



A health and education needs analysis of Gumala Aboriginal Corporation members.

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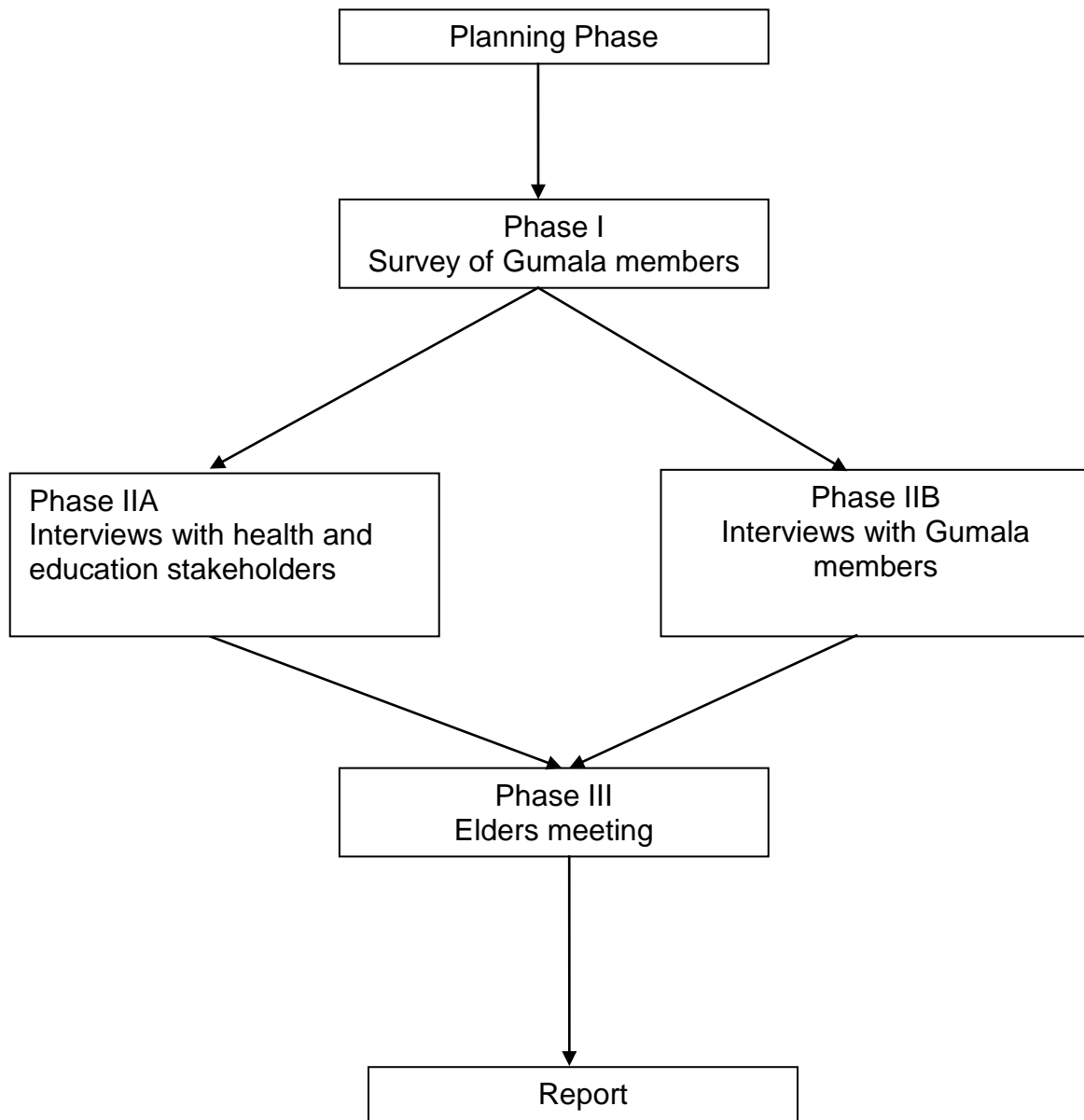
I. Introduction

On the first of February 2011 Murdoch University commenced a research project to identify gaps and needs in health and education of Gumala Aboriginal Corporation (GAC) members and to provide practical solutions to reduce these gaps and needs. All Gumala members were invited to participate but special emphasis was placed on members in the Pilbara region of Western Australia. Our findings are contained within this report. In addition our methodologies allow cautious generalisation of many of the findings to other Aboriginal language groups in the Pilbara. The research project was co-sponsored by Gumala Aboriginal Corporation and Rio Tinto.

The project team consisted of: Dr. Bruce Walker, Project Director (Health), Dr Anne Price, Project team member (Education), Ms Elizabeth Jackson-Barrett, Project team member (Education), Ms Ellen Seymour, Project Officer (Health) (deceased) and Dr Norman Stomski, Project Officer (Health).

We commend the report to all who read it and particularly the recommendations which we believe will enhance the health and educational status of Gumala members, their children and generations to come.

Project Flow Chart



III. Acknowledgements

We would like to acknowledge all of the Gumala members who participated and gave of their time. We felt privileged to be taken into the trust of these members and were honoured to listen to many heartfelt stories. We hope and trust that Gumala members continue to achieve the many goals they articulated in our interviews and surveys and that future generations benefit from it.

We were shocked to lose Ellen Seymour from our project team in early 2012. Ellen had written the first draft of the literature review and participated in the survey administration and the commencement of the interview phases. Ellen had a long history working with Aboriginal people and Aboriginal issues and was committed to the advancement of Indigenous people in Australia. She is sorely missed.

We wish to thank the Gumala administration and staff for their help and assistance which we needed from time to time. Without this the project may have faltered. In addition we wish to acknowledge the time offered to us by the many health and education stakeholders we interviewed.

A special thank you is made to the project Steering Committee and observers at Steering Committee meetings. Their input was invaluable and added depth and breadth to the project. The Steering committee consisted of Professor Rhonda Marriot (Murdoch University), Francois Langlois (GAC), Kerry Kessner (GAC), Darren Webb (Royal Flying Doctor Service WA), and Shannara Smith (Rio Tinto). In the early deliberations we also had the benefit of GAC employees Hannah Newnham, Joyce Gust and Observers Peter Caruso (GAC), Denise Groves (Kulbardi) and Paula Hicks (Kulbardi).

We would like to acknowledge the time and assistance provided to us by the Human Research Ethics Committee at Murdoch University. Their suggestions enhanced the methodology used at each stage of the project.

We also wish to thank The Aboriginal Collaborative Council Advising on Research and Evaluation (ACCARE) who provided support and direction to the project. ACCARE is a committee of the Telethon Institute for Child Health Research and advises widely on Aboriginal research.

Finally, we wish to acknowledge the administration and dedicated staff of Murdoch University who have shown total commitment to our project and to Indigenous health and education.

IV. Acknowledgement to Country

The Murdoch University team would like to acknowledge the many Aboriginal lands that we have travelled through during the course of the project.

Out of respect, we hereby acknowledge all past and present Traditional Owners, Elders and Custodians of these lands, in particular the *Banyjima, Innawonga and Nyiyaparli* peoples. It has truly been a privilege to stand upon your country, to look and to listen, which provided us with the best way forward. Our Health, Our Education, Our Future: *Nyaliguru marlbangaligu mirnuwayigu thulbau wobayigu.*

The Murdoch University research team working on the Gumala Health and Education Needs Analysis would also like to acknowledge that this project has been penned on *Nyungar* Land.

1. Literature Review

As we will demonstrate in the following literature review, the relatively poor health and education status of a large proportion of Indigenous¹ peoples in Australia is related to a complex interplay of historic, socioeconomic, cultural, and access issues. This presents a challenge to all concerned.

Murdoch University has accepted this challenge and with the support of the Gumala Aboriginal Corporation and Rio Tinto through its subsidiary Pilbara Iron, we look forward to providing important data on the health and educational needs of the Gumala members and partly, those of other language groups also located in the Pilbara region.

The data generated will provide all stakeholders with critical information upon which to design, facilitate and support best practice solutions for improving the health and education of Indigenous peoples. The actions that flow should be designed to facilitate healing, growth, educational and cultural and economic prosperity in Indigenous communities. It is our goal to have Indigenous people largely provide the practical solutions required.

1.0 Overview of the Literature Review

This literature review consists of two main sections, each of which contains several sub-sections. The first main section details the current state of Indigenous health, education, and employment in Australia. It provides the context from which a broad understanding may be developed of the health, education, and employment status of Indigenous Australians and the factors that influence them. The second main section focuses on the Pilbara region, particularly the situation of Indigenous residents, although the situation of non-Indigenous residents is also described in order to provide a comprehensive view of the Pilbara region. The Pilbara section of the literature review starts by detailing its geography, main industries, population characteristics, population distribution, employment levels, main occupations, and housing. This material

¹ The terms Indigenous and Aboriginal are used interchangeably throughout this document to refer collectively to the First Australians as a matter of respect and to evoke the right to self-determine. Due to the problematic nature of using one of these terms, we use both to be inclusive.

provides the reader with a sense of the living conditions in the Pilbara. We then detail information more specifically related to the purview of this project, namely, the health and education needs of Indigenous Pilbara residents. The health section details the health status of Indigenous Pilbara residents, healthcare services in the Pilbara, and Indigenous specific healthcare services. The education section examines early childhood, primary, secondary, post school and prison education for Indigenous peoples in Australia. The literature review concludes by highlighting the most significant health and education issues for Indigenous Pilbara residents, which then leads into the findings and recommendations of this project.

2.0 Methods for Literature Review

This narrative literature review was based on a structured search strategy. The aim of the review was to identify information and data on specific issues relating to health, education, and employment. The target population was Indigenous peoples about whom we collected data at the Commonwealth, State and Pilbara regional level. Search key words used were Indigenous, Aboriginal, Aboriginal and Torres Strait Islander, matched with health, disease prevention, education, service delivery, social determinants, well being, Australian, Western Australia, Pilbara, child health, morbidity, and mortality. Social determinant key words matched were housing, power, employment, job training, job readiness, economic participation, language, literacy, numeracy, cultural security, parenting, potable water, sewerage, substance use, incarceration rates and criminal justice. Databases and websites searched included Australian Bureau of Statistics, National Health Surveys, and *Aboriginal Healthinonet* at Edith Cowan University, Commonwealth and Western Australian Health, Education and Indigenous websites, Murdoch University health, education and Indigenous library portals. Key informants were also contacted to identify any new relevant publications. Databases were searched from 1996 until the present providing a time window of 15 years.

3.0 The State of Indigenous Health in Australia

This section provides an overview of health issues for Indigenous Australians. It starts by highlighting the disparity in health status between Indigenous and non-Indigenous Australians. We will then detail the main health conditions Indigenous peoples experience and discuss the factors that influence their health. Next, we examine Australian policy initiatives that have been undertaken to improve Indigenous peoples' health. This section concludes by describing Indigenous participation in the health workforce and the medical services that are available to Indigenous people in both remote and non-remote areas

3.1 The Disparity in Health between Indigenous Australians and Non-Indigenous Australians

Australia has a world class health system. It is thus a real indictment on Australia's international standing as an advocate of human rights that Indigenous Australians experience substantially worse health status and health outcomes than other sections of the Australian population.

In 2008, the average birthweight of Indigenous babies was about 200 grams less than that of non-Indigenous babies (Laws, Li & Sullivan 2010). Indigenous babies were twice as likely to be of low birthweight in comparison to non-Indigenous babies (Laws, Li & Sullivan 2010). This is significant as low birthweight has been associated with an increased risk of death during infancy and an increase in other health problems. The infant mortality rate for Indigenous infants is about one and half times higher than the mortality rate for non-Indigenous infants (Australian Bureau of Statistics 2011).

Adult Indigenous Australians die at a much younger age than non-Indigenous Australians. In 2010, the best available evidence indicated that the median age at death for Indigenous males ranged from 50-58 years (Australian Bureau of Statistics 2011). For Indigenous women the median age at death ranged from 55-67 years (Australian Bureau of Statistics 2011). In comparison to non-Indigenous women and men, both Indigenous women and men lived about 20 years less (Australian Bureau of Statistics 2011).

The 2010 Australian Bureau of Statistics /Australian Institute of Health and Welfare Report found Indigenous Australians experienced a health burden 2.5

times higher than non-Indigenous Australians. The 2011 Overview of Australian Indigenous Health Status reports that the rates of many chronic diseases were between two to ten times higher than the rates for non-Indigenous Australians (Thomson et al. 2012). In addition, Indigenous death rates were nine times as high as non-Indigenous rates for diabetes; five times as high for kidney disease; four times as high for digestive diseases; three times as high for respiratory disease; and two times as high for cardiovascular disease (Thomson et al. 2012).

Indigenous Australians account for about 2.5% of the population, and yet a 2003 study on the burden of disease and injury among Indigenous peoples found there were an estimated 51,475 Years of Life Lost (YLL) due to disease and injury for the Indigenous population, or approximately 4% of the total Australian population (Begg et al. 2007).

3.2 Selected Health Conditions

3.2.1 Cardiovascular Disease

Cardiovascular disease includes any disease or condition that impacts either on the heart or blood vessels. The most recent available evidence indicates that 12% of Indigenous people experienced some sort of cardiovascular condition (Australian Bureau of Statistics 2008). The proportion was somewhat higher in remote areas (14%) than non-remote areas (11%) (Australian Bureau of Statistics 2008). Throughout Australia in 2009-10, there were around 9000 hospital admissions for cardiovascular diseases (Australian Institute of Health and Welfare 2011). Most of these admissions were for coronary heart disease. Stroke and hypertension were two other main reasons for hospitalisation. Between 2004-2008, cardiovascular disease was the underlying cause in about one quarter of all Indigenous deaths (Australian Institute of Health and Welfare 2011).

3.2.2 Cancer

The exact extent to which cancer affects Indigenous Australians is difficult to determine for two primary reasons. First, some Australian jurisdictions do not collect data about the rate of cancer in Indigenous people (Australian Institute of Health and Welfare 2010). Second, it is doubtful that all Indigenous Australians with cancer have self identified as Indigenous (Australian Institute of Health and

Welfare 2010). Third, cancer is age related and as Indigenous people die younger cancer may not be present at that stage of life. Hence, the available data about the impact of cancer on Indigenous people in all likelihood underestimates the true extent of the problem and it should be considered in judging the following material.

During 2003-2007 in Australia, the rate of cancer was lower among Indigenous people in comparison to non-Indigenous people (385 and 433 cases per 100,000 people respectively) (Australian Bureau of Statistics 2009). The most common cancer experienced by Indigenous people was lung cancer, followed by breast cancer and prostate cancer (Australian Institute of Health and Welfare 2010). Over 2004-2008, cancer was the second leading cause of death among Indigenous people (Australian Institute of Health and Welfare 2011).

3.2.3 Diabetes

Only a marginal proportion of Indigenous people experience type 1 diabetes. However, type 2 diabetes commonly occurs among Indigenous people and it is a significant health issue (Australian Institute of Health and Welfare 2010). The best available data shows that about 6% of Indigenous people experience type 2 diabetes, with the proportion almost twice as high for those living in remote areas (9%) than for those living in non-remote areas (5%)(Australian Bureau of Statistics 2006). In comparison to non-Indigenous people, Indigenous people were three times more likely to experience some form of diabetes (Australian Bureau of Statistics 2006). Diabetes impacts on health in numerous ways, leaving individuals more predisposed to experiencing stroke, cardiovascular disease, kidney disease, eye disease, and peripheral nerve disease (National Aboriginal Community Controlled Health Organisation 2005). Over 2004-2008, diabetes accounted proportionally for about three times as many Indigenous deaths (7.2% of all Indigenous deaths) as non-Indigenous deaths (2.5% of all non-Indigenous deaths) (Australian Institute of Health and Welfare 2011).

3.2.4 Kidney Disease

Kidney disease refers to numerous disease processes that result in harm to the function of the kidneys. In 2004-2005, the proportion of Indigenous people who experienced kidney disease was ten times higher than for non-Indigenous people

(Australian Bureau of Statistics, Australian Institute of Health and Welfare 2008). Longstanding kidney disease often results in end stage renal disease, which may cause death if unmanaged (Australian Institute of Health and Welfare 2006). In comparison to non-Indigenous people, a much higher proportion of Indigenous people (63% compared to 30%) report end stage renal disease before the age of 55 (ANZDATA 2010). The management of end stage renal disease requires either ongoing dialysis or kidney replacement therapy. Between 2004-2008, the rate of Indigenous people who died from kidney disease was about five times the rate among non-Indigenous people (Steering Committee for the Review of Government Service Provision 2011).

3.2.5 Respiratory Disease

In 2004-2005, about one quarter of Indigenous people reported some form of respiratory disease (Australian Bureau of Statistics 2006). It was more prevalent among Indigenous people residing in non remote areas (30%) than it was for Indigenous people living in remote areas (17%) (Australian Bureau of Statistics 2006).

Around one in six Indigenous people reported asthma, leaving it as the most commonly experienced respiratory disease by Indigenous people (Chang & Torzillo 2007). In comparison to Indigenous people living in remote areas, almost twice as many Indigenous people living in non-remote areas reported asthma (9% compared to 17%) (Australian Bureau of Statistics 2006).

Although the rates of respiratory disease between Indigenous people and non-Indigenous people were about the same, Indigenous people were two and half times more likely to be hospitalised for respiratory disease than non-Indigenous people (Australian Health Minister's Advisory Council 2011). During 2004-2008, respiratory disease was one of most common causes of death among Indigenous people, accounting for 8% of all Indigenous deaths (Australian Health Minister's Advisory Council 2011). While the gap in death rates between Indigenous people and non-Indigenous people had closed since 2001, in 2008 the death rate from respiratory disease for Indigenous people was still two times more than that of non-Indigenous people (Australian Institute of Health and Welfare 2011).

3.2.6 Injury

Injury from a diverse range of sources contributes significantly to the burden of ill health experienced by Indigenous people. In 2004, about one in four Indigenous people reported a health condition linked to an injury or accident (Australian Bureau of Statistics 2006). The rate of Indigenous people who experienced a long term health condition caused by an accident or injury was one and a half times higher than it was for non-Indigenous people (Australian Bureau of Statistics 2006). Moreover, in 2008 about one quarter of Indigenous people experienced physical or threatened violence in the previous year (Australian Bureau of Statistics 2009).

In 2009-10, around twice as many Indigenous people were hospitalised for injuries than non-Indigenous people (Australian Institute of Health and Welfare 2011). The most common cause for hospitalisations from accidents among Indigenous people was assaults (Steering Committee for the Review of Government Service Provision 2011). The rate of hospitalisations for assaults was almost five times higher for Indigenous people who lived in remote areas than it was for Indigenous people in non-remote areas (Australian Institute of Health and Welfare 2011). In addition, hospitalisations for all accidents were almost double for Indigenous people living in remote areas in comparison to Indigenous people in non-remote areas (Australian Institute of Health and Welfare 2011). During 2004-2008, injury was the third leading cause of death among Indigenous people (Australian Health Minister's Advisory Council 2011). Of these deaths, about one quarter resulted from intentional self-harm and another quarter were caused by traffic accidents.

3.2.7 Eye Health

The eye health of Indigenous people appears to have improved over the last decade. However, far more Indigenous people still experience preventable eye conditions than non-Indigenous people (National Indigenous Eye Health Survey Team 2011). In 2008 it was found that over 90% of vision loss in Indigenous people was preventable (National Indigenous Eye Health Survey Team 2011). The rate of blindness among Indigenous people was six times more than that of non-Indigenous people (National Indigenous Eye Health Survey Team 2011).

The most common cause of blindness in Indigenous people was cataract (National Indigenous Eye Health Survey Team 2011). Almost one in three Indigenous people report eyesight problems, which was the most common eye condition among Indigenous people (National Indigenous Eye Health Survey Team 2011). This was compounded by the difficulty many Indigenous people have in accessing specialist eye care.

3.2.8 Ear Disease

Ear disease and hearing loss are very common in Indigenous communities, especially in remote areas (Couzos & Murray 2008). Indeed, the extent of the problem is so substantial that the World Health Organisation described it as “a massive public health problem requiring urgent attention” (WHO/CIBA 2000). In numerous remote communities nine in ten children aged between 6-30 months have an ear infection (Australian Bureau of Statistics 2006). Chronic ear infections frequently lead to a loss of hearing. Among Indigenous adults in both remote and non-remote areas, almost one in ten report partial or complete deafness (Australian Bureau of Statistics 2006). The levels of either complete or partial hearing loss are significantly higher among Indigenous peoples than non-Indigenous people (Australian Bureau of Statistics 2006). Importantly, hearing loss that results from chronic infections has been linked to poor educational outcomes and unemployment, which in turn substantially increase the likelihood of contact with the justice system (Couzos & Murray 2008).

3.2.9 The Social and Emotional Wellbeing of Indigenous Australians

Social and emotional wellbeing includes the social, emotional, spiritual, and cultural wellbeing of an individual (Garvey 2008). For an Indigenous person in particular, it also encompasses the relationship between an individual’s mental health and their connection to land, culture, spirituality, ancestry, family, and community (Vicary & Westerman 2004).

The 2008 National Aboriginal and Torres Strait Islander Social Survey enabled a broad understanding to be developed of Indigenous people’s social and emotional wellbeing through gathering information about psychological distress, stressors, positive wellbeing, social networks, social support and removal from

family (Australian Bureau of Statistics 2010). It found that around four in every five Indigenous people had experienced at least one significant stressful event in the last twelve months, most commonly the death of a family member or close friend (Australian Institute of Health and Welfare 2011). Despite this nine in every ten Indigenous people described themselves as feeling happy either some, most, or all of the time (Australian Institute of Health and Welfare 2011). However, the high rate of stressful events experienced by Indigenous people was reflected by Indigenous people being about twice as likely to be admitted to a hospital for an “mental or behavioural disorder” than non-Indigenous people (Australian Institute of Health and Welfare 2011). Indigenous people were also two and half times more likely to have died as a result of “mental and behavioural disorder” than non-Indigenous people (Steering Committee for the Review of Government Service Provision 2011).

3.3 The Influence of Selected Factors on Indigenous Health

3.3.1 Nutrition

Nutrition contributes importantly to the maintenance of good health. There are a number of factors that contribute to poor nutrition among Indigenous people, namely income in the lowest quintile, smoking, and high alcohol consumption (Gracey 2007). Poor nutrition increases the risk of an individual developing numerous health conditions, most commonly including overweight, obesity, malnutrition, cardiovascular disease, diabetes, and tooth decay (National Health and Medical Research Council 2000). These conditions may be prevented by including in the diet two serves of fruit and five serves of vegetables per day, reduced-fat varieties of yogurt, milk and cheeses, and selecting foods that contain little salt and sugar (National Health and Medical Research Council 2000).

Most Indigenous people aged over 12 years eat fruit and vegetables on a daily basis (85% and 95% respectively) (Australian Bureau of Statistics 2006). But about one in nine Indigenous people did not eat fruit on a usual basis, and one in twenty did not eat vegetables on a usual basis (Australian Bureau of Statistics 2006). Moreover, only 42% of Indigenous people ate the recommended number of fruit servings per day, and only 10% ate the recommended amount of vegetable servings per day (Australian Bureau of Statistics 2006). Failing to eat

fruit and vegetables on a daily basis was much more common in remote areas (20% and 15% respectively) than in non-remote areas (12% and 2% respectively). (Australian Bureau of Statistics 2006) Of those Indigenous people who consumed milk, slightly less than one in five Indigenous people in non-remote areas drank reduced fat milk, and in remote areas less than one in ten drank reduced fat milk. For salt intake, 83% of Indigenous residing in remote areas and 66% of those in non-remote areas usually or sometimes added salt to food after cooking (Australian Bureau of Statistics 2006).

The issue of food security may also impact on Indigenous people's nutritional status. Between 2004-2005, about 12% of Indigenous people reported running out of food. Some of those were able to gain food by other means, but 8% went without food when they were unable to afford it (Australian Bureau of Statistics 2006). In comparison to non-Indigenous people, the proportion of Indigenous people who went without food was about seven times higher (Australian Bureau of Statistics 2006).

3.3.2 Physical Activity

Australian guidelines recommend that adults engage in 30 minutes, and children engage in 60 minutes, of moderate physical activity on most if not all days of the week (Department of Health and Aging 2010). Inadequate physical activity increases the likelihood of an individual experiencing cardiovascular disease, diabetes, some cancers, depression, overweight, obesity, and a weakened musculoskeletal system (Department of Health and Aging 2010).

In 2008, 74% of Indigenous children reported having undertaken at least 60 minutes of physical activity each day, and only 3% reported no physical activity (Australian Bureau of Statistics 2009). Activity levels were much lower for Indigenous adults (38% of males and 23% of females undertook regular activity) (Australian Bureau of Statistics 2009). Almost half of Indigenous people reported very low or no physical activity, compared to only one third of non-Indigenous people who reported very low or no physical (Australian Bureau of Statistics 2009). The disparity in very low activity levels between Indigenous and non-Indigenous people has been slowly increasing since 2001 (Australian Bureau of Statistics 2009).

3.3.3 Bodyweight

In 2003, overweight and obesity was the second most significant factor which contributed to Indigenous people experiencing ill health, accounting for 11% of the total burden of disease (Vos, Barker & Stanley 2002). Indeed, this may be an underestimate as it has been suggested that the healthy weight range for Indigenous people may be lower than that of non-Indigenous people (Daniel 2007). The most recent evidence suggests that 57% of Indigenous people aged 15 years or older were overweight or obese (Australian Bureau of Statistics 2006). The proportion of Indigenous people who were overweight or obese was only slightly less in remote areas (62%) than in non-remote areas (55%)(Australian Bureau of Statistics 2006). There was only a small difference between the proportion of Indigenous people and non-Indigenous people who were overweight or obese (Australian Bureau of Statistics 2006). Indigenous people were more likely to be overweight or obese if they; had poor health status; had three or more long term conditions; had circulatory problems; had diabetes; or had not experienced cancer (Australian Institute of Health and Welfare 2011).

In 2005, around one in twenty five Indigenous people were underweight (Australian Institute of Health and Welfare 2011). Indigenous people were more predisposed to being underweight if they were current smokers, undertook low to moderate levels of physical activity and did not eat either fruit or vegetables regularly (Australian Institute of Health and Welfare 2011).

3.3.4 Breastfeeding

Australian guidelines recommend that infants should be exclusively breastfed until they reached six months of age and continued until at least twelve months (National Health and Medical research Council 2003). In 2004-05, 66% of Indigenous children aged between 0-3 years had been breastfed for an unspecified period, which was slightly lower than the proportion of non-Indigenous children aged between 0-3 years (72%)(Australian Bureau of Statistics 2006). There was little difference in the proportion of Indigenous and non-Indigenous children who had been breastfed for between 6-12 months (19% compared to 22%), and in excess of 12 months (11% and 14%)(Australian Bureau of Statistics 2006).

3.3.5 Immunisation

In 2004-2005, 88% of Indigenous children aged between 0-6 years were reported to have had the immunisations generally recommended in the Australian guidelines (Australian Institute of Health and Welfare 2011). However, this rate probably overestimates the actual rate of immunisation as indicated by the figures for individual vaccines (Australian Institute of Health and Welfare 2011). For example the rate for the whooping cough vaccine is 74%, and the rate for the diphtheria and tetanus vaccine is 79% (Australian Institute of Health and Welfare 2011). The most recent data indicates that the rate of immunisation among Indigenous children is about 8% lower than that of non-Indigenous children (Australian Institute of Health and welfare 2011). This gap is much higher in Western Australia where the rate of immunisation among Indigenous children is about 18% lower than that of non-Indigenous children (Australian Institute of Health and Welfare 2011). Among adults, in general a higher proportion of Indigenous people have received vaccines in comparison to non-Indigenous people (Australian Institute of Health and Welfare 2011).

3.3.6 Tobacco Smoking

In 2003, tobacco use among Indigenous people contributed more to the burden of disease and injury than any other factor. It accounted for 12.1% of the total burden of disease (Vos, Barker & Stanley 2007). The proportion of Indigenous people who consume tobacco is about twice as great in comparison to non-Indigenous people (38% compared to 18%) (Vos, Barker & Stanley 2007).

3.3.7 Alcohol Use

Alcohol related harm in the individual includes chronic diseases, accidents, and injury (National Health and Medical Research Council 2009). Its harmful effects also extend beyond the individual to families and the community (National Health and Medical research Council 2009). In 2003, alcohol was the fifth most substantial factor involved in the burden of disease for Indigenous people (Vos, Barker & Stanley 2007). It accounted for 5.4% of the total burden of disease, which was about twice the burden of disease that alcohol was responsible for in non-Indigenous Australians (Vos, Barker & Stanley 2007).

The proportion of Indigenous people who do not consume alcohol is about two and half times greater than that of non-Indigenous people (35% compared to 13%) (Australian Institute of Health and Welfare 2011). However, among those who consume alcohol, Indigenous people are twice as likely as non-Indigenous people to have consumed alcohol at high/risky levels at least once per week in the last twelve months (Australian Bureau of Statistics 2010). Over 2006-2008, Indigenous people were hospitalised for alcohol related harm at a rate slightly over four times that of non-Indigenous people (Australian Institute of Health and Welfare 2011). Four out of every five hospitalisations were for “mental and behavioural disorders”, typically acute intoxication, dependence syndrome, or withdrawal state (Australian Institute of Health and Welfare 2011). One in ten hospitalisations were for alcoholic liver disease, with the Indigenous hospitalisation rate for alcoholic liver disease almost five times that of non-Indigenous people (Australian Institute of Health and Welfare 2011). During 2004-2008, alcohol use was responsible for 3.6% of Indigenous deaths, and almost 70% of these deaths were linked to alcoholic liver disease (Australian Institute of Health and Welfare 2011). Overall, Indigenous people died from alcohol related causes at a rate 6.1 times greater than non-Indigenous people (Australian Institute of Health and Welfare 2011).

3.3.8 Illicit Drug Use

In 2008, almost one in four Indigenous people aged over 15 years reported the use of an illicit substance in the preceding year (Australian Institute of Health and Welfare 2011). The rate of illicit substance use was about one and half times higher for Indigenous people in comparison to non-Indigenous people (Australian Institute of Health and Welfare 2011). The most common illicit substances used by Indigenous people in the previous year were cannabis (17%), pain killers (4.5%), amphetamines (4.0%), and volatile chemicals such as petrol and aerosols (0.4%) (Australian Institute of Health and Welfare 2011). Indigenous people in remote areas reported less illicit drug use than Indigenous people in non-remote areas (17% compared to 24%) (Australian Institute of Health and Welfare 2011). During 2006-08, around one in every hundred hospitalisations among Indigenous people were related to illicit drug use (Australian Institute of Health and Welfare 2011). The primary reason for these hospitalisations was for

cannabis related “mental/behavioural disorders”, and the next most common was poisoning related to illicit drug use (Australian Institute of Health and Welfare 2011). The rate of deaths caused by illicit drug use was about one and half times higher among Indigenous people than it was for non-Indigenous people (Australian Institute of Health and Welfare 2011).

3.4 Australian Policy Initiatives to Improve Indigenous Health

In 1989, the National Aboriginal Health Strategy (NAHS) was developed in an effort to deliver comprehensive culturally secure primary health care which recognized the importance of community governance/control and principles of social determinants of health (Office of Aboriginal and Torres Strait Islander Health 2003). However, an evaluation of the NAHS in 1994 found that it had not been effectively implemented and as result Indigenous people had only experienced marginal improvements in health outcomes (Office of Aboriginal and Torres Strait Islander Health 2003).

Subsequently, the National Strategic Framework for Aboriginal and Torres Strait Islander Health was developed in 2003 after three years of national consultations (Department of Health and Aging 2003). The Strategic Framework was based on seven principles embodying respect; community control; coordination; consultation; capacity building; a holistic approach; and promotion and prevention (Department of Health and Aging 2003).

Efforts to improve Indigenous health gained further momentum after the release of the *Social Justice Report 2005* (Australian Human Rights Commission 2005). This report drew attention to the vast difference in the health of Indigenous and non-Indigenous Australians and called for the Government to accept responsibility to address the disparity in Indigenous health (Australian Human Rights Commission 2005). In response, many of Australia’s main health bodies, both Indigenous and non-Indigenous, coordinated a campaign to “close the gap” in health inequity (Calma 2009).

Following this campaign, in 2007 the Council of Australian Governments set specific targets as a commitment to reducing Indigenous disadvantage (National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data 2011). These targets are to:

- close the life-expectancy gap within a generation
- halve the gap in mortality rates for Indigenous children under five within a decade
- ensure access to early childhood education for all Indigenous four years olds in remote communities within five years
- halve the gap in reading, writing and numeracy achievements for children within a decade
- halve the gap for Indigenous students in Year 12 (or equivalent) attainment rates by 2015
- halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade.

To achieve these targets, the Council of Australian Governments has devoted \$4.6 billion for programs in early childhood development, health housing, economic participation, and remote service delivery (Department of Families Community Services and Indigenous Affairs 2009). In addition, various sections of the corporate and community sector have also provided commitments (Australian Indigenous Healthinfonet 2012). Such a level of commitment by both Government and other organisations is unprecedented and offers an opportunity to markedly reduce Indigenous disadvantage (Australian Indigenous Healthinfonet 2012). The success of these commitments revolves around integrating them into a comprehensive approach that addresses the diverse factors that underpin Indigenous disadvantage (Australian Indigenous Healthinfonet 2012). Moreover, substantially reducing Indigenous disadvantage will take considerable time and needs to be supported by sustained commitments by successive governments (Australian Indigenous Healthinfonet 2012).

3.5 The Influence of Australian Policy Initiatives on Indigenous Health

As the preceding sections have demonstrated, Indigenous people have experienced the worst health of any group of Australians over a long period of time. However, evidence indicates that the health of Indigenous people has been steadily improving for at least a decade.

During 1991-2008, there was a 25% reduction in the age-standardised death rate for Indigenous people in Western Australia, South Australia, and the Northern

Territory (Australian Institute of Health and Welfare 2008). This reduction led to a statistically significant closing of the gaps in death rates between Indigenous and non-Indigenous people (Australian Institute of Health and Welfare 2008). Life expectancy for Indigenous people has risen in the last estimate, however most of the improvement may owe to revised statistical methods and the actual increase in life expectancy may only be marginal (Australian Bureau of Statistics 2009). Over 1991-2008, Indigenous infant mortality rates have decreased by about 55% in Western Australia, South Australia, and the Northern Territory (Australian Institute of Health and Welfare 2011). This has led to a significant closing of the gap for infant mortality rates between Indigenous and non-Indigenous infants (Australian Institute of Health and Welfare 2011). The reduction in infant mortality came about despite an increase of 13% in the proportion of low birthweight babies born to Indigenous mothers (Australian Institute of Health and Welfare 2011).

In considering individual conditions, there has been a decrease in the death rate for several conditions, in particular chronic obstructive pulmonary disease, stroke, and renal disease (Thomas et al. 2006). Conversely, there has been a sharp increase in the rate of ischemic heart disease and diabetes (Thomas et al. 2006).

There have also been improvements in several areas that result in better overall health. First, during 2002-2008 there was an increase in the proportion of Indigenous people engaging in sporting or recreational activities (Steering Committee for the Review of Government Provision of Services 2011). Second, the number of Indigenous people who smoke tobacco has dropped in recent years (Australian Institute of Health and Welfare 2011). Third, there is now a much smaller gap in immunisation coverage between Indigenous and non-Indigenous children, which has contributed to a substantial reduction in infectious disease among Indigenous children (Australian Institute of Health and Welfare 2011).

In summary, although Indigenous people's health is improving on the whole, certain areas are still deteriorating. Moreover, despite the steady improvement in Indigenous health, there is a substantial gap between the health status of Indigenous and non-Indigenous people.

3.6 Healthcare Services for Indigenous People

3.6.1 Primary Healthcare

Primary healthcare refers to essential healthcare accessed through the community at an affordable cost. Broad in scope it includes health promotion, illness prevention, treatment and care of the sick, community development, advocacy and rehabilitation.

The most recent data available about Indigenous people's use of primary healthcare services dates from a study conducted during 2004-05. It found that about 60% of Indigenous people saw a doctor, and 30% sought care from an Aboriginal medical service, for assistance with a health issue (Australian Institute of Health and Welfare 2011). These figures, though, may underestimate the proportion of Indigenous people who saw a doctor as Aboriginal medical services employ other health professionals in addition to doctors. Indigenous people in remote areas were more likely to use an Aboriginal medical service (60% of all medical consultations) than those in non-remote areas (17.4% of all medical consultations) (Australian Institute of Health and Welfare 2011). Also, Indigenous people in remote areas were about four times more likely to attend a hospital than those in non-remote areas (16% compared to 3.7%) (Australian Institute of Health and Welfare 2011).

