

# Group Model Building

## Early Years Partnership: Derby

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Prepared by Telethon Kids Institute Early Years Partnership Evaluation Team and Department of Communities

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## 1. Introduction

In partnership with the Department of Communities and Minderoo Foundation, Telethon Kids Institute facilitated Group Model Building (GMB) workshops in the Kimberley. In Derby, two GMB sessions were held with mainly local Service Providers, and one session with mainly community members (mother or caregivers and service providers). Two sessions were also held in both Mowanjum and Pandanus Park, attended by mainly community members -mother or caregivers and service providers (Table 1). There were few men in attendance at the community GMB sessions so a Yarning session with men in Derby, as part of the planning for implementation of the Early Years Partnership (EYP) was held to ensure their voices were included in any co-design of solutions.

In GMB, a group of community stakeholders identify:

- The drivers of a complex problem of interest
- The connections between those factors that may make the problem more difficult
- Action ideas to address and present opportunities to be more effective, and;
- Potential places to act based on insights from mapping the system

In Yarning sessions, a group of men (parents, caregivers, Elders) identify:

• The barriers and facilitators to raising strong and healthy children in their community

The first section of the report contains an evidence overview for all the priority areas across the three sites. The remainder of the report is broken into a section for each site where full details are included and a section where action ideas common to two or three sites are combined.

## Table 1 Overview of number and types of workshops and number of attendees held in Derby,Mowanjum and Pandanus Park

|                                    | GMB 1     |             | GN        | IB 2        |
|------------------------------------|-----------|-------------|-----------|-------------|
|                                    | Date      | Ν           | Date      | Ν           |
| Derby – service providers          | 7/12/2023 | 27 (approx) | 21/3/2023 | 10 (approx) |
| Derby community (women)            |           |             | 27/4/2023 | 8           |
| Mowanjum community (women)         | 20/3/2023 | 15          | 26/4/2023 | 22          |
| Pandanus Park community<br>(women) | 22/3/2023 | 7           | 28/4/2023 | 15          |



#### 1.1 Priority Area Evidence Overview

The priority areas across Derby, Mowanjum and Pandanus Park are listed below in alignment with the EYP Impact Pathways. Culture and Language is not specified along the pathways but is an underpinning theme across all sites:

- Culture & Language
- Community Factors
  - o Service aspects
  - Socio-economic aspects
  - Social aspects
- Family Factors
  - o Parent health
  - o Family safety
  - o Financial wellbeing
- Child Factors
  - o Child health
  - o Child development

#### 1.1.1 Culture & Language

#### Culture

Indigenous culture and language should be included in any solutions to issues that face Aboriginal and Torres Strait Islander people. Strong attachment to culture has been associated with positive outcomes across a number of socio-economic and wellbeing indicators (1). Stronger cultural attachment was related to higher levels of employment, lower levels of arrests, educational attainment (except in remote and very remote communities), and good health (1). Conversely, in adulthood, Indigenous children removed from their families, regardless of their cultural attachment, reported significantly worse health status, and higher incidence of arrest and alcohol abuse (1).

Some particular aspects of child-rearing are also regarded as universal, such as the need for an emotional bond with a caregiver or caregivers, the need for security and protection, and the need for growing emotional competence (2), however, how these are expressed differs across cultures. Understanding and incorporating the different cultural values and systems is essential to all people who work with Indigenous populations. For example, child rearing looks very different between Aboriginal and non-Aboriginal cultures. All parents, caregivers and the wider community want to provide their children with a nurturing upbringing that results in competent adults who can nurture future generations (3). The nuclear family model that is dominant in Westernised countries and so drives service models and policy does not apply to Aboriginal families more generally and ways of child-rearing more specifically. Mothers do play an important role when the infant and the role of the wider family is to ensure she is doing a good job (4). However, as the child grows older, some child rearing responsibilities are taken up by other family members and the bonds between the child and the wider family strengthen (4). Aboriginal infants are accepted as valued members of the family and included in all community events such as births, deaths, illness, celebration, or ceremony (4).



Sometimes these events impact attendance at school, milestone appointments, playgroup, etc. but this was an accepted part of life (4). Therefore, it is important for all services to take culture into consideration. Some other differences in parenting behaviours that need to be considered included attending to crying babies (Aboriginal women believe that non-Aboriginal mothers are cruel to leave a baby cry), ways of encouraging autonomous thinking and behaviours (children's behaviour is often influenced through stories and fear mongering rather than by directly forbidding the behaviour), using spiritual practices to help grow strong children, co-sleeping, exclusive breastfeeding for longer periods (up to 8 or 9 months of age) and continued breastfeeding on demand for as long as the child wanted, carrying infants rather than letting them crawl or walk, and health beliefs (4). Judging Aboriginal parenting using a Western value system really sets up these parents for failure and may discourage them from seeking help when required.

Parents also have many of their own issues to deal with and may feel hesitant about seeking help because of fears that children may be removed. Many Aboriginal people experience intergenerational trauma and other entrenched inequities which often are associated with drug and alcohol abuse, poverty, overcrowding and inadequate housing (3). It is, therefore, imperative that services are seen as places of cultural safety and that learning is 'both-ways'. This can be achieved when people listen deeply and respectfully to one another, care for each other, and take time to build relationships. This is an important aspect of working with Aboriginal people and can easily be overlooked by Western services and departments as being too time consuming and costly. However, this 'both ways' approach forms the foundation for improved provision of services for Aboriginal communities, families, and ultimately for children (3).

