen assessment and provision	1. Access to general respiratory physician consultation 2. Access to sleep physician consultation 3. Education: asthma, BE, COPD 4. Smoking cessation 5. TB diagnostic and assessment 6. Chronic disease management/Pulmonary rehabilitation 7. Supported early discharge programme 8. Access to allied health, particularly physios 9. COPD management service, including dedicated oxygen assessment and follow-up. 10. Access to consultant thoracic surgery 11. Access to lung cancer multidisciplinary service 12. Immunisation status assessment	1. Access to general respiratory physician consultation 2. Subspecialist clinics (difficult asthma, BE, sleep disorders, TB, COPD, interstitial lung disease, occupational lung disease) 3. Lung cancer multidisciplinary clinic 4. CF multidisciplinary clinic 5. Respiratory failure service 6. Access to allied health, particularly physios 7. Immunisation status assessment 8. Pulmonary rehabilitation programmes 9. Smoking cessation
Diagnostic	1. Spirometry (access to interpretation) 2. Arterial blood gases 3. Chest radiology 4. Overnight oximetry 5. Access to microbiology services including mycobacterial diagnostics	1. Spirometry, DLCQ, flow volume loops, bronchial provocation testing (access to interpretation) 2. Arterial blood gases 3. Chest radiology, CT Scan, CTPA 4. Overnight oximetry 5. Simple polysomnography diagnostics (access to interpretation) 6. Diagnostic bronchoscopy 7. Access to microbiology services including mycobacterial diagnostics	1. Complex pulmonary function tests 2. Full diagnostic radiology services (24hrs) 3. Full polysomnography 4. Advanced sleep diagnostics 5. Advanced bronchoscopy diagnostics 6. Nuclear medicine studies 7. Full range of microbiological diagnostics
Interventional	1. 24 hour access to emergency pleural aspiration and ICC insertion	2. Pleural biopsy and aspiration 3. CT guided FNA	1. CT guided FNA 2. Pleural biopsy and aspiration 3. Access to advanced bronchoscopy diagnostics (laser, stenting, transbronchial) EBUS 4. Full range of cardiothoracic services, inc rigid bronchoscopy and mediastinoscopy 5. Video assisted thoracoscopy 6. Pleuroscopy
Affiliated	1. Onsite radiology service for chest xray 2. Discharge planning	1. Onsite palliative care/ intensive care, support 2. Consultative services: medical oncology radiation, radiation oncology, thoracic surgery 3. Onsite radiology, including CT scan 4. Discharge planning	1. Onsite palliative care/ intensive care/medical oncology/radiation oncology/thoracic surgery 2. Onsite interventional radiology 3. Onsite advanced medical imaging, including CT scan, nuclear medicine, PET scanning

Appendix E: Recommendations aligned to Queensland Health strategies.

To facilitate the ongoing process of review, implementation and evaluation, these recommendations are structured to reflect the Queensland Statewide Health Services Plan 2007–2012's reform agenda for system enablers (http://www.health.qld.gov.au/publications/corporate/stateplan2007/QHSHS_plan.pdf) particularly in relation to:

FUNDING

INFORMATION AND ITS USE

WORKFORCE

INFRASTRUCTURE AND ASSETS

and encompassing the broader Service Plan theme of

IMPLEMENTING AND EVALUATING CHANGE

Where relevant they also are mapped against the service-specific areas outlined in the Queensland Health Patient Flow Strategy (http://qheps.health.qld.gov.au/patientflow) which aims to improve the patient journey and experience through reduced delays, improved access to services and the implementation of best practice in healthcare across Queensland. The journey reflects the hospital experience, including pre-hospital, in-hospital and post-hospital flows. These are categorised into community, outpatient, emergency and inpatient flows. Each aspect of the patient flow continuum is specified against each recommendation.

FUNDING

1. **EQUITY IN ACCESS TO DIAGNOSIS AND TREATMENT** - Chronic lung disease requires equitable access to diagnostic and treatment services particularly in rural and remote Queensland. Areas with the highest disease burden are those least equipped to deal with chronic lung diseases. Regions requiring urgent attention are the Mt Isa, South West and Darling Downs-West Moreton Health Service Districts, followed by Townsville and Cairns and Hinterland. Key aspects of service delivery include access to spirometry in primary healthcare, medication access and security and timely access to specialist review and pulmonary rehabilitation for adults with COPD and bronchiectasis. (**COMMUNITY**, **OUTPATIENT**, **EMERGENCY** and **INPATIENT**)
2. **KNOWLEDGE GAPS AND RESEARCH** - There is an urgent need for the funding of high quality, well-designed research into the burden of disease, causes and Indigenous Australian perspectives of lung disease to inform prevention and treatment strategies. Particular targets should include the role of early life antecedents of chronic lung disease including tobacco exposure, growth and acute respiratory infections in early life. This research should be conducted according to the national standards and frameworks for Indigenous health research.