About 2% of Indigenous people in remote areas, and 1% in non-remote areas, indicated they would not seek care when they had a health issue (Australian Institute of Health and Welfare). For Indigenous people in remote areas, the most common reasons for not seeking healthcare when required were work, personal or family responsibilities, discrimination, not culturally sensitive, language problems, afraid, embarrassed, or dislikes service (Australian Institute of Health and Welfare 2011). In non-remote areas, Indigenous people most commonly said they do not seek healthcare because of the distance or lack of transport, unavailability of service, or excessive waiting time (Australian Institute of Health and Welfare 2011).

3.6.2 Access to Healthcare for Residents of Indigenous Communities

The most recent Australia wide information about access to primary healthcare for residents of Indigenous communities was collected during the 2006 Community Housing and Infrastructure Need Survey. It included 1187 individual Indigenous communities with a combined population of about 90,000 people (Australian Bureau of Statistics 2008).

In 2006, slightly less than one in ten of the communities surveyed reported that an Aboriginal primary health care centre was located in the community (Australian Bureau of Statistics 2008). Of these, 71% were in very remote communities, 9% in remote communities, and 20% in non-remote communities. About 10% of Aboriginal communities lived within ten kilometres of an Aboriginal primary health care centre (Australian Bureau of Statistics 2008). Slightly over 33% of Indigenous communities were located more than 100 kilometres from the nearest Aboriginal medical centre (Australian Bureau of Statistics 2008).

Less than half of the Indigenous communities reported having a doctor work in the community at least one day per fortnight, and slightly over half had a nurse work at least one day per fortnight (Australian Bureau of Statistics 2008).

Aboriginal health workers hold either a certificate or diploma level qualification and are typically the first type of healthcare worker Indigenous people in communities consult (Australian Bureau of Statistics 2008). Aboriginal health workers deliver care and information for numerous health issues, including substance abuse, mental health, diabetes, ear, and eye health. In 2006, female Aboriginal health workers were located within about half of the communities on a daily basis, and Aboriginal male health workers were located within about a third of the communities on a daily basis (Australian Bureau of Statistics 2008).

Access to healthcare may be enhanced by mobile clinics detailed in the following sections.

3.7 The Indigenous Health Workforce

Some Indigenous people prefer to consult Indigenous health professionals, or use Indigenous controlled medical services; this is for a variety of reasons including cultural differences, language barriers, and the experience of racism when using some mainstream services (Steering Committee for the Review of

Government Service Provision 2008). According to Census data, Indigenous people account for only 1% of the Australian health workforce (Steering Committee for the Review of Government Service Provision 2008). An increase in Indigenous health workers may be achieved through improving Indigenous educational outcomes (detailed in the following sections) (Steering Committee for the Review of Government Service Provision 2008). In addition, the number of Indigenous peoples in professional health occupations could be increased by facilitating opportunities to upgrade qualifications through further training (Steering Committee for the Review of Government Service Provision 2008). For example, in Western Australia the Marr Mooditji Aboriginal Health Training College offers certificate III, IV, and diploma qualifications, with a bridging course to nursing training.

At present, the small proportion of Indigenous health professionals means that many Indigenous people requiring healthcare will have to be seen by non-Indigenous health professionals (Steering Committee for the Review of Government Service Provision 2008). This then necessitates that non-Indigenous health professionals receive training that enables them to provide culturally sensitive healthcare (Steering Committee for the Review of Government Service Provision 2008).

3.8 Summary

There is a substantial gap in numerous health indicators between Indigenous and non-Indigenous people, particularly in infant birthweight, mortality and disease burden. A considerably higher proportion of Indigenous people experience some form of chronic disease in comparisons to non-Indigenous people, and Indigenous people die at much higher rate from chronic diseases than non-Indigenous people. The main factors that contribute to poor health among Indigenous people are inadequate nutrition, lack of exercise, overweight, and substance abuse. Overall, the health of Indigenous people has been steadily improving over the last two decades, despite the ineffective implementation of previous Government Indigenous health strategies. It remains to be seen if the current Government's Indigenous health policy considerably increases the rate of

improvement in Indigenous health status, and there are grounds for scepticism given the series of past attempts by successive Governments. Nonetheless, the present financial commitment to improving Indigenous health offers some hope that the Government may come close to achieving its goals.

4.0 The State of Indigenous Education in Australia

During 2010, slightly more than 160,000 Indigenous students were enrolled in schools nationally, accounting for about 4% of the student population. Most Indigenous students attend government schools (85%). Around four in five Indigenous students are enrolled in schools located either in urban or regional areas. The remaining Indigenous students attend schools in remote areas. Whereas most of the students in remote areas are Indigenous, in regional areas most students are non-Indigenous. Many Indigenous people undertake tertiary education after leaving secondary school. In 2010, there were about 9,500 Indigenous students attending university and over 74,000 in vocational education and training (Purdie and Buckley 2010).

In the following sections, we examine in detail current data and issues related to educational attainment, school completion, school attendance, and strategies to improve educational outcomes at a National and State level. This section concludes by detailing Indigenous people's transition from school to employment.

4.1 Current Educational Issues

4.1.1 Highest Level of Schooling Completed

The most recent data available about Indigenous school attainment were obtained from the ABS National Aboriginal and Torres Strait Islander Social Survey 2008. It found that between 1994- 2008 the proportion of Indigenous people aged 15 years or over who left school before completing year 10 fell by a significant margin (from 52.1% to 34.1%). Despite this improvement, in 2008 the proportion of those aged 15 years or over who left school prior to completing year 10 was slightly over twice as high for Indigenous people than it was for non-Indigenous people (34.1% compared to 16%). There was also a significant reduction in the proportion of Indigenous people aged 15 years or over who left school before completing year 11 or year 12 between 1998 and 2008 (from 80.3% to 64.8%). However, the proportion of people aged 15 year or over who

left school without completing year 11 or 12 was about one third more for Indigenous people than for non-Indigenous people (64.8% compared to 39.5%).

4.1.2 Achievement on Standardised Tests

Significant education reports have shown that in Australia the lowest performing students are likely to come from Indigenous communities, geographically remote areas and poor socio economic backgrounds (Hipwell et al. 2011; Thomson et al. 2010). The most recent available internationally based information about Indigenous students' secondary school learning outcomes derives from the OECD Program for International Student Assessment (PISA). It assesses learning outcomes in three key areas: reading, mathematical and scientific literacy. For reading literacy, in 2009 the proportion of 15 year old Indigenous students who obtained the national proficiency level was almost half that of non-Indigenous students (34.7% compared to 66.3%) (Thomson et al. 2010). For mathematical literacy, the proportion of 15 year old Indigenous students who obtained the national proficiency level was almost half that of non-Indigenous students (34.5% compared to 64.8%) (Thomson et al. 2010). For scientific literacy, in 2009 the proportion of 15 year old Indigenous students who reached the national proficiency level was close to half that of non-Indigenous students (37.8% compared to 68.5%) (Thomson et al. 2010). Between 2003-2009, there was no change in the proportion of Indigenous students who achieved the national proficiency level in scientific, mathematical or reading literacy (Thomson et al. 2010).

NAPLAN, the National Assessment Program Literacy and Numeracy, commenced in Australian schools in 2008. Once a year, all students in Years 3, 5, 7 and 9 are assessed on the same day using national tests in Reading, Writing, Language Conventions (Spelling, Grammar and Punctuation) and Numeracy (ACARA, 2012). NAPLAN reports for 2008-2011 show that whilst there has been an increase in some domains for the Indigenous students tested, national results are still poor for Indigenous students. The results show that there is still a substantial gap between Indigenous and non-Indigenous students in literacy and numeracy that needs to be closed.

4.1.3 NAPLAN Results for Schools in the Pilbara

The NAPLAN (National Assessment Program - Literacy and Numeracy) provide a measure by which schools may be compared across the nation. Almost all of the schools in the Pilbara scored substantially below or below the national average in either all domains or most domains tested. In all of the schools in which Indigenous students made up most of the student population, the NAPLAN results were substantially below national average in all domains in all years tested. The only school that was not below the national average in most domains was Dampier primary school.

In the 2010 NAPLAN results for Aboriginal Students indicated that for schools in the Pilbara much is yet to be achieved in the areas of literacy and numeracy. The NAPLAN results, school attendance rates and proportion of Indigenous students are summarised below in Table 4.1.

Table 4.1 Summary of Select 2010 NAPLAN Results for Pilbara Schools

School	Indigenous Students	Attendance Rate	NAPLAN Results
Baler Primary School	32%	89%	Substantially below national average in all domains in all years tested
Cassia Primary School	30%	91%	Substantially below national average in all domains in all years tested
Dampier Primary School	4%	94%	Above or substantially above national average in most domains in most years, with the exception of scores substantially below the national average in writing in Year 3

Karratha Senior High School	39%	79%	Substantially below national average in all domains in all years tested
Hedland Senior High School	33%	80%	Substantially below national average in all domains
Jigalong Remote Community School	90%	66%	Substantially below national average in all domains in all years tested
Karratha Primary School	20%	88%	Substantially below national average in all domains in all years tested
Marble Bar Primary School	75%	93%	Substantially below national average in all domains in all years tested
Millars Well Primary School	14%	92%	Below or substantially below national average in all domains in all years tested
Newman Primary School	29%	86%	Below or substantially below national average in all domains in all years tested
Newman Senior High School	25%	85%	Substantially below national average in all domains in all years tested
Roebourne District High School	98%	56%	Substantially below national average in all domains in all years tested
North Tom Price Primary School	10%	89%	Below national average in most domains in Years 5 and 7

Nullagine Primary School	98%	74%	Substantially below national average in all domains in all years tested
Onslow Primary School	57%	80%	Substantially below national average in most domains in all years tested
Pannawonica Primary School	9%	89%	Below national average in most domains in all years tested with the exception of writing in Year 7
Pegs Creek Primary School	25%	88%	Below national average in most domains in all years tested
Port Hedland Primary School	17%	88%	Below national average in most domains in all years tested
Port Hedland School of the Air	25%	Not reported	Below national average in Year 5, the only year tested
South Hedland Primary School	89%	73%	Substantially below national average in all domains in all years tested
South Newman Primary School	13%	90%	Below national average in most domains in all years tested
Tambrey Primary School	15%	90%	Below or substantially below national average in all domains in all years tested
Tom Price Primary School	24%	88%	Below national average in Years 3 and 5 in all domains and achieved national average in all domains in Year 7
Tom Price Senior	17%	85%	Below national average in all

High School			domains
Wickham Primary School	35%	88%	Substantially below national average in all domains in all years tested
Yandeyarra Remote Community School	100%	79%	Substantially below national average in all domains in all years tested

The above NAPLAN results capture the 26 schools in the Pilbara region and it should be noted that only 1 school out of the 26 schools scored above or substantially above national average in most domains in most years. Moreover, the NAPLAN results indicate that the other 25 schools have scored below or substantially below the national average across all domains and all years tested which indicates that there is still major work to be addressed and overcome to meet the federal agenda of *Closing the Gap* in education for Aboriginal students in the Pilbara. It should be further noted that Australian Independent Schools of Western Australia (AISWA) and Catholic Education also have schools in the Pilbara, however these are significantly low in numbers compared to government schools.

It should be noted that these results should be approached with some caution as they mask significant debate within the educational community about the cross cultural validity and effect of such national 'one size fits all' testing. In particular it is important to consider the impact of NAPLAN as a policy on school leadership, teacher development, the curriculum and the educational experiences of Indigenous students (Unsworth 2011). How for example might remote schools be expected to reorganise themselves to improve their NAPLAN results? What will be the benefits and costs of such change?

The scholarly literature is also cautious about the use of literacy and numeracy tests standardised for Standard Australian English speakers, when many Indigenous children in remote communities, such as those in the Pilbara, may

have this language as their second or even third language. The dangers of applying standardised norm referenced tests to non-English speaking background children are well documented. These children are often assessed as linguistically and academically deficient and their school communities (leaders, teachers, parents, curriculum) are blamed for their apparent poor performances (Wigglesworth, Simpson and Loakes 2011).

4.1.4 School Attendance

Consistent attendance at school has been associated with gaining competency in core educational skills such as numeracy and literacy. It is therefore an integral element in reducing Indigenous disadvantage as higher levels of educational attainment are linked to improved socio-economic status.

On average, the proportion of Indigenous students attending school is about 10% lower than that of non-Indigenous students and this gap increases as students progress through school (Productivity Commission 2011). In both the Northern Territory and Western Australia the attendance rate in year 10 for Indigenous students was 20% lower than it was for non-Indigenous students (Productivity Commission 2011). Over 2007-2009, attendance rates declined for all students through year 5 to year 10, but the decrease was more marked for Indigenous students (Productivity Commission 2011). Attendance for all students also declined more as the location of the school moved from urban to regional, remote and very remote areas, but the decrease was more substantial among Indigenous students (Productivity Commission 2011).

Low attendance at school among some Indigenous students has been linked to several factors. These factors include socio-economic disadvantage, contact with the criminal justice system, inadequate acknowledgement of Indigenous culture and history in schools, deficit thinking, a lack of engagement with parents and the community and racism (Aveling 2012; Schwab 2001; Biddle et al.2004).

4.2 Strategies to Improve Indigenous Educational Outcomes

4.2.1 'Close the Gap' Initiatives

Over the last two decades the Australian Federal Government has introduced a number of educational policies to improve the outcomes in education for Aboriginal students. The Commonwealth Ministerial Council on Education, Employment, Training and Youth Affairs (MCCEETYA) taskforce on Indigenous Education (2000) reported that *'the scale of educational inequality continues for Australia's Aboriginal and Torres Strait Islander and remains at unacceptable levels'*. The framework and principles of MCCEETYA's National Statement of Principles and Standards for More Culturally Inclusive Schooling in the 21st Century was endorsed by all State, Territory and Government Ministers in an effort to overcome and achieve measures that will *'close the gap'* in education for Indigenous Australians (Productivity Commission 2011).

The priority areas are:

- school readiness,
- engagements and connections;
- attendance;
- literacy and numeracy;
- leadership;
- quality teachers.

Other target areas have been set to include halving the gap in Indigenous children in reading, writing and numeracy within the decade; halve the gap for Indigenous students in year 12 attainment rate by 2020.

The Prime Minister's Report (Productivity Commission 2011) indicates that 43 per cent of Indigenous Australians live in rural areas with a further 25 per cent living in remote areas. Regional Partnership and Remote Service Delivery Partnership Agreements are an integral part of the *Closing the Gap* agenda and are coupled with a Federal commitment to genuine engagement with Indigenous communities. One measure has been the \$564.4 million allocated under the National Partnership Agreement on Indigenous Early Childhood Development to

ensure access to early childhood education for all Indigenous four year olds in remote communities from 2013 (Productivity Commission 2011).

At the local level in Western Australia and in line with the federal agenda of *Closing the Gap*, the WA Aboriginal Education Strategy (2011-2014) is addressing six key areas:

- readiness for school
- attendance
- literacy and numeracy
- pathways to real post-school options
- engagement and connections
- leadership, quality teaching and workforce development

Informing the State Government of Western Australia is the Western Australian Aboriginal Education and Training Council (WAATEC). The responsibility of WAATEC is to assist education providers across Western Australia with successful, effective and sustainable education and training practices for Aboriginal people across Western Australia. Further, the council monitors, coordinates and advises government Ministers of relevant developments in Aboriginal Education through its Strategic Plan. One of the WAATEC council's central aims is to 'bring about better life outcomes' for Aboriginal peoples across Western Australia through education and training (Western Australian Strategic Plan for Aboriginal Education and Training, 2011-2015). The council's prime driver for change is for all education institutions and training providers to incorporate Aboriginal Cultural imperatives within their organisations. Through extensive consultation over a two year period WAATEC has developed six areas of priority:

- Aboriginal Languages, Cultures, Perspectives and History
- Early Childhood Development and Readiness for Schooling
- Enrolment, Attendance, Participation and Achievement
- Quality Teaching and Strong Leadership
- Community Capacity Building for Leadership and Engagement in Decision making

- Training and Workforce Development for Aboriginal People

The imperatives and priority areas of WAATEC align with the National *Aboriginal and Torres Strait Islander Education Action Plan 2010-2014* and are endorsed by the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA) (Western Australian Strategic Plan for Aboriginal Education and Training, 2011-2015).

These areas are connected to the target areas of the Closing the Gap initiative as well as the findings of the 2000-2002 Western Australian Aboriginal Child Health Survey (WAACHS) conducted by the Telethon Institute. The research found that *'many Aboriginal children have excessively low levels of readiness to learn at school on arrival into Year 1 despite the fact that a large percentage enrol in both kindergarten and pre-school when eligible'*. The study highlighted a complexity of factors such as *'English being a second or third dialect, classroom setting, inappropriate teaching strategies, attendance patterns, otitis media'* which all contribute to *'substantially low'* academic performance. Moreover, the study highlighted that for things to change in education for Aboriginal students then education systems must adopt a leadership role. Programs that assist Indigenous communities and their families to foster literacy and numeracy for school readiness are necessary to improve the current state of affairs for Aboriginal students.

4.2.2 Early Childhood Programs

Recently two major reforms have been introduced in relation to Early Childhood Education in Australia. First, the introduction of the Early Years Learning Framework (EYLF), National Quality Standard (DEEWR, 2010), and second the Australian Curriculum (ACARA). These two guidelines give clear recommendations of what is expected of Early Childhood educators especially those teaching Aboriginal students. There is *"strong evidence that indicates that the early years from 0-8 are critical in a child's development and that Aboriginal and Torres Strait Islander children remain significantly disadvantaged in development and educational outcomes by the end of the early years"* (Steering Committee for the Review of Government Service Provision 2011). Further, it is

suggested that “*without early learning opportunities, Aboriginal and Torres Strait Islander children “are likely to be behind in their first three years of schooling”* (Steering Committee for the Review of Government Service Provision 2011). Both reforms clearly recognise that ‘*cultural competencies*’ are a key principle and practice for educators to ensure that all school children are given the opportunity to engage with Aboriginal cultures and histories.

The Council of Australian Governments (COAG) has reflected in its policy agenda a number of targets to improve outcomes for Indigenous peoples, especially young children. The targets that relate to early childhood development are:

- 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
- every child will have access to a preschool program in the 12 months prior to full-time schooling by 2013
- halving the gap for Indigenous students in reading, writing and numeracy within a decade

4.2.3 Teachers and School Leaders

Teacher quality has been widely acknowledged as one of the most important in-school factors that can lead to improvements in Indigenous students’ learning outcomes. Teachers having high expectations of all students, cultural understanding and sensitivity and building community trust through collaboration have all been recognised as leading to improved academic achievement for Indigenous students (Sarra 2003; Harrison 2010; Groome 1995; Craven 1996).

The Council of Australian Governments (2008) pointed out that:

“Teachers are the key to effective pedagogies that serve the needs of all students in all circumstances. Good teaching cannot be routine or substituted by texts and teaching materials. It requires deep and connected knowledge on the part of

teachers, the exercise of complex and high level judgements both cognitive and interpersonal, and a well-informed and varied repertoire of strategies”

In other words good teachers who use effective strategies and connect with their students and their communities through the building of relationships can make a difference to Indigenous student outcomes, attendance and retention. In recognition of the need for quality teachers, the Council of Australian Governments (COAG) agreed to introduce initiatives to raise the standard of teaching quality for all students, with a particular emphasis on Indigenous students and those in disadvantaged, rural or remote areas by agreeing to ‘*attract high quality principals, school leaders and teachers to schools in disadvantaged communities*’ (MCEETYA 2009).

The powerful role that school leaders (principals and deputy principals) can play in driving positive educational change is well understood. In particular inclusive and collaborative forms of leadership that promote more equitable representations of Indigenous voices through consultation and involvement in school decision making are considered critical (Keddie & Niesche, 2012).

4.2.4 Aboriginal Support Workers and Aboriginal Teachers in Schools

A key strategy for improving Indigenous student achievement and engagement in school is the employment and meaningful engagement of Indigenous staff within schools (Sarra 2003). Indigenous students have been found to have a more positive sense of self when either Indigenous teachers or Indigenous adults are present at school (Sarra, 2003). In terms of teaching staff, both Indigenous teachers and Aboriginal and Islander Education Officers (AIEOs)² are employed in Australian schools. Indigenous teachers hold the same qualifications and perform the same roles as non-Indigenous teachers, although they are often required to take on additional responsibilities to liaise with communities and families or coordinate Indigenous programs. AIEOs assist students and mediate between educational bodies, government agencies and committees. The type of assistance AIEOs provide depends on the level of qualification obtained.

² There are various titles used across states and sectors for Indigenous people employed in schools to assist with educational programs. The term Aboriginal and Islander Education Officer (AIEO) which is used by the WA Department of Education is used here for clarity. However it is acknowledged that there are a variety of roles and responsibilities encompassed within this broad term.

Data about the number of Indigenous teachers were collected from 2003 to 2008 in several surveys conducted by the Commonwealth Department of Education, Employment, and Workplace Relations. Between 2003-2008, the number of Indigenous teachers increased from 1473 to 1845 in government schools, and from 72 to 132 in Catholic schools. However, a concurrent increase in non-Indigenous teachers meant that the ratio of Indigenous teachers to non-Indigenous teachers was almost stable over 2003-2008 (about 1% in government schools and 0.2% in Catholic schools).

The Australian government and the West Australian Education Department have for decades acknowledged that strategies were needed to assist schools with Aboriginal students and the *hiatus of home and school* (Commonwealth Schools Commission 1975). As a result, in the 1970s the WA Education Department initiated The Aboriginal and Islander Education Officer (AIEO) program with the employment of Aboriginal Teacher Aides to assist in public schools in:

“areas where children come to school speaking the vernacular, the aide provides a vital communication channel within the school, and between the school, the parents and the wider community” (Education Department of Western Australia 1974).

This initiative was inline with the Federal government’s agenda of giving high priority to Aboriginal education from 1972-1975 and also the Schools’ Commission Report 1976-1978 triennium that recommended that:

“Aboriginal people be trained to liaise between schools and Aboriginal parents and caregivers. Home liaison workers, counsellors and Aboriginal teacher aides could assist parents, counsel students, establish homework learning centres and find other ways of overcoming the difficulties of students and the hiatus between home and school” (Commonwealth Schools Commission 1975).

Despite these early initiatives, issues within the education system today for Aboriginal and Islander Education officers are plagued with repetitive hindrances. In 2011, a Review of the Aboriginal and Islander Education Officer (AIEO) Program conducted by academics from the Edith Cowan University Centre for

Indigenous Australian Knowledge's, found that having AIEOs in schools was invaluable as AIEOs provided:

“valuable background information on students’ situations, build relationships with the students and community, provide classroom support for teachers, act as a cultural bridge between Aboriginal and non-Aboriginal stakeholders in the school” (Gower et al 2011).

Further, both teachers and principals cited that AIEOs ensured *‘student attendance and reinforced behaviour programs’* with principals adding that AIEOs, teachers and principals should all be provided with *‘professional learning’* so as to maximise effectiveness in working alongside one another.

However, there appeared to be a lack of *‘joint planning and classroom collaboration with lessons’* between AIEOs and respective classroom teachers with the AIEOs stating that *‘many teachers are unaware of their skills and that they are ineffectively used in a classroom environment’*. Further, there is much room for improvement in relation to AIEOs *‘career pathways and job duties’*. Disturbingly, the issues raised in the 2011 report are repetitive of the weaknesses identified in the AIEO program back in 1979; teacher attitudes; lack of role definition; no security of tenure; problem of age differences; and selection and appointment.

4.2.5 Aboriginal Perspectives across the Curriculum

It has been suggested over many years that one initiative to improve Indigenous educational outcomes involves the incorporation of Indigenous languages, culture, perspectives and history in the curricula of schools. Major national reports such as The Royal Commission into Aboriginal Deaths in Custody (1991) and the Bringing them Home Report (1997) have highlighted that inappropriate curricula have often been identified as a major cause for the lack of educational achievement in education for Aboriginal students (Jackson-Barrett, 2010). Federally, the Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA 2000, 2005-2008, 2009-2012)) and the newly developed Australian Curriculum recognises the role that education plays in building a

society that is *'cohesive and culturally diverse, and that values Australia's Indigenous cultures'* which is to be addressed in the Intercultural Understanding across the new curriculum.

There are a large number of national educational programs and strategies aimed at reconciling the relationship between Indigenous and non Indigenous Australians. These programs are about recognising and respecting the life and histories of Aboriginal Australians. One of the most widely acknowledged of these is NAIDOC Week. This week is celebrated around Australia to acknowledge the history, culture and achievements of Aboriginal and Torres Strait Islanders peoples. Other days of significance include National Sorry Day, National Reconciliation Week, Harmony Day and Mabo Day. There are a range of teaching materials available to assist schools and teachers to implement these programs into their curricula.

There are also festivals that aim to promote education, health, culture and possible vocations. One example is the Community Festivals program in which students participate in musical concerts. As part of this program, 15 festivals were held around Australia in 2008, including some in remote locations. Feedback from teachers indicated that the events were very successful and inspired students, teachers, and community members (Steering Committee for the Review of Government Service Provision 2011). Another example is the Croc Festivals which are held in a number of locations across Australia including rural and remote regions and communities for Indigenous and non Indigenous youth. The festivals aim to inspire education, careers, health, sporting, visual arts and crafts in 100% drug and alcohol free environments (<http://www.nrhsn.org.au>).

4.2.6 Scholarships and Support Structures

Each year many Indigenous students are provided with scholarships to prominent inner city schools. Examples of foundations that provide such scholarships include The Australian Indigenous Education Foundation, The Yalari Foundation, and the Cape York Higher Expectations Program. Private schools from across Perth, offer a range of Indigenous scholarships to Indigenous students from either rural or the metropolitan areas. Some examples of scholarships on offer for

co-ed, boys or girls schools are Guildford Grammar, Scotch, Trinity, Wesley, Aquinas, St Brigid's, Iona, Presbyterian Ladies, Mercedes and Winthrop Baptist Colleges.

For those Indigenous peoples aspiring to enter Tertiary studies there are numerous scholarships available across Australia. The Auora Foundation has the Charles Perkins and Roberta Sykes scholarships for tertiary study abroad and the Commonwealth Government has Indigenous scholarships available at all tertiary institutions with most institutions also offering Indigenous scholarships alongside those offered by the commonwealth.

Support structure programs usually use liaisons officers to assist students with homework and study; obtaining scholarships and other financial support; career information; recreational activities; and family and transitional issues. An example of a support program is the Future Footprints Program, which has been undertaken by the Association of Independent Schools Western Australia.

4.2.7 Foundation and Industry Programs

There are a range of Foundations that support the aspirations of Indigenous students in the Pilbara. The Polly Farmer and Wirrapunda Foundations assist Indigenous peoples with both education and employment training opportunities as well as life skills with their Follow the Dream and Solid Futures programs. The Smith Family and Luke Adams Foundations sponsor programs such as 'Mathletics' and the 'Roebourne Girls FX leadership' in the Pilbara. Each of these foundations have forged important partnerships with leading industry and mining companies such as Lotterywest, Alcoa, Healthways, Skywest, Toyota, Rio Tinto, BHP Billiton, Newmont Mining, Pilbara Iron and Pindan Contracting to name a few.

There are numerous innovative educational programs that aim to improve Indigenous attendance, retention and completion at school. One well known example of a successful educational program is the WA Clontarf Foundation which uses the incentive of participation in a football academy to retain students to the completion of year 12. It currently operates 23 academies and about 2,200 Indigenous students are enrolled (Steering Committee for the Review of

Government Service Provision 2011). An evaluation of the program undertaken by the WA Department of Education and Training found that its success was underpinned by the commitment of the staff and the strength of their relationships with the students. Other factors contributing to success were inclusion of an appropriate curriculum; staff holding attitudes that students could succeed; strong sense of belonging; assistance with goal setting; and encouraging healthy lifestyles.

4.3 Aboriginal Prisoner Education

According to Carnes (2011), there is a lack of research on prisoner education in Australia generally and there is even less that specifically focuses on Aboriginal prisoner education. Most sources of information are in the form of written reports developed by the Department of Correctional Services. The only independent reports are from the Australian Bureau of Statistics and the Office of the Custodial Inspector of Prisons (OICS). Carnes (2011) has made a significant contribution to this lack of independent research through her PHD study, *Closing the Gap in Indigenous Prisoner Education: yarning with ex-prisoners from the Deaths in Custody network*, and her subsequent published papers. Specifically Carnes' work highlights the alarming rates of incarceration of Indigenous peoples in Western Australia.

As Carnes (2011) writes:

“On May 27, 2011 38.8 per cent of adults and 73.3 per cent of juveniles in detention in Western Australia were Aboriginal (Department of Corrective Services, May 27, 2011). Aboriginal women represented 77 per cent of female prisoners. They were under represented in the better resourced prisons and made up 100 per cent of female prisoners in the poorly resourced Roebourne and Eastern Goldfields prisons (Department of Corrective Services May 27, 2011. The Office of the Inspector of Custodial Services has noted that “the Department [of Corrections] commitment to the over-representation of Aboriginal peoples in the justice system appears to have amounted to little more than a form of words, well past its utility”

Following comprehensive analysis of the reports from the OICS of thirteen of the fourteen adult prisons in WA (Acacia, Greenough, Broome, Eastern Goldfields, Albany, Bunbury, Woorooloo, Bandyup, Boronia, Casuarina, Roebourne and Hakea) and, significantly, yarning with ex Aboriginal prisoners, Carnes made five tentative recommendations that may go some way to close the gap in Aboriginal prisoner education. These recommendations are briefly outlined below:

1. Provision of adequate resources and infrastructure – issues related to overcrowding, high staff turnover, high levels of training staff casualisation, lack of appropriate training facilities and lack of regular ongoing funding were identified by Carnes as widespread problems. It was also noted though that the level of resources and standard of facilities varied widely from prison to prison, with prisons with high Indigenous populations often the worst resourced. The cessation of the Indigenous Tutorial Assistance Scheme was also noted as a concern that particularly impacted on Indigenous prisoner education.

2. Access to current technology – it was noted that the WA government decision to remove personal computers from all cells has reduced the ability of prisoners to access external studies. The WA government's reluctance to investigate the use of such technology as SKYPE to facilitate "E-visits" and maintain contact with communities was also raised as a concern that impacts on Indigenous prisoners who are often 'out of country'. Such technology is, according to Carnes, commonplace in Korea, Singapore and Hong Kong but to her knowledge not available in Western Australia.

3. Provision of innovative training programmes – Carnes has identified a number of promising innovative programmes being trialled in various prisons. Albany prison, for example, encourages prisoners and tutors to put forward ideas of the types of course they want to be provided. In Bunbury some programmes are being taught by prisoners with particular skills. There are however opportunities for more innovations, particularly with respect to meeting the needs of Indigenous prisoners. Input from prisoners, Elders and Indigenous communities would assist in this. Concerns were raised about the appropriateness of some nationally

accredited TAFE course to meet Indigenous prisoners' needs. The OICS noted for example

"It will be necessary to assess whether such nationally accredited units are flexible enough to allow Aboriginal prisoners at Greenough to tailor their education and skill development in ways that are best suited to their communities post-release....For Aboriginal people from remote areas, one might also question the extent to which any of the employment activities at Greenough are likely to prepare them for employment after release".

4. *A focus on cultural education* – Carnes found that while there were some attempts to provide culturally relevant programs for Aboriginal prisoners in some prisons these were largely unsuccessful. Carnes noted that in some prisons there was a lack of ongoing cultural awareness training for staff, an unfamiliar diet for prisoners, lack of Aboriginal Education Workers, and most significantly lack of appropriate support for 'out of country' prisoners. Of particular relevance for this report, Carne (2011) also noted that:

"The prison environment may not allow, physically, for cultural needs to be met. At Roebourne prison, for example, women's' participation in education was limited because the prison design did not allow for the following of cultural rules that dictated women could not mix with men from different families. In practice this means that if an inappropriate male is in the education centre, the women will not attend"

Further,

"Greenough did not provide any cultural Aboriginal programs such as language, stories and music. "As an Aboriginal prison this is a serious omission" (OICS, August 2010: 16). Acacia prison is criticised for having under developed Aboriginal policies and strategies with a weak range of courses".

5. *Access to education* – Inadequate resourcing and lack of facilities has meant that Indigenous prisoner access to education is often limited and haphazard.

Roebourne prison was particular highlighted by the OICS as being impoverished in terms of resources.

“Women were the most disadvantaged at Roebourne prison, and all women in this prison are currently Aboriginal. While education services were not openly denied there were only limited opportunities for women to access them. Though the Inspector had, in the 2007 report, called for provision of services to women at Roebourne to be at the same level offered at Bandyup Womens prison in Perth, little had changed by 2011. Unfortunately, the 2010 inspection revealed that little progress had been made for women prisoners at Roebourne over the past ten years. Despite some improvements to departmental policies for women prisoners in the regions, the services available to women at Roebourne Regional Prison remain impoverished”

Finally, the need to improve the provision of culturally appropriate and relevant education for Indigenous prisoners in WA is urgent. A starting point must be listening to the views of Indigenous prisoners, ex-prisoners and Indigenous communities. This was noted by the Royal Commission into Aboriginal Deaths in Custody twenty years ago in 1991 (Carnes 2011). The OISC also recommended in 2008 that Indigenous services committees/reference groups be established in prisons but this has not been consistently implemented (Carnes 2011). There is a potential here for GAC to play a role in the establishment of such committees in prisons where Gumala members are incarcerated.

4.4 Indigenous Peoples Transition from Education to Employment

The way in which Indigenous peoples move from education into the workforce contributes significantly to increasing a sustainable employment rate. There are numerous factors that influence people’s employment prospects after leaving school. However, generally the lack of school qualifications has in the past decreased people’s chances of obtaining employment (Purdie and Buckley 2010). Indigenous youth are provided assistance with the transition from school to employment by government organisations such as Job Network or the Australian Government’s Indigenous Cadetship Programs which introduces

Indigenous students to employers with cadetship positions (Purdie and Buckley 2010). Independent organisations also facilitate employment opportunities for Indigenous school leavers by delivering programs like the Aboriginal Employment Strategy, and Myma Pty Ltd (Purdie and Buckley 2010).

How well Indigenous peoples have managed the transition from school to employment can be assessed by looking at the proportion of Indigenous people aged 18-24 years who are unemployed or not undertaking education and training, and the type of employment for those with a certificate level III or higher.

Information about these two indicators were collected for the ABS National Aboriginal and Torres Strait Islander Social Survey in 2002 and 2008, the ABS National Health Survey in 2004-05 and 2007-08, and in the ABS General Social Survey 2002.

In 2008, for those aged 18-24 years, Indigenous peoples were about four times more likely to be either unemployed or not studying compared to non-Indigenous people (40.1% compared to 9.8%) (ABS 2010). WA had the highest proportion of Indigenous peoples aged 18-24 years who were neither employed nor studying (50.6%), while the ACT had the lowest (25.4%) (ABS 2010). Between 2000-2008, the proportion of both Indigenous and non-Indigenous peoples aged 18-24 years who were neither employed nor studying did not significantly change (Australian Bureau of Statistics 2010).

The Government of Western Australia Department of Training and Workforce Development, through its Aboriginal Workforce Development Strategy 2012, recognised that to have sustainable employment outcomes for Aboriginal peoples there are four main areas of concern that need to be addressed:

- Connecting employers to Aboriginal job seekers
- Engaging local knowledge and capacity to build successful outcomes in regions
- Removing barriers to participation in the workforce
- Improving the Transition of Aboriginal people to sustainable employment outcomes

For Indigenous peoples, the transition from school to employment or from unemployment to employment is affected by factors such as lack of school attendance and successful completion, contact with the criminal justice system, and past policies all of which impede employment prospects. Major Industry and Mining companies are forging pathways to create sustainable Indigenous employment. Rio Tinto, Fortescue Mining Group and BHP Billiton are exemplifiers of such employment programs.

4.5 Summary of the Education Section

Over the last decade there has been an improvement in the proportion of Indigenous students who complete higher levels of schooling. However, there is substantial ground to make up before the proportion of Indigenous students who complete either year 11 or 12 equals that of non-Indigenous students. In recent years, Indigenous student attendance rates at school have not declined despite efforts to address it. Moreover, the gap in attendance rates between Indigenous and non-Indigenous students has increased albeit by a marginal extent. In the period for which data is available, there has been little or no change in Indigenous students' proficiency level for scientific literacy, mathematic literacy, and reading literacy. It is true that the gap has closed between Indigenous and non-Indigenous students' proficiency level for scientific literacy, mathematic literacy, and reading literacy, but only because the levels for non-Indigenous students have declined. Indigenous student performance on NAPLAN tests continues to be well below that of non-Indigenous students. Indeed, across almost all educational indicators, Indigenous students record much worse results than non-Indigenous students, which clearly suggests that initiatives are required to address this disparity.

5.0 Indigenous Employment

This section starts by detailing the employment status of Indigenous Australians and how it's influenced by educational achievement. We then look at the main types of occupations Indigenous peoples are employed in, before finishing with a discussion of Indigenous self-employment and business ownership.