#### 1.1.2 Community Factors

#### **Service Aspects**

Early detection of child health and development problems improves outcomes for children (5). However, there is an inequitable relationship between access to services and low socio-economic position, low maternal education and low English proficiency (6). It has also been suggested that a family's engagement with providers has been influenced by birth order of children, cultural beliefs, personal health practices, previous engagement with service providers and cost (7). Increasing engagement with service providers and strengthening those relationships with early childhood practitioners and continuity of care is important.

While there are many well documented family level risk factors which effect children's development, the evidence does indicate that delivery of services should occur with progressive universalism at the fore (5). This approach would address the current inequities at community level which hinder better service provision and utilisation.

There are many community level factors of service access to be considered when looking at the health and development of young children. The service needs to be transparent in its provision of services and to be mindful of cultural norms and appropriateness of its approach (8, 9). Trust in services would be improved and would subsequently influence health seeking behaviour if cultural differences were better addressed in health care settings (8). In those families effected by generational trauma, persecution and suffering, service providers need to be trained to be able to



navigate these issues to meet both the health requirements and create trust (5, 8). The provision of translation services and interpreters would also engender trust and better compliance with treatment and future access to care (8). Geographical aspects cannot be undervalued as transport, social support and accommodation options effect a child reaching services, particularly in rural and remote locations (9). The cost of these factors plays a role in service reach, even if the service itself is provided under Medicare. Service provider hours and appointment mechanisms also effect the availability of a service (9). This is apparent during ophthalmology and ear, nose and throat appointments where testing precedes the specialist doctor's appointment. Effective appointment planning would reduce the need for multiple attendance days as scheduling could allow appointments to be better streamlined.

A further dimension is the effective engagement of the family with the service (9). Children from some communities, in particular CaLD communities, can be overlooked for early intervention services such as physiotherapy, occupational therapy, speech pathology, audiology. They are also more likely to have their developmental concerns overlooked when they do present to services (6). For example, language delays can be masked by a child's exposure to more than one primary language and health professionals misattribute the delay to this exposure, when there is in fact an underlying issue (6).

Referral pathways need to be simplified to assist with access to early intervention services (6). For many families, the General Practitioner (GP) is the gateway facilitator to further services, but the GP can also be a barrier as families are reluctant to attend. (6) There are long waitlists for surgical interventions for children. For example, at the end of April 2023, Perth Children's Hospital median wait times for ENT surgery of category 3 cases (least urgent cases) was 14 months (10). Ophthalmology level 3 cases had a wait list time of nine months while general paediatric surgery was about 7 months (10). Across all elective surgery cases on waiting lists, there has been very little change since April 2022. Long term investment in staff training and a commitment to a better integrated early years health system would reduce the number of children starting school developmentally vulnerable (5).

#### Socio-economic aspects

A child's access to safe, stable, and adequate shelter is recognised as a basic human need and is important for children's physical and mental wellbeing and development (11). Multiple factors related to housing may affect children's health and developmental outcomes including home ownership, mobility (frequency of housing moves), homelessness, overcrowding, and poor housing conditions (12, 13). Moreover, housing factors intersect with various socioeconomic factors that underpin children's health and developmental context (14).

Moving house in childhood is a common occurrence. Australia is among some of the most mobile countries in the world with roughly half the population changing where they live every five years (15). Moreover, low-income families are also more likely to have involuntary or forced moves, for example, where a rental lease is cut short, house payments become unaffordable, or family circumstances change through job loss, family violence, separation, or divorce (16-19). Research evidence also indicates that Indigenous Australians move home at higher rates than non-Indigenous



populations (20). Constrained housing choices confronting low-income families and Indigenous Australians compound the developmental challenges already facing their children because of socioeconomic conditions (20-22). Moving homes alter the level of community resources available to children, such as quality schools and childcare, availability of recreational and social programs, and neighbourhood safety (23). Moving homes also impacts families' social connections to their community by affecting close ties or social networks that provide emotional support and information about the broader community (24, 25). High rates of housing mobility have had a wide array of documented negative consequences for a range of child outcomes, including children's development and health outcomes (26), particularly for Indigenous Australian children (20).

Indirect processes associated with socioeconomic factors such as parent wellbeing or availability intersect with aspects of the home to impact on children's development and wellbeing. Features of the home such as poor physical quality associated with economic hardship or family conflict indirectly affect children via family, particularly parental wellbeing, or behaviour (27). Further, the intersection of parenthood and unaffordable or high-quality housing, which may or may not entail homeownership, may result in parents working long hours (24). Whereby, the parents are less able to spend time with their children.