INFORMATION AND ITS USE

3. **COMMUNITY-BASED CULTURALLY APPROPRIATE EDUCATIONAL STRATEGIES** to combat lung diseases are urgently required. They should be readily accessible and widely available to health services, communities and Indigenous people with chronic diseases. These programs should target pregnant women, mothers, youth and the elderly, concentrate on primary prevention and early diagnosis and be subject to formal evaluation. Financial incentives should be considered. (**COMMUNITY** – Hospital-Community interface)

4. **IMPROVING INDIGENOUS IDENTIFICATION** in health datasets and at the clinical level is critical. Existing data collections should be evaluated for their accuracy including missing data and misclassification. Mandated cross-cultural awareness programs should be ensured and monitored for all health staff (including senior staff in the organisation). Failure to address identification issues will perpetuate funding and policy decisions that are based on poor evidence. (**COMMUNITY**, **OUTPATIENT**, **EMERGENCY** and **INPATIENT**)
5. **CLIENT-FOCUSED HEALTH INFORMATION SYSTEMS** - There is a need to address the inadequacy of health information systems in Queensland, particularly with respect to the continuum of care for clients with chronic diseases. There are considerable implications with respect to client safety and outcomes, and the ineffectiveness and inefficiency of services. The current information systems are important contributors to the lack of coordination of services.
6. **A CENTRALISED DATA AND EVIDENCE RESOURCE REPOSITORY** with respect to lung health in Indigenous Queenslanders including the ready identification of evidence based resources, research outcomes and information sharing should be developed. This could be based on successful initiatives such as the Indigenous HealthInfoNet.

WORKFORCE

7. **ABORIGINAL AND TORRES STRAIT ISLANDER WORKFORCE** - Initiatives are required to increase the participation of Indigenous people at all levels of the health workforce and for this participation to be effective and appropriately rewarded. The apparent shift in the role of many IHWs to largely administrative functions should be addressed. The training should occur in collaboration with non-Indigenous staff so that cross-fertilisation of knowledge and experience occurs (**COMMUNITY**, **OUTPATIENT**, **EMERGENCY** and **INPATIENT**)
8. **HEALTH CARE SERVICE ACCESS AND CULTURAL SAFETY** - Clinical settings should be more culturally safe to facilitate access, appropriate care and follow-up. More Indigenous Liaison Officers are required in almost all hospitals and they should be more readily visible to clients. (**COMMUNITY**, **OUTPATIENT**, **EMERGENCY** and **INPATIENT**)
9. **TOBACCO** - Innovative and tailored, multi-layered approaches to tobacco control are required. They should be appropriately developed and resourced so that they extend beyond one-off brief interventions and are sustainable in a broad range of settings. The key to addressing tobacco consumption remains investing in sufficient numbers of appropriately trained primary health workers. Initiatives should include ensuring health care providers have the capacity to identify, counsel and locally refer people for intensive smoking cessation support (**COMMUNITY**, **OUTPATIENT**, **EMERGENCY** and **INPATIENT**). This should include training and support of community-based tobacco workers to provide ongoing support and counselling and facilitate access to pharmacotherapy. Centralised expertise is required to support and advise these local providers. Such programs should provide leadership and support to workplace and household smoke-free initiatives, limitations on tobacco marketing and the involvement of children and young adults in diversionary community-based smoke-free initiatives. (**COMMUNITY**)
10. **SPECIALIST SERVICES** - There is a clear need to increase access to adult and paediatric specialist services at all levels especially for Indigenous Queenslanders living in remote and very remote areas. Teams should be multidisciplinary, provide outreach services across the state, link with regional hospitals and have a role in the training of primary care workers with respect to the detection, intervention and treatment of lung disease. (**COMMUNITY** and **OUTPATIENT).**

11. **INTEGRATED HEALTH CARE DELIVERY** - Greater integration of service delivery at all levels, including primary care, is required. Existing primary care initiatives (such as adult and child health checks) need to be of sufficient quality to optimise prevention and enhance early detection of disease. There should also be the appropriate resources to ensure that the appropriate follow-up occurs for individuals identified through the health checks as being at risk of, or having been diagnosed of, chronic lung disease. Other primary care activities (eg self management strategies, smoking cessation, exercise training) need to be evidence-based. They need to be supported by high quality information systems, multi-disciplinary teams that include IHWs and allied health and resources to ensure they are sustainable and integrated. Greater collaboration between Queensland Health, Divisions of General Practice and Aboriginal Community Controlled Health Services is required. It is important that the considerable needs of Indigenous people living in larger urban centres, particularly Brisbane, are not overlooked. (**COMMUNITY**, **OUTPATIENT** and **INPATIENT**)

INFRASTRUCTURE AND ASSETS

12. **TARGETTED INFRASTRUCTURE AND CAPITAL** should be allocated to areas which limit the ability of the health workforce to implement high quality, integrated prevention and health care. A minimum resource framework should be identified and implemented including facilities and equipment for spirometry, exercise training and education especially at a primary health care level. (**COMMUNITY**, **OUTPATIENT** and **INPATIENT**)

IMPLEMENTING AND EVALUATING CHANGE

13. **A CONTINUOUS QUALITY IMPROVEMENT FRAMEWORK AND RESEARCH STRATEGY** is required. Existing primary health care-based CQI initiatives (eg ABCD) should be complemented by region and state-wide systems which include the quality of and access to specialist and tertiary level services (eg transplantation). This process should facilitate service refinement, identify areas which require targeted research and encompass a process of ongoing review and engagement with primary and specialist health care providers. (**COMMUNITY**, **OUTPATIENT**, **EMERGENCY** and **INPATIENT**)