5.1 Employment Status of Indigenous Peoples

The following information has been sourced from the ABS National Health Survey 2007-2008, and the National Aboriginal and Torres Strait Islander Social Survey 2008 (Australian Bureau of Statistics 2009; Australian Bureau of Statistics 2010). Since 2002, there has been an improvement in the employment status of Indigenous Australians (Australian Bureau of Statistics 2009; Australian Bureau of Statistics 2010). In 2008, 54% of Indigenous people aged 15-64 years were employed, which has increased by 6% from 2002 (Australian Bureau of Statistics 2009; Australian Bureau of Statistics 2010). Accordingly, the unemployment rate fell by 6% between 2002-2008 (from 23% to 17%), however the rate was still slightly more than three times that of non-Indigenous Australians (5%) (Australian Bureau of Statistics 2009; Australian Bureau of Statistics 2010). In 2008, of those employed Indigenous people 64.1% were employed full time, which was an increase of 3.2% in the full time employment rate since 2002 (Australian Bureau of Statistics 2010).

It should be noted that the employment rate in 2008 was inflated to some extent by the way in which the ABS classified employment information. In the National Aboriginal and Torres Strait Islander Social Survey 2008, the ABS classified Indigenous people who were participating in Community Development Employment Projects (CDEP) as being employed (Australian Bureau of Statistics 2010). However, while some people in CDEP programs undertook activities that would be considered as employment in the broader community, others engaged in activities not much different to Work for the Dole and hence would normally be considered unemployed. Interestingly though, the ABS classification also appears to have understated the improvement in Indigenous employment in recent years. Over 2002-2008, the number of Indigenous people in CDEP programs has almost halved and the unemployment rate has also fallen, which suggests that a

substantial number of Indigenous people have moved from CDEP into mainstream employment since 2002 (Australian Bureau of Statistics 2009; Australian Bureau of Statistics 2010).

5.2 Employment Status and Educational Attainment

Information about the relationship between Indigenous educational attainment and labour force status was collected in the National Aboriginal and Torres Strait Islander Social Survey in 2002 and 2008 (Australian Bureau of Statistics 2004; Australian Bureau of Statistics 2010). As noted in a previous section, holding an educational qualification significantly increases the likelihood of Indigenous people gaining employment. Between 2002-2008, for Indigenous people aged 18-64 years, the proportion of people who were employed increased slightly for those with a Certificate III to Advanced Diploma qualification (from 81.9% to 84.7%), and decreased marginally for those with a Bachelor Degree qualification (from 90.8% to 90.0%) (Australian Bureau of Statistics 2004; Australian Bureau of Statistics 2010). In the same period, between Indigenous and non-Indigenous people aged 18-64 years, there was a decrease in the gap in the proportion of those who were employed with a Certificate III to Advanced Diploma (from 81.9% and 85.6% to 84.7% and 86.8%, respectively), and Bachelor Degree or higher (from 90.8% and 89.2% to 90.0% and 87.7%) (Australian Bureau of Statistics 2004; Australian Bureau of Statistics 2010).

5.3 Employment of Indigenous Peoples by Sector and Organisation

The most recent data available found that about three quarters of employed Indigenous people work in the private sector (Australian Bureau of Statistics 2010). Nonetheless, in comparison to non-Indigenous people, Indigenous peoples were more likely to work in the public sector (14.7% compared 25.8%) (Australian Bureau of Statistics 2010). Indigenous people were also more likely to hold low skilled occupations and less likely to hold professional, administrative, or managerial positions, in comparison to non-Indigenous people (Australian Bureau of Statistics 2010). The most common industries Indigenous people aged 18-64 years worked in nationally were “health and community services”(14.2%) and “government administration and defence” (Australian Bureau of Statistics 2010).

5.4 Self-Employment and Indigenous Owned Business

Self-employment and business ownership leads to self-sufficiency and less dependence on welfare benefits. Several factors have contributed to Indigenous people having lower rates of self-employment and business ownership than non-Indigenous people. First, government programs tend to encourage the development of businesses that involve the community rather than the individual (Steering Committee for the Review of Government Service Provision 2011). Second, Indigenous people may have problems obtaining funding, often because assets are owned by the community rather than the individual or because business opportunities are less viable in remote areas (Steering Committee for the Review of Government Service Provision 2011). Third, in comparison to non-Indigenous people, Indigenous people tend to have lower levels of education and less business ownership related training (Steering Committee for the Review of Government Service Provision 2011).

Information about self-employment was collected in the ABS National Aboriginal survey 1994, National Aboriginal and Torres Strait Islander Health Survey 2004-2005, National Aboriginal and Torres Strait Islander Social Survey 2008, and the National Health Survey undertaken in 1994, 1995, 2004-5, and 2007 (Australian Bureau of Statistics 1996; Australian Bureau of Statistics 1997; Australian Bureau of Statistics 2006; Australian Bureau of Statistics 2010). Between 1994-2008, Indigenous self-employment remained stable at about 7-8 percent of those employed. In the same period non-Indigenous self-employment almost halved from 20 per cent to around 11 per cent. Hence, the gap in self-employment between Indigenous and non-Indigenous people has decreased, but not because the Indigenous self-employment rate has changed.

5.5 Summary of the Employment Section

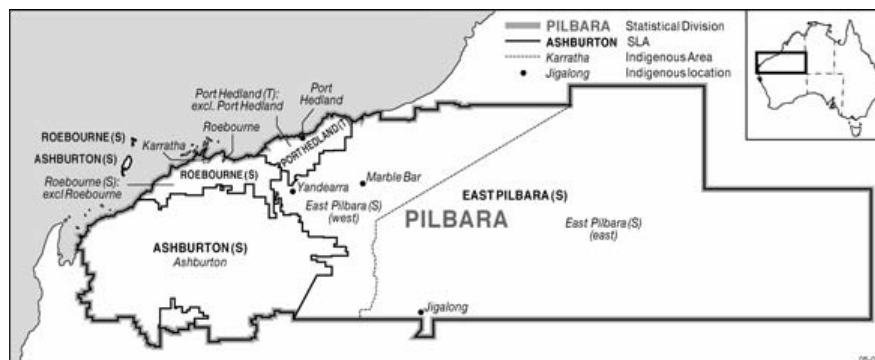
Over the last decade there has been an improvement in the Indigenous employment rate, but the unemployment rate for Indigenous people remains three times higher than that of non-Indigenous people. Encouragingly, the increase in the Indigenous employment rate has occurred at the same time that a substantial number of Indigenous people have moved off CDEP programs, which suggests that many more Indigenous people are now employed in mainstream occupations. There is clear relationship between Indigenous educational

achievement and employment status, which highlights the need to improve educational outcomes for Indigenous people. Most Indigenous people are employed in the private sector, although in comparison to non-Indigenous people substantially more Indigenous people work in the public sector.

6.0 A Profile of the Pilbara Region

This section starts with an overview of the Pilbara region which broadly describes the local government structure, the population distribution within local government areas, and the main industries in these areas. We then more extensively examine the population characteristics for the Pilbara by detailing the age distributions, employment rates, types of occupations, and housing. Next, the population characteristics for the Indigenous population in the Pilbara are presented. These Indigenous characteristics include population distribution, language groups, employment, health, and education. This section then concludes with a discussion of health and education services in the Pilbara.

Figure 6.1 Statistical Geography of the Pilbara region



6.1 Pilbara Demographic Characteristics

The Pilbara region comprises approximately 20% of the total land mass of Western Australia (Department of Regional Development and Lands 2011). Much of the region is desert and sparsely populated. The Great Northern Highway and the North West Coastal Highway are the two major road networks. Transport between towns is predominantly by road and almost entirely by private vehicle (Department of Regional Development and Lands 2011). Air services are available at four regional airports (Karratha, Newman, Paraburdoo and Port

Hedland) (Department of Regional Development and Lands 2011). The Region can be separated into three distinct geographical formations, a vast coastal plain, extensive rugged inland ranges and an arid desert region extending into Australia's dry centre (Department of Regional Development and Lands 2011). Despite being categorised as a “dry tropical” climate, the Pilbara has the highest occurrence of cyclones in Australia which impacts significantly on the costs of development and maintenance of health services and health infrastructure.

The Pilbara has extensive mineral and energy resources resulting in a long term boom economy accompanied by sustained growth in both population and employment, which in turn have placed long term pressure on available infrastructure, housing and services that historically have been unable to meet demand (Department of Regional Development and Lands 2011) Major economic activities in the Pilbara include mining of iron ore and base metals, and the extraction of oil, gas and salt (Department of Regional Development and Lands 2011). There is a small manufacturing and service industry as well as tourism, large pastoral holdings and fishing activities (Department of Regional Development and Lands 2011).

The estimated value of iron ore and petroleum products, including liquefied natural gas exports, was \$22 billion in 2005-06, which was about 25% of Australia's total mineral and petroleum product exports in that year and accounted for approximately 15% of the Gross National Product (Department of Regional Development and Lands 2011). The value of iron ore and petroleum products has increased substantially since 2005-2006. As one example, the value of iron ore exports from the Pilbara was in excess of \$30 billion in 2009 (Department of Regional Development and Lands 2011). Recent estimates suggest that the Pilbara region is currently responsible for 16% of Australia's Gross National Product (Department of Regional Development and Lands 2011).

6.1.1 Broad Population Characteristics

The 2011 Census recorded a total population of 59,894 people (Australian Bureau of Statistics 2012). The total population had increased by almost 9,000 people since the 2006 Census (Australian Bureau of Statistics 2007). Most of this increase was thought to be driven by increased employment in the mining sector

throughout the Pilbara. The population in the Pilbara in 2011 accounted for just over 2.5% of the total Western Australian population, an increase of about 0.5% since 2006 (Australian Bureau of Statistics 2012).

In the East Pilbara, Port Hedland, (15,004) and Newman (9,087) are the two main population centres, which together account for about three quarters of the total East Pilbara population (Australian Bureau of Statistics 2012). In the West Pilbara, the main population centres are Karratha (16,476), Dampier (2,000), Wickham (1,651), Tom Price (5,460) and Paraburdoo (1,509) (Australian Bureau of Statistics 2012). These towns account for 80% of the district's population. The Pilbara region is divided into four Statistical Local Areas– Ashburton, Roebourne, East Pilbara and Port Hedland- each of which will now be examined in turn.

6.1.1.1 Ashburton

The Shire of Ashburton covers an area of 101,240 square kilometres (Department of Regional Development and Lands 2011). The Shire's seat of government is the town of Tom Price. It has a population of about 5,460 (June 2010), most of who live in the mining towns (Australian Bureau of Statistics 2012). The land in Ashburton is mainly taken up by pastoral leases. Other industries important to Ashburton include iron ore mining, oil, natural gas, fishing and tourism (Department of Regional Development and Lands 2011). Ashburton also contains the Karijini National Park. In addition to Tom Price, Ashburton includes the towns of Paraburdoo, Onslow, Pannawonica, and Wittenoom. The majority of the Shire's population live in these four towns (Department of Regional Development and Lands 2011). A number of Aboriginal communities such as Bellary and Wakathuni also form part of the Shire.

Tom Price, located in the eastern sector, is the largest town and the Shire Administration Centre. Paraburdoo is 80km south of Tom Price and has the area's principal airport. Pannawonica is 330km northwest and Onslow 380km west of Tom Price in lineal distance. The distances between the towns by road are far in excess of these figures.

6.1.1.2 Roebourne

The Shire of Roebourne covers an area of 15,882 square kilometres (6,132 sq mi) and in 2011 had a population of about 22,900 (Australian Bureau of Statistics 2012). Most of the Shire's population resides either in its seat of government, the town of Karratha, or the other major towns including Cossack, Dampier, Point Samson, Roebourne, Whim Creek, and Wickham.

The population of the Shire of Roebourne is growing steadily due to the increasing employment opportunities arising from new resource projects (Department of Regional Development and Lands 2011). There is a wide range of education, social, shopping and recreation services available. The major industries in the Shire include iron ore export, oil, natural gas, salt, nickel, fishing, and tourism (Department of Regional Development and Lands 2011).

6.1.1.3 East Pilbara

The Shire of East Pilbara covers an area close to 380,000 square kilometres and is the third largest municipality in the world (Department of Regional Development and Lands 2011). The Shire's seat of government, and home to slightly over half the Shire's population, is the town of Newman in the shire's south-west. Towns and communities include Newman, Bamboo, Goldsworthy, Jigalong, Panmu, Pangurr, Irrungadi, Pipunya, Goodabinya, Marble Bar, Nullagine, Shay Gap, and Telfer. The total population of the Shire is estimated to be 7,746 (Australian Bureau of Statistics 2012). The major industries in the Shire are mining, pastoral and tourism (Department of Regional Development and Lands 2011).

6.1.1.4 Port Hedland

The Port Hedland Statistical Local Area, at 11,844 km² is the smallest of the four in the Pilbara, but it contains two of the main residential centres in the Pilbara Region: Port Hedland and South Hedland (Department of Regional Development and Lands 2011). The population of the Town of Port Hedland, which includes the satellite town of South Hedland, is estimated to be 15,054 people (Australian Bureau of Statistics 2012). The remainder live on pastoral stations located throughout the area.

Both Port and South Hedland provide a range of community services, including cultural, recreation and shopping facilities. The main industries are iron ore processing and export, salt production from extensive evaporation ponds for export, shipping of manganese and other minerals and livestock production (mainly cattle) (Department of Regional Development and Lands 2011). The Port is one of the worlds largest in tonnage terms, with over 170 million tonnes of product worth more than \$3 billion shipped each year (Department of Regional Development and Lands 2011).

6.1.1.5 Summary of the Broad Population Characteristics

The Pilbara comprises a vast tract of land with most of the population clustered around a few major towns. The mining and resource sectors are the two main industries in the Pilbara, and presently account for about 15% of Australia's Gross National Product. Its population has been steadily increasing, mainly in response to significant increase of resource and mining projects. The increase in population, particularly its fly in-fly out workforce, has further fuelled the unmet demand in infrastructure, housing and other community services.

Having described the distribution of the Pilbara's population in broad terms, we will now look at the demographic characteristics of the Pilbara region's population in more detail. The demographic characteristics of the Pilbara's population will also be compared to those of the Australian population, which allows the reader to understand how the situation of those living in the Pilbara differs from that of most Australians.

6.1.2 Detailed Population Characteristics

6.1.2.1 Population Age Distribution

In contrast to the rest of Australia, there are significantly fewer elderly people in the Pilbara; about 10% of the Population in the Pilbara are aged 55 or over compared to around 25% in Australia (Australian Bureau of Statistics 2012). The Pilbara has higher numbers of 25-44 year olds, as well as younger people (Australian Bureau of Statistics 2012). In the 2011 Census 20.0% of the population usually resident in Pilbara were children aged between 0-14 years, (Australian Bureau of Statistics 2012). The median age of persons in Pilbara was

32 years, compared with 37 years for the rest of the Australian population (Australian Bureau of Statistics 2012).

In 2012, around 60% of Pilbara residents were born in Australia (Australian Bureau of Statistics 2012). The majority of Pilbara residents from overseas were born in New Zealand and the United Kingdom. Of the languages only spoken at home, English was the most common (69.7% of residents) (Australian Bureau of Statistics 2012). Apart from English other languages spoken at home were: Mandarin 0.7%, Martu Wangka 0.6%, Manyjilyjarra 0.5%, and Yindjibarndi 0.5% (Australian Bureau of Statistics 2012). About three quarters of residents indicated a religious affiliation and the most common were Catholic 20.1%, Anglican 13.4% and Uniting Church 2.5% (Australian Bureau of Statistics 2012). About half the resident population was married (44.7%) and about one third had never married (35%) (Australian Bureau of Statistics 2012). A much smaller proportion of Pilbara residents had undertaken tertiary education in comparison to the rest of Australia (3.6% compared to 14.3%) (Australian Bureau of Statistics 2012).

6.1.2.2 Employment

The Pilbara region has a significantly higher rate of full time employment than the rest of Australia (Australian Bureau of Statistics 2009). At the time of the 2006 Census³, 20,183 people aged 15 years and over who were usually resident in Pilbara were in the labour force (Australian Bureau of Statistics 2009). Of these, 71% were employed full-time and 18% were employed part-time. There were 4,820 usual residents aged 15 years and over not in the labour force (Australian Bureau of Statistics 2009). While the region's labour force grew 12% between 2003 and 2010 from 24,100 to 27,100 persons, its share of the State's labour force declined slightly from 2.4% in 2003 to 2.1% in 2010 (Australian Bureau of Statistics 2009). Unemployment in the Pilbara has traditionally remained significantly lower than the State average. In 2010 the unemployment rate was 4.2% compared to the State average of 4.7% (Australian Bureau of Statistics 2009).

³ Information about employment in the Pilbara from the 2011 Census will be released in October 2012. The information detailed here is the most recent available data.

6.1.2.3 Types of Occupations

At the time of the 2006 Census⁴, the most common occupations in the Pilbara were Technicians and Trades Workers 24%, Machinery Operators and Drivers 16%, Professionals 13%, Labourers 13% and Clerical and Administrative Workers 11% (Australian Bureau of Statistics 2009). The vast majority of people were employed by the mining industry 22%, followed by the education sector 5%, mining support services 2.5%, retail 2.5%, and engineering and construction 2.5% (Australian Bureau of Statistics 2009).

6.1.2.4 Income Levels

Residents in the Pilbara have significantly higher income levels than other Australians. According to 2011 Census, personal incomes levels in the Pilbara are about three times that of the Australian average, and Family incomes levels in the Pilbara are about twice that of the Australian average (Australian Bureau of Statistics 2012). The disparity in income levels mainly owes to the higher levels of salaries available to the large proportion of Pilbara residents who work in the mining or resource industries (Australian Bureau of Statistics 2012).

6.1.2.5 Housing

Housing is much less affordable in the Pilbara compared to elsewhere in Australia. In March 2011, RP Data noted rentals in the Pilbara region were the highest in the nation at \$1,650 per week (RP DATA 2011). In addition, the average home price had risen by 8% in the March quarter and by 288 % over the previous 5 years (RP DATA 2011). These high housing costs are reflected by just over one in ten Pilbara houses being fully owned, which compares to about one in three for the rest of Australia (Australian Bureau of Statistics 2009). The pressures on housing affordability have in particular been driven by the subsidization of housing or rental costs by employers in the mining or resources sector year (Department of Regional Development and Lands 2011).

⁴ Information about occupations in the Pilbara from the 2011 Census will be released in October 2012. The information detailed here is the most recent available data.

6.1.2.6 The Indigenous Population

Within the Pilbara Indigenous people account for a higher proportion of the regional population than for Western Australia as a whole⁵ (13.9% compared to 2.3%) (Australian Bureau of Statistics 2009). Best estimates suggest that slightly over 7,000 Indigenous people reside in the Pilbara (Australian Bureau of Statistics 2009). In contrast to non-Indigenous people, there are a higher proportion of Indigenous people in younger age groups, suggesting Indigenous women have a higher fertility rate than non-Indigenous women (Australian Bureau of Statistics 2009). Conversely, the proportion of Indigenous people in older age groups was less than that of non-Indigenous people, which indicates that Indigenous people die at a younger age when compared to non-Indigenous people (Australian Bureau of Statistics 2009).

6.1.2.7 Distribution of Indigenous People's Residency across the Pilbara

The majority of Indigenous people in the Pilbara region live in the towns of Port Hedland (1,618), Newman (281) in the East Pilbara and Karratha (738), Roebourne (600), Wickham (290), Onslow (196) and Tom Price (155) in the West Pilbara (Australian Bureau of Statistics 2009). Significant numbers of Indigenous people also live in the following communities:

- Jigalong: 256 people
- Parngurr: 170 people
- Warralong: 100 people
- Yanderra: 102 people
- Injudunna: 149 people

6.1.2.8 Income and Employment Levels for Indigenous Peoples in the Pilbara

Income levels are substantially lower for Indigenous people in the Pilbara in comparison to non-Indigenous people. In 2006 Indigenous people's incomes

⁵ The most recent data available about Indigenous people's population representation distribution in the Pilbara comes from the 2006 Census

were about one quarter of the individual incomes of non-Indigenous residents⁶ (Australian Bureau of Statistics 2009). Indigenous household income was half that of non-Indigenous households, which seems incongruous given that Indigenous people earn only a quarter of that of non-Indigenous people (Australian Bureau of Statistics 2009). However, it is explained by more people living in Indigenous households in comparison to non-Indigenous households. The disparity in income levels owes to a much higher proportion of Indigenous people receiving welfare benefits compared to non-Indigenous people (Australian Bureau of Statistics 2009). In addition, about a third of employed Indigenous people in the Pilbara worked in CDEP programs for which earnings were only marginally higher than the amount received for welfare benefits (Australian Bureau of Statistics 2009).

In 2006, one sixth or 17% of the total Indigenous workforce (for people over 15 years) was unemployed (Australian Bureau of Statistics 2009). This figure was over 5 times the average unemployment for the region of 3.2% and over 4 times the national average of 4.2% in 2009 (Australian Bureau of Statistics 2009). The figures are still likely to be similar in 2012. Compounding the high unemployment is the large proportion of Indigenous people in the Pilbara who are not in the workforce (50%) (Australian Bureau of Statistics 2009). Since mining began in the Pilbara 40 years ago, Indigenous employment has remained largely unchanged (38% in 1966 and 42% in 2005) (Australian Bureau of Statistics 2009). By contrast over 80% of non-Indigenous are employed (Australian Bureau of Statistics 2009). The difference in employment levels suggests non-Indigenous people have benefited disproportionately from the mining boom. This may be addressed to some extent by the mining sector committing to employ an additional 58,000 Indigenous people by 2011 (Australian Bureau of Statistics 2009). Whether these targets will be met remains to be seen as no data is available at present; however it seems uncertain given recent reports casting doubts over some of the mining sectors commitment to delivering effective trainee programs (ABC 2011).

⁶ The 2006 Census is the most recent available data source for Indigenous people's income and employment levels in the Pilbara.

An important source of Indigenous employment in the Pilbara is the Indigenous community organisation sector. Census data indicates that this sector employed over twice as many Indigenous people as iron ore mining which was the next largest employer of Indigenous people (Australian Bureau of Statistics 2009). In one way this is beneficial as the stability of the Indigenous community organisation sector, which is government funded and not directly impacted by government cycles, means Indigenous people have a secure source of employment (Australian Bureau of Statistics 2009). However, the preponderance of Indigenous people working in the community sector also highlights the need to increase Indigenous employment numbers in the private sector.

There are multiple factors that impede the participation of Indigenous people in the workforce. These centre around education disadvantage, lack of access to appropriate VET courses, chronic health conditions at rates several times that of non-Indigenous Australians, and massive over representation in the justice system, amongst other things (Australian Bureau of Statistics 2009). Indigenous people are much more likely to experience one or several of these impediments than non-Indigenous Australians (Australian Bureau of Statistics 2009).

6.1.2.9 Languages Spoken by Indigenous Peoples in the Pilbara

The 2006 Census found that most Indigenous people in the Pilbara spoke English, although about 10% were not proficient in English or did not speak English at all⁷ (Australian Bureau of Statistics 2009). The Wangka Maya Pilbara Aboriginal Language Centre lists 27 distinct languages which have survived to varying extents in the Pilbara today (wangkamaya.org.au). The most common of these languages which are spoken by Indigenous people are: Martu Wangka, Manyjilyjarra, Kartujarra, Nyangumarta, Nyiyaparli, Banyjima, Karajarri, Mangala, and Ngarla. However, currently almost all of these languages are spoken fluently by only a small number of people and most of the languages are considered to be endangered (wangkamaya.org.au).

6.1.2.10 Level of Socio-Economic Disadvantage for the Pilbara

The Relative Socio-Economic Index of Advantage and Disadvantage is a general measure of socio-economic status. Of the 4 Statistical Local Area's in the

⁷ 2011 Census data about languages spoken by Aboriginal peoples are not yet available.

Pilbara, Roebourne had the highest score for relative socio-economic advantage and disadvantage which meant it was the 15th highest ranked (the higher the ranking the greater the level of economic advantage) out of 144 local government areas in Western Australia (Australian Bureau of Statistics 2009). Next was Ashburton as the 22nd highest ranked, followed by Port Hedland which was the 25th highest ranked, and East Pilbara as the 55th highest ranked (Australian Bureau of Statistics 2009).

Relative Socio-Economic Disadvantage captures information about economic and social resources of people and households within an area. Ashburton and Roebourne were both listed as having the equal lowest level of disadvantage ranked (the lower the ranking the greater the level of economic disadvantage) in the Pilbara scoring in the 9th decile (Australian Bureau of Statistics 2009). In contrast, East Pilbara registered a high level of relative disadvantage, ranking 22 of all WA local governments (Australian Bureau of Statistics 2009).

The economic resources index assesses numerous variables including household income, housing expenditures (e.g. rent) and wealth (e.g. home ownership). The Shire of Roebourne (across all residents, both Indigenous and non-Indigenous) scored considerably above the other local governments, ranked 112 in Western Australia (Australian Bureau of Statistics 2009). Ashburton, Port Hedland, and East Pilbara were ranked 77, 66 and 25 respectively (Australian Bureau of Statistics 2009).

The Education and Occupation Ranking Index measures the general level of education and occupation-related skills of people within an area. This index assesses a number of skills including qualifications achieved and ongoing training. In particular, in addition to unemployment it considers the balance between occupations that require a high level of skills, and occupations that require a low level of skills. Ashburton and Roebourne scored within the bottom half of this index, and East Pilbara and Port Hedland in the bottom 25%, which suggests that people in the Pilbara are predominately employed in occupations with a low skill base (Australian Bureau of Statistics 2009).

In summary, across all indices, the Shire of Roebourne generally attained the highest ranking of the Pilbara local government areas. Port Hedland and

Ashburton ranked comparably across most indices, and East Pilbara ranked lowest in all areas. Although the Pilbara ranked poorly across the Education & Occupation Index, it did however score highly in the overall Relative Socio-Economic Advantage & Disadvantage Index, in comparison to the rest of Western Australia.

6.2 Health and Health Services in the Pilbara for both Indigenous and Non-Indigenous People

This section first details the health status of both non-Indigenous and Indigenous people in the Pilbara. It then looks at health services in the Pilbara before describing Indigenous health services.

6.2.1 Health Profile of the Pilbara Region

Pilbara residents tend to experience poorer health than residents in most other parts of Western Australia (WACHS Planning Team 2011). In part, the poorer health status of Pilbara residents owes to higher levels of smoking, higher levels of obesity, and low amounts of fresh vegetable and fruit consumption especially in remote Indigenous populations (WACHS Planning Team 2011). The other main factor that contributes to Pilbara residents experiencing poorer health is the lack of access to timely and effective primary healthcare which would have otherwise prevented the development of health conditions. This lack of timely healthcare means that the rate of avoidable hospitalisations for many health conditions is between two to five times greater for Pilbara residents compared to other Western Australian residents (WACHS Planning Team 2011). Moreover, the lack of timely healthcare has led to Pilbara residents unnecessarily dying from various health conditions at a rate which is one and a half to two times greater than that of non-Pilbara residents (WACHS Planning Team 2011). The avoidable hospitalisations and unnecessary deaths are detailed in Table 6.1.

The higher rates of avoidable hospitalisations and unnecessary deaths experienced by Pilbara residents clearly points to a need to increase certain healthcare services (WACHS Planning Team 2011). In addition to using these rates to prioritise required health services, Rural Health West identified the chronic health conditions experienced most commonly by Pilbara residents (WACHS Planning Team 2011).

These conditions included diabetes; circulatory system diseases; hypertensive disease; respiratory disease; musculoskeletal conditions; arthritis; rheumatoid arthritis; asthma; and injury events (WACHS Planning Team 2011).

Table 6.1 Avoidable Hospitalisations and Unnecessary Deaths in the Pilbara

MEASURE	CONDITION	PILBARA RATE ²	WA RATE	NATIONAL RATE
Avoidable Hospitalisation	All chronic conditions	7,064.4	1,916.9	1,816.0
	Diabetes complications	4,720.0	873.6	728.1
	Iron Deficiency Anaemia	87.3	113.4	84.7
	Hypertension	134.8	29.0	32.7
	Congestive Heart Failure	541.0	202.9	218.6
	Angina	387.9	198.5	257.4
	Chronic Obstructive Pulmonary Disease	808.5	275.9	282.6
	Asthma	384.9	222.3	211.3
	All acute conditions	1926.6	1,121.4	1,034.8
	Dehydration and Gastroenteritis	319.5	188.7	194.5
	ENT Infections	325.9	185.3	165.2
	Bacterial kidney infections	71.3	48.7	38.0
	Cellulitis	409.8	135.9	145.3
	Gangrene	37.5	25.1	23.0
MEASURE	CONDITION	PILBARA RATE ³	WA COUNTRY RATE	NATIONAL RATE
Avoidable Mortality	All causes (0-74 years)	260.6	189.5	175.4
	Cancer	53.8	61.2	63.3
	Colorectal Cancer	-	9.6	11.5
	Lung Cancer	23.4	21.5	21.8
	Cardiovascular diseases	79.2	58.9	48.5
	Heart disease	55.9	34.3	34.6
	Respiratory diseases	20.6	11.9	10.7
	Chronic Obstructive Pulmonary Disease	21.2	9.8	8.5

Considered together, these conditions along with the rates of avoidable hospitalisations and unnecessary deaths indicated improvements are warranted in the following healthcare services: general medicine; oncology; cardiology; endocrinology; surgery; rheumatology; respiratory medicine; dermatology; haematology; and paediatrics (WACHS Planning Team 2011).

6.2.2 Indigenous Health in the Pilbara

We have seen that residents in the Pilbara experience worse health than residents in other areas of Western Australia, but it is even worse for the Indigenous Pilbara residents. This has been attributed to the remoteness and the socioeconomic disadvantage of Indigenous people in the Pilbara (Aboriginal Health Council of Western Australia 2008). In the following sections we have drawn on material from The Pilbara Regional Aboriginal Health Profile to summarise the state of Indigenous health in the Pilbara (Aboriginal Health Council of Western Australia 2008).

In the Pilbara, about two out of every three Indigenous adults experience a chronic health condition (Aboriginal Health Council of Western Australia 2008). The burden of chronic disease experienced by adult Indigenous residents is clearly demonstrated by a comparison of the hospital admittance rates for some of the most common chronic conditions (Aboriginal Health Council of Western Australia 2008). These rates indicate that in comparison to non-Indigenous people, Indigenous adults are admitted:

- 12 times more for renal dialysis
- 8 times more for diabetes
- 5.62 times more for cellulitis
- 6.64 times more for respiratory infections
- 8.82 times more for pancreatic disorders

In general, Indigenous women are about three times more likely than non-Indigenous women, and Indigenous men about four times more likely than non-Indigenous men, to be admitted to hospital in the Pilbara (Aboriginal Health Council of Western Australia 2008). Moreover, the disparity in health status is

highlighted by both Indigenous women and men living about 20 years less than non-Indigenous women and men in the Pilbara (Aboriginal Health Council of Western Australia 2008).

In the Pilbara, Indigenous infants and children also experience significantly worse health in comparison to non-Indigenous infants and children, as demonstrated by the following:

- about 11% of Indigenous babies were of low birth weight compared to about 3% of non-Indigenous babies
- Indigenous infants are admitted to hospital two times more often than non-Indigenous infants
- the mortality rate for Indigenous children was about four times that of non-Indigenous children
- in comparison to non-Indigenous young children in the Pilbara, Indigenous children were hospitalised about four times more often, mainly for respiratory conditions, injury, poisoning, and mobility and senses conditions
- Indigenous children aged between 5-14 were admitted to hospital about two and half times more often than non-Indigenous children in the Pilbara (Aboriginal Health Council of Western Australia 2008)

6.2.3 Health Services in the Pilbara

The distribution of a relatively small population over a vast area in the Pilbara calls for a flexible approach to the delivery of healthcare. The integral elements of such an approach are; a focus on preventative healthcare and health promotion; multiple health services co-located in accessible locations, along with the delivery of healthcare services to remote areas; the use of e-health services to interconnect Pilbara health services with each other and with Perth (Aboriginal Health Council of Western Australia 2008). Healthcare services in the Pilbara are diverse and include general practice, hospitals, dental care, remote nursing posts, health centres, aboriginal health services, aged care providers, and the

Royal Flying Doctor Service (Aboriginal Health Council of Western Australia 2008). An overview of these services will be presented in the following sections. However, as stated above it is worth investigating more mobile and outreach services.

6.2.3.1 General Practice

In 2010, there were 24 general practitioners in the Pilbara (Pilbara Development Commission 2012). Of these, eight were in the Town of Port Hedland, ten in the Shire of Roebourne, and three in both the Shire of East Pilbara and Shire of Ashburton.

6.2.3.2 Hospitals and Health Centres in the Pilbara

The two main hospitals in the Pilbara, located at Karratha and Port Hedland, in addition to inpatient care provide a range of population health services including community and allied health, mental health and community-based aged care services (Pilbara Development Commission 2012). Smaller hospitals are located at Onslow, Newman, Tom Price, Paraburdoo and Roebourne (Pilbara Development Commission 2012). The remote area nursing posts service smaller communities such as Marble Bar and Nullagine. Community and public health centres are located at: Ashburton, Karratha, Newman, Onslow, Port Hedland, South Hedland, and Roebourne (Pilbara Development Commission 2012).

6.2.3.3 Dental Healthcare

Private dental practitioners in the Pilbara are only located in Port Hedland, Karratha and Tom Price (Pilbara Development Commission 2012). Most Pilbara dental services are delivered by the State government (Pilbara Development Commission 2012). However, the government provision of dental services has been insufficient and for periods of time non-existent over a prolonged period. In 2010, the number of government funded dentists amounted to one in the Town of Port Hedland, three in the Shire of Roebourne, and none in both the Shire of East Pilbara and the Shire of Ashburton (Pilbara Development Commission 2012). The State government has moved to address this problem by allocating funding over 2012-2016 for an additional 27 dentists (Pilbara Development Commission 2012). The 2012/13 Commonwealth budget has also allocated more funds for dental care nationally so this may have a positive effect on much needed dental care.

6.2.3.4 Mental Health

Pilbara Mental Health and Drugs Service delivers mental health services through clinics at Port Hedland, Tom Price, Newman and Karratha (Pilbara Development Commission 2012). Psychological services are also provided by the Pilbara Health Network as part of the Federal Government's Better Access Program (Pilbara Development Commission 2012). This service addresses the mental health needs of the smaller communities in the Pilbara including Karratha, Wickham, Roebourne and Dampier.

6.2.3.5 Aboriginal Health Services

In the Pilbara, specific Indigenous healthcare services are delivered by Aboriginal Community Controlled Health Services (Aboriginal Health Council of Western Australia 2008). The terms Aboriginal Medical Service and Aboriginal Community Controlled Health Service are often used interchangeably, but there are important differences between the services. An Aboriginal Medical Service refers to a health service funded mainly to deliver care to Aboriginal and Torres Strait Islander people (Aboriginal Health Council of Western Australia 2008). It is not controlled by the community but is instead run by the State or Federal government (Aboriginal Health Council of Western Australia 2008). In contrast, an Aboriginal Community Controlled Health Service is a primary health care service controlled by the local Aboriginal community (Aboriginal Health Council of Western Australia 2008). It must have been initiated by a local community, located within that community, and have a governing body which was elected by the community (Aboriginal Health Council of Western Australia 2008). In addition, it must provide culturally appropriate and holistic services to the community.

There are three Aboriginal Community Controlled Health Services operating in the Pilbara region, namely: the Puntukurnu Aboriginal Medical Service; the Mawarnkarra Aboriginal Health Service; and the Wirraka Maya Health Service Aboriginal Corporation.

The Puntukurnu Aboriginal Medical Service delivers care to the communities of Jigalong, Parnngurr, Punmu and Kunawarritji, which are spread across an area of

over 90,000 square kilometers (Aboriginal Health Council of Western Australia 2008). Its workforce consists of: four Aboriginal Health Workers; two and a half general practitioners; two environmental health workers; registered nurse; bringing them home counselor; nutrition and alcohol program manager; safe house coordinator; six safe house support workers; two trainee health workers; and clinic coordinator.

Mawarnkarra Aboriginal Health Service provides services throughout the Roebourne Shire (Aboriginal Health Council of Western Australia 2008). Its workforce includes: five Aboriginal Health Workers; three registered nurses; and one doctor.

Wirraka Maya Health Service Aboriginal Corporation delivers care to Indigenous people in Port Hedland, South Hedland, and the surrounding communities (Aboriginal Health Council of Western Australia 2008). Its workforce comprises: four Aboriginal Health Workers; two general practitioners; two registered nurses; senior medical officer; child health worker; sexual health coordinator; health promotion worker; regional eye health coordinator; visiting medical officer; visiting health professionals; and visiting specialists including a paediatrician; podiatrist; optician; pathologist; gynaecologists; and a surgeon.