A key throughline across the research literature is that there are multiple interrelated features of housing disadvantage that intersect with aspects of family processes impinging upon children's development, particularly as experienced by Indigenous Australian families (28). Housing challenges experienced by families have included insufficient housing availability, overcrowding, poor housing conditions, a lack of affordability, long waiting lists for government housing, and discrimination in the private rental market (18). Consideration of multiple housing factors provides valuable insight into the lived realities of Indigenous Australian families' housing experiences, for example living with family and friends (including kinship groups) for extended periods of time or frequently moving from family to family or to transient or emergency accommodation. This is consistent with the research literature indicating that Indigenous Australian families face multiple forms of social and financial disadvantage (29). Housing is a basic need and has been identified as an important social determinant of health (11). The clustering of housing factors will generally coexist for families and have a cumulative impact on health and well-being, particularly with prolonged experience in childhood (30).

#### Social aspects

The social aspects that impact the developing child can be understood broadly as the level of social cohesion within the community (31). Social cohesion requires both an absence of social problems (such as crime, drug use, domestic violence) and the presence of strong social bonds (32). In addition, the social environment is heavily influenced by culture and ethnicity (31). Together, social cohesion and the cultural beliefs and attitudes held within a community can have a significant impact on how children develop during the early years (31, 33). Geographically, communities with high social inequality and low socio-economic status tend to correlate (33). An example of this correlation can be seen in the Aboriginal communities located in the remote areas of Western Australia, where high social inequality and low SES has led to concentrated disadvantage (34). In addition, social problems tend to cluster among communities experiencing disadvantage, such as drug use, crime, increased



mortality, and child maltreatment (33). Thus, at a community level, crime rates are usually an indication of social cohesion within a community (33).

Social bonds include both close relationships between individuals in a community, and the connections linking individuals to institutions that generate social status and power (35). Social capital, social networks, social connectedness, social support, social isolation, social exclusion, and social ties are some of the terms used in connection with social bonds (32). Strong social connections can have a protective effect on the health of individuals (36). Conversely the Social Determinants of Health cites social exclusion as a major factor impacting health and wellbeing (32). For families with young children, being socially isolated can have a negative impact on their ability to parent and to provide a positive learning environment for their child (37, 38). Strong social connections are associated with positive parenting capabilities such as caregiver responsiveness, child engagement, and attachment with the child (39, 40). Therefore, when families have poor social resources in early parenthood they are at a significant disadvantage (32, 41).

Although individuals are largely motivated to increase their social resources, this is influenced by the environment (opportunities) and individual factors (personality) (42). Acknowledging the barriers that limit opportunities for families to develop social resources within a community is essential. For example, perceptions of crime in the community can lead to parents limiting their children's access to outdoor physical play. This leads to an increased risk of obesity and poor mental health for children (43). Cultural beliefs and stigmas can be both protective and damaging to child development. When education is highly valued within a community, it can improve child outcomes (31). Alternatively, if there exists a prevailing public stereotype or stigma associated with the community, such as a perception of pervasive drug use, it will significantly impact the ability of any family from the community to establish meaningful social connections within the broader community. This influences child development because barriers to developing social cohesion, such as stigmas, can reduce the social capital families have access to (31).

Conceptually, communities consist of more than just the social environment. There are also services, physical resources (parks, transport), governance structures, and socio-economic factors all of which represent the broad aspects influencing child development outcomes at the community level (31). While distinct, there is also significant overlap between these domains, for example, access to parks (services) is heavily influenced by perceptions of safety (social), and poor socio-economic status influences the extent to which individuals can engage in civic activities (social). Thus, from an ecological viewpoint, the communities in which children are born and live are a key determinant of child developmental outcomes, (31, 41, 44, 45) and it is not only important how each of these domains influence child outcomes, but also how they interact with each other (31). Therefore, measuring or assessing the social environment at the community level, requires multi-methods to assess not only the social bonds, cultural beliefs and attitudes, and social problems, but also how these social aspects interact with the other services, resources, governance, and socio-economic factors within the community (31).



#### 1.1.3 Family Factors

#### **Parent health**

A central contributing factor to the successful early development of children is maternal health and wellbeing. Maternal health refers to the health of women during pregnancy through to childbirth and 6-8 weeks post partem (46). The health of the mother has strong associative links to children's long-term health and their subsequent cognitive, emotional, and behavioural development (47, 48). Poor maternal perinatal health (mental or physical) increases the risk of poor general health in the child threefold. Further, a child has a 30% increased risk of having a chronic health condition if the mother has a chronic condition (49). Maternal health encompasses a range of health-related factors such as mental health (depression and anxiety), smoking, the use of alcohol and other drugs, teenage pregnancy, and general health status. Initiatives to promote the mental and physical health of mothers during the perinatal period can have substantial positive implications for the development of children.

Maternal depression is a known risk factor for a range of issues such as children's early developmental trajectories or early developmental delay (50). Poor maternal mental health during pregnancy or post-partum significantly increases the risk of the child experiencing problems in early development including behavioural, cognitive, global, and socioemotional development (50). Subsequently, poor early developmental issues have implications for children's school readiness and academic performance (51).

Smoking while pregnant is an identified maternal health factor that has a negative impact on a child's general health and substantially increases the risk for Sudden Infant Death Syndrome (49, 52). Maternal smoking effects child in-utero lung development and subsequent respiratory health and can have lifelong implications (53). Children born of mothers who smoked while pregnant, have higher rates of bronchitis, pneumonia, asthma, wheezing, behavioural problems such as hyperactivity and inattention in children under 5 (53, 54).