The three Aboriginal Community Controlled Health Services in the Pilbara region deliver services that can be classified in five broad groups: clinical health care services; preventative care programs and screening programs; pharmaceutical services; emotional and social wellbeing services; and substance abuse programs (Aboriginal Health Council of Western Australia 2008). Clinical health care services include general practice, nursing, allied health, and specialist services (Aboriginal Health Council of Western Australia 2008). The preventative care and screening programs are diverse and cover areas such as health promotion, immunisation, infectious diseases, child development, sexually transmitted infections, diet, and hearing and eye screening (Aboriginal Health Council of Western Australia 2008). Pharmaceutical services provide free medications and scripts (Aboriginal Health Council of Western Australia 2008). The emotional and social wellbeing programs deliver a wide range of programs

including counselling, family support, home visits and mental health promotion (Aboriginal Health Council of Western Australia 2008). Finally, the substance abuse programs address numerous dependencies through community education, counselling, crisis intervention, promotion of living and social skills, cultural activities, and client support (Aboriginal Health Council of Western Australia 2008). In considering the diverse range of services provided by Aboriginal Controlled Health Services, it can be seen that they do genuinely aim to deliver holistic healthcare to Indigenous communities in the Pilbara.

However, there are a number of significant gaps in Aboriginal Community Controlled Health Care Services. These gaps include dialysis; comprehensive dental care; radiology; physical activity programs; food stores; permanent counsellor; outreach wellbeing programs; harm reduction programs; needle exchange programs; and detoxification support (Aboriginal Health Council of Western Australia 2008).

6.2.3.6 Indigenous Health Promotion and Disease Prevention Services in the Pilbara

Health promotion and disease prevention services in the Pilbara are provided by both Aboriginal Community Controlled Health Services and the WA Country Health Service.

6.2.3.6.1 Indigenous Health Promotion and Disease Prevention Services Delivered by Aboriginal Community Controlled Health Services

To reiterate the three Aboriginal Community Controlled Health Services that operate in the Pilbara are the The Puntukurnu Aboriginal Medical Service, Mawarnkarra Aboriginal Health Service, and the Wirraka Maya Health Service Aboriginal Corporation. The Mawarnkarra Aboriginal Health Corporation delivers a comprehensive range of health promotion and disease prevention services. These services include; screenings by Aboriginal Health workers and a registered nurse; immunisation and disease control; chronic disease care plans; mental health checks and services; sexual health assessments and counselling; environmental health services; alcohol and drug services; nutritional program for those affected by substance abuse; advice on diet and healthy eating, including

appointments with a visiting dietician; eye health screening and appointments with a visiting ophthalmologist who attends every three months; podiatry care from a podiatrist who attends once a fortnight; ear health screenings; education about healthy lifestyle including diabetes prevention; and a safe house for victims of domestic violence (Department of Health 2007).

The Puntukurnu Aboriginal Medical Service provides several health promotion and disease prevention services, comprising: screenings and health promotion for sexually transmitted diseases; immunization programs; maternal and child health programs, including antenatal and post-natal education, childhood screening, and parenting skills programs; and visiting health professionals (attendance regularity unspecified) including audiologist, obstetrician, gynecologists, podiatrists, physiotherapist, pediatrician, and a mental health nurse (Department of Health 2007).

Wirraka Maya Health Service Aboriginal Corporation delivers numerous health promotion and disease prevention services. These services consist of: a child health program, including antenatal and post-natal education, early childhood screening, continuing parent education and surveillance; diabetic retinopathy screening; immunisation program; chronic disease initiative; visual impairment program; and a family violence program (Department of Health 2007).

In considering the extent of the health promotion and disease prevention services offered by the three Aboriginal Community Controlled Health Services operating in the Pilbara region, it is evident that the Mawarnkarra Aboriginal Health Corporation provides by far the most comprehensive range services. This suggests that the communities serviced by the Mawarnkarra Aboriginal Health Corporation may experience a higher standard of healthcare than other communities in the Pilbara. However, how effective the health promotion and disease prevention services are can not be evaluated as information about the effect of these services was unavailable and information was unavailable about the health status of members of individual communities. In addition, no specific details could be obtained for either the content or implementation of health promotion and disease prevention services, which means no assessment can be

made to determine if the delivery of the services is congruent with recommendations for best practice (Department of Health 2007).

6.2.3.6.2 Indigenous Health Promotion and Disease Prevention Services Delivered by the WA Country Health Service

The WA Country Health Service has a Health Enhancement Team which is responsible for coordinating health promotion and disease prevention services in the Pilbara. It comprises: a health enhancement coordinator who leads the team; nutrition coordinator, responsible for nutrition and food security; healthy schools coordinator, responsible for nutrition and physical activity in primary and secondary schools, particularly low socio-economic schools; health promotion project officer who provides brief interventions for injuries, tobacco, alcohol, mental wellbeing, and men's health; Aboriginal health promotion officer, responsible for maternal, reproductive and sexual health among young Aboriginal women; healthy communities project officer who undertakes needs assessment for Newman; four health promotion officers, two in East Pilbara and two in West Pilbara, who focus on early childhood, youth and maternal health; two sexual health nurses who provide sexual health screening and sex education; regional immunisations coordinator; and a research and evaluation coordinator who provides research and evaluation support, capacity building, and obtains data.

The Health Enhancement Team in the Pilbara has provided numerous health promotion and disease prevention services in recent years, these include:

- public health hygiene activities and education focusing on clean face (to prevent trachoma) and healthy ear (to prevent otitis media) messages;
- enhanced trachoma screening in 2012, coupling clinical screening and treatment with education messages and a holistic approach to a 'clean face' community;
- health promotion events known as the Healthy Kids events targeted at Aboriginal children aged 0 – 5 years old and their families. The events

include culturally tailored information and engaging activities surrounding personal and environmental health, hygiene, development, and safety. The events aim to provide accessible health promotion to Aboriginal families within the Pilbara as it is delivered in regional areas as well as remote communities;

- health promotion resources are also being developed aligning with the health messages delivered in the Healthy Kids events. The resources will be specifically tailored to suit the local culture and languages within the Pilbara, as identified via extensive community consultation;
- Aboriginal youth health promotion initiatives addressing alcohol, tobacco and mental health education and engagement through interactive programs such as Hedland's Next Top Model and Vibe 3on3 National Basketball and High Hop Challenge;
- development and implementation of initiatives to improve food security, particularly in the Western Desert, including the delivery of nutrition education, cooking workshops, support for school and community gardens, and implementation of shelf talkers (shelf labelling of healthy items) in remote community stores;
- strong focus on Aboriginal maternal health including lifestyle behaviours whilst pregnant (tobacco, alcohol and nutrition) and perinatal mental health. This includes education, awareness raising campaigns, links to primary health and support services;
- working with low socioeconomic status schools, typically remote community schools and those in the towns with relatively larger Aboriginal population, to encourage and introduce health eating and physical activity initiatives;

- education and screening of Aboriginal people in regards to sexual health. Also includes capacity building sessions on sexual health for other services who work closely with Aboriginal people;
- health promotion strategies to improve immunisation rates among the Aboriginal population;
- building partnerships and capacity with other service providers in the region to avoid duplication services, share resources and encourage other services to be underpinned by health promotion principles eg. ear health.

6.2.3.7 Gumala Aboriginal Corporation's Supportive Measures for Health

The Gumala Aboriginal Corporation provides four programs which help improve the health of its members (gumala.com.au/member-services/health-programs). The health and wellbeing programs assists with the purchase of food; payment of rent, electricity, water and telephone accounts; purchase and repair of white goods; purchase of household goods; and the repair and maintenance of a motor vehicle. The pensioner support program delivers funding assistance over the financially challenging Christmas period with the aim of improving the health and wellbeing of Gumala members who are either aged 50 and over or in receipt of a disability support pension. The medical program medical provides for the health needs of Gumala members and their children through delivering funding for; medical costs; dental care; spectacles; prescribed medication expenses over and above any government subsidy, including the Patient Assisted Travel Scheme and private health insurance; reasonable over the counter medical needs; other medical needs such as podiatry, physiotherapy, and counselling; and the modification of vehicles for medical purposes. The final healthcare program funded by Gumala is the critically ill patient support program. It provides travel and accommodation subsidies to Gumala members, Gumala beneficiaries or kinship family who are visiting or supporting relatives who are both critically ill and receiving relevant specialised medical treatment unavailable in their home community.

6.3 An Overview of Aboriginal Education Services in the Pilbara

In the following section, we detail the state of Indigenous education in the Pilbara. First, data are presented for early childhood services and the development of children before they enter compulsory schooling in the Pilbara. We then examine pre primary, primary and secondary school resources including academic achievement and attendance during primary and secondary school. This section concludes by detailing post-secondary education in the Pilbara. The information in this section has been taken from three main sources: the Western Australian Department of Education and Training Schools Online website; the National Assessment Program Literacy and Numeracy (NAPLAN) results; and the Australian Early Development Index (AEDI).

6.3.1 Early Childhood Services

There are slightly over 60 different types of early childhood services available in the Pilbara (Pilbara Development Commission 2011). These services comprise long day care (13), out of school/vacation care (6), occasional care (4), family day care (17), and playgroups (23). Most of these services were located either in Port Hedland (18) or the Shire of Roebourne (23). In total, there were about 890 childcare places available. The Shire of Roebourne had the most number of childcare places (368), followed by Port Hedland (258), East Pilbara (133), and Ashburton (131).

Programs like the West Pilbara ‘Communities for Children’ have been established to seek better outcomes for children aged 0-12 and their families. Such organisations have accessed funding to develop projects and strategies in the Pilbara region including Yaandina “Growing Strong children”, Clan – Parenting courses and Acacia Prison support – Strong Fathers, Strong Culture. The website also provides detailed information regarding the number and type of early childhood services available in the region (<http://www.wpc4c.org.au/default.aspx?WebpageID=1>).

6.3.2 Pre-Primary School Development

Compulsory schooling begins in Western Australia from the beginning of the year a child turns six and a half years of age. In line with contemporary research on early childhood education, however, parents are encouraged to enrol their

children in Kindergarten or Pre Primary programs prior to the commencement of compulsory schooling (e.g. the DEEWR Early Years Learning Framework).

The development of children prior to entering primary school may be judged by considering scores on the Australian Early Development Index (AEDI). The AEDI establishes how well children are progressing in five developmental areas by the time they reach school. These areas are: physical health and wellbeing; social competence; language and cognitive skills; communication skills and general knowledge; and emotional maturity. Children are thought to be especially at risk if their development is below average in two or more of the areas assessed by the AEDI.

The AEDI results for the Pilbara are reported for each of the statistical local areas, namely: Port Hedland, Roebourne, East Pilbara and Ashburton. The 2009 AEDI results were:

- Port Hedland: *overall there are 26.9 per cent of children developmentally vulnerable on one or more domains of the AEDI and 13.4 per cent are developmentally vulnerable on two or more domains*
- Roebourne: *overall there are 21.8 per cent of children developmentally vulnerable on one or more domains of the AEDI and 10.3 per cent are developmentally vulnerable on two or more domains.*
- East Pilbara: *overall there are 31.8 per cent of children developmentally vulnerable on one or more domains of the AEDI and 19.7 per cent are developmentally vulnerable on two or more domains*
- Ashburton: *overall there are 9.9 per cent of children developmentally vulnerable on one or more domains of the AEDI and 0.7 per cent are developmentally vulnerable on two or more domains.*

From the above figures, it is evident that most children in the Pilbara are on track in the five developmental areas. How well Indigenous children in the Pilbara are progressing is unclear, however, because the data were unavailable for the Pilbara region. There are two main reasons to believe that Indigenous children in

the Pilbara are more developmentally vulnerable than non-Indigenous children. First, the 2009 AEDI National Report found that between half and one third of Australian Indigenous children are developmentally vulnerable on one or more of the AEDI areas (over twice the national average), and nearly one third of Australian Indigenous children are developmentally vulnerable on two or more areas (nearly three times the national average). Second, the AEDI figures for remote communities in the Pilbara, where Indigenous children account for a majority of young children, indicated that one third to one half of the children were developmentally vulnerable in two or more areas. The one exception to this pattern throughout the remote communities in the Pilbara was Paraburdoo where none of the children were developmentally vulnerable in any area.

6.3.3 Primary and Secondary Schooling

Compulsory schooling in the Pilbara is provided by both public and private sectors. Provision of public schooling falls within the auspices of the Department of Education and Training WA's Pilbara Education Regional Office (PERO), located in the town of Karratha. The Pilbara education region spreads over 510,000 square kilometres and consists of four senior high schools, one district high school, nineteen primary schools, two remote community schools, two education support schools, a school of the air, and a camp school (<http://www.det.wa.edu.au/regions/pilbara/detcms/navigation/school-locations/?oid=MultiPartArticle-id-11538801>).

Schools within the Pilbara region are classified as either Coastal, Inland or Remote. Coastal schools are located in Port Hedland, Dampier, Karratha, Roebourne and Wickham. Inland schools are largely located around the mining towns of Newman, Tom Price, Paraburdoo and Pannawonica. Remote schools include Yandeyarra RCS, Jigalong RCS, Marble Bar PS, Nullagine PS and Onslow PS. (<http://www.det.wa.edu.au/regions/pilbara/detcms/navigation/about-us>).

According to the PERO website, public schools within the Pilbara education region have a strong focus on: Indigenous education, literacy and numeracy, attendance, engagement and retention, academic achievement and fostering

strong relations with the local community, particularly industry. A recent initiative is the development of school networks; Karratha, Hedland, Karijini and Remote Schools each led by a network Principal. The aim is to facilitate greater curriculum choice for students, increase access to specialist teachers, provide a smoother transition from Primary to Secondary Schools and develop a more consistent behaviour management and discipline system across schools in the region.

In most public schools, Indigenous children account for about one in three students. In some schools Indigenous children make up over 90% of the student population. These schools include Roebourne District High School, Nullagine Primary School, Jigalong Remote Community School, South Hedland Primary School, and Yandeyarra Remote Community School. For a few schools, Indigenous students are in the minority and account for around one in ten students. Nevertheless, even in these schools Indigenous students make up far more of the student body than would be seen in most other metropolitan schools.

Given the vastness of the region and its economic, geographic and demographic diversity it is not surprising to find a great deal of diversity among the schools in the region. The following is a snapshot of some Pilbara public and private schools.

6.3.4 Public Schools in the Pilbara: A Snapshot

Tom Price Primary School is one of two primary schools in the mining town of Tom Price. There are currently 330 students from Kindergarten to year 7. A strong emphasis is placed on English and Maths with other focus areas including Science, Society and Environment, Health, Physical Education, the Arts and Japanese language. The school seeks to put the child at the centre of its ethos and aims to build self esteem and a sense of achievement through personal performance.

South Newman Primary School is one of three public schools located within the mining town of Newman. There are approximately 500 students enrolled with 17% Indigenous students. The school provides education from Kindergarten to

Year 7 including specialist programs in Japanese, Music programs for students with learning difficulties, Gifted and Talented and Physical Education. The school has recently become an Independent Public School (IPS) which allows for much greater devolution of responsibility to the school community.

(http://www.det.wa.edu.au/schoolsonline/main_page.do?displayURL=overview.do&schoolID=5593)

Roebourne District High School is located in the town of Roebourne and caters for students from Kindergarten to year 12. There are currently approximately 195 students enrolled at the school with 98% being Aboriginal. There are three main Aboriginal language groups in the town: the Nguluma people, in whose country the town is situated along with Yindjibarndi and Banyjima people. The school works with the community to promote strong spirit and culture by working with such groups as the Strong Men and Strong Women's groups.

Yandeyarra Remote Community School is 142 kms South East of Port Hedland, in the Mugarinya Community on Yandeyarra station. The community is on a large Aboriginal Reserve and non-Aboriginal people must get permission before entering. All the students are Aboriginal. There are around 35 students from K-12 although this number may expand to over 150 during Lore time. Students and community members speak Aboriginal English with the three predominant language groups being Kariyarra, Nyamal and Nyangumarta. Literacy, Numeracy, Attendance and Participation, and Technology are school priorities. The Aboriginal Literacy Strategy, Whole School Literacy and Numeracy and Nutrition programs have been implemented and After School Sport, Playgroup, camps, excursions and incursions are provided. There are 3 classrooms, a computer lab, library, art room, home economics room, gym, a vegetable garden and new under cover assembly area (as part of the Federal Governments BER program) (http://www.yandeyarrarcs.wa.edu.au/?page_id=2)

6.3.5 Private Schools in the Pilbara: A Snapshot

Four schools in the Pilbara are members of the Association of Independent Schools, Western Australia inc. (AISWA). They are located in the Great Sandy Desert, South Hedland and the East Pilbara. AISWA is a not for profit

organisation established to support and promote the interests of Independent Schools in WA. Schools within AISWA are diverse representing a number of religious and philosophical beliefs as well as some of WA's most remote Indigenous Communities (<http://www.ais.wa.edu.au/about-aiswa/>). Within this umbrella organisation sit Aboriginal Independent Community Schools (AICS) (<http://aics.wa.edu.au/about-us>) . There are currently 14 AISCs schools in WA with the first one having been established in the Pilbara at Yandjarra in the 1950s. Lack of state government support lead to the school's closure but it was revived at Strelley Station in the early 1970s' with the support of the Commonwealth Government.

Strelley Community School is the oldest continually operational Independent Aboriginal School in Australia having commenced in 1976 (<http://aics.wa.edu.au/schools/strelley-community-school>). The main campus is located 60 km east of Port Hedland with two annexes in Woodstock and Warralong – 150 to 200kms South East. The school's ethos reflects a strong commitment to cultural maintenance through innovative approaches to incorporating Indigenous languages and pedagogy in their programs. Students at the schools are drawn from a number of different language groups with the largest being Nyangumarta. This language is the target language of the school's Languages Other Than English (LOTE) program. Extensive Nyangumarta resources are being produced by the school and community to maintain and promote Indigenous language use.

The Parrngurr Community School is located on the edge of the Great Sandy Desert approximately 370 km East of Newman. The community is home to 140 Martu people (<http://www.parrngurrschool.com.au/>). The school provides education from Kindergarten through to Secondary with a total enrolment of approximately 50 students. The school prioritises the Martu people's self reliance and ownership of the school. The school's programs acknowledge respect for Martu culture and the need to provide additional skills for students to improve their social and educational destinies within the majority culture. There is a focus on developing cross cultural understandings, physical health and well being, social competence, emotional maturity, language and cognitive skills,

communication skills and general knowledge.

RAWA Community School is similarly in the Great Sandy Desert some 640 kms East of Port Hedland situated within the Punmu Community – the nearest shop is a 7 hour drive away (<http://www.rawaschool.com.au/>). The school provides educational services from Kindergarten to Secondary with a focus on literacy and numeracy as well as work based learning.

6.3.7 Training and Technical and Further Education in the Pilbara

Public funded TAFE sector student curriculum hours (SHC) in the Pilbara have grown by nearly 40 % between 2006 and 2010. A large proportion (24 %) of delivery is employment based such as apprenticeships in metal and mining and traineeships in office and clerical occupational groups. Training delivery in 2010 focused on engineering and mining, community services, health and to a lesser extent education. (<http://www.dtwd.wa.gov.au/dtwd/detcms/navigation/regional-profiles/pilbara/?oid=MultiPartArticle-id-8295257>)

In the Pilbara there are several registered vocational education and training providers and apprenticeship programs. The Pindan College, located in south Hedland, for example, offers comprehensive transitional programs from school to the workforce.

By far the largest training provider is the Pilbara Institute (formerly known as the Pilbara TAFE) which delivers nationally accredited vocational education and training programs with offices located in Karratha, Port Hedland, Newman and Tom Price (<http://www.pilbaratafe.wa.edu.au/site/API/overview.aspx>). The Pilbara Institute provides education and training services to people living and working in some of the world's largest mining and pastoral areas. Pilbara Institute staff also deliver training onsite in remote Aboriginal communities. The Pilbara Institute works with industry to address widespread skill shortages. This has led to the development of a number of Fast Track traineeships offered especially to local Indigenous people. Programs have included those in the areas of hospitality studies, automotive, electrical and warehousing trades (<http://www.pilbaratafe.wa.edu.au/site/API/industry.aspx>).

The Pilbara Institute has established training centres in Karratha, Hedland, Pundulmurra, Newman and Tom Price. Courses available mainly centre around mining, occupational health and safety, business and a limited number of lifestyle courses in the larger centres.

TAFE courses are also available via distance education through a variety of providers such as Open Training and Education Network (OTEN) or Open Colleges. The advantage of this is that students are able to study a variety of courses at their own pace and in their own communities. Access to effective on line technology is essential.

6.3.7 University Educational Opportunities

Access to university courses is only available through distance education, for example through Open University Australia or directly through universities that offer external modes of study. Access to computer technology and preferably high speed internet is a pre requisite for many of these courses.

6.3.8 Education Unit within Gumala

Gumala Aboriginal Corporation houses an education unit as a division of its member services. The education unit consists of two Gumala staff members with Gumala members being able to access financial assistance for their educational needs. Financial assistance is provided for all education sectors – Primary, Secondary, Tertiary and Scholarships (<http://www.gumala.com.au/member-services/development-programs>). Education Assistance schemes within Gumala are well established, giving members and their children assistance with their school needs such as;

- school fees
- school stationery
- uniforms
- lunches
- swimming lessons
- excursions and camps
- Abstudy
- subsidised travel

There is further provision for tertiary assistance scholarships, tuition and rent assistance and subsidised travel.

Training and education initiatives are being formulated from within the education unit. The Early Childhood 0-5, 3A Project in partnership with both Tom Price Primary School and Melbourne University at the Wakathuni Community is one such initiative. Although in its infancy stages of a two year trial, if successful there is a possibility in the future for a further 0-5 centre in another location (<http://www.gumala.com.au/member-services/development-programs>).

Gumala Aboriginal Corporation has increased its annual education expenditure from \$690,000 in 2010 to approximately \$1.5 million in 2011. All education assistance schemes are indicative of helping to secure the future for Banjima, Innowonga and Nyiyaparli peoples by investing in education ([gumala.com.au/member-services/development-programs](http://www.gumala.com.au/member-services/development-programs)).

6.4 Indigenous Representation within the Criminal Justice System in the Pilbara

Within the Pilbara, Indigenous people are arrested and detained at much higher rates than non-Indigenous people. Over the last decade, Indigenous people accounted for slightly more than half of those who were arrested in the Pilbara (Western Australian Police 2011). This meant that in any one year about one in four Indigenous adults in the Pilbara are arrested (Western Australian Police 2011).

The over-representation of Indigenous people in the criminal justice system occurs not only in the Pilbara but throughout Western Australia (Law Reform Commission of Western Australia 2006). Indeed, out of all of the Australian States, Western Australia has the highest proportion of Indigenous adult imprisonment and Indigenous juvenile detention (Law Reform Commission of Western Australia 2006). This disproportionate rate is especially disturbing since it has been argued that Australia has the worst record in the world for the imprisonment of Indigenous people (Law Reform Commission of Western Australia 2006).

It is argued that we must all take responsibility for our own actions, however beyond this there are independent external reasons for the over-representation of Indigenous people in the criminal justice system and these fall into two broad classifications: underlying causes and issues within the criminal justice system.

Underlying causes include historical factors and the low socio-economic status of many Indigenous Australians (Law Reform Commission of Western Australia 2006). The main historical factors are the dispossession of Indigenous people from their traditional land, and the forced removal of children from their families and subsequent institutionalisation (Law Reform Commission of Western Australia 2006). Both of these factors have been significantly associated with a higher rate of Indigenous contact with the criminal justice system (Law Reform Commission of Western Australia 2006). The main socio-economic determinants that contribute to the over-representation of Indigenous people in the criminal justice system are a lack of education, poverty, and insufficient employment opportunities (Law Reform Commission of Western Australia 2006).

How issues of structural bias leads to the over-representation of Indigenous people in the criminal justice system is perhaps best demonstrated by considering the following two statistics. In Western Australia during 2003, Indigenous people accounted for between 17%-26% of the adults who appeared in court, but about 36% of those imprisoned were Indigenous (Law Reform Commission of Western Australia 2006). It has been argued that the higher rate of imprisonment of Indigenous people is due to them committing a greater number of serious offences in comparison to non-Indigenous people (Law Reform Commission of Western Australia 2006). However, figures do not support such an argument as it has been shown that Indigenous people are far more likely to be imprisoned for minor offences (Law Reform Commission of Western Australia 2006).

6.5 Conclusion of the Literature Review

This literature review has demonstrated that Indigenous people in the Pilbara experience considerable disparity in health and education when compared to non-Indigenous residents in the Pilbara.

In terms of health, two out of every three Indigenous adults in the Pilbara experience a chronic health condition and their lifespan is twenty years less than non-Indigenous residents in the Pilbara. Also, in the Pilbara, Indigenous children have a mortality rate four times that of non-Indigenous children, and Indigenous children are hospitalised four times more often than non-Indigenous children. Much of the disparity in health outcomes for Indigenous people in the Pilbara has been attributed to socioeconomic disadvantage and living in remote locations.

In terms of education, most of the Pilbara schools in which Indigenous students account for the overwhelming majority of the student body report low attendance rates. Moreover, all but one of the schools in the Pilbara scored substantially below or below the national average in either all domains or most domains tested. These attendance and educational outcomes issues have been associated with inadequate acknowledgement of Indigenous culture and history in schools, a lack of engagement of parents and the community, contact with the criminal justice system, and socio-economic disadvantage.

Our discussions with Gumala staff and our own first hand experience with Gumala members indicates that the disparity in health and education experienced by Indigenous people in the Pilbara also extends to Gumala members. The needs analysis results that follow provides information to develop specific strategies to address many of the health and education needs of Gumala members. In the following sections we detail the findings of the need analysis and provide recommendations to address the issues we have detailed.

There is a significant disparity between Aboriginal and non-Aboriginal health and education in the Pilbara region of Western Australia. This is compounded by inequities across a range of socio-economic outcomes (housing, justice, employment and economic participation) and indicators of well being. This disparity demands urgent attention by all relevant Government agencies, communities and industry. Innovative and sustainable solutions are required to

bridge the gaps identified in this review. The aim of this current project is to identify gaps in health and education identified by Gumala members and others and to recommend practical solutions as suggested to us by Aboriginal people, other stakeholders and the project team to close many of these gaps.

7. Phase I. Mailed Survey of Gumala Members

7.0 Methods and Results for the Survey and Interviews Conducted with Gumala Members

The aim of the survey was to gain the opinion of members on health and education as it pertained to themselves, their families and their communities. In addition we sought practical solutions to any problems identified. Preliminary discussions with GAC suggested that a low response rate was likely, somewhere in the order of 10%. The project team discussed this likelihood and decided to proceed with the mailed survey despite a projected low response rate as it would likely provide us with themes that would allow us to better frame the later planned interviews with members. We also considered that the survey would also exhaust most of the issues likely to be raised by the wider membership.

7.1 Methods

Specific questions were asked of all participants by way of a mailed survey. These questions were aimed primarily at identifying the opinions of participants about what they saw as any gaps in the health and education of Gumala members including themselves, their families and their communities. Other important areas such as social determinants of health were also explored.

Participants were also asked to provide practical solutions where possible. They were recruited in the following way:

a) Aboriginal participants were invited from the existing Gumala member register (database) provided by Gumala Aboriginal Corporation. We also attended important events such as general meetings as they occurred, to publically promote participation. This also involved GAC officials providing their imprimatur at meetings. We advised GAC members in the introduction to the survey that it could be administered orally on request. This involved sending their first name by SMS to a designated mobile phone. These members were contacted by a project officer and the questionnaire administered over the phone. The survey was also

promoted on Gumala radio based in Tom Price.

b) The Dillman method (Dillman 1978) was used for the dissemination of the survey questionnaire, explanatory information, and follow up procedures. The Gumala members initially received a herald postcard informing them that the survey would be conducted in 2 weeks time and asked for their co-operation. This was designed to stimulate interest in the study, allow for failed postal returns and engender a better response rate (Pirota et al 1999). Two weeks later the sample population received an envelope containing the following items: A covering letter of explanation discussing anonymity, expected time to complete the survey (15 minutes), objectives of the research, how the participants name was obtained and that the study was not linked to any previous study. The members were advised that if they do not wish to take part in the study they did not have to. The envelope also contained the questionnaire, a stamped self-addressed envelope for the questionnaire return and a return mail card with basic demographic information that signified that the respondent had returned the questionnaire. Non-respondents were also encouraged to use this return mail card to signify that they were not participating and in this way they would not receive any follow up reminders. A reminder card was sent at 2 weeks after the survey was dispatched. At week 4 another reminder card was sent with a personalised letter and another questionnaire. All printing and mailing was conducted in a non-holiday period in the third quarter of 2011. Respondents' survey replies remain anonymous. The questionnaires have no identifying information recorded on them. Instead, respondents were asked to return a separate card that identified them and signified that they had returned their questionnaire. The return of the questionnaire implied consent.

Quantitative results from the survey were entered into SPSS version 19 and checked for entry errors using frequency analysis. Descriptive statistics were generated for the items with predefined response options. The open-ended questions were analysed with the use of content analysis. Content analysis may be undertaken in several different ways. In this study, the content analysis was undertaken by counting the number of times either words or phrases occurred in the written responses to the open-ended questions. The words or phrases that occurred the most times were considered to be important issues. In addition,

important issues were identified by the research team through discussions about the responses to the open-ended questions, particularly as some important issues may be difficult to discuss or describe and hence occur infrequently in the responses. These important issues were then compared and similar issues were grouped together as themes.

Human Research Ethics Committee approval was granted by Murdoch University number 2011/115.

7.2 Results

GAC provided a list of 1219 members. All were mailed initially. Of these 55 were returned in the survey period as unable to be delivered leaving 1164. One hundred and twenty six questionnaires were returned giving a response rate of 10.8%. This figure is consistent with that projected by GAC during our discussions. The overall response to specific questions is shown in Tables 7.1-7.6. While this response did not allow us to give generalisable quantitative opinions of members, the questionnaires yielded rich information that allowed the project team to identify themes and issues. These are discussed below.

7.2.1 Descriptive Statistics Results

7.2.1.1 Respondent Demographics

Demographic details for the respondents are listed in Table 7.1. The respondents' average age was 42.5 years (14.2 SD). Females were far more likely to respond than males (accounting for 66.4% and 33.6% of the respondents respectively). In terms of residential location, slightly over half lived in rural areas (57.5%) and the remainder lived in urban areas (42.5%). About half of the respondents were from the Banyjima group (58.6%), one quarter were from the Nyiyaparli language group (25.0%), and the remainder were from the Innawonga language group (16.4%). An overwhelming majority of the respondents indicated that they had no problem with either speaking English (94.1%) or reading and writing English (84.6%) (Table 7.2).

Table 7.1 Gumala Respondent Characteristics

Respondent Characteristic	
Age (average years)	42.5
Gender	
Female (number)	81
Male (number)	41
Language Group	
Banyjima (number)	68
Nyiyaparli (number)	29
Innawonga (number)	19
Living Location	
Rural (number)	69
Non-Rural (number)	51

Table 7.2 Respondents Use of Language

Language Spoken at Home	
English (number)	105
Banyjima (number)	8
Nyiyaparli (number)	5
Yindjibarndi (number)	3
Ngarluma	1
Innawonga	1
Only Indigenous	5
Only English	95
Indigenous and English	10
Speak English	
No Problem (number)	112
Minor Problem (number)	7
Big Problem (number)	0
Read/Write English	
No Problem (number)	99
Minor Problem (number)	14
Big Problem (number)	4

7.2.1.2 Social Determinants of Health and Education

The responses for the items about social determinants of health and education are listed in Table 7.3 About half of the respondents (54.2%) were currently employed, and around four in five (80.8%) expressed a desire for a job. A lack of sufficient income appeared to be of concern to the respondents as only slightly more than one quarter (27.7%) indicated they had enough money to live in a healthy way, and almost half (46.3%) stated that insufficient income led them to not pay their bills or go without food or clothing.

About two thirds of the respondents (65.4%) said that they generally slept well, but close to half (44.8%) said that they regularly felt tired.

Most respondents had adequate essential services, as was evidenced by about nine in ten indicating they had clean water* (92.5%), no problems with sewers or toilets (86%), and always had power connected (92.5%). Only about one quarter of the respondents (27.3%) indicated that either the community or home had access to the internet. Around one in four respondents (27.0%) stated that there was a dog problem in the community, and slightly less than one in five (17.8%) had access to a vet.

**Note: A problem with potable water later occurred at Wakathuni and Bellary during the interview phase of the project in March 2012.*

Table 7.3 Social Determinants of Health and Education

Social Determinant	Yes (%)	No (%)	Don't Know (%)
Access to clean water	92.5	6.6	0.9
Problems with sewers or toilets	13.1	86.0	0.9
Power connected	92.5	7.5	0
Currently employed	54.2	44.9	0.9
Desire paid job	80.8	18.2	1.0
Hold current drivers license	80.2	19.8	0
Regularly feel tired	44.8	53.3	1.9
Generally sleep well	65.4	34.6	0
Family member in gaol	20.8	69.8	9.4
Enough money to live in healthy way	27.7	68.6	3.8
Household members without food, clothing, or not paying bills, because lack of money	46.3	50.0	3.7
Community/home have internet access	27.3	69.1	3.6
Dog problem in community	27	68.5	4.5
Access to vet	17.8	80.4	1.9
<hr/>			
Average Number of People in Household	Mean (Standard Deviation)		
	3.72 (1.6)		

7.2.1.3 Perceived Health Status

The responses for the items about perceived health status are listed in Table 7.4. Most respondents thought they were in good health, as evidenced by about three quarters indicating that their health was either “excellent” (16.9%), “very good” (19.4%), or “good” (37.1%). They also thought that most children in their family experienced good health, given that they indicated that only about one in four children were either in “fair” (19.5%) or “poor” (2.5%) health. However, they thought that other members of the family or language group were less likely to be in good health. Almost half of the Elders in the family were thought to be in either “fair” (32.2%) or “poor” (10.7%) health; about four in ten language group members were perceived to be either in “fair” (29.5%) or “poor health” (10.7%);

almost one in three children in the language group were viewed as experiencing either “fair” (22.0%) or “poor” (8.5%) health; and around four in ten language group adults in the family were perceived to be either in “fair” (26.7%) or “poor health” (10.8%).

Table 7.4 Perceived Health of Gumala Members

	Perceived Health Status					
	Excellent	Very Good	Good	Fair	Poor	Don't Know
Personal Health (%)	16.9	19.4	37.1	17.7	8.1	0.8
Language Group (%)	11.5	4.9	27.9	29.5	10.7	15.6
Children in Language Group (%)	11.9	12.7	29.7	22.0	8.5	15.3
Elders in Family (%)	10.7	6.6	28.9	32.2	16.5	5.0
Adults in Family (%)	10.8	9.2	40.0	26.7	10.8	2.5
Children in Family (%)	20.3	19.5	35.6	19.5	2.5	2.5

7.2.1.4 Access to Healthcare

As the data in Table 7.5 indicates, the overwhelming majority of the respondents indicated they were able to access all of the listed forms of healthcare, which included doctors, nurses, Aboriginal Health Workers, hospitals, pharmacists, dentists, chiropractors and the entire range of allied health workers. It should be noted that this finding was inconsistent with the findings derived from the responses to the open-ended questions in the Phase 1 survey (presented in the next section) in which Gumala members commonly indicated that it was difficult to access healthcare. These discordant views are explored in the discussion section which follows on from the results.

Table 7.5 Access to Healthcare

Type of health care	Ability to access	
	Yes (%)	Don't Know (%)
Local Doctor	99.1	0.9
Hospital	99.1	0.9
Visiting Nurse	84.0	16.0
Pharmacist	96.1	3.9
Dentist	94.4	5.6
Psychologist	88.0	12.0
Geriatrician	90.9	9.1
Physiotherapist	90.3	9.7
Chiropractor	88.0	12.0
Occupational Therapist	85.5	14.5
Dietician	91.6	8.4
Speech therapist	89.7	10.3
Podiatrist	86.7	13.3
Sex health advisor	79.5	20.5
Aboriginal Health Worker	94.3	5.7

7.2.1.5 Perceptions of Drug Problems

The responses to the items about perceptions of drug problems are listed in Table 7.6. The respondents viewed substance abuse as a significant concern in the community. Over four in five respondents indicated that alcohol, marijuana, cigarettes, and other drugs, were all problems.

Table 7.6 Perceptions of Drug Problems

Type of Drug	Perceived Extent of Problem			
	No Problem (%)	Minor Problem (%)	Some Problem (%)	Big Problem (%)
Alcohol	18.2	5.8	28.1	47.9
Marijuana	17.4	7.4	22.3	52.9
Other Drugs	18.3	11.3	29.6	40.9
Cigarettes	13.9	10.7	19.7	55.7

7.2.1.6 Adequacy of Health Services

While only about half of the respondents (54.8%), said that health services in general were adequate (54.8%), three quarters indicated that health professionals met their needs (Table 7.7).

Table 7.7 Adequacy of Health Services

	Yes (%)	No (%)	Don't Know (%)	Very Big Problem (%)
Health Services Adequate	54.8	27.6	11.8	5.9
Health Professionals Meet Needs	75.0	15.6	6.9	2.6

7.2.1.7 Relationship between Health and Employment

Most of the respondents associated employment with improved health. Over three quarters of the respondents indicated that having a job improved health (79.3%), and slightly less than three quarters said that having a job also improved their family's health.

Table 7.8 Relationship between Health and Employment

	Yes (%)	No (%)	Don't Know (%)	Very Big Problem (%)
Does having a job improve a person's health	79.3	10.7	8.3	1.7
Does a person with a job improve their family's health	73.6	14.0	9.9	2.5

7.2.1.8 Mobile Health Trailer

The respondents overwhelmingly endorsed having a mobile health trailer travel around the communities, with over nine in ten respondents indicating that it was a good idea (93.6%). As the data in Table 7.9 demonstrates, the survey respondents thought that the mobile health trailer should visit all towns and communities throughout the Pilbara.

Table 7.9 Communities the Mobile Health Clinic Should Visit

All of the Pilbara	Marble Bar	Port Hedland
All remote communities	Newman	Roebourne
Bellary Springs	Onslow	Tom Price
Eastern Guruma	Onkaparinga	Wakathuni
Jigalong	Parabado	Warralong
Karratha	Parnapinya	Wickham

7.2.1.9 Education Needs

The responses for the items about education needs are listed in Table 7.10. A substantial proportion of the respondents wanted to engage in educational programs, as indicated by slightly over half (52.0%) agreeing they would like to be trained or return to school. About one in five respondents (21.1%) were using education or training services, however, of concern was that over half of the respondents (57.9%) felt that their culture was not understood by education or training services providers. Moreover, only about one third of the respondents (35.4%) felt that their training or education needs were met. The respondents

also indicated only about four in ten of their children's or families' (39.6%) educational or training needs were met. Finally, about one in ten family members (11.0%) had undertaken a traineeship paid for by the mining companies.

Table 7.10 Education Needs

	Yes (%)	No (%)	Don't Know (%)
Would like to be trained/return to school	52.0	44.9	3.1
Do you use education/training services	36.7	61.7	1.7
If you do use education/training services, do they understand your culture	21.1	57.9	21.1
Current needs for education/training met	35.4	27.4	37.2
Children/families current needs for education/training met	39.6	17.0	43.4
Children/family members undertaken traineeship paid for by mines	11.0	87.2	1.8

7.2.1.10 Aboriginal Children's Attendance at Educational Institutions

The responses for the items about Aboriginal children's attendance at educational institutions are listed in Table 7.11 Slightly more than half of the respondents (N=41/48) had children attending an educational institution. The children were most commonly enrolled in either secondary school (N=23), primary school (N=21), pre-primary school (N=21), and kindergarten (N=10). Almost all respondents (97.5%) with children at educational institutions said that they were attending regularly.

Table 7.11 Aboriginal Children’s Attendance at Educational Institutions

	Yes (number)	No (number)	Don't Know (Number)
Do you have any school age children	48	41	3
Do you have kids in day care	12	2	0
Do you have kids in kindergarten	10	0	0
Do you have kids in pre-primary	25	1	0
Do you have kids in primary school	21	1	0
Do you have kids in secondary school	23	1	0
Do you have kids in TAFE	1	1	0
Do you have kids in university	4	1	0
Do you have kids in traineeship	5	1	0
Are your children attending regularly	39	1	0

7.2.1.11 Support for Aboriginal Children’s Schooling

The responses for the items about support for Aboriginal children’s schooling are listed in Table 7.12. An overwhelming majority of the respondents (85.2%) indicated that either they or someone else were able to help their children with homework. Nonetheless, half of the respondents (50.0%) expressed a desire for homework assistance. Most of the respondents (79.6%) said there was a quiet space for their children to do homework. About half of the respondents (50.9%) thought the education services they used were culturally sensitive. The remainder either did not know (28.3%), or did not think that the education services were culturally sensitive. Despite this, about three quarters of the respondents (72.5%) indicated that their children’s school catered well for their cultural obligations.

Table 7.12 Support for Aboriginal Children’s Schooling

	Yes	No	Don’t Know
Can you/someone else help at home with kids homework	85.2	11.1	3.7
Desire homework assistance for your child	50.0	42.6	7.4
Somewhere quiet for children to do homework	79.6	16.7	3.7
Know principal or teachers at your children’s school	81.8	16.4	1.8
Are education services you use culturally sensitive	50.9	20.8	28.3
	Not At All	Well	Big Problem
How well does your children’s school cater for your cultural obligations	17.5	72.5	10.0

7.2.1.12 Aboriginal Participation in School Workforce

The responses for the items about Aboriginal participation in the workforce are listed in Table 7.13 Over a third of the respondents (38.2%) indicated that Aboriginal teachers were present at their children’s educational institution. About half of the respondents (52.2%) indicated that Aboriginal Islander Education Workers, Aboriginal Liaison Officers, or Aboriginal Support Workers, were present at their children’s educational institution.

Table 7.13 Aboriginal Participation in School Workforce

	Yes	No	Don’t Know
Aboriginal teachers present at children’s education institution	38.2	54.5	7.3
Aboriginal Islander Education Workers or Aboriginal Liaison Officers or Aboriginal Support Workers present at children’s educational institution	52.1	37.5	10.4

7.2.2 Phase 1 Qualitative Findings

7.2.2.0 Thematic Analysis of the Health Section

In the following section the qualitative report for the health component of the Gumala Health and Education Needs Analysis Survey is detailed. This qualitative report resulted from a content analysis of the responses to the open-ended questions listed in the survey questionnaire. Four main themes were identified for health, namely: Access; Funding; Health Promotion; and Self-Empowerment. Each of these themes will now be described.

7.2.2.1 Theme 1: Access

One of the most important issues raised by the Gumala members about health care access was the lack of healthcare professionals. This was mainly due to insufficient numbers of easy to reach Aboriginal health workers or specialist doctors, especially kidney, heart, dental and mental health specialists. Also, a lack of general practitioners and nurses was of concern for Gumala members. Adding to the problem of easy to reach healthcare professionals was a lack of transport which made it difficult for Gumala members to get to healthcare professionals. To help solve this problem, Gumala members said that transport could be improved, doctors and nurses could travel to the community, and telehealth services could be provided. An overwhelming majority of the Gumala members thought that the proposed mobile health trailer was a good idea to improve their health, particularly by providing diagnostic services, dental care, diabetes care, specialist referrals, and vaccinations. The last two issues of most importance to Gumala members were related to the reluctance to leave country for health care. In these cases, Gumala members said that being provided with accommodation and helping family members travel with them while they received healthcare outside of country were both important issues.

7.2.2.2 Theme 2: Funding

There were three main funding issues which impacted on healthcare for Gumala members. The first issue was the cost of healthcare, especially specialist healthcare which was seen as very expensive. The second issue was the level of financial assistance; while some Gumala members saw the amount of financial assistance as adequate, others stated that increased funding was required. A

particular problem with the level of financial assistance was the range of healthcare services it covered with additional funding requested for specialist services, private health insurance, dental care, and health promotion activities such as dietary programs, quit smoking programs, and exercise programs. The third issue involved streamlining the process by which Gumala members could access funding for health care. Gumala members said they needed to fill out too many forms to access funding and that the forms were difficult to complete.

7.2.2.3 Theme 3: Health Promotion

Gumala members emphasised the importance of health promotion, as demonstrated by various health promotion activities being listed as the most common response to the question about what Gumala Aboriginal Corporation could do to help improve the health of members. The types of issues that were suggested be addressed through health promotion most commonly included Elders' health, sexual health, substance abuse, nutrition and diet, mental health, and pregnancy. Several suggestions were provided about how to deliver health promotion activities, namely, workshops held in the community, bush camps, and online workshops. Also, in response to the question about what problems the proposed mobile health trailer could help with, many of the respondents suggested that it could also be used for health promotion.

7.2.2.4 Theme 4: Self-Empowerment

The importance of self-empowerment to Gumala members was evidenced by many respondents stating that they needed to take responsibility for their own health. One way the Gumala members said they could help their health was through eating better and improved nutrition. Undertaking job training and finding employment were linked to assuming responsibility for improved health. Gumala members also emphasised the importance of education about traditional culture as a means to self-empowerment which would lead to better health. The last way by which Gumala members said that they could improve their health was through the use of traditional bush medicines and concern was expressed that Gumala Aboriginal Corporation did not provide funds to pay for traditional bush medicine.

7.2.3.0 Thematic Analysis of the Education Component

In the following section the qualitative report for the education component of the Gumala Health and Education Needs Analysis Survey is detailed. This qualitative report resulted from a content analysis of the responses to the open ended questions listed in the survey questionnaire. Five main themes were identified: 1. Financial Support for Education and Training 2. Education, Training and Real Jobs 3. Culture and Language 4. Mentoring 5. Communication.

7.2.3.1 Theme 1: Financial Support for Education and Training

One of the most consistent issues raised in the survey was access to education funding provided by Gumala. Specifically, an issue was that Gumala members believe that the Education Assistance forms are too complicated and it appeared that not all members knew about the availability of the education scheme. They also stated that the amounts allocated to either primary or secondary schools were insufficient. Members who lived outside the Pilbara revealed that they were not aware if funding was still available to them. Also, it was indicated that the education funding scheme did not extend itself to Early Childhood or Day Care applications. The issue of funding for one on one or group tuition is an area that requires further inquiry. It was suggested that a Gumala entitlements workshop would be of benefit to members. Further, members indicated that they wanted to know why un-accessed funding could not be accessed for another area, and questioned what happened with unspent funding. There was also a suggestion that an emergency utility fund may assist some struggling members.

7.2.3.2 Theme 2: Education, Training and Real Jobs

There appears to be issues surrounding apprenticeships and traineeships and the pathway that leads to 'real jobs'. Many were not happy that apprenticeships were given to people from outside the Pilbara and felt that priority should be given to locals. Also there appears to be an abundance of traineeships but no advice on how to obtain one. It was conveyed that apprenticeships and traineeships should not only just be in mining and that the same priority be given to all areas other than mining. Gumala mentors are also needed to assist in both these areas.

Importantly, numerous members identified that they would like to retrain or undertake further education studies to increase their employment opportunities. Consistently, people stated that they needed career advice and that this is a much needed service to which they don't have access to. They also require information on exactly what jobs are out there and how to train for and obtain them. For example, one respondent stated that they would like to become a pilot but was of the opinion that this would not be Gumala funded. There was a consistent comment in relation to the access to driver training facilities and the ability of members to acquire a driver's licence. It was commented that "...it was no good to train for something if you can't physically get there". Further, given that computer technology in the world today is a vital aspect, many members expressed that they need computers and computer training. This was not just an interest but more a work priority.

The vast majority of GAC members indicated that they wanted to do a short course. These courses ranged from literacy and numeracy, computer literacy and skills, understanding formal documents workshop, communication, speaking in public, making ends meet with household expenses, music and art development, foetal alcohol effects, drugs and alcohol, healthy eating, first aid, parental support, access to books, sewing, gardening, swimming, machinery and building programs right through to exercise, book-keeping and owning your own business programs. This vast spread of interest indicates that there is a need to develop short course programs beyond what is currently provided by TAFE and that their effective delivery is planned.

7.2.3.3 Theme 3: Culture and Language

The theme of culture was frequently nominated. There were three main areas relating to culture. First, cultural awareness; many felt that educators across all sectors needed to undertake 'cultural awareness training' because they do not know of nor understand the issues that many Aboriginal Australian's face, particularly in the Pilbara. It was highlighted, that many teachers do not do cultural awareness training before they take up a teaching position. Second, cultural camps for all members were mentioned on several occasions. It was indicated that having camps was an important aspect to maintaining and keeping culture alive and well, especially given that there is a disconnect between the

older and younger generations. These camps should not be undertaken at Lore times as they are not Lore camps but more bush camps that should or could be connected to men, women and children camps. It was also suggested that City Camps were a good idea for Gumala members to familiarise themselves with hospitals, schools, universities or employment before moving down to the city. Third, language programs should be developed for all Gumala members to access. These programs should or could be implemented in schools or at a place in the community. It was also suggested that cultural outings and picnics were important to keep the community connected.

7.2.3.4 Theme 4: Mentoring

Mentoring was consistently pointed out as an area of need. Members indicated that mentoring was required in primary schools, boarding colleges and to assist with transitional pathways into employment. It was also indicated that members themselves could and should be trained to assist in this area. Some members commented that Gumala should have mentors across all sections of Education as well as in the community. These mentors could or should be well versed in understanding all aspects of services available to Gumala members as well as different employment fields. Mentors were somebody that members could connect to on a daily or weekly basis. Another suggestion was that Gumala Mentors could staff a Gumala Hostel to support those Gumala members studying in Perth.

7.2.3.5 Theme 5: Communication

Frequently communicated throughout the survey responses was the lack of or insufficient communication between Gumala and its members. Members felt that not only were their entitlements not clearly explained to them but also other Gumala services and entitlements were not promoted. Being aware of and being able to obtain the information would allow members more choices. There was a clear indication that many do not know all that is available to them as Gumala members. For instance, it appears that parents of students who board at schools outside the Pilbara have questions about their entitlements as this was regularly commented on throughout the survey. New pathways for communicating with members need urgent exploration.

7.3 Development of the Interview Guide for Phase IIB

7.3.1 Health Component

The Phase I survey informed the interview questions for the health component of Phase IIB plus some general questions as well. The questions were mainly derived by listing the issues that were identified as important during the content analysis of the survey open-ended questions undertaken in Phase I. In addition, some questions were derived through consultation between the research team and steering committee. In total, the health component of the interview guide for Phase IIB contained 32 questions, which were grouped under the themes identified through the content analysis. To reiterate, these health themes were Access; Funding; Health Promotion; and Self-Empowerment. For most of the 32 health questions in the interview guide, the people being interviewed could provide either a “yes”, “no”, or “don’t know” answer, in addition to providing any other comments about the question. The remaining questions were open-ended and asked people to list comments. The results of the interviews conducted in phase IIB will be detailed later in that section.

7.3.2 Education Component

The interview questions for the education component of Phase IIB contained questions derived from what people indicated on their Phase I surveys. After collating and identifying key themes and words through the content analysis of Phase I we were able to compile a series of questions. The research project team, with input from the steering committee, worked together on the final compilation of the interview questions. We felt the need to use these questions as the starting point for the interviews. We planned to cover the six education themes highlighted from the survey — financial support; education, training and real jobs; culture and language; mentoring; and communication.

7.4. Discussion

7.4.1 Discussion of the Thematic Analysis Findings for the Health Section

7.4.1.1 Access

One of the main barriers to the access of healthcare for Gumala members was insufficient numbers of doctors and nurses, which accorded with the findings of previous studies (eHealthNT 2012)). This problem is experienced by both Indigenous and non-Indigenous people residing in remote Australian locations. In comparison to non-remote residents, on a per capita basis, remote residents have about half as many medical workers available (312 per 10,000 for non-remote residents, and 140 per 10,000 for remote residents) (National Rural Health Alliance 2011).

The difficulties Gumala members reported regarding the difficulty in accessing healthcare professionals has been consistently highlighted in previous studies (Steering Committee for the Review of Government Service Provision 2011). In the most recent study conducted during 2008, 71 per cent of Aboriginal and Torres Strait Islander adults residing in remote areas lacked public transport, and 46 per cent experienced difficulties in accessing health services due to transport and distance (Australian Bureau of Statistics 2010). It has been proposed that outreach and community visiting improves the availability of services for Indigenous communities (Australian Medical Association 2011). In line with this strategy was the Gumala members' suggestion that the proposed mobile health trailer could be used to transport health professionals to the communities.

Gumala members also suggested the lack of access to health professionals could be addressed to some extent by providing e-health services. In July 2012 the Federal government will begin implementing its nationwide e-health initiative, however, when this will commence in the Pilbara remains unclear. For Indigenous communities in the Pilbara, the Federal government could base its provision of e-health services on the successful model used by Kimberley Aboriginal Medical Services Council (Australian Indigenous Healthinfonet 2012). This model enables each community to retain control over the medical records and allows individuals to consent for their record to be accessed outside their home community (Australian Indigenous Healthinfonet 2012). An evaluation of the e-health system pilot program in the Kimberley has found numerous

improvements in the health outcomes of Indigenous residents (Australian Indigenous Healthinfonet 2012).

The other notable access issues for Gumala members were the lack of accommodation both for themselves and their family in cases where they needed to leave country for medical care. These issues have been highlighted in recent media reports which showed Indigenous patients and their families camping opposite the Port Hedland hospital (ABC 2011). In response, the West Australian Housing Minister said that a hostel would be built to house those currently in camps. It appears little progress has been made on this issue to date as the Pilbara Health Profile, released in April 2012, notes the need for an Indigenous hostel and recommends that a feasibility study should be undertaken (WACHS Planning Team 2012). Whether the situation is similar in other locations in the Pilbara is unclear. It should be noted that Gumala Aboriginal Corporation will cover travel and accommodation costs for relatives of a critically ill member. However, this does not appear to extend to cases in which the member needs to travel for non-critical care.

7.4.1.2 Funding

Gumala members highlighted the prohibitive cost of healthcare, particularly dental and medical specialist healthcare. Moreover, Gumala members were divided over whether the amount of financial assistance received from Gumala Aboriginal Corporation was adequate for medical and dental expenses. Affordability has been shown to be one of main factors influencing Indigenous people's uptake of health services (Scrimgeour and Scrimgeour 2008). The most recent available evidence found that about one in five Indigenous people in remote locations experienced difficulties in accessing medical services (Australian Bureau of Statistics 2010). In addition, Indigenous people tend to have low incomes, which leaves Medical Benefit Schedule and Pharmaceutical Benefit Schedule co-payments less affordable (Scrimgeour and Scrimgeour 2008).

The other issue of concern regarding funding was that the forms Gumala members needed to complete to access financial assistance were perceived as difficult to complete and too numerous. However, we have looked at the claim

forms on Gumala Corporation's online site and they appear to be neither burdensome nor difficult. Nevertheless, the responses suggest that some Gumala members may require assistance with completing the medical expenses claim form.

7.4.1.3 Health Promotion

Gumala members emphasised the importance of Gumala Aboriginal Corporation becoming involved with the delivery of health promotion initiatives, which was consistent with the recommendations of numerous Australian Indigenous health bodies (Australian Indigenous Healthinfonet 2005). These recommendations state that health promotion initiatives may be enhanced if Indigenous organisations, on behalf of the local community, liaise with Aboriginal community controlled health services in developing the content and subsequent implementation of health promotion initiatives (Australian Indigenous Healthinfonet 2005). Moreover, the effectiveness of health promotion initiatives may be further improved through Indigenous organisations and Aboriginal controlled community health services collaborating with National Indigenous health bodies such as The National Indigenous Health Promotion Knowledge Network (Australian Indigenous Healthinfonet 2005).

Almost all of the health promotion issues suggested by Gumala members have been commonly cited as priority areas in previous Indigenous health strategies (Australian Indigenous Healthinfonet 2011; Steering Review for the Provision of Government Services 2011). The exception was Elders' health, which has not been cited in previous strategies although it may in some cases fall under aged care. This suggests that an understanding needs to be gained of the Elders particular health needs in order to develop suitable health promotion initiatives.

Gumala members viewed community workshops as one of the most effective ways to deliver health promotion initiatives, which was in line with previous research (Barnett and Kendall 2011). Holding health promotion initiatives within the community fosters a sense of ownership, particular when the initiatives are interactive and facilitate community involvement (Barnett and Kendall 2011). The sense of ownership contributes to community acceptance of health promotion and thereby increases the likelihood of sustained behavioural change. Also,

encouraging the community members to participate in health promotion initiatives enabled an understanding of individual needs, which seemed to improve attendance (Barnett and Kendall 2011).

Online workshops were another common suggestion for the delivery of health promotion initiatives. However, as the descriptive statistics results section demonstrated, only about one quarter of either the households or communities had internet access. Hence, at the moment online workshops would reach only a limited segment of Gumala members and internet connectivity within the communities would need to be increased to improve the online reach of health promotion initiatives.

7.4.1.4 Self-Empowerment

Gumala members viewed the use of bush medicines as promoting self-empowerment and a way in which they could improve their health, which accords with previous research (Barnett and Kendall 2011). Indigenous Australians have reported that gathering and consuming bush medicine may help restore and protect culture (Barnett and Kendall 2011). In addition, it was thought that the use of bush medicine would to some extent foster a return to traditional dietary patterns which had been disrupted by colonisation and supplanted by poor nutrition influenced by Western culture (Barnett and Kendall 2011). Importantly, it was recognised that to sustain behavioural change the use of bush medicines needs to be based on local knowledge (Barnett and Kendall 2011). Although Gumala members did not explicitly state the cycle of causation between the use of bush medicine, maintaining culture, improved nutrition, and self-empowerment, they nonetheless recognised that the former three factors all contributed to self-empowerment.

The other main way Gumala members said they could assume responsibility for self-empowerment was by improving their health through undertaking job training and gaining employment. The association between health, education, and employment has been widely acknowledged, perhaps most notably in the World Health Organisation's *Closing the gap in a generation: Health equity through action on the social determinants of health* (Marmot 2005). Regardless of the country, research has consistently shown that higher incomes and higher levels

of education are associated with a better quality of health (Marmot 2005). Hence, it is necessary to provide the circumstances that enable people to undertake training and secure employment (Marmot 2005). However, it should be noted that employment and income are only two of the many social conditions that influence health (Marmot 2005). To achieve good health for a certain population, it is necessary to create a certain set of social conditions, which we will discuss in more detail throughout the following sections.

7.4.2.0 Discussion of the Thematic Analysis Education Component

7.4.2.1 Financial Support for Education and Training

It is well known that the individual cost of education and training to families has risen significantly in recent years across Australia. According to the ABS 2012 quarterly figures, the cost of education rose by 6 % generally, with a 7.7% increase in secondary education and child care costs rising 9.7% (The Age, April 25, 2012).

For Indigenous families, particularly those living in remote areas, educational costs present an even greater burden on already relatively low incomes. Financial assistance for Gumala families to assist with education and training related costs is one way to relieve this burden and increase educational opportunities for Gumala members. Currently, the Gumala Education Assistance Program is one form of assistance but it is only available for primary and secondary school aged children and is not accessed by everyone. A range of alternative forms of assistance could be investigated such as one on one tuition, homework classes or support for school based programs. The way in which such financial assistance schemes are accessed, distributed and evaluated to ensure that they are fair and equitable and that there are demonstrable improvements in educational outcomes is worthy of further investigation.

Given the high priority currently being placed on Early Childhood Education and Care and the relative high costs and lack of access to Indigenous Child Care facilities in the Pilbara, extending financial support to families with young children has the potential to both alleviate some financial problems and provide better educational opportunities for Gumala children. Several recent Federal government reports have highlighted the need to improve Early Childhood

Education and Care programs (*Early Years Learning Framework (EYLF)*, *National Quality Standard* (DEEWR, 2010); the *Australian Curriculum* (ACARA). This is also consistent with recent Federal Government budget announcements that will provide \$55.7 million to 2015-16 to better prepare children for school through a home based parenting and early childhood program initially targeting communities with a high proportion of disadvantaged Indigenous Australians. Investigating a range of ways to financially support families with children in the 0 – 5 age group so that they can provide the best environment for their children to learn and develop could be a key strategy to improve long term educational outcomes for Gumala members.

7.4.2.2 Education, Training, Short Courses and Real Jobs

Rates of Indigenous unemployment, particularly in remote areas, are much higher than that of non Indigenous Australians. ABS figures consistently show Indigenous unemployment rates to be four or more times higher than those for non Indigenous Australians. This can be attributed to a combination of complex intergenerational factors which require effective and sustainable solutions. As previously noted the WA Aboriginal Workforce Development Strategy has, for example, called for greater connections between employers and Aboriginal job seekers, the need to develop local knowledge and capacity to build successful outcomes in regions, the removal of barriers to participation in the workforce and importantly improvement in the transition of Aboriginal people to sustainable employment outcomes (Aboriginal Workforce Development Strategy, 2012).

Access to early, ongoing, relevant and wide ranging career advice as well as opportunities to engage in education and training opportunities that can lead to real and sustainable jobs are required to address the economic and social impact of high unemployment rates. Similarly the opportunity to enrol in short targeted courses in communities and towns could assist Indigenous members to develop a range of skills related to work, health, community development, empowerment, recreation and general education.

7.4.2.3 Cultural Awareness in Education and Training

Awareness of Indigenous languages, cultures, perspectives and history has been well recognised as having a positive impact on educational outcomes for all students and is a key Federal and State government strategy. Given the majority of teachers and educational professionals coming to the Pilbara may have limited experience working with Indigenous language groups in this region it is vital that effective and sustainable forms of cultural awareness education, ongoing professional development and curriculum support is provided. To be effective and relevant, such programs and resources need to be thorough, sustainable and locally developed. An example that could be used as a comparison point is some of the Professional Development programs developed by the Stronger Smarter Institute in Queensland (www.strongersmarter.qut.edu.au/). These programs emphasise that all children can learn regardless of culture, language or socio economic status. The most effective learning occurs where teachers can build positive relationships with their students and communities and, importantly, have high expectations of all learners. Gumala support for the development of a range of locally relevant programs that can assist teachers and school leaders to provide better learning opportunities for Indigenous children could be investigated further.

7.4.2.4 Mentoring in Schools, TAFEs, Universities and the Workplace

The use of mentoring to improve Indigenous retention and outcomes across all education sectors and in the workforce is one strategy that has been widely used. There are many forms of mentoring and the literature strongly suggests that a one size fits all approach is not the most effective (Centre for Social Responsibility in Mining, 2012). Mentoring typically involves a relationship between a more experienced person helping a less experienced person to achieve their goals. It can be formal or informal and can involve specific assistance with study or work issues or more general assistance with concerns such as developing confidence to speak up or accessing information (Price, 2009; MacCallum 2007). Genzuck (in Becket, 1993) described the roles of mentors as “*catalysts, cheerleaders, trainers and problem solvers*”. One large and successful national mentoring programme is the Australian Indigenous Mentoring Experience (AIME). The program is built around the belief that

Indigenous = Success. By teaming up Indigenous high school students with University students, the goal of AIME is to provide Indigenous high school students the skills, opportunities, belief and confidence to finish school at the same rate as their peers. Gumala could explore ways in which similar sorts of mentoring programs may be accessed by students and workers in the Pilbara.

7.4.2.5 Communication

On numerous occasions Gumala members stated that they were unaware of what GAC provided to support education. Hence, it would be worthwhile to evaluate the way in which the Gumala Aboriginal Corporation currently communicates with its members. As was noted in the discussion of the health findings, some Gumala members appear to experience difficulties in understanding written forms, which suggests that Gumala Aboriginal Corporation could consider communicating with members more through oral or visual means.

7.4.3 Descriptive Statistics Section of the Health Component of the Survey

7.4.3.1 Social Determinants of Health

Almost all of the respondents reported no problems with most environmental social determinants, which perhaps may owe to the financial assistance provided by Gumala Aboriginal Corporation for water and power under its Health and Wellbeing program. However, of concern was the substantial proportion of communities that reported a dog problem and lack of access to veterinary services. Dogs, especially unhealthy dogs, are a source of numerous parasite transmitted infectious diseases and dog bites are a common cause of injury (Carroll et al. 2011). The extent of the dog problem reported by Gumala members suggests that measures could be considered to control it. These measures may include a baseline community survey to establish more detailed data about the problem; engendering trust through engaging the community; provision of outreach veterinary services; and a follow-up survey to assess the benefits of the program (Carroll et al. 2011). Such measures have been successfully undertaken in Indigenous communities elsewhere in Australia and may be used to develop a model to improve dog health in the Pilbara (Carroll et al. 2011). Murdoch University School of Veterinary and Biomedical Sciences conduct clinics on a

spasmodic basis in Aboriginal communities and this should be explored more formally.

The proportion of respondents who were employed (54.2%) was very similar to the Australian Indigenous employment rate (54.0%) (Australian Bureau of Statistics 2010). About four in five respondents expressed a desire to work which, when those who were employed are taken into account, means that about one quarter of the respondents wanted to gain employment. Clearly, employment opportunities need to be created as, to reiterate, employment tends to improve health. Indeed, it was evident that most respondents were aware of this relationship as four in five stated that gaining employment would improve their health, which highlights the need for constructive action rather than discussion.

7.4.3.2 Perceptions of Health

Most of the respondents viewed themselves as being in good health. This finding accords with the findings of the National Health Surveys conducted in 2004-05 and 2007-08 in which 84.0% and 84.9% of the respondents respectively reported their health status as either “excellent”, “very good” or “good”. However, it should be noted that while most respondents in this study perceived their health to be good, about four in ten respondents said that the their families, other language group members and Elders health was either poor or fair. This suggests that substantial improvements can be made in health across the community.

In terms of the community in general, the group that the respondents were most concerned about was the Elders, as indicated by about half of the respondents stating that the Elders health was either fair or poor. It was consistent with the findings of the thematic analysis in which the respondents emphasised the importance of providing health promotion initiatives for the Elders. Again, this highlights the importance of gathering information about the Elders’ health needs in order to develop appropriate health promotion activities.

7.4.3.3 Perceptions of Drug Problems

Substance abuse issues are clearly an area that needs to be addressed as over four in five Gumala members said that alcohol, marijuana, cigarettes, and other drugs were a problem in the community. Although our data does not allow for prevalence estimates of substance abuse among Gumala members, the proportion of respondents who said that it was an issue suggests that it is common in the communities. This suggestion accords with National data which indicates that among Indigenous people in 2008, 38% consumed tobacco, 31% used alcohol at high or risky levels, 17% used marijuana, and 10% used stimulants (Australian Institute of Health and Welfare 2011).

Simply talking to communities about the harms of substance abuse is unlikely to affect behaviour unless the underlying causes are addressed (Marmot 2005). Such a cause-focused approach includes addressing issues of identity, economic and daily life opportunity, and a sense of hope for the future (Nichols 2011). These issues will be discussed in depth in the sections that detail Phase IIA and Phase IIB.

7.4.3.4 Access to Healthcare and its Adequacy

It seems incongruous that almost all respondents indicated that they had access to comprehensive healthcare, given that the thematic section identified a lack of access as one of the most important issues. This suggests that the respondents were able to access all forms of healthcare, but it was often difficult to reach. This seems to be reflected by only slightly over half of the respondents stating that the healthcare services were adequate. As was noted in the thematic analysis section, strategies need to be introduced to address the barriers the respondents encounter in accessing healthcare, particularly as a lack of accessibility frequently results in Indigenous people not using healthcare often to their detriment (Australian Medical Association 2011).

8.0 Phase IIA: Survey and Interviews of Health and Education Stakeholders

8.1 Aims / Research Question

In Phase IIA we asked health and education stakeholders to detail gaps and solutions, particularly practical solutions, in Pilbara Aboriginal Health and Education as they see them.

8.2 Research Design / Methods

The design was a series of questions put to stakeholders using a mixed modality approach of interviews, written paper response, or an online survey. Respondents could choose how they responded.

8.2.1 Procedures

Stakeholders were;

a) Health: local doctors and allied health and nursing personnel in private practice and in the public sector, regional managers of health and their staff in the Pilbara and those who have direct interest in Aboriginal health including Commonwealth, State and Local Government employees. Specifically population health personnel were invited to participate. All stakeholders were invited to participate by a direct approach, through their employer or by local newspaper advertisement.

b) Education: Regional managers in the State, Independent and Catholic education system, principals, teachers, and teachers assistants and those with a direct interest in Aboriginal education issues at a Government level were invited to participate. Advertisements were also placed in local newspapers.

Early in the process we sought permission of the regional managers of health and education to approach hospitals and schools. We then approached the various managers of medical and allied health facilities individually to conduct an interview or survey. We then contacted school principals to do the same. If permission was denied we did not proceed in these individual facilities. All stakeholders approached received an information letter containing the study details and gave consent before proceeding.

Ethics approval was given by Murdoch University Human Research Ethics Committee, approval number 2011/196, Pilbara Regional Education Office and also the Catholic Education Office Western Australia.

Interviews were undertaken on the phone or in person at a mutually agreed time and place. No interviews were conducted in participants' homes. The answers in interviews were recorded manually in writing for later analysis. All survey responses were anonymous and interview responses confidential.

8.2.2 Recruitment Areas

A review of the demographics of health and education services for Gumala members in the Pilbara show that they are located mainly in townships. Accordingly, we concentrated on personnel in these locations, including Newman, Tom Price, Port Hedland, Roebourne and Karratha. We also were able to obtain comments about smaller centres such as Paraburdoo and Onslow from stakeholders who visited these towns.

8.2.3 Data Handling and Analysis

All data were entered into Google documents either manually by project officers or directly by participants who chose to use the online modality. The results were tabulated as descriptive statistics for variables of interest. The responses to the open ended questions were analysed with the use of thematic analysis. In the first stage of the thematic analysis, codes were developed by assigning names to small sections of the interview transcripts. We then identified the most salient, incisive codes and developed these into themes which captured the most important issues.

8.3 Findings

8.3.0 Participants

We interviewed or obtained submissions to questions from 74 stakeholders. Of these, 28 were from the Health Sector and 46 were from the Education sector. The health professionals we interviewed were drawn from a diverse range of occupations, including: project managers; hospital managers; support service managers; population health officers, general practitioners; nurses; speech pathologists; physiotherapists; chiropractors; and occupational therapists. The 46

education professionals who participated worked in locations across the Pilbara, from Karratha, Newman, Tom Price, Port Hedland, Roebourne and Wickham. Some were education support workers such as Aboriginal Torres Strait Islander Workers (AIEOs), Teacher Assistants (TAs), Education Assistants (EAs) and others were District Office staff, teachers and principals.

8.3.1 Findings from the Health Professional Interviews

8.3.1.1 Health Professionals' Prioritisation of Indigenous Health Issues in the Pilbara

The health professionals we interviewed were asked to detail what they saw as the biggest health issues faced by Indigenous people in the Pilbara. Most health professionals identified the main issue as chronic diseases, most commonly heart disease, diabetes, obesity, and malnutrition. Unsurprisingly, these diseases were linked to poor diet and inadequate nutrition. An overwhelming majority of health professionals said that substance abuse was also one of the most concerning health issues. These substances included alcohol, tobacco, marijuana, and volatile chemicals (e.g. petrol). The abuse of substances was associated with diverse social factors such as boredom, lost roles, dispossession, despair, role modelling, low socioeconomic status, family dysfunction and mental health issues. The health professionals we interviewed stated that the social and health consequences of substance abuse for Indigenous people in the Pilbara were: social isolation; violence; malnutrition; low birth weight; foetal alcohol syndrome; kidney disease; heart disease; mental health issues; injury related to falls; and brain injuries. Another health issue identified as a priority was chronic ear infections that often result in hearing impairments leading to communication problems and learning difficulties, which in turn promote a cycle of unemployment and crime. The health professionals we interviewed attributed the development of chronic ear infections mainly to hygiene and insufficient access to doctors and ear specialists. These issues that lead to chronic ear infections will be discussed in more detail in some of the following sections.

8.3.1.2 Generational Cycle Leading to Poor Health

Several of the health professionals we interviewed said that the health problems Indigenous people in the Pilbara experienced were often the result of a generational cycle which perpetuated poor health. The perpetuation of poor health was mainly attributed to a lack of role models on whom young people could base behaviour that led to good health. One of the health professionals we interviewed said:

“There has been generations of poor education, difficulty in breaking the cycle as parents are not leading by example and they have not for generations”

As the above excerpt demonstrates, a lack of education was seen by many of the health professionals we interviewed as being integral to the persistence of poor health throughout generations of Indigenous people in the Pilbara. The next section will discuss the health professionals’ suggestions about the initiatives content and how educational initiatives could be delivered.

8.3.1.3 Educational Initiatives to Improve the Health of Indigenous People in the Pilbara

The health professionals we interviewed identified numerous areas that should be targeted through educational initiatives, including diet, exercise, hygiene, pregnancy health, and substance abuse. Education in these areas was thought to be a priority as most health professionals perceived that Indigenous people did not appear to be aware of what of sort behaviour promoted good health and what consequences resulted from unhealthy behaviour. Importantly, numerous health professionals also said that forums should be held where Indigenous people were given the opportunity to prioritise areas of health that needed to be addressed:

“Facilitating Aboriginal input at a community forum will improve the needs of Aboriginal health- as determined by Aboriginal people”

Consulting Indigenous people about the content of health education programs was also seen as integral to improving the effectiveness of these programs for two main reasons. First, the involvement either of Elders or trusted members of the Indigenous community would foster trust, improve communication, and thereby increase compliance. Second, the participation of Indigenous people in

developing educational programs would help ensure that they are culturally sensitive:

“We can do all the cultural awareness training in the world, but we are not Aboriginal and cannot understand everything. We need to be able to offer what is needed”

Several suggestions were provided about how educational programs could be most effectively delivered. It was emphasised that the accessibility of health programs would be enhanced if they were provided in small towns and communities. Moreover, the involvement of local Aboriginal health workers was thought to be important as it would improve community connection, and hence adherence, with the health programs.