Alcohol consumption during pregnancy poses a great risk of harm to the foetus, especially in the first twelve weeks of gestation (52). Exposure to alcohol during pregnancy can lead to child outcomes such as Foetal Alcohol Spectrum Disorder (FASD), low birthweight and pre-term birth (55). FASD is an irreversible disorder which manifests with facial characteristics, permanent learning, growth, development, and behavioural problems.

Though the rates of teenage pregnancy have fallen substantially over the last 50 years in Western Australia, there remains a relatively high proportion within the four partner communities. Smoking during pregnancy, higher risk of low birthweight babies, pre-term babies and higher morbidity are significantly more likely to occur with teenage mothers (55). Such health-related factors have significant implications for the early and long-term development of children's outcomes.

Mitigating protective factors have been identified as reducing the overall negative impact of risk against developmental and behavioural problems. These protective factors may include early intervention strategies to promote higher social and interpersonal support, a reduction in child screen time to less than one hour per day, and improving child sleep behaviours by age 2 (51).



Therefore, strategies seeking to promote maternal health may have long-term beneficial outcomes for children's outcomes whilst reducing the overall risk of poor health-related factors.

#### **Family safety**

Family safety is a widely used umbrella term to encompass forms of family and domestic violence (FDV) and family violence (FV). FDV describe an ongoing pattern of behaviour intended to coerce, control, or create fear within a family or intimate relationship. FDV includes physical, financial, emotional or physical abuse, and sexual violence (56). FV refers to violence between family members, such as between parents and children, siblings, and intimate partners. Children's experiences of FDV may be through direct abuse, or indirectly through witnessing or being otherwise exposed to violence or threats of violence (57). Children who *witness* violence experience the same degree of negative psychosocial outcomes as children who directly experience physical abuse (58). Further, different forms of violence tend to co-occur (59) and impacts of violence are cumulative (60). While Indigenous children are more frequently exposed to FV than children in the general population (61), FV in the Aboriginal and Torres Strait Islander communities needs to be understood in a wider context that acknowledges the impact of colonisation, trauma and dispossession (62). Children from culturally and linguistically diverse communities are also at a higher risk of being exposed to FDV (61). Community and cultural values, pre-migration experiences, immigration policy and visa status contribute to this risk (63).

Family and domestic violence can impact the health and development of babies in-utero, including health risks such as antepartum haemorrhage, low birth weight, preterm delivery and overall foetal morbidity (64). Evidence also highlights the impact of violence on foetal brain development, with consequences for children's later cognitive development (64). The detrimental effects of children's experience of family and domestic violence have been consistently documented in the research literature across numerous dimensions – psychological and behavioural; social and emotional; physiological and physical, and cognitive (65-69). Infants are considered especially vulnerable because their brains are developing rapidly and this development is heavily dependent upon what they experience (59), and because of the amount of time they spend in the family home and the level of their dependence on parents or other caregivers (58, 67, 70).

FDV impacts children's cognitive development and may include lower intellectual functioning, delay in speech development, memory, and executive functioning (59, 71). Impacts on psychological and behavioural functioning include both internalising symptoms (e.g., attachment disorders, low self-esteem, depression, anxiety, loneliness, or having fewer interests and social contacts (66, 70); and externalising behaviour problems (poor sleeping habits, poor general health and behavioural problems such as increased irritability, screaming, crying and general poor health (72). Other behaviours include aggression, non-compliance, problematic peer relationships, fighting, and being fearful (66, 70). Children may also exhibit symptoms of trauma - which in cases of severe violence or multiple episodes can lead to loss of already acquired developmental milestones (59), and symptoms of post-traumatic stress disorder (73). Children exposed to FDV have higher odds than non-exposed children of being vulnerable in all five AEDC domains: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based) and communication skills and general knowledge (70).

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#### **Financial wellbeing**

Alongside poverty, research evidence indicates that child development is significantly impacted by other indicators of financial status such as low income, housing, food insecurity, parental education, and employment (74, 75). Children living in households experiencing financial hardship are at greater risk of poor health and educational outcomes, both in the short and long term (76). In addition, children from low-income families are more prone to psychological or social difficulties, behaviour problems, lower self-regulation and elevated physiological markers of stress (77). Low household income affects a child's capacity to access a healthy diet and adequate medical care, live in a safe home environment, have stable quality care and appropriate housing, heating, clothing and educational materials (78-80). A recent review of housing affordability impacts on children's outcomes makes the case for the necessity to expand family housing assistance in government policy (81).

A major outcome of poor financial wellbeing is food insecurity which refers to the limited or uncertain availability of or capacity to acquire nutritionally adequate and safe foods (82). In Australia, low-income earners, Aboriginal and Torres Strait Islander peoples, culturally and linguistically diverse groups, single parent households, older people and people experiencing homelessness are at greater risk of food insecurity (83). Rarely occurring in isolation, food insecurity is more commonly experienced alongside economic, health, and housing insecurity (84). Further, the geographical location of regional and remote communities exacerbates the difficulty of accessing affordable healthy food, and is often accompanied by limited food and nutrition literacy (83). Research has established clear links between food insecurity and child outcomes such as school readiness (85), behaviour problems, academic problems, anxiety and depression (86, 87), as well as suspension from school (88) in school-aged children. Further, food insecurity is linked to poor general health and developmental risk among children aged 0-4 years (89, 90) and school aged children 6-13 years, (88, 91). Long-term effects are demonstrated with older children experiencing food insecurity are approximately twice as likely to have asthma (92) and almost three times as likely to have iron deficiency anaemia (93).

The role of maternal education in parenting practice, childhood development and lifetime success has been well established (94, 95), with strong links between paternal education and positive child development (96). Comparatively, parents with a higher level of education are able to invest more capital, resources and quality time for their children (97, 98). Mothers with higher education are associated with more knowledge of early childhood development (99), use a wider vocabulary with their kids (100), invest more in their child's health (101), and provide more children's books in the home (102).

The relationship between maternal occupational status and parenting practice and child development is a complex one, with the broader family context playing an important role (103). While some evidence suggests maternal employment has a detrimental effect on children's cognitive development when it occurs in the first year of life (104, 105), other research suggests mothers with high profile part-time jobs are positively associated with high quality parenting practice and better outcomes (106, 107). Further, positive associations between maternal employment and child





learning outcomes are evidenced among low-SES families, with the mother's contribution to the household income providing more resources resulting in a higher quality home environment (103).

#### 1.1.4 Child Factors

#### **Child development**

The United Nations declaration of the rights of the child enshrines the right for all children to receive adequate provision of physical, psychological, spiritual, social, and cultural needs for optimum growth and development (1). Child development refers to the physical and psychological growth of the child, from conception through infancy and early childhood (2). Working with communities to positively impact child development is one of the overarching aims of the Early Years Partnership.

High rates of preventable developmental delay and early onset of chronic disease have prompted international interest for early detection and effective early intervention for these conditions (3). Early detection relies on appropriate and regular measures. Such measurement is complex and what is considered 'normal' varies widely (4). In Western Australia, the Ages and Stages 3 questionnaire (ASQ 3) is a validated instrument that has demonstrated high reliability and specificity for developmental screening at: 0-14 days, 8 weeks, 4 months, 12-18 months, and 2-3 years (5). However, experts have noted the importance of considering cultural and contextual factors when using this indicator as 'normal' varies across cultures, ethnicities, and religions (6). Across most populations in Western Australia the number of children receiving these checks decrease with age, with 98% of eligible children receiving their 0–14-day check, and 30% receiving the 2–3-year-old check (7).

Further, school entry assessment is administered when a child begins formal schooling via the Australian Early Development Census (AEDC) (8). AEDC measures five domains: physical health and wellbeing; social competence; emotional maturity; language and cognitive skills; communication skills and general knowledge. This measure has been shown to be a reliable predictor of literacy and numeracy in later primary school years (9). Between 2007 and 2009, revisions were made to the tool to make it culturally appropriate for Aboriginal children with a preference that the AEDC measure be administered with an Indigenous Cultural consultant present (10). Additionally in 2020, AEDC was included in Closing the Gap targets with a strengths-based focus and movement from 'developmentally vulnerable' to 'developmentally on track' (11). The latest AEDC data (2021) shows that 57% of all Western Australian children (12), and 31% of Aboriginal children (13) were developmentally on track across all five domains.

This series of health checks is recommended to understand the child's growth firstly, better, and secondly to detect possible developmental problems as early as possible. Intuitively, early detection should link with prevention and/or early treatment. Likely due to few studies, there is currently limited evidence to demonstrate this link, but existing evidence has demonstrated links between increased health checks and enhanced referrals, especially for psychosocial problems in children (14). As a key reason for screening is early detection of developmental delays, provision of adequate and prompt medical or other relevant supports may enhance the uptake of these checks. One study identified that early detection without timely access to care adversely impacted parental self-efficacy (15).



Overall screening for child developmental delays is essential for early detection and appropriate education, support, referrals, or management across the spectrum of 'normal' child development. Strategies to increase these health checks aligned with the provision of the necessary follow-up support, could comprise an important pathway for ensuring more children reach their full potential.

#### **Child health**

Experiencing good health impacts how children go about their everyday lives because health can influence participation in family life, schooling, social and sporting activities (52). Birthweight, nutrition and the maintenance of a healthy weight, physical activity, chronic conditions, ear and oral health, sleep and social and emotional wellbeing are all associated with child development and school readiness. Moreover, poorer outcomes related to these factors tend to have a social gradient (108, 109), with children experiencing social disadvantage or those from marginalised populations often overrepresented.

Low birthweight is an important indicator of a newborn's immediate health and a determining factor of their future health, with potential implications for early child development (52) and is associated with an elevated risk of developmental delays, cognitive impairments, motor skills and behavioural difficulties during the early years of a child's life (52, 110, 111). Babies born in very remote areas (8%) or within areas of greatest socioeconomic disadvantage (8%) are more likely to be of low birthweight than those born in major cities (6%) or areas of least disadvantage (6%). Also, babies of Indigenous mothers are more likely to be of low birthweight than those of non-Indigenous mothers (12% and 6%, respectively) (55).