“Its focus should be accessibility and culturally appropriate to the community members- there needs to be a greater commitment to employing Aboriginal health workers that are specific to the community/region”

An emphasis was also placed on delivering health programs to children in their early years, especially because health professionals tended to perceive that older role models were lacking:

“There needs to be early childhood education. It’s not going to happen over night and it will be a generational thing. Many still fall through a large gap due to poor social circumstances”

In particular, notable success had been achieved in back to country programs which involved Elders working with young children to identify individuals who could become youth leaders within the community.

Finally, the health professionals thought that the health care programs should be conducted continually, and the content should be repetitive and provided both verbally and visually, in order to reinforce the health programs messages.

8.3.1.4 Availability of Healthy Food for Indigenous Communities in the Pilbara

While education about diet was seen as a key element of improving Indigenous people’s health, such education will probably have little effect if they are unable to source healthy food. Most health professionals we interviewed said that the lack

of healthy food was partly caused by Indigenous people having little say in the types of food remote stores stocked and that remote stores stocked the most profitable food:

“Remote communities have no guidance in the function and content of remote stores. There’s very little input from community members regarding the style of food on offer. It’s dictated by the owner. Remote stores persist in stocking foods that have the highest profit margins i.e. energy dense and nutrient poor foods”

It should also be noted that some of the health professionals believed that Indigenous people knew what healthy choices were but did not choose them. This problem was seen as one that extended to most Australians, both Indigenous and non-Indigenous. It was also brought to our attention that brand named cola is cheaper per litre than milk.

8.3.1.5 The Adequacy of Housing for Indigenous People in the Pilbara

Several of the health professionals we interviewed said that a lack of adequate housing, and subsequently overcrowding, adversely affected the health of Indigenous people in the Pilbara. This mainly owed to overcrowding causing unhygienic conditions which led to the development of infectious diseases, particularly ear infections, rheumatic fever and chest infections. The health professionals said that that there were two main factors associated with the lack of adequate housing. First, insufficient maintenance of government housing had left some houses inhabitable, which resulted in families living together in housing that was habitable. Second, in many areas families needed to live together to afford rents which had been inflated because of the prices mining companies were willing to pay. The impact of mining companies on rental prices was seen as an important issue that needed to be addressed not only because it led to overcrowding but because of the attendant psychological impact:

“Due to the money that mining companies are willing to pay for rent, local people cannot afford housing and there are long waiting lists. Psychologically this must make things enormously challenging because it says local people have no importance compared to this industry that is making millions of dollars. The consequences of this are likely to be great. But I don’t know the mining companies are (all) to blame-it is the homeowners who name the price, making

top dollar on properties. If they committed to lower rent costs, housing would become more affordable.”

8.3.1.6 Continuity of Healthcare in the Pilbara

Numerous health professionals said that a lack of continuity in the delivery of healthcare contributed significantly to the poor health experienced by Indigenous people in the Pilbara. One of the main reasons for the lack in continuity was that health professionals were often transient. The health professionals we interviewed said that two main factors were linked to the transient nature of health professionals' employment in the Pilbara. First, health professionals became frustrated by a high prevalence of Indigenous people missing appointments and the lack of improvement in Indigenous people's health, which led to the health professionals leaving their positions. To address the lack of compliance, the Pilbara Division of General Practice has created care co-ordinator positions. These care co-ordinators are responsible for a set of clients who they communicate with to ensure that appointments are attended and medications are taken as required. The second factor involved mining companies offering lucrative salaries to lure health professionals away from government healthcare positions. Moreover, population pressures arising from the importation of the mining workforce led to inflated rental costs. This in turn contributed to lack of continuity in healthcare in as healthcare services needed to divert funding from health programs to subsidising staff rental accommodation. Finally, despite not being commonly mentioned by the health professionals we interviewed, it also seems likely that many health professionals left the Pilbara out of a desire to return to metropolitan areas.

The transient nature of health professionals had two main implications for Indigenous people's health. First, service delivery was fragmented, which led to disjointed clinical management of people's health issues and less than optimal outcomes. This fragmentation was highlighted by one senior manager stating that some communities were serviced by up to twelve different healthcare providers who often provided duplicate services. Second, the short term nature of health professionals' employment led to lack of trust among Indigenous people, which detrimentally affected communication and impacted on health outcomes.

Another barrier to the continuity of the healthcare in the Pilbara was associated with keeping accurate medical records. The health professionals we interviewed said the lack of accurate medical records was due to several factors. One factor involved the transient nature of Indigenous people, which led to people seeing different doctors in different areas, with subsequent gaps in the records held by each doctor. Another factor was linked to the multiple stakeholders providing services, with little transfer of information between the stakeholders. The last factor was due to the lack of an electronic medical record system which the Federal government has intended to rollout but has yet to implement. The lack in accurate health records would appear to compound the problems associated with transient health professionals, namely, impaired communication and disjointed clinical management of people's health issues.

Specialist healthcare services seem to be far from comprehensive in the Pilbara, which also acts as a major impediment to the continuity of healthcare. Indigenous people often need to travel to Perth for specialist healthcare. The need to travel such substantial distances frequently means that Indigenous people receive inadequate specialist follow-up care. The lack in follow-up care seems to be mainly related to people being unable to travel to subsequent appointments in Perth because of cultural obligations or difficulties in finding suitable accommodation.

The final factor involved in the lack of continuity of healthcare in the Pilbara was related to inadequate communication between non-Indigenous health professionals and Indigenous health professionals. This communication problem resulted in the fragmented coordination of healthcare services. It was suggested that establishing regular meetings between Indigenous and non-Indigenous health professionals could improve rapport and communication.

8.3.1.7 Strengths of Indigenous Healthcare in the Pilbara

We asked the health professionals we interviewed to list the three main strengths of healthcare for Indigenous people in the Pilbara. The most commonly listed response was Aboriginal health workers, who were seen as being particularly important as cultural brokers. However, numerous health professionals also said that the numbers of Aboriginal health workers was insufficient and that more

needed to be trained. Further, there was also a need to provide additional incentives to retain Aboriginal health workers as mining companies “poached” many Aboriginal people who had recently obtained health worker qualifications because they were seen as reliable workers. The next most commonly listed strength was Aboriginal Medical Services, which some of the health professionals we interviewed said had been facilitated by improved employment of Aboriginal staff. Some of the other commonly listed strengths were cultural sensitivity of staff and community outreach services such as allied health, population health, health promotion, and nursing. Finally several health professionals stated that they enjoyed providing healthcare for Indigenous people and liked to make a difference.

8.3.2.1 Findings from the Interviews with the Education Professionals

8.3.2.1 Education Professionals’ Prioritisation of Indigenous Education Issues in the Pilbara

The education professionals we interviewed were asked to detail what they believed were the biggest issues being faced by Aboriginal peoples in the Pilbara in relation to education. Most stakeholders identified that closing the gap in literacy and numeracy for Aboriginal students was one of the main issues facing educators in the Pilbara. This is a major area of priority as many Indigenous students begin school speaking their home languages as their first language and many do not access early childhood education due to lack of service provision and transport issues . This in turn impacts on Aboriginal students’ literacy and numeracy development. Another area of priority was the lack of Aboriginal perspectives across the curriculum in many classrooms. The lack of Indigenous representation within the curricula of schools has implications for literacy and numeracy attainment for students and cultural and linguistic understanding and competencies for educators. Given that Indigenous cultural practices in the Pilbara are alive and well and are not static, then professional development for all education professionals who teach in the Pilbara is another area of priority.

8.3.2.2 Educational Disadvantage across the Generations

Numerous education professionals signalled that various education issues that are experienced by many Aboriginal peoples in the Pilbara are not only complex but are an accumulation of years of exclusion, marginalisation, alienation and disengagement from formal education. Educational professionals suggested that there is no 'quick fix' solution to address the issues in education for Aboriginal peoples in this area. Further, the education professionals suggested that for educational reform to take place, a more strategic and sustainable approach is needed. That is, successful programs needed additional funding not shelving, as many good and successful programs have come and gone over the years due to the lack of financial support.

"We used to have an Indigenous Kindy and a Mobile Playgroup but the funding stopped – nothing lasts".

Stakeholders also acknowledge that education issues are intrinsically linked to health problems and cultural misunderstandings and that both education professionals and Aboriginal peoples must have high expectations of what can be achieved by attending school. Barriers still exist and need to be broken down with extensive community engagement and consultation. *"Aboriginal leadership must drive education reform"*.

The following sections are a breakdown of the interview conversations that we had with stakeholders. We have not discussed them in order of preference but by grouping them in relation to the topic. This is what the stakeholders; AIEOs, Principals, teachers and DET staff had to say.

8.3.2.3 Early Years Programs

A range of suggestions were offered to better prepare Indigenous students for school. These included culturally safe parenting programs and mobile play groups for communities. It was noted that in some towns Indigenous play groups have been closed through lack of funding sources that were previously available. Greater encouragement and support for parent involvement in Early Childhood Education (ECE) was also suggested and in many cases the need for a bus to transport students to and from school was recommended.

It was also raised that there was a lack of locally based Indigenous school resources. It was suggested that funding could be made available for the development of assorted educational resources like the Catholic Education package - *Nidja Noongar Boodjar Noonook Nyininy* (ss@ceowa.perth.catholic.edu.au).

8.3.2.4 Primary School Years

As with the Early Years, stakeholders suggested that greater parent involvement would be beneficial to improve Indigenous student achievement. A bus to and from school was also noted especially given lack of public transport and the Pilbara heat. Most stakeholders said that Aboriginal studies across the curriculum were not being widely taught in Primary schools in the Pilbara but this depended on the individual teachers or schools. Similarly very little local language is taught. They did note however that this was complex because of the number of languages spoken in the Pilbara. Other stakeholders were concerned that a lot of their time is taken up with behavior management issues and they are often called away from working on literacy and numeracy to deal with behavior management problems. It was interesting to note that in some towns many of the AIEOs were from “down south”. It was suggested by some that AIEOs could have a small discretionary budget that they could use to buy stationary, pencils etc for students.

8.3.2.5 Secondary School Issues

One of the major concerns raised was the transition from primary to secondary school. It was felt that while many Indigenous students were happy attending primary school they did not want to go on to the larger high schools. It was suggested that better transition programs be initiated so that the students can feel more comfortable with the new school system.

A big concern was also the perceived lack of awareness by teachers and schools of the impact of Lore on teenagers. It was noted that for many it was not appropriate to return to school as a student once they had undergone Lore. It was suggested that schools need to be flexible in their timetabling around Lore in the Pilbara and to accommodate high school students after Lore with appropriate respect.

One school administrator is looking at an innovative model to attend to this issue. They are developing a “Farm School” where Indigenous High School students can work with Elders and members of the community to develop culturally appropriate land management skills – whilst at the same time developing literacy, numeracy and work ready skills. The Farm School concept is being supported by a mining company in that town.

8.3.2.6 Successful and productive use of AIEOs

All participants acknowledged that AIEOs are a vital part of Indigenous Education and yet they are often found to be looking in from the outside.

The core responsibility of AIEOs, according to the Department of Education and Training (WA) Job Description Form, is:

“to provide support to Aboriginal and Torres Strait Islander students, their parents/guardians, teachers, the school and the community through their knowledge, understanding and sharing of Aboriginal and Torres Strait Islander history, language and culture.” (DET, 2002).

However, concerns were raised by some participants that many AIEOs were not being provided opportunities to do this in a sustained and productive way.

8.3.2.7 Roles and Responsibilities of AIEOs

It was suggested that greater awareness is needed among AIEOs, teachers, school administrators and the community about the specific role of AIEOs. This is different to that of Education Assistants and other support workers in schools. A suggestion is to increase awareness of all stakeholders of the current AIEO job descriptions (JDF) and current Certified Agreement (2010). This could be provided by District Office or the relevant union (e.g. United Voice). For example a Professional Development PD for AIEOs such as – *know your job and your entitlements*. Similarly it was noted that an updated version of the 2003 AIEOs manual might be timely.

“We don’t do planning”. “We need you in kindy, we need you to ring a parent.”

AIEOs suggested that they would like time to plan with teachers prior to the start of a topic or each week. This would enable them to provide cultural input and be

better prepared to support Indigenous students with whom they work. Some suggested they would like more opportunities to team teach along with the teacher. While it was acknowledged that some teachers and some schools facilitated this, it was not a widespread practice. It was also noted that very often AIEOs are working on a specific task, for example, one on one tutoring with a child, when they are asked to stop and deal with a behavior management issue or contact a parent.

“We don’t do planning”. “We need you in kindy, we need you to ring a parent.”

8.3.2.8 A Culturally Safe and Private Place and Space to do their Work

AIEOs are often required to conduct very sensitive meetings with parents or students and they need a place to do this. Some AIEOs are required to work in open plan areas where students, teachers and parents often pass through. Some are not provided keys to storerooms or classrooms and are required to ask for these. While some AIEOs have a designated room, this is not widespread.

“We don’t even have a key”

8.3.2.9 Cultural Competence Training

It was suggested that AIEOs should conduct local cultural competence training for teachers on a regular basis. This should not be limited to a one off prior to the commencement of the year. Some teachers who have a late appointment miss this and often teachers are overwhelmed at the beginning of the year. A written document could be available for staff outlining key cultural issues. Interestingly many AIEOs working in the Pilbara are from “out of town” and some form of local cultural awareness would be useful. It was also suggested that the opportunity for new teachers and AIEOs to spend time in communities would be beneficial.

8.3.2.10 A Discretionary Budget

AIEOs also suggested they need a small discretionary budget to buy stationary, pencils, pencil cases that they can keep in the classroom for children who need them.

8.3.2.11 School and Home Connections

AIEOs recommended that schools needed to be more open and listen to parents and communities. AIEOs can play an important role in helping schools understand what is really going on in the community.

“It seems many schools are not understanding or just not ‘hearing’. Some schools are only interested in uniforms and attendance so they can tick a box. There is more to education than this.”

“Wadjalas not catering for Aboriginal needs – it’s still not done! Same as my school. Same as my mums! They don’t want to bring black fella ways into their school.”

Having established connections between home and schools allows for Aboriginal peoples to feel a sense of belonging to the school given the long history of generational exclusion and marginalisation. Without these connections, it is possible that Aboriginal peoples will feel that schools are not for them and that Aboriginal ways of doing and knowing will not be respected.

8.3.2.12 Career Paths and Up Skilling

AIEOs at the meetings were very keen to develop their skills. For some this meant having greater access to Professional Development (PD) opportunities. For others it meant being able to attain a Certificate III or IV qualification. Others showed interest in being able to move beyond the current Level 3 AIEO and others considered the possibility of becoming teachers.

While the opportunity to gain a Certificate III or IV was raised there was an acknowledgement that there was little financial incentive to do so. A great deal of interest was shown in accessing PD on a range of topics. Specifically noted were workshops related to identifying health issues (e.g. sniffing, hearing, hygiene, eyesight, mental health); supporting literacy and numeracy; ICT skills, the Australian Curriculum and effective planning. Learning how to access and apply for grants was also raised as a useful PD for AIEOs.

NB A list of PD is available on the Institute for Professional Learning website: <http://www.det.wa.edu.au/professionallearning/detcms/navigation/look-for-professional-learning/aieo--ea-and-other-student-support-staff/>

Providing funding for block release would be required to support this. The issue of a shortage of relief AIEOs to cover such block releases, however, was noted by one Principal.

Some suggested that they would benefit from accessing the Professional Development that teachers get, for example, on the first two “pupil free days” of the school year. It was noted that in some cases AIEOs have been required to clean up the school or prepare classrooms rather than access this PD. The possibility of establishing School Based Traineeships for AIEOs was also made as a suggestion which might encourage teenagers to work in Early Childhood Centres or primary schools.

AIEOs can provide an enormous amount of advice and direction to schools. However, the extent to which AIEOs are respected and valued clearly varies from school to school. However it is still the case that Indigenous ways of knowing, doing and learning are not widely or deeply understood or respected and therefore not generally implemented at the school level. In many cases it would appear that these issues continue *“to be paid lip service to”*.

8.3.2.13 Aboriginal Perspectives, Cultural Awareness, Professional Development and Languages in Schools

Most stakeholders agreed that it was very important to include Aboriginal perspectives across the curriculum but this was neither consistent nor widespread. Often it depended on the individual teacher or principal and that it really was up to the department to tell them (schools) to do this if it is policy. There is a belief that the curriculum is already overcrowded and adding Aboriginal perspectives will mean more work. There was also a question posed “How can teachers’ teach what they don’t know?” The issue of Aboriginal perspectives being taught within schools is an issue that has been raised for well over 40 years. Moreover there is an opportunity for Indigenous resources such as the *Nidja Noongar Boodjar Noonook Nyininy* educational resource package from Catholic Education (ss@ceowa.perth.catholic.edu.au) to be produced.

As the Department of Education has now limited its provision of professional development to schools across the state, one principal indicated they are turning

to Queensland educators for professional development for their teachers. During both phases of the project it was clearly indicated that there is also a need to professionally develop schools and teachers' understanding of *Country* when teaching and living in the Pilbara. This is an area of opportunity that Aboriginal people from the Gumala Aboriginal Corporation should facilitate.

8.3.2.14 Careers and Career Guidance for Indigenous Students and Adults

“Just because I live in the Pilbara doesn’t mean to say I want to be a miner.”

“These kids want to go to University”

“The only thing our people are learning is mining.”

There was a great deal of discussion on the topic of career advice and careers for Indigenous students and adults in the Pilbara. There were concerns that career advice in schools was not catering adequately for Indigenous kids. It was suggested that career guidance should start earlier in Primary school and that a range of options be offered for Indigenous students –“... *these should be broader than mining and sport*”. The issue was also raised about how Indigenous adults access career advice, whether it was up skilling from their current qualification or just starting a qualification. From the conversations, it is clear, that there needs to be much more information available about University courses, pathways, scholarships and general careers. More Indigenous professionals like doctors and lawyers could act as role models in the Pilbara.

It was also noted that while there are School Based Traineeships and TAFE courses available in bigger towns these often don't lead to jobs which raises the idea that perhaps there is an avenue for Gumala to collaborate with other training providers and work with industry to provide internships with real work prospects.

The issue of the competition for and sometime unsuitability of mining apprenticeships and traineeships for local Indigenous Pilbara kids was also raised. It was noted that the conditions from Native Title were supposed to be for local Aboriginal people. It was recommended that the big mining companies should liaise with local high schools to identify students seeking employment in the mining industry.

Further, educational professionals indicated that employment networks could be formulated to connect students to other industries other than mining. For example mining companies have a vast number of suppliers and it is feasible to collaborate through the Indigenous employment strategies of these supply companies to undertake a new Indigenous employment initiative.

8.3.2.15 Innovative Programs to Assist in Engaging Aboriginal Students

The issue of transience was also a concern that needs innovative solutions. Transience is the purposeful and intentional absence from school due to cultural, funeral and family obligations. Three schools in the Pilbara are beginning to look at ways that they can minimize the impact that transience has on student learning. This might be through an online learning system where students can continue their learning regardless of the school they are attending. Similarly the need for a differentiated curriculum was emphasised.

Regular movement from one town to the next is a common occurrence for many Indigenous families in the Pilbara. While some high schools are beginning to investigate ways to accommodate this it is still a major concern. Some stakeholders noted for example that although some classes were set up for transient students, they were not assessed and did not receive a report or feedback. Discussions raised the possibility of transient students being able to have a login and pin number and work remotely or at a school so they could continue with their studies.

A school ready house where students can have breakfast and a shower before school was considered a success in the past but it was reported that it had recently been taken over by the Polly Farmer Foundation, and was now much stricter and was no longer used by many students. It was suggested that some students found the 'stricter' guidelines too rigid and inflexible for their needs. Issues of safety were raised in some communities and the need for a safe house or shelter offered as a solution. It was suggested that a community bus would assist with truancy and a truancy officer from the community based at schools.

It was suggested that 'Excursions to Country' might help teenagers connect better with their community.

8.3.2.16 Girl's Education

"Boys get Clontarf – Girls get nothing"

It was noted in quite a few meetings that a lot of funding and programs were available for Indigenous boys but much less for girls. While there are some programs for girls these need to be expanded and diversified beyond sport. Indigenous female professional role models for example and opportunities for girls to try a range of employment options were recommended on numerous occasions.

8.3.2.17 Transport

Many stakeholders raised the issue of transport and how difficult it is getting to school. Transport issues do not just exist for 'out of towners' or remote communities they exist also in towns. Given that there is limited public transport throughout the Pilbara and given the heat extremities in the region issues surrounding transport need further exploration.

8.3.2.18 Suggested Programs

A number of ideas for funded programs were suggested at the meetings by various stakeholders. These included

- Clontarf type programs for girls
- Returning Young Mothers to School Program
- Ready for School house
- Truancy Patrol
- Transience
- School Ready House
- Homework Centre held at the school ready house
- Youth worker / education officer
- Programs for alcohol, drugs and sex education
- Breakfast Club - should be evaluated to ascertain what difference it makes

- High Achievers - Establishment of an Extension and Challenge Program for Indigenous Students

One concern raised was that there seems to be no consistency to funding or programs and no long term strategies particularly for the Pilbara in relation to education programs. A clear message was that schools need to be more open with parents and communities and become actively involved. They really need to understand what is going on in communities and this is a core role for AIEOs. It should also be noted that the Pilbara District Regional Office is undertaking an extensive literature review of what programs have been previously delivered in the Roebourne area so that they have an informed knowledge when working alongside the Roebourne community or communities.

8.3.2.19 A Cause for Concern

Lastly, but by no means least, the following issues surrounding AIEOs are really the concern of the Department of Education. It would however, be careless not to make mention of them in our discussions as all stakeholders were vocal when speaking of the wages, housing and lack of permanency of AIEOs.

“Wages are disgusting”

The very low wages of AIEOs was also noted on nearly every occasion that we spoke with stakeholders. This has been highlighted in recent campaigns launched by the union United Voice to draw attention to the low pay rates for all Education Support Workers (<http://unitedvoice.org.au/news/spot-the-difference-a-call-for-fairness>). Negotiations are currently underway for improved pay and conditions through the 2012 Enterprise Bargaining Agreement.

“Permanency”

Some concerns were expressed over the difficulties associated with gaining permanency which would provide more secure employment and enable AIEOs better access to superannuation and loans.

Housing was a major concern raised time and time again by stakeholders. New means tested terms and conditions meant that AIEOs earning above a certain amount were no longer able to access Government supported housing. This is of

particular concern in the Pilbara mining towns where rent can be around \$2000 a week. While new land is being developed for housing it is all private or company owned.

“Can’t do private it’s too expensive!”

The issue of housing provision and the cost of private rentals was also echoed by a key stakeholder not just AIEOs. For AIEOs who have state supported housing, there is a constant need to keep abreast of their working hours. If they earn too much then there is the real possibility of losing their public subsidised accommodation and yet AIEOs do not earn enough to have the option of affording private rents. It is a catch twenty two situation, Aboriginal support workers are desperately needed out in our schools and yet there is no accommodation provided.

8.4 Discussion

8.4.1 Discussion of the Health Component

8.4.1.1 Health Professionals’ Prioritisation of Indigenous Health Issues in the Pilbara

The health professionals we interviewed identified chronic disease as the most pressing health issue among Indigenous people in the Pilbara. This accord with several recent previous studies (Begg et al. 2007; Australian Bureau of Statistics 2010; Thomson et al. 2012). These studies have demonstrated that chronic disease contributes more to the burden of ill health than any other health condition experienced by Indigenous people (Begg et al. 2007; Australian Bureau of Statistics 2010; Thomson et al. 2012). The types of chronic disease the health professionals perceived as the most burdensome among Indigenous people in the Pilbara were all among the most common chronic diseases experienced by Indigenous people across Australia (Thomson et al. 2012). Indeed, in the Pilbara Health Profile report recently released in April 2012, these chronic diseases were identified as priority areas not only among Indigenous people but also for non-Indigenous people (WACHS Planning Team 2012). To reiterate, these chronic diseases were heart disease, diabetes, obesity, and malnutrition, ear infections, and substance abuse. The only chronic disease highly prevalent among

Indigenous people but not commonly detailed by the health professionals in this study was respiratory disease (Thomson et al. 2012).

Most chronic diseases highlighted as priority areas by the health professionals we interviewed were mainly seen as arising from a combination of inadequate nutrition and poor diet, which accords with previous research (Australian Indigenous Healthinfonet 2012; WACHS Planning Team 2012). This combination is commonly referred to as an issue of food security. In the short term, food insecurity may lead to hunger and anxiety about insufficient food; lack of energy; the experience of social exclusion; family life disruption; and anxiety over the loss of custody of children due to the ability to provide adequate food (Booth & Smith 2001; Browne, Laurence and Thorpe 2009). In the long term, food insecurity may result in low birth weight infants and, to reiterate, the development of many chronic diseases including becoming overweight or obese. Although it may appear incongruous that food insecurity leads to unhealthy weight gain, it results from lowest cost food options having high fat, salt and sugar content, whereas healthy food such as lean meats, whole grains and fresh vegetables and fruits cost more (Drewnowski & Spencer 2004; Laurence 2009).

Food security issues among Indigenous people are linked to numerous social and cultural determinants. These determinants include: financial constraints which may at times lead to a reliance on emergency food relief; lack of knowledge about healthy food, budgeting, and cooking skills; adoption of healthy diet inhibited by busy lifestyles, large households, or mixed food preferences within the household; inaccessibility of nutritious food often compounded by a lack of transport; and an inability to regularly prepare healthy food due to transient lifestyles, and family and cultural obligations (National Health and Medical Research Council 2000; Palermo & Mitchell 2002; Queensland Health 2006). Food security issues among Indigenous people have been addressed to varying degrees through the provision of numerous programs, which need to be tailored to meet the needs of local communities (Laurence and Thorpe 2009).

The health professionals we interviewed attributed substance abuse among Indigenous people in the Pilbara to numerous socio-economic factors. Numerous studies have also discussed these factors, which include dispossession, social

exclusion, loss of traditional roles, lack of employment, low income, grief, and role modelling especially peer pressure (Marmot 2005; Catto and Thomson 2008; Wilson et al. 2010). The diverse range of factors that contribute to substance abuse clearly necessitates the use of a broad approach in order to effectively manage substance abuse among Indigenous people. Such an approach includes: developing the ability of individuals, families, and communities current and future substance abuse issues; government services working in conjunction with community-controlled services to minimise drug harm; increasing the accessibility of health and wellbeing services that address substance abuse; and incorporating holistic approaches from prevention through to treatment and continuing accessible local care (Catto and Thomson 2008).

Assessments of substance abuse programs developed for non-Indigenous people have invariably shown that they are ineffective among Indigenous people, especially as they do not adequately address the particular issues that contribute to substance abuse among Indigenous people (Strempele et al. 2003; d'Abbs 2008; Nichols 2010). The ineffectiveness of these programs has been attributed to a number of factors, including: lack of training in life skills required for self-determination; program cultural style and insufficient staffing expertise; lack of program setting within "Aboriginal lifestyle" environments; non-local service provision which owes in part to difficulties in recruiting staff to remote locations; under-resourced programs; and lack of collaboration between healthcare agencies, vocational trainers, and Elders (Strempele et al. 2003; Gray et al. 2009; Nichols 2010). In addition, the post-program effect is often negated by the absence of strategies that fail to address the everyday reality of many Aboriginal people (Brady 1998; Burns et al. 1995; Gray et al. 2000). For instance, strong kinship relations promote group conformity, which may make it difficult to refrain from substance use in the presence of family or group members who are using substances. In the forthcoming section which discusses health promotion initiatives, we will detail several recent substance programs that have been developed to meet the particular needs of Indigenous people.

The last chronic disease that was highlighted by the health professionals we interviewed was chronic ear infections. This was consistent with previous research undertaken in Western Australia which found that one in five Indigenous

children aged 0-11 experienced recurrent ear infections (Zubrick et al. 2004). Recurrent ear infections are a significant health issue as they may result in ear or hearing problems. These problems in turn lead to communication and learning difficulties, which results in a cycle of unemployment and crime (National Aboriginal Community Controlled Health Organisation 2011). Across Australia, about one in twelve Indigenous adults in remote areas experience some form of ear or hearing problem, and slightly less than one in ten report complete or partial deafness (Australian Bureau of Statistics 2006).

The main factor responsible for chronic ear infections is overcrowded living conditions which enhance the spread of infectious bacteria (National Aboriginal Community Controlled Health Organisation 2011). Other factors include: the development of an ear infection at an early age, which then promotes recurrent ear infections; inadequate detection of ear infections owing to often asymptomatic nature of ear infections; poor nutritional status; unhygienic food preparation and living conditions; lack of personal hygiene; and passive smoking (National Aboriginal Community Controlled Health Organisation 2011). Given the diverse factors that contribute to chronic ear infections, a broad approach is required to prevent the occurrence of chronic ear infections.

8.4.1.2 Generational Cycle Leading to Poor Health

It has been internationally recognised that a focus on early childhood health is required to break the cycle of poor health outcomes among Indigenous people across generations. The health professionals we interviewed linked the poor health of Indigenous people in the Pilbara to an intergenerational cycle fuelled by a lack of adult role models and insufficient education about maintaining good health. Previous Western Australian research suggests that these two factors contribute to an interwoven cycle of poor health outcomes throughout the generations, but there are numerous other significant factors that also perpetuate it (Blair, Zubrick & Cox 2005).

To address the generational cycle of poor health outcomes requires a comprehensive approach which includes; increasing income levels; improving levels of educational attainment; addressing the impact of colonisation on Indigenous people, in both a material and psychological sense; reducing

overcrowding in housing; lowering rates of teenage pregnancies; low levels of educational schooling attainment; improving maternal health and wellbeing; lowering the rate of premature and low birthweight infants; reducing substance abuse, particularly among pregnant women; reducing the incidence of infectious disease; improving knowledge about healthy and nutritious food; and increasing the number of episodes of healthcare provided to Indigenous adults and children (Zubrick et al. 2004). Some of the factors in this comprehensive approach, like improving income and educational attainment, appear to be beyond the scope of healthcare programs. However, it is often the case that Indigenous health programs need to address underlying social, cultural, and economic factors in order to affect sustained improvement in health outcomes (Zubrick et al. 2004). An example of one such program is detailed in the next section.

8.4.1.3 Educational Initiatives to Improve the Health of Indigenous people in the Pilbara

From the interviews we held with health professionals, a number of areas arose that should be targeted by health promotion initiatives. These areas were diet, exercise, hygiene, pregnancy health, and substance abuse. As the material in the previous section demonstrated, most of these areas are integral to breaking the intergenerational cycle of poor health among Indigenous people, and hence should be addressed through health promotion initiatives. In this section, we will discuss a substance abuse program that illustrates how the involvement of the local communities led to a culturally appropriate program that addressed almost all of the health promotion initiatives identified as priority areas by the health professionals we interviewed.

The following substance abuse program was developed in the Derby area of the West Kimberley region in conjunction with community and cultural leaders, community groups, and a diverse section of general community members (Nicholls 2010). The resultant model for the substance abuse program was named the “Derby Aboriginal Bush Camp and Bush College”. It consisted of three main interventional aspects: strengthening and maintenance of Aboriginal identity and cultural knowledge; promotion of vocational and life skills; and providing a sense of hope for the future. Although people of any age were eligible, the

program was targeted at at-risk youth who would be encouraged to attend before substance abuse issues arose.

The Bush College was located four hours by car from the Derby regional centre, situated in remote country but within reach of emergency assistance. Its location contained significant local paintings and ample amounts of bush tucker and bush medicine. The remoteness of the Bush College was also advantageous as it discouraged residents from walking to town. The camps are alcohol and drug free.

The program was almost entirely operated and managed by Aboriginal people, which was beneficial as it was viewed by residents as an example of self-determination. Its construction retained a bush atmosphere and provided an informal, inclusive family setting. The living units differed in size in order to accommodate individuals, family and peer groups, and the attendant Elders, staff and vocational trainers.

The program consists of three main interventional components. The first component involved the residents spending a quiet first week eating regularly, resting, and walking through the surrounding open country. Elders, staff, and longer-term residents then progressively introduced new residents to the programs cultural teaching element, in a formal manner each morning and informally throughout each day. As appropriate, Elders would take residents back to country for specific cultural teaching, which may have included; bush skills and knowledge; “grandmother teaching” for young women; language stories; Aboriginal history since colonisation; “Aboriginal style counselling” regarding dispossession, anger, substance misuse, family violence and the experience of hopelessness; kin and skin group knowledge; dances; songs; paintings; and excursions into country.

The second component was undertaken in tandem with the first component. It consisted of accredited vocational training programs which mainly focused on practical skills related to cattle stations, building, trades, land care, tourism, ranger, horticultural employment. Other vocational courses provided office work, sewing, and fabric printing training. In addition, life skill training was offered, including money management and budgeting; banking and numeracy; reading

and writing; health education; house management; substance abuse management; family violence; and job applications.

The third component focused on developing post-program skills and ongoing support. As support in remote communities mainly arises from family, Elders, and peers, people who were potential sources of post-program support were invited to stay with residents for all or part of the program. This strategy sought to strengthen the relationship between residents and their family, Elders and supportive peers. Over the course of the program, post-program goals and strategies to maintain them were discussed, and deficiencies in home-environment support were identified along with support strategies. Vocational support strategies included connections with meaningful employment relevant to the home community and skills gained at the Bush College; vocational trainers and Centrelink staff attending on-site; and providing pathways into community development employment programs. Other strategies included: post-program home visits by community-based health workers; connections into sporting, recreational and activity groups which residents expressed an interest in while at the Bush College; and the establishment of a “dry-house”, which also served as temporary accommodation post-program for residents without supportive relatives.

The establishment of the Bush College cost about \$1.5 million in total. Recurrent costs were in the order of \$350,000. These costs were offset to some extent through residents contributing seventy five per cent of community development employment program/social security entitlements.

In summary, while the main focus of the Bush College was to prevent substance abuse, its program went well beyond addressing the symptoms of substance abuse in developing healthy, resilient individuals with career pathways. Importantly, the Bush College was open to anyone, including those without substance issues, and sought to attend to the underlying causes of unhealthy behaviour before problems became ingrained. The holistic nature of its program addressed all of the health areas prioritised by the health professionals we interviewed. In addition, the Bush College’s delivery of the program accorded with the suggestions offered by the health professionals we interviewed about the

ways in which health promotion activities could be most effectively implemented. The suggestions included: participation of local members in the development of programs to ensure that they were culturally sensitive; involvement of Elders, trusted community members, and local Aboriginal health workers to promote trust and increase adherence to the program; and localised provision of the program to enhance accessibility. In light of the concordance between the health professionals' proposals about health promotion initiatives and the Bush College's content and delivery of its program, it may be worthwhile to consider implementing a similar model in the Pilbara. In particular we commend the concept to Gumala.

Clearly, implementation of the Bush College in the Pilbara presents significant challenges and may be unfeasible, not least because of the significant cost associated with one Bush College compounded by the possibility of needing to construct individual Bush Colleges for each language group in their respective country. Nonetheless, the manner in which the College's programs were developed and provided, offers a useful guide to develop smaller health promotion initiatives that target particular health issues. Such initiatives are detailed in the subsequent section which presents the findings of the Phase IIB interviews with Gumala members, but of note is the suggestion of a mobile health and education trailer which could be used for this purpose.

It should be highlighted that the Bush College was designed to address the needs of adults. However, a substantial body of international evidence has consistently demonstrated that health promotion initiatives must be introduced in early childhood to break the intergenerational cycle of poor Indigenous health outcomes. This needs to start with maternal health as it contributes significantly to better health in early childhood among young Indigenous children. Evidence suggests that culturally sensitive healthcare results in Indigenous women seeking earlier and more frequent maternal health checks, in addition to experiencing better overall maternal outcomes (Reibel and Walker 2010). Post-birth programs also contribute importantly to better health for Indigenous women and their children, in particular family home visiting programs have been shown to especially effective (Sivak, Arney & Lewig 2008).

Information about potentially preventable hospitalisations among Indigenous children aged 0-5 years highlights the areas that should be targeted by early childhood health promotion initiatives. The most recent available information shows that in 2008-2009 the most common potentially preventable hospitalisations among Indigenous children aged 0-5 years were: infectious and parasite diseases; malnutrition; ear diseases; respiratory diseases; and dental diseases (Australian Institute of Health and Welfare 2010). All of these diseases, excluding dental disease, are linked to unhygienic living conditions, which will be discussed in the following section which discusses the adequacy of housing. Malnutrition clearly results from an inadequate or inappropriate diet. WA Country Health Service provides early childhood nutrition screening and education about nutrition. Whether the children of Gumala members experience malnutrition is unclear. Hence, it may be worthwhile for Gumala Aboriginal Corporation to consider consulting with WA Country Health Service to identify if there is problem, and if so, how to best address the issue on a local level. Dental diseases need to be addressed through a combination of improved diet, dental hygiene and an increase in free and affordable dental services. Issues around improving specialist services, including dental care, will be discussed in the following section about the continuity of healthcare in the Pilbara.