Adequate nutrition, maintaining a healthy weight and physical activity lay the foundation for optimal growth and development. As children are constantly growing, good nutrition is key to support their growth and development, and it gives them the energy they need to concentrate, learn and play (112). From birth, breastfeeding aids in growth, cognitive development and is protective against infections and immune-related diseases later in life (113). Infancy, toddlerhood, and early preschool (0–4 years) represent a period of rapid growth and brain development. This critical period has been shown to be threatened by food insecurity, with both household and child food insecurity associated with poor health outcomes, developmental risk and behavioural problems (88, 90, 114). Evidence exists to suggest that nutrition assistance programs and parental coping strategies can alleviate the impact of household food insecurity but fail to address the ongoing issue of compromised developmental outcomes in children (115, 116).

Regular physical activity is important as it promotes motor skills development, coordination and strength, which are essential for a child's physical milestones. Children who are physically active tend to have better cognitive development and language, concentration, memory and problem-solving skills. Being active also enhances brain development and promotes the formation of neural connections, which are critical for learning and intellectual growth (52).

Healthy hearing is crucial for various aspects of child development. If a child has hearing loss or earrelated issues, it can impact their ability to hear and understand sounds, which may lead to delays in language and communication. In addition, untreated inflammation and infections, known as otitis media, can adversely affect a child's cognitive development and socio-emotional wellbeing (117). Otitis media is most common in children under 12 months of age with high rates of the disease seen among Aboriginal and Torres Strait Islander children living in rural, remote and urban areas (118).



Otitis media and hearing loss have become normalised in some remote communities and can go unrecognised with parents rarely seeking help for these conditions (119). Routine child health checks, including an assessment of Indigenous children's ear health on each occasion of contact with a health service, are needed to monitor hearing health in the case of recurrent infections, and to support the identification of issues associated with hearing loss such as delays in speech and language development and impaired listening skills (120).

Good oral health throughout infancy and early childhood contributes to better dental health in adulthood, resulting in less decay and reduced loss of natural teeth (121). Without it, sufferers may experience pain, discomfort and embarrassment affecting the ability to eat, speak, sleep, socialise confidently (52), and poorer school performance (122). Dental caries, commonly known as dental decay, refers to the development of cavities (small holes) in the teeth that compromise the health and structure of the tooth. It is the most prevalent oral disease among Australian children (123), with one in three children aged five to six experiencing tooth decay in Western Australia (124). Some population groups face greater challenges in accessing oral health care and experience the greatest burden of poor oral health (125). Children living in remote and very remote areas (53%) were more likely to have had decay in their primary teeth than children in major cities (39%). Tooth decay was also observed to be more prevalent among children living in households with low income (50% had experienced decay in their primary teeth) compared with one-third (33%) of children in high-income households. Differences were also observed between Indigenous children and non-Indigenous children experiencing decay in their primary teeth (52).

The prevalence of chronic conditions such as asthma, diabetes, hay fever and developmental disorders can have profound effects on various aspects of a child's development. The management of symptoms, chronic pain, limitations in daily activities, and social isolation can interrupt a child's normal development leading to an increased risk of vulnerability upon entry to school (126). Managing chronic conditions can be complex, expensive and take a psychological, social and economic toll on the children affected and their families. Early intervention and joined-up support services can minimise the negative effects and support families (127).

Adequate and quality sleep are important factors in healthy brain development in children (52). A sleep deficit has been associated with a range of physical, behavioural and other mental health issues. Young children who do not get enough sleep are at increased risk of becoming overweight (127), and are at risk of having externalising and internalising difficulties suggesting behavioural difficulties resulting from poor quality sleep include both 'conduct' and 'emotional' problems (128).

Another key aspect of the relationship between child health and development is social and emotional wellbeing (SEWB). Social and emotional development encompasses the ability to identify and understand one's feelings, accurately read and comprehend emotional states in others, manage strong emotions and their expression, regulate own behaviour, develop empathy for others and establish and sustain relationships (52). One in 10 Australian children scored in the 'of concern' range on the Strengths and Difficulties questionnaire, and children living in the lowest socioeconomic areas more likely to score 'of concern' that children living in the highest socioeconomic areas.



#### Conclusion

In these communities, community-level factors strongly impact the healthy development and wellbeing amongst 0- to 4-year-old children. Trust in services and availability, accessibility, and coordination play important roles in engagement with services. Housing stock, affordability and suitability all play roles in issues of overcrowding which then impacts on pre-school and school attendance. Social environments can be powerful vehicles for change as they can be positive or negative. Encouraging safe and healthful environments can have multi-faceted and multi-level benefits for all. Parental health, family safety, financial wellbeing individually has strong impacts on child development and wellbeing. Each of these factors is complex and multifaceted and so call for a suite of solutions. However, they are not completely separate factors as there are many connections and common determinants to all these. Underpinning all of these is child health and development and overlaying all is culture and language. It is important to understand how these factors combine to create a local system so that local, culturally informed solutions can be developed and implemented.

## 2. Group Model Building

The dates and number of attendees at each of the GMB workshops and Yarning sessions are presented in Table 1Table 1 Overview of number and types of workshops and number of attendees held in Derby, Mowanjum and Pandanus Park (further descriptions of attendees are presented in A.1). Participants worked in groups to identify the main enablers and barriers (variables) to child well-being (including the impacts of family well-being on the child) aged 0-4 years in the community, and the links between them. These variables and connections were 'mapped' during the workshop to create a causal loop diagram (CLD) using the software program STICKE<sup>1</sup>.

IN GMB #2, participants were first asked to review the CLDs (which had been refined by the Telethon Kids Institute team in-between workshops) to identify any new variables or connections that had not been 'mapped' in the initial workshop. Participants then worked through a facilitated process to identify existing actions, including ideas of how these could be strengthened, and new actions to address parts of the system. New actions and strengthened ideas were first assessed by the group in terms of impact and feasibility, and then prioritised.

Causal Loop Diagrams (CLD) were developed to identify variables and connections to understand: **'What things help or hinder the healthy development and wellbeing of children aged 0-4 in your community (Derby, Mowanjum and Pandanus Park)?'**. Each community's CLD and unique action ideas will be discussed separately, however, for ease of interpretation the actions that were nominated by more than one community are listed in Table 2 below.

<sup>&</sup>lt;sup>1</sup> STICKE is an application developed by the Institute for Intelligent Systems Research and Innovation, Deakin University in collaboration with the World Health Organization Collaborating Centre for Obesity Prevention. This application aims to facilitate community knowledge exchange to foster shared understanding of complex problems.

| Priority Area<br>(casual loop                                  | Title   | Description   | Votes   |
|--|---|---|---|
| diagram location)  |   |   |   |
| Culture &<br>Language<br>Culture                               | Engage and support<br>Elders to<br>participate in and<br>lead community<br>events and 'on<br>country' outings | Actively engage community Elders in community<br>events – culture, language, 'just hanging out'.<br>Comfortable and suitable transport back to country<br>for elderly people and special needs.<br>Take different groups (Elders; young people, etc)<br>across different seasons to increase knowledge and<br>consumption of bush tucker and increase cultural  | 8 (4/4)<br>DC/MW                                  |
| Community<br>Factors<br>Service Aspects                        | Collaboration of<br>services to increase<br>coordinated<br>approaches and<br>access to health<br>services     | One-stop shop for people to increase ability to<br>advocate for themselves and for access to services;<br>to be pointed in the right direction or put in touch<br>with the right service. Helping to address barriers<br>to engagement with services.<br>Coordinated approach – sharing of<br>progress/support.<br>Better communication from organisations about<br>their services and visits or cancellation of visits to  | 25<br>(7/5/7/4/<br>2)<br>DC/DC/P<br>PW/MW/<br>PPW |
| Community<br>Factors / Culture<br>& Language<br>Social Aspects | Address youth<br>boredom and crime  | communities. Increase service outreach.<br>On country outings (bush country, fishing, picnics).<br>Participate in Law and culture with Elders.<br>Include non-Aboriginal youth (two-way learning) -<br>bring them out from Derby to outlying<br>communities.<br>Expected to impact crime rate by creating more<br>respect for town and country.<br>The 0- to 4-year-olds influenced by older children<br>(role models) so there is a need to break the cycle.<br>Increase youth crime service availability.<br>Develop play centres and create activities (e.g. Blue<br>Light Discose Movies, etc.) | 3 (3/0/0)<br>MW/DW<br>/DW                         |
| Community<br>Factors<br>Physical Aspects                       | Transport & infrastructure  | Make available transport for clinic and school.<br>Need spaces for youth services (maybe a church<br>shed – check PP).<br>Provision of more streetlights.<br>Reschedule bus services so the whole community<br>benefits and has the opportunity to use the bus.   | 5<br>(1/4/0/0)<br>PPW/PP<br>W/PPW/<br>MW          |
| Community<br>Factors   | Increase Access to<br>Power   | Solar power in each house with community<br>batteries.<br>Lack of electricity means that the kids don't sleep<br>and are tired. This affects school attendance  | 0 (0/0)<br>DW/PPW                                 |
| Community<br>Factors<br>Physical Aspects                       | Playground  | Provide suitable playgrounds and physical activity<br>areas for the younger children and older children.<br>New playground that encourages child<br>development.<br>Undercover basketball court.<br>Suitable and safe playground like at the Derby<br>hospital.   | 0 (0/0/0)<br>MW/PP<br>W/PPW                       |