8.4.5 Availability of Healthy Food for Indigenous Communities in the Pilbara

Throughout this report we have discussed on numerous instances how either inadequate nutrition or unhealthy food contributes to several of the most burdensome diseases experienced by Indigenous people. Clearly, these problems will remain unaddressed unless nutritious food is readily available. One of the most common themes that arose from the interviews with the health professionals was the unavailability of healthy food in remote stores. Indeed, the lack of healthy food in remote areas has been a longstanding issue throughout remote Australia (Council of Australian Governments 2009). In a Western Australian survey of remote Indigenous communities conducted during 2004, about one in five respondents did not have regular access to fruit and vegetables, and more than four in five had to travel over 100 kilometers to obtain fresh fruit and vegetables (Environmental Health Needs Coordinating Committee 2005). Further, even when healthy food is available it is often expensive and frequently

costs more than it would in regional centres, which makes it difficult for Indigenous people to afford adequate amounts especially as they typically have low incomes (Council of Australian Governments 2009).

In recognition of the longstanding food security issues encountered by Indigenous people, the Council of Australian Governments in 2009 called for the development of National Strategy for Remote Food Security in Indigenous Communities (Council of Australian Governments 2009). This strategy consists of the following five actions:

- development of new standards to ensure all services and products, particularly healthy foods, are safe, reliable, and of an acceptable quality;
- development of a mechanism to ensure that stores in remote communities meet minimum standards and encourage stores to adopt higher standards;
- improving store sustainability and quality through adoption of higher standards of governance and accountability, achieved by moving stores that are currently incorporated under State and Territory Association laws to incorporation under the Corporations Aboriginal Torres Strait Islander Act;
- development of a National Health Eating Action Plan for remote Indigenous communities which; examines influences on purchasing and consumption decisions in order to identify ways to increase consumption of healthy foods; in-store promotion of good quality and affordable food, and restriction of energy dense and poor nutrient quality food; developing food, nutrition, and cooking knowledge, and consideration of the benefits arising from locally based food production; and a healthy eating campaign, focused on children with a emphasis on nutrition education at school;
- development of a National Workforce Action Plan which: increases the nutrition workforce, and fosters and supports the capacity of the local Indigenous workforce to promote healthy eating; and developing, training, and supporting a sustainable remote store workforce, including in-store support staff.

In the context of this study, the last two actions in the National Strategy appear to be the most important to improve food quality in the Pilbara. This owes to the health professionals we interviewed attributing the lack of good quality food to local communities having no input about foods stocked in remote stores, and store owners predominantly stocking energy dense and nutrient poor foods with high profit margins. Unfortunately, we are unable to determine whether any progress has been made on either issue for two reasons. First, the National Health Eating Action Plan, which was intended to include strategies for increasing in-store healthy food and restricting unhealthy food, has yet to be released. Second, the National Workforce Action Plan contains no detail about directions for improving the workforce in remote stores (Health Workforce Australia 2011). At present, from the information available to us, it does not appear as though any of the Aboriginal Community Controlled Health Services in the Pilbara have any programs to improve the provision of quality food in stores. The WA Country Health Service is taking some action to improve food quality by developing community gardens, and promoting education about healthy food choices through the labeling of stock in stores. However, these actions are clearly insufficient to improve the quality of food in remote stores in the Pilbara and a more comprehensive strategy needs to be implemented. In particular, it may be beneficial for Gumala Aboriginal Corporation to hold discussions with WA Country Health Service about whether strategies are underway to implement the National Strategy for Remote Food Security in Indigenous Communities.

8.4.1.5 Adequacy of Housing for Indigenous People in the Pilbara

The health professionals we interviewed reported that a lack of adequate housing, especially unmaintained housing, as a priority issue as it resulted in overcrowding in habitable housing, which in turn led to unhygienic conditions and the promotion of infectious diseases. As detailed several times previously in this report, overcrowding in remote Indigenous communities and the attendant increase in infectious diseases has been well documented in the literature across an extensive period.

We note that Gumala Aboriginal Corporation is moving towards addressing housing issues for its members by providing affordable rental accommodation

through committing to construct 150 homes by 2016. As part of the commitment, Gumala Aboriginal Corporation is currently “identifying reputable firms to provide their goods and services at fair rates”. We suggest Gumala members could be more widely served if the involvement of members was incorporated in the contracts for these services. For instance, Gumala Aboriginal Corporation in awarding the contracts could include as a condition work skill training and employment of its members. As an example, the Thamarrurr Development Corporation ensured that as part of a Government housing assistance package about a third of the houses were constructed by the local community (Rothwell 2012). It resulted in a skilled local workforce which has since constructed the infrastructure for several commercial projects. Importantly, obtaining the funds through the housing assistance package rested on Thamarrurr Development Corporation’s keen awareness of what the Government had offered, as demonstrated through it being the only Indigenous organisation to apply for the funding (Rothwell 2012). This points to the importance of Indigenous organisations gaining a full appreciation of the availability of Government funding.

8.4.1.6 Continuity of Healthcare in the Pilbara

One of the main barriers to providing continuous healthcare in the Pilbara which was identified by the health professionals we interviewed as the highly transient nature of the health workforce. WA Country Health Service has also highlighted retaining staff as integral to improving the quality of healthcare and since 2010 has introduced a number of measures to retain staff for longer periods (WACHS Planning Team 2012). These measures include: providing staff accommodation; augmenting the capacity of Aboriginal health initiatives through attracting and retaining leadership roles for Aboriginal people; introduce employment arrangements for flexible service provision such as mobile health teams; and promote a workforce culture and environment that facilitates innovation and continuous improvement (WACHS Planning Team 2012).

The health professionals we interviewed indicated that the two main reasons for the lack of continuity in healthcare were the higher salaries in the mining sector luring staff away from their positions, and staff leaving due to frustration with a perceived lack of improvement in Indigenous’ peoples’ health. In regard to the former reason, WA Country Health Service has been endeavouring to address

this issue through subsidising staff accommodation and higher loadings on doctors' salaries (Indigenous Allied Health Australia 2011). With the latter reason, the burnout health professionals experience when working in Indigenous communities has been recognised across most health professions including Aboriginal Health Workers (Speech Pathology Association of Australia 2007; Australian College of Rural and Remote Medicine 2010; Ridoutt and Pilbeam 2010; Indigenous Allied Health Australia 2011; Katzenellenbogen et al. 2011). To address this issue, professional health organisations provide training and guidelines about early identification of stress, coping strategies, and maintaining realistic goals and boundaries. In addition, the WA Country Health Service has an Employee Assistance Program which provides free counselling for work based and personal problems (WA Country Health Service 2010).

The second main barrier to the continuity of healthcare was the lack of accurate medical records due to individuals consulting with different doctors in different areas, and little sharing of information between different health services. As noted in the discussion of Phase I, the implementation of the Federal Government's e-health initiative provides a means to address the issues surrounding the lack of accurate medical records in the Pilbara. This has been demonstrated in the Northern Territory where the piloting of e-health system has resulted in 95% of health providers sharing information and subsequent "major benefits in the delivery of coordinated health care across the Territory" (eHealth NT 2010). It has been suggested that the rollout of the e-health system in remote Western Australian areas will be based on the Northern Territory model and it is envisaged that similar benefits in the delivery of health services will attend its implementation.

Another barrier to the continuity of healthcare in the Pilbara was seen as insufficient specialist services. The lack of specialist services has been consistently identified in various WA Country Health Service planning reports and the latest report suggests that it will worsen with the expected sharp increase in Fly-In-Fly-Out workers in the future. Although there has been a small increase in medical specialist workforce in the last two years, it has not been in line with demand and the Pilbara Health Care Profile released in April 2012 does not detail any further increases in the specialist workforce. Moreover, the Pilbara Regional

Plan recognises the WA Government's current healthcare plan for the region is only a "rescue package" and that additional initiatives are required to meet the local communities healthcare service needs (Regional Development Australia 2010). In light of this lack of current services, the need for the proposed mobile health trailer proposed in this project in addressing the healthcare issues of remote Indigenous communities is clearly evident. Such a trailer could be tested as a model.

The final barrier which was commonly mentioned by the health professionals interviewed which impeded continuity of healthcare in the Pilbara was inadequate communication between Indigenous and non-Indigenous health professionals. This communication issue has also been recognised by the WA Country Health Service in some areas of the Pilbara (WA Country Health Service 2010). The problems that arise from the lack of communication have been identified as confusion about medical care plans for Aboriginal patients and a lack of clarity about the roles of health professionals in caring for Aboriginal patients. In line with recommendations offered by the health professionals we interviewed, WA Country Health Service has committed to collaborating more closely with Aboriginal Health Workers (WA Country Health Service 2010). However, this commitment was made in 2010 and communication problems clearly still exist, which suggests further effort is required to improve the relationship between the WA Country Health Service and Aboriginal Health Workers (WA Country Health Service 2010).

8.4.2 Discussion of the Education Component

The education professionals that we interviewed identified many areas of need in education for Indigenous people of the Pilbara. There was a very clear indication by all stakeholders that educational issues are complex and intergenerational. It was also highlighted that to close the gap in education for Aboriginal peoples will require a sustained and committed approach to both the funding and the delivery of programs by state and federal governments as well as educators. Moreover, the areas of need highlighted in this discussion are early years programs; Indigenous educational resources; Aboriginals studies and perspectives in school curricula; literacy and numeracy; transition from primary to secondary school; cultural awareness programs for education professionals; up skilling and more

purposeful utilisation of Aboriginal Islander Education officers (AIEOs); school/home connections; transience; career pathways and career guidance; innovative and sustainable programs; and transport. Importantly, these areas of need that were highlighted by the education professionals have been nationally recognised and are the main focus and priority areas for the Commonwealth Ministerial Council on Education, Employment, Training and Youth Affairs (MCCEETYA) taskforce (MEECCTYA Taskforce on Indigenous Education, 2000) and the Prime Ministers agenda for Closing the Gap in Education for Indigenous Australians (Closing the Gap, Ministers Report, 2011). Further, the Western Australian Aboriginal Education and Training Council (WAATEC) on the whole, is addressing these highlighted areas in its six areas of priority (Western Australian Strategic Plan for Aboriginal Education and Training, 2011-2015).

Central to the issues raised by the educational professionals we interviewed is the agreement that partnerships between schools and parents need to be made to increase Indigenous students' educational outcomes (Christensen 2002; Sheldon 2003). Beresford and Gray (2006) affirm that in Australia there are 'positive educational improvements which are long term' when constructive partnerships with Aboriginal parents and communities are made. Whilst there is no 'one size fits all solution' for building such partnerships, implementing programs which assist communities and their families with their needs will lead to empowered parents. This in turn will develop effective communication with schools based on established relationships and trust. Clearly, what should not be underestimated is the impact that the building of relationships with Indigenous parents and community/s will have. Such relationships have the potential to build capacity and resources to address many of the areas highlighted by the educational professionals. Ultimately these relationships will have a profound effect on an Indigenous child's educational learning. From little things big things grow (Kelly & Carmody 1991). Our recommendations relating to the issues above are extensive and compelling (see recommendations section) and we believe that their adoption will result in meaningful changes to Indigenous people in the Pilbara and in particular Gumala members.

9.0 Phase IIB: Interviews with Gumala members

9.1 Aims / Research Question

In Phase IIB we asked Gumala members about gaps and solutions, particularly practical solutions, in Pilbara Aboriginal Health and Education as they see them.

9.2 Research Design / Methods

The design involved conducting face to face interviews or mobile phone interviews with Gumala members. A combination of open-ended and close-ended questions was used in the interviews. The questions were derived from the material obtained in Phase I.

9.2.1 Procedures

Stakeholders were Gumala members who agreed to participate. We endeavoured to include all Gumala members by inviting them to participate via:

- a) mailing letters with details obtained from an approved GAC member database with the approval of GAC itself (2011/115).
- b) public announcements at the general meetings of Gumala Investments P/L and the Gumala Aboriginal Corporation.
- c) broadcasts on Gumala radio.
- d) advertisements in local newspapers.
- e) volunteer notices distributed as part of the Phase I survey.

Ethics approval was given by Murdoch University Human Research Ethics Committee, approval number 2011/221.

Interviews were undertaken on the phone or in person at a mutually agreed time and place. The interviewers were mainly local indigenous people including Gumala members who underwent structured training. The Training module is detailed in Appendix 1. The answers in interviews were recorded manually in writing for later analysis. All interview responses were confidential.

9.2.2 Data Handling and Analysis

Quantitative results from the survey were entered into SPSS version 18 and checked for entry errors using frequency analysis. Descriptive statistics were

generated for the items with predefined response options. The open-ended questions were analysed with the use of content analysis. Content analysis may be undertaken in several different ways. In this study, the content analysis was undertaken by counting the number of times either words or phrases occurred in the written responses to the open-ended questions. The words or phrases that occurred the most times were considered to be important issues. In addition, important issues were identified by the research team through discussions about the responses to the open-ended questions, particularly as some important issues may be difficult to discuss or describe and hence occur infrequently in the responses. These important issues were then compared and similar issues were grouped together as themes.

9.3 Results

We contacted 1164 Gumala members and invited them to participate in the interviews. Of these members, 145 participated in the interviews. The characteristics of these participants are detailed below.

9.3.1 Descriptive Statistics Phase IIB

9.3.1.1 Participant Characteristics

Most respondents were members of the Bunjima language group (n=87). The remaining respondents were either from the Nyiyaparli language group (n=29), Innawonga language group (n=21), or non-defined language group (n=7). In terms of living location, respondents were almost equally divided between those who resided in the Pilbara (n=750, and those who lived elsewhere (n=69).

9.3.1.2 Access to Doctors and Medical Services

The responses for the items about access to doctors and medical services are listed in Table 9.1. There was a clear need for an increase in the number of local health professionals. Over one third of the respondents indicated there were not enough doctors' near to country (37.5%), and about one in four stated there were insufficient Aboriginal health workers (25.2%). About three quarters of the respondents said they had good transport, but travel to medical services still appeared to be an issue as almost nine in ten respondents indicated that the mobile health service would be helpful (88.4%). Of concern, in cases where the respondents had to leave country for medical treatment, less than half had

adequate accommodation (47.8%), and slightly more than half said that their family would be able to accompany them (51.4%).

Table 9.1 Access to Doctors and Health Services

	Yes (%)	No (%)	Don't Know (%)
Are there enough doctors near to country?	56.9	37.5	5.6
Are there enough Aboriginal health workers available?	70.6	25.2	4.2
Do you have good transport?	75.5	23.1	1.4
Do you have adequate accommodation if you have to leave country for medical treatment?	47.8	40.6	11.6
Are your family members able to travel with you if you have to leave country for medical treatment?	51.4	31.0	17.6
Is the proposed mobile health clinic a good idea?	88.4	2.9	8.7

Access to renal dialysis in country was mentioned repetitively. Renal dialysis is expensive, complex and health labour intensive. It is not without risks to patients. However, serious consideration should be given to a Unit in Tom Price at the local hospital.

9.3.1.3 Funding

Less than half of the respondents were able to afford medical treatment (44.1%), but Gumala Aboriginal Corporation assisted with the payment of medical services in the majority of cases (79.7%). Although most respondents had no problems with Gumala Aboriginal Corporation's handling of payments for medical services, a substantial minority thought the process could be easier (21.1%). Table 9.2 lists the responses for the items about funding.

Table 9.2 Funding

	Yes(%)	No(%)	Don't Know(%)
Are you able to pay for medical treatment	44.1	53.8	2.1
Does Gumala help you with paying for medical treatment	79.7	11.2	9.1
If Gumala does help you, are the payments made in a smooth and easy way	71.4	21.1	7.5

9.3.1.4 Health Promotion Initiatives

The respondents expressed a keen interest in health promotion initiatives, as evidenced by over nine in ten indicating that Gumala Aboriginal Corporation should organise health promotion initiatives in all listed topics (Table 9.3). An overwhelming majority of the respondents thought that health promotion initiatives should be delivered through camps in country, workshops, and online information (Table 9.4).

Table 9.3 Health Promotion Topics

What health promotion topics should Gumala include and who should Gumala target? Examples Follow.	Yes (%)	No (%)	Don't Know (%)
Elders	97.9	1.4	0.7
Mothers	95.7	2.1	2.1
Men's Health	92.7	1.5	5.8
Mental Health	92.8	1.4	5.8
Sexual Education Youth	95.0	2.8	2.2
Diet	96.4	1.4	2.2

Table 9.4 Health Promotion Delivery

Where and how should health education activities be delivered?	Yes (%)	No (%)	Don't Know (%)
Camps	88.5	4.6	6.9
Workshops	94.7	3.8	1.5
Online Information	96.2	2.3	1.5

9.3.1.5 Self-Empowerment through Taking Responsibility for Health

As the material in Table 9.5 demonstrates, an overwhelming majority of the respondents endorsed a broad holistic approach to assuming responsibility for their own and familie's health.

Table 9.5 Self-Empowerment

What do you think members could do to promote their own health and the health of their family?	Yes(%)	No(%)	Don't Know(%)
Better Eating	98.6	0.7	0.7
Sports	97.8	0.8	1.4
Nutrition	98.5	0.8	0.7
Jobs	98.5	0.8	0.7
Bush Medicine	97.8	1.5	0.7
Culture	96.4	2.2	1.4
Involving Elders	97.8	1.5	0.7

9.3.1.6 Adequacy of Education Services

The respondents in general seemed to be satisfied with education services, as demonstrated by about three quarters agreeing that all of the items listed in Table 9.6 were adequate.

Table 9.6 Adequacy of Education Services

Are the following services adequate	Yes (%)	No (%)	Don't Know (%)
Day Care	77.9	15.4	6.7
Mentor	76.3	14.8	8.9
Literacy	78.1	16.8	5.1
Numeracy	79.5	15.4	5.1
Indigenous Teachers	78.8	16.8	4.4
Language Programs	74.6	20.3	5.1
Financial	74.1	19.4	6.5
Transport	73.9	19.6	6.5
Scholarships	74.8	20.1	5.0
Internet	73.5	16.9	9.6

9.3.8 Education Support

The respondents clearly valued ongoing education support; specifically the vast majority thought it was necessary to have a career advisor (90.4%), career advice (82.4%), traineeship information (91.2%), and pathway information (88.3%). The responses to items about education support are listed in Table 9.7

Table 9.7 Education Support

Post-schooling, is it necessary to have:	Yes (%)	No (%)	Don't Know (%)
Career Advice	82.4	10.3	7.3
Career Advisor	90.4	3.7	5.9
Traineeship Information	91.2	4.4	4.4
Pathway Information	88.3	5.0	6.7
Scholarship Information	70.8	17.5	11.7

9.3.2 Thematic Analysis of the Health Component

9.3.2.1 Access

9.3.2.2.2 Access to Medical Doctors and Aboriginal Health Workers

Many Gumala members said that there were not enough doctors and nurses near country. This was also highlighted by “*more doctors, more health workers*” being listed as one of the most common responses to the question which asked the members to suggest three things to improve health. Notably, when we asked health professionals if there were enough doctors or nurses, almost three quarters said there were enough doctors and almost all said there were enough nurses. This difference in perceptions indicates a need to improve communication between Gumala members and health professionals in the Pilbara.

One of the ways the health professionals said they could improve their communication was by using Aboriginal health workers to liaise with Indigenous communities. However, numerous Gumala members said that there were insufficient numbers of Aboriginal health workers:

“There are minimal Indigenous health workers and no Indigenous doctors. We need more Indigenous health professionals”

The lack of Aboriginal health professionals was further demonstrated by “*more Aboriginal health workers*” being noted as one of the most common responses to the question about three things to improve health.

9.3.2.3 Transport to Local Medical Services

Many Gumala members said that they had good transport to reach doctors. However, it was also made clear that certain segments of Gumala members required help to reach medical services, particularly the elderly, young children, and members in remote communities. Some Gumala members said that the Patient Assistance Transport Scheme was useful, but others indicated that it was unaffordable for communities:

“General community problem: capacity to pay is the issue”

Although numerous members said that Gumala Aboriginal Corporation provided medical travel assistance, some thought that it could be accessed only in exceptional instances:

“Depends on circumstances-Gumala may help if the issue is near death. Otherwise no.”

The proposed mobile health clinic was often cited as a solution for those who lacked sufficient transport to medical services and was thought to be particularly helpful:

“It will make healthcare available when before it wasn’t. At least we will know our health will be in good shape knowing that we get weekly or monthly visit from the mobile clinic”

Moreover, the mobile health clinic was seen as a means by which the accessibility of healthcare could be improved as it would alleviate the travel burden even for those who were able to travel to medical services.

“It’s easier for the services to come to the people in most circumstances. More accessibility the better, can access the remote communities”

9.3.2.4 Leaving Country for Medical Services

About half of the Gumala members said they lacked accommodation if they needed to leave country for medical treatment, and slightly over a third said a family member would be able accompany them for support. In considering the responses from the health professionals we interviewed, a significant proportion of Gumala members would need to leave country for medical care if it was beyond what a doctor or nurse could provide as there were insufficient specialists in the Pilbara. Even in cases where medical conditions could be adequately managed by a doctor or nurse, many Gumala members would still need to leave country for treatment as there appears to be an insufficient number of doctors and nurses distributed throughout the Pilbara. This was reinforced by the statements the Gumala members made about the adequacy of medical services, such as the following:

“We’re battling to get doctors only. Government needs to spend more on people like us who live in the Pilbara”

Hence, it is more than likely that Gumala members would need to leave country for medical treatment at some point. Given around half of the Gumala members would lack accommodation in such instances, strategies should be developed to ensure that Gumala members have somewhere to stay when seeking healthcare off country, particularly in Port Hedland and Perth.

9.3.2.5 Gumala’s funding of Healthcare Services

It was apparent that the Gumala Aboriginal Corporation’s support was essential to most Gumala members’ ability to access healthcare as somewhat more than half said they would not be able to afford medical services without Gumala Aboriginal Corporation’s assistance. However, the level of financial assistance was not always sufficient to cover all of the families’ medical expenses over a particular period:

“[Is the funding adequate] Not Really. Only to a certain amount. Once you use up funding from Gumala and a family member gets sick you can’t help them”

Another funding issue was that numerous Gumala members said that Gumala Aboriginal Corporation did not process medical claims smoothly. The main complaint about the processing of claims was that they were processed too slowly, with several members noting that it could take up to one week. Other complaints included too much paperwork, paperwork was difficult to complete, and some doctors did not support purchase orders. Finally, some Gumala members thought that it was unreasonable to have to produce letters to support their claims, others however indicated that they understood that Gumala Aboriginal Corporation had to follow their guidelines.

9.3.2.6 Health Promotion Initiatives

Health promotion initiatives across several areas figured prominently in Gumala members’ responses to the open-ended question which asked them to list three things that would improve their health. Of these areas, the most common was education about better eating. Such education included information about cooking, hygienic food preparation, and nutrition:

“We need an awareness of the difference in society between traditional foods and processed foods of these days”

“Teach and help each other about healthy food and how to cook”

“A certified dietician could help with food, blood, and body type diets”

Further initiatives that could help Gumala members improve their diet were better access to healthy food and breakfast programs for school children:

“We need access to the food: good food, fresh food, in the community store”

Bush foods were also thought to be an important component of a healthy diet. It was suggested that bush camps could be held to increase members' knowledge of bush foods, particularly within the local environment:

“They're important and could be included on bush camps. Should include local knowledge and production”

Another common health promotion initiative involved several avenues that could be used to improve Gumala members exercise levels. These avenues included providing gym memberships, education about the benefits of exercise, and the delivery of structured exercise programs:

“We need a qualified fitness instructor to implement, mentor and monitor exercise programs on an ongoing basis”

“Exercise programs would be great including payment of fitness centre fees and health centres i.e. Jenny Craig. This will enable individual goals and help meet personal targets, not a group, as we are all different”

Gumala members also saw substance abuse programs as an important health promotion initiative.

“It should be a priority as there is a lot of drug and alcohol abuse. Something needs to be done about it”

Another common response to the open-ended questions regarding health promotion initiatives, was the general need for health education programs , and that these programs must be easy to access:

“There needs to be more availability of resources and programs to increase knowledge- being informed about health and how to adapt your lifestyle”

To complement the information from the open-ended questions, we asked Gumala members about whether Gumala Aboriginal Corporation should organise health promotion programs in several specific areas, including; health education sessions for Elders; healthy pregnancy for mothers; men’s health; mental health counselling; sex education for youth; and diet. Almost nine out of every ten Gumala members we interviewed said that Gumala Aboriginal Corporation should organise health promotion programs in these areas. The overwhelming endorsement of such programs demonstrates that Gumala members have a keen desire to participate in health promotion programs and Gumala Aboriginal Corporation should consider organising their delivery.

We also asked Gumala members about where and how health promotion initiatives should be undertaken. We started with an open-ended question to provide Gumala members with an opportunity to express whatever they thought was important about where and how health promotion programs should be undertaken. In response, Gumala members most often said that health promotion programs should be held within the local community, and within schools as part of early education. The primary reason for conducting the health programs within local communities was because it was the most comfortable location. There was also a common desire for the whole family to participate together in hands-on workshops:

“They should be in the community, where they are most comfortable, with whole family in hands –on sessions”

It should be noted, though, that while the members expressed a keen desire for the whole family to participate, there was an acknowledgement of culturally sensitive issues and that some health promotion initiatives would need to take this into account:

“Some need to be done separately. Men’s’ group, women’s group, young women’s group, with Elders involved”

As the last statement indicates, some members thought that Elders should be involved in delivering health promotion initiatives. However, several members said that Elders should be consulted but it was the responsibility of other community members to organise the workshops:

“It’s up to the young members to promote better health for and on behalf of the Elders. Seek their advice but get out and do the work”

After the open-ended question, we then asked about several specific ways in which health promotion initiatives could be delivered, namely: camps in country; workshops; and online information. An overwhelming majority of Gumala Members endorsed all three methods of delivering health promotion programs. However, several members commented on the lack of accessibility to online resources in remote communities, which suggests that health promotion programs might have the greatest impact if they were conducted through camps in country and interactive workshops.

9.3.2.7 Self-Empowerment

Role models were viewed by Gumala members as the most important influence in leading people to take responsibility for improving their own health and thereby becoming self-empowered.

“We need to lead and live life as an example”

This was consistent with the health professionals we interviewed stating that a lack of role models across generations was an important contributing factor to the poor health of Indigenous people in the Pilbara. Although Gumala members thought role models were important, some members doubted whether suitable role models existed, as demonstrated by the following statement:

“I believe the children are the main players-grandchildren telling their grandparents to look after themselves to see them grow up”

When community role models were absent, it was thought that it would be beneficial to arrange to have other successful Indigenous people visit. These people should not necessarily have a high profile, but simply be successful in some way:

“Mentors would be good but not just sports people: real people who have been successful, even just in small things”

Despite the doubts about whether some communities had role models, there was a clear recognition among the members that they could become role models through adopting practices that led to self-empowerment, including: *“not drinking and smoking”*; *“practice healthy eating, diet, exercise”*; *“keeping house and communities clean and not keeping too many dogs”*; and *“positive parenting and pregnancy”*.

Finally, education, in both the traditional and Western sense, was seen as integral to self-empowerment. Western education was thought to lead to self-empowerment mainly because it was served as pathway into employment and a successful life:

“Educate the young. Get them credentialed for appropriate jobs where they are set up for success”

In comparison to Western education, traditional education appeared to be far more encompassing in that it led to the perpetuation of culture and regaining self-identity, particularly for non-remote members

“Keep it alive. Bring the lore and culture to Perth and teach them what they have lost”

9.3.3 Thematic Analysis of the Education Component

9.3.3.1 Improving Aboriginal Education in Early Childhood, Primary, Secondary, Post Schooling and Scholarships

The Gumala members we interviewed gave a detailed description of how they would like to see Aboriginal education improved for their children and extended families. The number of respondents was consistently 145, which demonstrates how important education is viewed by Gumala members. A pattern of suggested strategies emerged from the Gumala members responses and members' responses are all valued in their entirety as the analysis reflects. The members are tired of answering questions all the time and want action to assist their children to go to school and get an education. It was vital that we capture the core meaning of what Gumala members said and to do this we have broken the

discussion into 5 areas; early childhood; primary; secondary; post schooling and scholarships.

9.3.3.2 Early Childhood

Gumala members stated that they would like access to day care facilities for their children in preparation for school readiness. Members viewed that motor skills, fundamental literacy and numeracy assists with learning and development and this should begin with a 'pre-start' school such as a day care. Further, members commented that day care provides routine, emotional bonding, healthy eating for children. Day Care access would also assist parents to obtain essential skills and coping strategies associated with sending their child to school. The respondents also indicated that the importance of school needed to be established early. Day Care centres and playgroups are not only for Gumala children to experience social bonding but also to give access to programs that incorporate music, dental hygiene, language, motivation, bullying and respect:

“assistance for children to go into day care facility in preparation for school. This enables routine, healthy eating, learning, interaction, emotional bonding, music, sharing”

Of concern was a comment by a mother who felt racially alienated when she took her daughter to child care *“You could see in their eyes they were saying: What are you doing here”*. She withdrew her child from the centre.

Another area of concern for Gumala members was language and culture. Respondents want to see more culturally appropriate programs to assist their children develop socially and mentally and also to experience school success by being proud of who they are:

“less swearing around children, less attitude, violence, teach em language”

“speak the languages, respect Elders”

Respondents indicated that Language, culture and respect were areas of dire need that require attention. These three areas could be dealt with if more Aboriginal teachers and AIEOs were employed at Aboriginal run centres as well as schools in the local areas. After school care was another suggested initiative

with respondents also indicating that mentors and good role models were also required:

“more academic role models, sports stars etc”

9.3.3.3 Primary

In this section the respondents overwhelming indicated the need for more Aboriginal teachers and AIEOs to be employed in schools. Truancy and attendance officers who were willing to wait for kids and find avenues to improve school attendance is necessary. Breakfast programs were also a focal point of the conversations:

“breakfast programs so incentive to go to school”

Respondents indicated that many Gumala children were well behind in their literacy and numeracy learning. Respondents felt that more one on one tuition, homework classes, mentoring and intensive tuition was of vital importance.

Given that technology is a part of everyday life across the world it was suggested that a computer should be provided for every Gumala household. This would go a long way to address literacy and numeracy for all families. It was suggested by a number of respondents that there is a need for programs to be developed that address bullying, respect, nutrition, sex education and alcoholism. If a computer was provided then these could also be uploaded.

Intensive tuition on a one to one basis, homework classes, mentoring and out of school activities were also pointed out as needed by Gumala members.

Transport was also mentioned as lacking and in need. Members felt the need to engage children outside of school:

“assistance for activities outside of school for constant learning with sports, arts, music education, tuition, this entails constant learning, stimulation, striving, routine, balance of living”

Importantly, and consistently throughout the responses was the reference to cultural awareness, Indigenous studies and language programs. The respondents have given an overall indication that these are needed and should be developed without delay.

A key stakeholder, as well as Gumala respondents, have signalled the need for a truancy officer. More importantly, the stakeholder is looking at ways to have an attendance officer to assist across the district:

“as above. Get em to school, why not at school?”

9.3.3.4 Secondary School

Gumala respondents reveal the need for an Aboriginal Liaison Officer (ALO) in secondary schools. An ALO could assist Aboriginal students in many areas. The respondents specified that Life skill programs that teach about love, budgeting, morals and building a strong foundation of self identity so that one can value the transition into adulthood. Programs that deal with personal growth and emotions, health and wellbeing and bullying were also suggested. Given the numbers of teen pregnancies and teenage parents there was also a call for programs to assist teenagers with this life transition beginning with sex education. Sex education was repeatedly mentioned by members to prevent sexually transmitted infections and prevent unwanted pregnancies.

Consistently and overwhelming the respondents indicated that homework classes, aspiration programs, career mentorship, work ready programs and work experience are required to assist every generation of Gumala members. Scholarships to private schools were seen as a way of improving children’s education as well as a way of avoiding family conflict.

Attendance was also a focal point and respondents indicated that *“attendance was most important”* and that there was a need to make schools *“more worthwhile”*. Cultural Initiatives that deal with Aboriginal Studies, Language and Elders were signalled as a requirement within secondary schools:

“cultural awareness training, cultural exchange. Have Elders come in and do sessions, speak the languages, respect the Elders”

9.3.3.5 Post Schooling

There was a consistent response that Gumala members need and want post schooling career mentorship, work experience and career advice.

Apprenticeships and traineeships for mature age people are also required.

Respondents felt the need for *“getting them work ready. Advertise more*

traineeships and offer a wide variety of training” to assist with their employment prospects.

Computer assistance, text books programs to address self esteem and confidence were additional areas of need indicated. Given the past history of treatment in relation to Aboriginal people, respondents expressed the need for self esteem and confidence programs to also include bullying and life skills programs to deal with life transitions. More importantly the respondents felt the need for programs to assist with a healthy long life were in need:

“develop the skills required for the transition stages within the lives of member to continue on the self-empowerment evolving changes required to live life in a healthy and longevity future”

For those wanting to enter into university study, scholarships, computers and text books were all themes where assistance of some sort was requested. Study support would be of benefit for all students as respondents stated that:

“they need help to send them for higher ed. I would love to do a higher degree but can’t afford it, been knocked back for assistance”

The respondents were clear in that they require assistance with many aspects of post schooling study. They have indicated quite clearly that they require career advice (82.4%) with access to a career advisor (90.4%) who can assist them with traineeships (91.2%) career pathway (88.3%) and scholarship (70.8%) information.

9.4.0 Discussion

9.4.1 Discussion of the Education Component

The responses by Gumala members have highlighted that regardless of school area e.g. early childhood; primary; secondary or post schooling, there is a consistency to the message being told. Gumala members deem early childhood and day care access to be of vital importance for their children as it sets children up with a good education from the start. This importance links in with the Federal and State government initiatives of ‘closing the gap’ for Aboriginal Australians. Moreover, Gumala members have highlighted that a ‘western education’, but not

at the expense of their culture, will assist them to empower themselves as Gumala members to be able to:

“continue learning the right skills from primary and day care to focussing on the future of what they aspire to do in their lives, job, sport, dance, music or education- university etc. Adapting to society change with technology and the need to learn about budgeting money, morals, strong foundations that need to be laid down in the early years of life. To value the transition into adulthood. Don’t forget love”

9.4.2 Discussion of the Health Component

9.4.2.1 Access to Medical Doctors and Aboriginal Health Workers

A lack of doctors and other professionals was one of the main concerns raised by the Gumala members we interviewed. The Pilbara Health Network, responsible for the provision of Government funded healthcare, has also recognised the problem and has moved to improve the availability of health professionals. This mainly involves offering incentives to corporate healthcare practices to focus on the needs of local community members (Health manager respondent “HMR”, personal communication). At present, and in addition to the three AMS, all but one of the healthcare practices in the Pilbara are corporate practices. These corporate practices currently focus on providing occupational healthcare services which mainly address the needs of employees from the mining sector (HMR, personal communication). However, the new incentives from the Pilbara Health Network obligate corporate practices to provide chronic disease management services, which will shift the focus from the mining sector to the local community (HMR, personal communication). This will lead to improvement in the availability of health professionals, but there are numerous impediments, most significantly high staff turnover due to burnout and the difficulty of attracting health professionals to remote areas (HMR, personal communication). These problems appear largely intractable, which suggests that innovative solutions are required such as the proposed mobile health clinic and an increased focus on health promotion and disease prevention.

The lack of Aboriginal health workers was another of the main concerns which arose from the interviews we conducted with Gumala members. This has been

an issue over numerous years and recent WA Country Health Care Service initiatives have increased the number of Aboriginal workers, at both the management and health professional level (WACHS Planning Team 2012). However, as previously noted, the mining sector targets the recruitment of Aboriginal health workers because they are viewed as a reliable source of labour. The willingness of Aboriginal health workers to enter the mining sector is entirely understandable as they may earn up \$100,000 more than what they would as a health professional. Hence, it appears as though incentives need to be offered to retain Aboriginal health workers. Finally, initiatives to increase the number of Aboriginal health workers should endeavour to ensure that each specific region in the Pilbara has at least one Aboriginal health worker from that region. This is important as an Aboriginal health worker from a particular region understands the region's culture more comprehensively than non-locals and is better able to provide advice about culturally sensitive healthcare.

9.4.2.2 Transport to Local Medical Services

Many Gumala members said that a lack of adequate transport to medical services was a notable problem. There was some doubt about whether, and in what circumstances, Gumala Aboriginal Corporation covered travel expenses, which suggests that it would be beneficial to clarify the issue through a communication strategy. If the travel expenses are not entirely subsidised, then other initiatives are required to address the lack of transport as programs such as the Patient Transport Assistance Scheme were clearly unaffordable for some communities.

The Pilbara Health Network has recognised that inadequate transport presents as a substantial problem for Indigenous communities in the Pilbara. To help alleviate this problem, part of the recently established care co-ordinators' role is to provide clients with transport to appointments (HMR, personal communication). However, it was acknowledged that it was difficult to find qualified staff to fill all care co-ordinator positions and there would consequently be gaps in service delivery (HMR, personal communication).

Another plan to address the lack of adequate transport to medical services has been to acquire mobile health clinics, in line with the strategy proposed by

Murdoch University. At present, WA Country Health Service intend to obtain two mobile health clinics, of which one will be primarily based in Karratha and the other mainly based in Newman. These two mobile clinics will probably be in operation by July 2013. The Pilbara Health Network has also submitted a funding proposal for a mobile health clinic which, if successful, could be in operation before July 2013. In addition, there are unconfirmed reports that the Puntukurnu Aboriginal Medical Service has collaborated with Newcrest Mining to obtain mobile health vehicles which will operate across the Western desert area. It is envisaged that the integration of these mobile health clinics along with the mobile health professional teaching one proposed by Murdoch University will contribute substantially to closing service provision gaps in the delivery of healthcare across the Pilbara.

9.4.2.3 Leaving Country for Medical Services

Gumala members commonly stated that a major problem was finding accommodation when leaving country for medical services. For Gumala members, there are two main situations involved with leaving country for medical services: travelling to the hospital at Port Hedland or travelling to Perth for medical care. The situation at Port Hedland, as noted in Phase I, is far from acceptable with Aboriginal people camping in the park outside the hospital and seemingly no other strategy in place apart from a feasibility study to build a hostel. The Patient Assistance Transport Scheme does cover some of the cost of short-term commercial accommodation, but even so the exorbitant cost of such accommodation in Port Hedland would probably be unaffordable for the overwhelming majority of Gumala members. Affordable accommodation is available at the Bunara Maya Hostel in South Hedland which is managed by Aboriginal Hostels Limited, but there are only about 30 places. Considered together, these accommodation issues suggest that Gumala Aboriginal Corporation should consider how it could provide accommodation for members requiring medical treatment in Port Hedland. Funding partners should be considered.

In many cases Gumala members need to visit Perth for medical treatment. There are two hostels in Perth that provide culturally sensitive accommodation specifically for Aboriginal peoples who travel to Perth for healthcare. The Derbal

Bidjar Hostel in Maylands accommodates Aboriginal people who need any type of medical treatment, and the Elizabeth Hansen Autumn Centre in Bayswater only accommodates Aboriginal people who require renal care. In total, these two hostels can accommodate about 60 people but this is clearly insufficient to meet the needs of Indigenous people across the State, which highlights the need for additional Indigenous accommodation services.

9.4.2.4 Funding

Some Gumala members said that the level of funding received from GAC was at times inadequate to cover all of the families' medical expenses. Each Gumala member receives \$3,200 per year for medical expenses, with an additional \$2,800 provided in cases where the \$1000 sport funds and \$1800 computer funds have not been used. It should be noted that these funds are only provided to each adult Gumala member and must cover the cost of medical expenses for their children. However, once the funds have been spent members may apply for discretionary assistance for further medical expenses. It appears as though Gumala members were not aware of the discretionary assistance, which reinforces the need for GAC to implement a communication strategy about member entitlements.

Another issue was that some members reported that accessing medical funds took too much time, particularly the processing of forms. However, advice from GAC reveals that these delays are unavoidable at times because they have an obligation to follow guidelines established under the General Gumala Foundation Trust Deed. Most medical expense claims are processed within seven days, but it may be longer for a variety of reasons, including: invoice required but not received; member has not been contactable when a further query is needed; signature on the application form does not match the member's signature on GAC records; invoice provided but no application form received by the member; and the claim may not meet the guidelines of the program. Whether all members are aware of these conditions is unclear, which again highlights the need for GAC to develop improved communication processes with members.

Another main issue some members reported relating to accessing medical funds was the perception that it required too much time to process the forms. These

delays appear unavoidable at times, however, because GAC have an obligation to follow guidelines that were established under the General Gumala Foundation Trust Deed. Most medical expense claims are processed within seven days, but it may sometimes require longer for a variety of reasons, including: invoice required but not received; member has not been contactable when a further query is needed; signature on the application form does not match the member's signature on GAC records; invoice provided but no application form received by the member; claim may not meet the guidelines of the program. Whether all members are aware of these conditions is unclear, which again highlights the need for GAC to improve communication.

9.4.2.5 Health Promotion Initiatives

Education about better eating and exercise were the two health promotion areas of most interest to Gumala members. Numerous studies have been undertaken in these areas to determine what types of initiatives work best in Indigenous communities (Australian Institute of Health and Welfare 2011). These studies have shown that in order for physical activity and dietary programs to be effective they must be community initiated and managed (Australian Institute of Health and Welfare 2011). Conversely, physical activity and dietary programs are invariably ineffective if they do not have a high level of community ownership and support (Australian Institute of Health and Welfare 2011). In addition, programs are also ineffective if they fail to address broad structural issues such as poverty and an inadequate supply of health food (Australian Institute of Health and Welfare 2011). Following are two examples of physical activity and dietary programs that have been shown to be effective in Indigenous communities.

The Looma Healthy Lifestyle was implemented in 1993 to address high rates of heart disease and kidney disease among the Looma community in the Kimberley region (Rowley 2000). It initially began by providing older community members with transport to the bush where they hunted and gathered bush honey and bush food (Rowley 2000). Interest in the program progressively developed throughout the community and it gained strong support from the Community Council (Rowley 2000). In addition, a community member was employed as the local store manager and authorised to improve the quality of food (Rowley 2000). As a result there was a marked increase in the quantity of fresh vegetables, fresh fruit, and

other healthy food (Rowley 2000). Changes to the availability of healthy food also included introducing a school breakfast program and changing the type of food provided in the school canteen (Rowley 2000). In addition, education about eating well was delivered within the community and in schools on a weekly basis (Rowley 2000). Exercise levels were improved through the Community Council organising hunting trips, sports, and walking groups (Rowley 2000). Overall, these initiatives together led to major improvements in diet-related cardiovascular risk profiles, improvements which have been sustained in the last formal evaluation in 2009 (Australian Indigenous Healthinfonet 2011).

The “waist loss” program was modified to meet the needs of four Indigenous communities subsequent to detailed consultation with these communities (Egger et al. 1999). It focused on diet and physical activity. The program involved Elders promoting physical activity through walking regularly in visible places (Egger et al. 1999). In addition, a rugby competition was introduced to encourage physical activity (Egger et al. 1999). The initial intention was to handover responsibility for the program during the early stages of its implementation (Egger et al. 1999). However, a respected non-local leader appeared to be more acceptable than a local community representative (Egger et al. 1999). Over the course of a year, the average decrease in fat among participants was 11%.

After better eating and exercise, the next most commonly mentioned health promotion initiative by the Gumala members was substance abuse. In Phase IIA, we detailed in depth a substance abuse program that comprehensively addressed the social determinants that lead to substance abuse. We also stated that the comprehensive substance program may be unfeasible for Gumala to introduce because of the substantial investment. Detailed next is a much less resource intensive program that nonetheless still requires substantial community engagement.

The “Gari and You” interactive flipchart was developed to assist allied health workers providing counselling in Indigenous communities in the West Pilbara (Heimberger & James 2006). It elicits self-reflective response from people during counselling through telling the real story of local community member who successfully learnt to manage alcohol abuse (Heimberger & James 2006). The

program aims to achieve harm minimisation through reducing alcohol intake. An initial draft of the chart was developed through an interview with a local man who shared his experience about how he ended a cycle of alcohol abuse (Heimberger & James 2006). Community members then enthusiastically contributed advice about the draft, all of which was included into the final chart (Heimberger & James 2006). The flipchart incorporated photos of notable locations in the area with short summary headings written in the local languages above each photo (Heimberger & James 2006). On the back of each flipchart are discussion points for the counsellor to elicit self-reflection from the community member (Heimberger & James 2006). The two concluding flipcharts ask the community member to determine what they could do to reduce alcohol consumption, particularly through considering realistic alternatives and supportive community members (Heimberger & James 2006). Overall, the local community was extremely receptive to the flipchart as they participated in its design and because it was both a culturally and educationally appropriate resource (Heimberger & James 2006).

To summarise the three promotion initiatives that were detailed in this section, it can be seen that they involved the participation of local members in their design and the assistance of Elders in promoting the initiatives. This resulted in community engagement in culturally appropriate programs held either in bush areas, within the local community and at local schools. All of these elements in the programs encompassed the suggestions that Gumala members provided about implementing health promotion initiatives. Hence, the programs we have detailed in this section could be used by Gumala Aboriginal Corporation to introduce health promotion initiatives, particularly through working in collaboration and capitalising on the expertise of local Aboriginal Medical Services.

10.0 Phase III. Interview and discussion with Gumala Aboriginal Elders

10.1 Methods

We arranged a discussion and interview with Gumala Elders as a group. Ethics approval was obtained from the Murdoch University HREC (2012/053). We posed a series of questions face to face with Elders in Tom Price. The interviews involved posing questions about solutions for gaps in health and education identified previously in the project by Gumala members and stakeholders in health and education. The answers to these questions were noted and summary made in writing at the time. All answers from individuals remains confidential to the group and the interviewers. We amalgamated the responses, noted key statements and formulated a generalised conclusion about gaps, needs and practical solutions in health and education for Gumala members.

In summary the question themes were as follows:

Health

We asked Elders about Gumala employing a health promotion officer to develop health promotion programs and seek opinions and involvement of Elders. We outlined a geographic pathway for the mobile health clinic to be tested as a model in the area between Paraburdoo and Youngaleena. We asked for comments about this route. We advised Elders and asked for comment about our health findings which Gumala members identified as problems and which solutions need to be found for: housing and need for maintenance; water not clean; too much rubbish and too many sick dogs; people could not get healthy food from the stores; and too much grog, drugs and gambling. We asked Elders to comment on whether in addition to existing staff that Gumala should appoint someone who would act on the member's behalf to help solve the problems that are making communities unhealthy places to live in such as a dedicated community health officer. They could also assist individual members with claims, paperwork and related issues.

Education

We asked Elders what assistance was required to change educational outcomes for their children. We specifically outlined the areas of early childhood, primary, secondary and post schooling. We asked Elders to give us their account of what

they thought was happening in education and began the conversation with what members had already highlighted. Elders strongly discussed that there was a disconnection with the younger generations and felt that the education focus should be on Early Childhood. We raised the issue of cultural camps and Elders were keen to discuss this option. Elders said that education was important for the future generations and that Gumula needed to develop ways to improve education for Gumula members.

10.2 The meeting

The Elders meeting began with the traditional protocol of Acknowledging Country and thanking the Elders for their attendance. Delivering the Acknowledgement of Country in an Aboriginal language from outside 'country' from which both the members came and where the meeting was being held helped to establish the tone of the meeting. Elders had been meeting all day and there was a big funeral underway in Roebourne which left Elders slightly anxious about getting back for the funeral.

Once the customary 'where you from' protocol was completed the research team went onto to explain the ethics forms. We quickly realised that many Elders did not read and therefore required assistance with the forms. With the ethics formalities out of the way, the Elders had many suggestions of how both Health and Education could be improved for them as Aboriginal peoples. We have purposefully intertwined both the Health and Education discussions with the voice of the Elders to pay respect and show that we really have listened and heard what the Elders had to say. Health and Education issues cannot be separated, they are intrinsically linked and one cannot be addressed without the other. Moreover, the Elders voiced their views as strong Innawonga, Banyjima and Nyariparli peoples who are Gumala members seeking change for their families and younger generations. Elders disquietly raised that as Aboriginal people "*we have been talking about these things for a long time, we have tried but we can't stop*" because they believe wholeheartedly "*we got to teach the kids*".

In general the Elders were not negative about the suggestions made by members and the project team. The idea of the Mobile Health Truck was keenly discussed by the Elders and there was a consensus that the Mobile Health Truck was a

good idea *“however to cover all areas more than one would be needed”*. Many agreed that a route from Paraburdoo to Youngaleena would be okay for a start. Elders discussed exactly what the Mobile Truck could be used for and ideas such as *“health and education programs, mobile playgroup, to teach us computers”* were some of the ideas. The Elders stated that given the health issues within their communities having a health officer (in addition to existing staff) would be a good idea and that a health officer could also be utilised within the Mobile Health Truck. Career information could also be provided in the Mobile Health Truck.

It was also reported by Elders that there are currently no men’s or women’s camps operating (except those for lore). Elders felt that GAC should assist financially to facilitate camps and that *“we got our own bush knowledge”* as we have *“to teach our kids”*. Elders yarned further about their young kids not *“wanting to go to school”* and Elders feeling that this generation *“don’t want to get off their backsides”*. We experienced a profound sense of anguish from many of the Elders. They know and understand that the world around them has changed but more importantly they know that their younger generations must get an education and they adamantly expressed that this must be with *“the younger generations through technology and that they must also learn so not to be left behind”*. Elders expressed they also need courses for themselves to learn *“computers, sewing and literacy”* and Elders suggested that they should have access to *“an art centre, where art can be left without having to be packed away. We have no supplies”*. The research team also asked about training and courses and the Elders gave a clear indication that it was needed. One such example was in relation to getting a driver’s license given the travel distance of moving around the Pilbara. The response *“that you get a driver’s license when you go to prison”* and *“if not we just teach ourselves”* suggests that one of the basic life skills of driving needs to be seriously addressed.

Elders raised the concern of housing which has been an ongoing issue for decades. There are issues with *“overcrowding, cockerroachers, gambling and drinking”* with one Elder reminding us that *“strength comes from within (indicating this while pointing at his heart) he was a drinker and he also knew when to stop”*. Elders were also keen to see Gumala mob *“design their own houses to suit their*

own purposes within the Pilbara” which could also skill Gumala people in different trades.

Elders felt that they desperately needed a Dialysis machine in Tom Price *“just like the one at Jigalong”*. Elders raised the issue that there were not “nearly enough health workers near or working with communities” and that they especially need trained Dialysis Nurses. It was suggested that the Mobile Health Truck was a way to spread the healthy food message.

Due to the severity of peoples health problems Elders said that many have to travel down to Perth for treatment. They knew of the Autumn Centre at Elizabeth Hansen House where they could stay whilst receiving treatment. Elders strongly expressed that they should have their own *“Ronald McDonald House”* staffed by Gumala people living in Perth. The research team suggests that this should be further explored especially given that Murdoch University is developing its Eastern precinct opposite the new Fiona Stanley Hospital.

It is only fitting to finish on the words of one of the Elders which have resonated with us since our visit to ‘country’. An Elder, who believes his people have to keep going and not to give up said *“when I put my head on my pillow at night and I think about the kids and grandkids – I know we have to keep trying”*. Our Health Our Education Our Future: Ngaliguru marlbangaligu mirnuwayigu thulbau wobayigu.

11.0 Recommendations

11.1 Introduction

Below are recommendations made largely from suggestions by Gumala members. The project team has added to these and streamlined the individual recommendations to be a cohesive whole. The recommendations are based on the gaps and needs identified from the study at large. It should be noted that Gumala Aboriginal Corporation has been growing and expanding its efforts and offerings to members while this project has been underway. This has included the employment of new staff with expanded and special duties that overlap with health and education. To that extent some recommendations may have already been adopted or partly adopted by GAC. We also recognise and understand that GAC's funding is finite and that priority is an issue for any new or modified change they undertake. Ultimately any decision to adopt one or all of these recommendations is a matter for Gumala as a whole including its members. We have endeavoured to prioritise the recommendations to demonstrate more urgent needs.

11.2 Health Recommendations

11.2.1 Strategic Plan for Health

We recommend that GAC prepare a strategic plan regarding the improvement of the health of their members. This report should serve as a resource for such a plan. It should be understood that GAC has an unusual opportunity to develop and implement this plan to improve the health of members and to act as a shining example to other Indigenous corporations and the Australian public more widely. In short, GAC can accelerate closing the gap for its membership as a whole.

11.2.2 Raising Awareness of Members' Entitlements and Communication with Members

As a priority GAC should consider improving members understanding of their health program entitlements, particularly how to access them. It was clear from our study that at present many members do not appear to be fully aware of the health services GAC deliver and the procedures they need to follow to access these services. This is despite GACs best efforts. The problem could be

addressed to some extent by extending the role of the member solutions specialist to encompass medical expenses claim forms. In addition, GAC could produce a video that discusses health entitlements and the application process. Presenting information through a visual medium would be especially beneficial as some members appear to have limited literacy skills. Finally, a high proportion of Gumala members own a mobile phone, which suggests that GAC could make good use of this medium to send brief messages about member entitlements and other issues more generally. Given the high turnover of mobile phones, GAC should consider an incentive for members to lodge any new number.

11.2.3 Improving Access to Medical Services

As a priority GAC should explore how to improve the members' access to medical services. This may involve purchasing small buses and employing drivers to move people to medical care and back. It should be noted that Pilbara Health Network's appointment of care coordinators may help address the lack of transport because part of the position involves transporting clients between communities and medical services. It is recommended that GAC hold discussions with Pilbara Health Network about placing its members on care coordinator lists.

Overall, community members expressed a preference for medical services to be made available in the communities, which suggests that investment in a mobile health clinic is wise. We note that WACHS and other Aboriginal Medical Services are planning to acquire mobile health clinics, but we envisage that these small operations will still leave wide gaps in service delivery.

11.2.4 Mobile Health Clinic

We strongly recommend that GAC hold discussions with Murdoch University about the proposed mobile health clinic. Gumala members overwhelmingly supported obtaining a mobile health clinic and detailed many of the possible services it could deliver to fill gaps not currently provided or not frequently provided by existing services. These are found in the body of the report but include dentists, general practitioners and a host of allied health services. In consultation with Gumala members we identified an initial route for the mobile clinic which is as follows: Paraburdoo, Bellary, Wakathuni, Tom Price and Youngaleena. We suggest that the mobile clinic be tested as a model in this

specific area and that if it proves to be successful further units could be rolled out in multiple locations in the Pilbara. The facility should work closely with WACHS, the local hospital, Tom Price medical clinic and other local health providers to complement rather than duplicate existing services. It should be noted that a partnership with Murdoch University will likely develop the mobile clinic into a teaching facility with experienced supervisors on board. There are many benefits for all parties in such a relationship but particularly for members. Finally, the mobile clinic should also be involved in health promotion and education more generally.

11.2.5 Appointment of Two Health Officers

- a) We acknowledge GAC has an existing health and culture manager, but we strongly recommend either expanding the role of the health and culture manager or creating a new community health officer position. The role of the community health officer should include working one-on-one with individual community leaders/representatives to identify and enact strategies to address: unclean water; overcrowding; housing maintenance; litter and other rubbish; dog issues; stocking healthy food in nearby stores; gambling; and substance abuse. These were all significant and common issues that arose during this project and numerous ideas have been provided to address these issues in the preceding sections. In addition a community health officer should advocate on behalf of members as they encounter the health system.
- b) In addition to the community health officer, we strongly recommend that GAC appoint a health promotion officer. This officer would facilitate the involvement of the community and elders in forums to identify health promotion initiatives. Members see the need for taking responsibility for their health and appear ready to become involved. In this report we detail numerous examples of successful health promotion initiatives that could be discussed at forums to gauge community support and to facilitate their development. Gumala members expressed a keen interest in health promotion and gave practical solutions for modalities to support dissemination of information. This included camps in country which we believe are a culturally secure method of practice. We believe that GAC

should capitalise on this interest through supporting the appointment of a health promotion officer and engaging local AMS's, WACHS and others in delivering health promotion initiatives called for by community members. Further, health promotion initiatives need to be carried out over prolonged periods to allow for repetition and program evaluation, and hence require ongoing and sustained funding.

As part of any health promotion program GAC should consider including information for members on the need to keep appointments with health providers or to at least re-schedule or cancel appointments as necessary. Such a move should enhance relations between Indigenous people and health care providers.

Both appointments need to be resourced financially to allow various activities to occur and both provided with administrative support.

11.2.6 Improving Food Security

Many of the health issues Gumala members experience are linked to unhealthy diets. Improving Gumala members' knowledge of healthy dietary practices is important, but it will have little impact unless strategies are implemented to increase knowledge and availability of healthy food. GAC through its new Health Promotion Officer could consider undertaking healthy food courses including bush tucker. Consideration should be given to ways of securing healthy fresh food options for the more remote communities. We also recommend that GAC liaise with the WACHS to determine how well the National Strategy for Remote Food Security in Remote Indigenous Communities has been implemented in the Pilbara.

11.2.7 Promotion of Bush Medicines

We recommend that GAC supports the documentation of bush medicine by the Banyjima, Niyaparli, and Innawonga peoples. To achieve this GAC could liaise with organisations like the Wangka Maya Pilbara Aboriginal language Centre which has previous experience in documentation of the use of bush medicines among Indigenous people in the Pilbara. As we demonstrated in a previous section, the use of bush medicines has been shown to maintain links to culture and improve health. We therefore recommend that GAC facilitate opportunities

for Gumala members to learn about the use of bush medicines, possibly through bush camps led by Elders. After documentation occurs GAC should consider advocating for scientific studies to test the effectiveness and safety profiles of these medicines.

11.2.8 Discussions with Mining Companies about the Impact of Mining on Community Housing

We recommend that GAC hold discussions with mining companies about the impact their activities are having on local communities. These impacts may have not been foreseen when GAC initially negotiated royalty agreements and there may be grounds to make a case for further compensation. The main issue we encountered was high housing rental costs, which have been primarily driven by the influx of mining workers placing pressure on housing availability. This pressure on housing availability affects Indigenous peoples' ability to afford housing, which contributes to overcrowding, promotes unhealthy living conditions, and the subsequent transmission of infectious diseases. It also inhibits the employment of health workers who would need to move to the region.

11.2.9 Improving Housing and Building the Local Workforce

Members understand that employment is positively linked to health. We note that GAC has identified the need for additional housing and is currently enacting a five year plan to provide 150 homes for its members. Additional housing is important as the expected decrease in overcrowding will contribute substantially to improving the health of its members. We recommend that in any negotiations with builders GAC requests employment opportunities for Gumala members as a condition in awarding the construction contracts. These opportunities should encompass transport to and from work (if required) and building traineeships. This may result in the development of a local skilled workforce that may be able to independently undertake commercial construction projects subsequent to the completion of local housing. We note the example of the establishment of the Thamarrurr Development Corporation as a model on which this could be based.

11.2.10 Accommodation when Leaving Country for Healthcare

The lack of accommodation for Indigenous people seeking healthcare in Port Hedland is entirely unacceptable. We strongly recommend that GAC seek

partners to build a hostel in Port Hedland. Many Gumala members also need to travel to Perth for healthcare, and only limited places are available at culturally sensitive hostels. We recommend that GAC explore the option of building a hostel in collaboration with Murdoch University. At present, Murdoch University is planning the construction of new buildings at its eastern precinct opposite the new Fiona Stanley hospital. Currently, considerable desire exists to integrate initiatives between Murdoch University and Fiona Stanley hospital and we believe that GAC may be able to capitalise on this prevailing sentiment. Finally, plans for the development of accommodation should consider the need to accommodate members who wish to travel and support family members receiving medical care.

11.2.11 Enhancing the Aboriginal Health Workforce

Increasing the number of Aboriginal health workers was consistently emphasised as a priority by Gumala members. We recommend that GAC provide incentives for its members to undertake Aboriginal health worker courses. We note that GAC currently cover the cost of expenses associated with TAFE courses, but additional payments could be provided such as a one off “bonus” payment at the completion of the course. In addition, GAC could hold discussions with universities about developing Aboriginal health worker courses that provide comprehensive and culturally sensitive mentoring throughout the courses. Universities are well placed to deliver such mentoring as they have experience in providing it in other courses. The issue of bonded scholarships to work in country at local facilities is another matter worthy of discussion.

11.2.12 Obtaining Dental Care and Dialysis Units

The inadequacy of dental care was commonly mentioned as an area which needs improvement. This inadequacy was detailed as a lack of dentists, a lack of funds to pay for the care and exorbitant fees charged by some dentists in the region. We recommend that GAC make the provision of affordable dental care for members a priority. All avenues to solve this problem should be explored.

Access to renal dialysis in country was mentioned repetitively by some members. Renal dialysis is expensive, complex and health labour intensive. It is not without risks to patients. However, serious consideration should be given to a Unit in Tom

Price at the local hospital. We recommend that GAC approach both the WACHS and mining companies about funding for this dialysis unit.

11.2.13 Developing Educational Resources about Culturally Sensitive Healthcare Resources

Many health professionals requested additional cultural awareness training to augment the courses they had previously completed. It was noted that they needed to be informed of each community's particular cultural requirements as the training they had previously received may have been too generic. Moreover, the health professionals held a perception that some Aboriginal Medical Services may have been reluctant to fully engage with non-Indigenous healthcare services. We recommend that GAC endeavours to establish more collaboration between Indigenous and non-Indigenous healthcare services as it would enhance the integration of these services with attendant benefits for its members. In addition, we recommend that GAC draw on the knowledge of its members to produce culturally sensitive healthcare educational resources. These resources would be invaluable to inform non-Aboriginal, and also non-local Aboriginal, healthcare workers about how best to provide healthcare for the Banyjima, Innawonga, and Nyiyaparli peoples. Finally, we strongly recommend that cultural awareness training be compulsory for all health care workers in the Pilbara region and that regular meetings between health workers and community representatives should occur to enhance understanding.

11.2.14 Facilitation of Visits by Murdoch University Students to Country

GAC should negotiate with Murdoch University about a University partnership. This partnership could enhance the well being of members and the organisation alike. Prior to the constructions of any Mobile Health Clinic GAC should facilitate visits to communities of Murdoch students and staff where they can provide quality care. Such an arrangement is likely to assist community members but also expose students to country and Aboriginal peoples with the intent of drawing some of them back to the area. This recommendation should see formal discussions with Murdoch University about a coordinated plan and not just the ad-hoc visits that currently occur.

11.3 Recommendations for Education

In this section we draw on our analysis of the survey and interview responses to begin to identify the sorts of changes needed to provide Gumala members and Aboriginal people with a more supportive and successful education. It is the research team's belief that Gumala Aboriginal Corporation (GAC) is a vital stakeholder with the ability to transform the position of Education in the Pilbara for Aboriginal peoples. As such, GAC has the capacity to empower educational stakeholders to move forward and build on the strengths of the Indigenous communities throughout the Pilbara region. GAC has the capability to lead both the Pilbara community and educators together through the provision of strategically provided professional development which is based on 'real' issues highlighted by the discussions of the GAC membership, AIEOs and educational stakeholders such as teachers and principals.

11.3.1 Development of a Strategic Plan for Education

In our analysis we found that there is a lack of direction in relation to GAC's overarching educational plan. There does not appear to be a working strategic plan in place for educational outcomes and successful completion of education for GAC members. GAC has at present many enabling strategies in place. These are available through monetary assistance with school fees; uniforms; lunches; swimming lessons; scholarships across educational sectors; travel assistance to name a few. There is however scope to expand the education section of GAC. At present the education Manager spends around 90% of her time on administrative tasks and record keeping. Whilst an important aspect, more staff time could be better spent collaborating and establishing partnerships with other educational entities such as the Department of Education's Regional office in the Pilbara. There is a clear need to establish a relationship with all schools, training, TAFEs and university sectors that GAC members attend and this is not a solo job.

11.3.2 Senior Level Education Appointment and Development of an Education Circle

We recommend that a Senior Level appointment be made so as to develop and drive the education section of GAC to its full capacity, particularly through overseeing the development of a strategic education plan and its integration with

GAC's current education services. The senior appointee should have current knowledge of State and Federal objectives driving Indigenous education, funding sources, the ability to develop relationships with all educational sectors across the Pilbara and convene an Educational type forum with all the appropriate stakeholders. This forum would be driven by Senior and Gumala members in order to further develop GACs Education Strategic Plan that addresses the 'on ground' issues within schools for GAC members. By developing an Educational Circle, key performance indicators could be targeted to develop a Pilbara specific 'think tank' driven by Gumala. District Office staff, Catholic Education, Association of Independent Schools of Western Australia (AISWA), principals and teachers would be invited to share their ideas and experiences of how to further enable educational outcomes and attainment for GAC members and their families.

11.3.3 Establishing Links to Indigenous Programs

There is the opportunity for GAC to liaise and build relationships with schools in an effort to assist with the raising of literacy and numeracy for Gumala students. Programs such as the [Indigenous Literacy Foundation](#) and the [Desert Feet Programs](#) could assist both Gumala students and schools to develop successful strategies in literacy and numeracy. If for instance these programs require an application fee then this could be provided by GAC. The Desert Feet program is underpinned by musical and creative development which is fostered in participating students with the program being run intensively. The Indigenous Literacy Foundation provides schools not only with literacy ideas for Aboriginal students, but will be promoting an Indigenous Literacy Day on the 5th September 2012 that involves 'the great book swap' which could be run out of Gumala's Perth Office as it has access to people power because of its central location. Offering to partner with schools in these endeavours will foster goodwill and productive relationships at a minimal budgetary cost. These are only two examples of effective and innovative programs and Gumala's Education unit should explore this linkage further.

11.3.4 Provision of Educational Courses and Links to Employment Opportunities

It was very clearly indicated from both the Gumala members and Elders that they would like to have more hands on type of workshops to attend. Many talked about the need for an ongoing Art Program for members. Literacy was also a

major issue across this project and was highlighted when people could not understand/or needed assistance with the consent forms, so a forum to assist the people to fill out forms could also be included in the [PaCE project](#) as well as adult literacy. Further, there has been a clear indication that not all GAC members wish to be employed in the mining sector. With this in mind, there needs to be clear career pathways developed so GAC communities can 'grow their own' Aboriginal education and health workers, nurses, dentists, etc. Also, there is a sound need for career advice. These pathways should be linked to scholarships funded by both Gumala and from within industry. Obtaining a drivers licence is an obstacle for many GAC members. There is an issue of completing the log book hours and access to driving lessons and we believe that it is worth exploring the possibility of having an industry sponsored car that members could book to complete the requirements for their licences.

11.3.5 Establishment of PaCE Projects

The educational programs described in the preceding three recommendations could be established by applying for a Department of Education, Employment and Workplace Relations (DEEWR) Parental and Community Engagement Program (PaCE) funding. This funding requires an Aboriginal corporation such as Gumala, alongside stakeholders (such as universities and schools) to develop and implement creative and innovative approaches which are community driven to improve the educational outcomes of their children. The educational programs we have detailed would all enhance the educational outcomes for GAC members. These could all be linked to the Mobile Clinic, or alternatively, as Wakathuni has already established the 0-5 Early Childhood Centre, this centre could be utilised to offer the same range of early learning, parent support, health and well-being PaCE programs. We have provided a link to existing [PaCE](#) Projects from all over Australia.

11.3.6 Professional Development of Educators

Another significant factor highlighted in the analysis was that many Aboriginal peoples living and working in the Pilbara are 'living off country'¹. Many are Aboriginal Islander Education Workers (AIEOs) working in schools with GAC students. They have highlighted to us the need for a revamped 'Working on Country' professional development for all education stakeholders as they felt that

it was not their place to address cultural training. We suggest that a professional development package be developed with Gumala Elders and members to assist all new/existing educators working with Gumala students. This training would also be undertaken by AIEOs, Education Assistants, and Teacher Assistants, because of the number of people working 'off country'.

11.3.7 Enhancing the Roles of Indigenous Education Staff

There is room for significant transformation in relation to the roles, career pathways and job descriptions of AIEOs. We have stated throughout the document that this is primarily the responsibility of the Department of Education, AISWA and Catholic Independent schools, however, we believe that Gumala can assist in the transformation of the role of AIEOs in the Pilbara. First, with the development of a Professional Development package 'Working on Country' – The Pilbara perspective, which could be undertaken by all future and existing AIEOs as well as teachers. With regard to developing 'local' Indigenous teachers it is possible for a teaching scholarship to be initiated alongside a university using a variety of study models. Again this requires further exploration. Lastly, Gumala Aboriginal Corporation is well placed to develop an award for Education which either a school or individual Indigenous staff member could win. These could be presented during the NAIDOC celebrations at Pilbara District Office.

11.3.8 Early Childhood

Early childhood is a priority area across Australia for Aboriginal peoples to improve school readiness for their children. There should be further exploration in the provision of financial support, a mobile kindy and Day Care Centre with training options for those interested in working in an Early Childhood setting.

11.3.9 Primary School

It was strongly indicated by parents that they would like to see the provision of 1:1 tuition and a homework class to improve literacy and numeracy for their children. We strongly recommend that the Gumala Education unit explore what assistance the Department of Education, Employment and Workplace relations (DEEWR) can provide, then hold discussions at the District office and school levels to approach this issue collaboratively. Additionally, GAC should consider

the idea of funding 1:1 or group tuition or intensive tuition camps. Parents as well as educational stakeholders indicated that there is a need for an attendance/truancy officer and solutions to assist with transience need to be explored. We suggest that the Gumala Education Unit hold discussions with the Regional Director of Pilbara Education District Office to raise these issues and to see what the intent of the Department is in relation to the issues. These discussions provide the opportunity to develop a working relationship. We also recommend that GAC review the amount of financial assistance it provides for primary students. On a final note, the Department of Health in Western Australia provide public dental services for school children and eligible adults. Free basic dental care is provided to all school children from pre primary to Year 11 (Year 12 in remote localities). We recommend that the Gumala Education unit make contact with this service for its members to establish how members are able to access it. Should form completion for this service be required then Gumala should assist with this process in their existing form completion process.

11.3.10 Secondary School

Within the secondary settings there are areas that Gumala should assist with. Again, there is a clear need to explore 1:1 tuition and the provision of homework classes to improve literacy and numeracy. We strongly recommend that the Gumala Education unit explore what assistance the Department of Education, Employment and Workplace relations (DEEWR) can provide then hold discussions at the District office and school levels to approach this issue collaboratively. Additionally, GAC should consider the idea of funding 1:1 or group tuition or intensive tuition camps. Solutions to assist with transience need to be explored. There is also a need to find a solution for those students who leave the school for Lore business. We recommend that the development of a differentiated curriculum to suit both men and women lore students is worthy of exploration. We further recommend that a GAC consider employing a fractional career advisor to assist with career choices and pathways. Further, we recommend that Gumala alongside industry partners develop a driver training program to assist students with driver training and license. Finally we recommend that GAC review the amount of financial assistance it provides for secondary students.

11.3.11 Post School

In the post school setting there were many significant areas of need. We recommend that GAC support access to early, ongoing, relevant and wide ranging career advice as well as opportunities to engage in education and training opportunities that lead to real and sustainable jobs required to address the economic and social impact of high unemployment rates. Moreover, there is a clear need in the area of short courses requested by members. The development of a mentor is also strongly recommended. Scholarship information and availability should also be available through the career advisor and linked to the Mobile clinic.

11.3.12 Aboriginal Studies and Perspectives across the Curriculum

Both education stakeholders and members emphasised that Aboriginal studies and perspectives across the curriculum is an area that requires development across all settings: Early childhood; Primary; and Secondary settings. There is the opportunity for GAC to work alongside its Elders and members to develop culturally appropriate schools resources. Further, the idea of cultural camps needs to be explored to assist with the development of educational resources, story and two way language books.

11.3.13 Computer and Internet Access

We recommend that GAC undertake a baseline audit to ascertain how many families have a computer and internet access. Whilst there is a computer provision scheme, it appears that not every member accesses it. A baseline audit will establish who is without IT facilities and internet access and also determine how literacy and numeracy can be addressed within Gumala households. Elders expressed the need to learn and use current technology and we recommend that the Gumala Education unit explore the idea of Ipad or computer supply to member households for those who haven't accessed the existing scheme. We also strongly recommend that the Gumala Education unit approach the Global Laptop Program who are supplying "One Laptop Per Child"(OLPC) across Australia to seek assistance for Gumala students to raise their literacy and numeracy levels with the supply and use of a laptop. We highly recommend that

GAC considers providing members with basic internet access. The benefits of this are immense.

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Appendix 1: Interviewer Training Module

TRAINING OUTLINE

GUMALA MEMBERS INTERVIEWS

1. PROJECT BACKGROUND
 - a. Project history
 - b. Partnerships and community consultations
 - c. Project aims and objectives

2. PROJECT MATERIALS AND INFORMATION
 - a. Brochure for members
 - b. Letter to stakeholders
 - c. Letter to Gumala members

3. THE PRELIMINARIES
 - a. Information for participants
 - b. Consent forms
 - c. Survey questions and interpretation

4. ETHICAL ISSUES
 - a. Consent
 - b. Respecting privacy
 - c. Respecting participation
 - d. Respecting culture

5. RECRUITMENT
 - a. Approaching people to participate

- b. Offering a follow up interview

6. DOCUMENT SAFETY

- a. Handling of completed surveys
- b. Storage of completed surveys
- c. Transportation of completed surveys

7. FREQUENTLY ASKED QUESTIONS

- a. What if the person does not want to answer a question?
- b. What if the person misunderstands the meaning of a question?
- c. What if the person becomes upset?
- d. What if the person wants more information about the project?
- e. What if the person want to talk more about any of the issues raised in the survey?
- f. Who do I contact for help or advice

8. PAY AND TIME SHEETS

- a. What is the rate of pay?
 - b. How do I get into the system? Application and tax form including tax file number
 - c. Time sheets and how to log on
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