Table 2 Actions similar across two or more of the communities of Derby, Mowanjum andPandanus Park, prioritised and grouped using the Impact Pathways



| Community<br>Factors                                  | Increase Access to<br>Housing                    | BBQ at playground so parents can cook while the<br>kids play.<br>Increase housing stocks by maintenance of empty,<br>existing houses and build new houses.<br>High cost of living, overcrowding, food issues,  | 5 (5/0)<br>PPW/DW                  |
|---|--|--|------------------------------------|
| Socio-economic  |  | money shortage.  |                                    |
| Family Factors<br>Family Safety                       | Community<br>Warden System<br>(night patrol)     | Self-regulation by the community.<br>Noise control so there are quiet times.<br>Measures may involve taking the stereo for a<br>specific time or confiscation for repeat offenders.<br>The wardens must be people respected by the<br>community.   | 18<br>(11/6/1)<br>MW/PP<br>W/PPW   |
|   |  | This will help with sleep.<br>Could also assist with drug and alcohol control<br>through engagement with police  |                                    |
| Family Factors<br>Financial<br>Wellbeing              | Employment and<br>Training                       | Provide employment and training for young people<br>so they can stay and work in the community.<br>Reinstate the CDP program as it can lead to more<br>jobs for communities and provide school holiday<br>activities.<br>Increase the number and variety of courses<br>available at the local TAFE.<br>Bring education to where the mums are at e.g.<br>Ngunga Women's Centre, playgroups, etc. Makes it<br>easier for the mums to attend and less threatening<br>environment. Provide basic education (numeracy,<br>reading and writing) and life skills. | 16<br>(9/7/0/0)<br>MW/MW<br>/DW/DW |
| Family Factors<br>Financial                           | Increase childcare<br>availability               | Increase day care centres; increase eligibility of access to care.   | 8 (8/0)<br>DC/MW                   |
| Wellbeing<br>Family Factors<br>Financial<br>Wellbeing | Financial Planning<br>Workshops                  | <ul> <li>Provide childcare so parents can work.</li> <li>Provide education about budgeting, food shopping, managing finances, and saving.</li> <li>Have some sessions with a woman facilitator for women.</li> <li>Education and demonstrations in the use of generically labelled foods with a dietician.</li> </ul>  | 3 (2/1)<br>PPW/M<br>W              |
| Family Factors<br>Parent Health                       | Education and<br>restriction on<br>alcohol/drugs | Introduce alcohol restrictions by police similar to<br>Fitzroy Crossing including limits on what you can<br>buy e.g. light beer. Close the bottle shops on some<br>days.<br>Provide health promotion about not sharing<br>needles, and the damage that drugs can do.<br>Increase awareness of the impacts of alcohol – that<br>it impacts everyone including kids, their safety and<br>school attendance   | 7 (5/2)<br>DC/PPW                  |
| Child Factors<br>Child<br>development<br>Child health | Parenting<br>education<br>workshops              | Increase parent awareness of the importance of<br>school readiness, financial education, health<br>education. Collaborative maternal and child health<br>service delivery.<br>Incorporate the 3 'A' approach<br>( <u>https://colbypearce.net/2014/02/11/triple-a-</u><br><u>model-of-therapeutic-care/</u> ). Align workshops with<br>playgroups.  | 10<br>(6/3/1)<br>DC/MW/<br>PPW     |



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|               |                    | Provide healthy eating workshops for mums and babies and children and households.                           |           |
|---------------|--------------------|---|-----------|
| Child Factors | Child Health Day & | Provide wrap-around support and service delivery.   | 5 (5/0)   |
| Child health  | School-ready days  | In the one place at the one-time have service<br>providers, activities, referrals and health checks.        | MW/DW     |
| Child         |                    | Hold school ready workshops so Abstudy and other  |           |
| development   |                    | entitlements can be claimed.  |           |
|               |                    | Parents/caregivers can get birth certificates,<br>uniforms, books, etc in readiness for the school<br>year. |           |
| Child Factors | Early Breakfast    | Provide breakfast in the community before bus   | 18 (10/8) |
| Child health  | Program            | time and provide a packed school lunch.   | MW/PP     |
|               |                    | Perhaps have people in community cooking – part   | W         |
|               |                    | of work for dole scheme, increase knowledge and   |           |
|               |                    | skills in nutrition, nealthy eating, and provide  |           |
|               |                    | employment.   |           |

NB DC= Derby community; DW=Derby women; MW= Mowanjum women; PPW=Pandanus Park women

### 2.1 Derby

The CLD for Derby is presented below (Figure 1) and each theme is discussed separately in the following sections. The colour coding in this CLD is as follows:

- 1. Ocean: Culture
- 2. Sky: Service aspects
- 3. Blue: Socio-economic aspects
- 4. Red: Social aspects
- 5. Land: Parent health
- 6. Roo: Family safety
- 7. Sand: Financial wellbeing
- 8. Flower: Child development
- 9. Dark red: Child health



#### Figure 1 Causal Loop Diagram from Derby



#### 2.1.1 Culture and Language Derby

Cultural practices were essential foundations for healthy child development, with strengthening of kinship and cultural identity linked to social and emotional wellbeing (Figure 2). Challenging elements of cultural practices were also noted, such as the cultural practice of resource sharing, sometimes led to 'humbugging' where limited resources were spread across multiple people which can lead to a greater proportion of the household income being shared and also negatively impact discretionary income.





#### 2.1.2 Community Factors Derby

The Community Factors incorporated community-level service, socio-economic and social aspects which were linked through household income (Figure 3). Trust in services was an important issue and was affected by the availability of local workers to provide continuity of care, the availability of outreach services, and the length of waiting lists. It is important to build and maintain trust as this is how engagement with services is improved. Social aspects included empowering families to co-design solutions aimed at decreasing crime and improving service delivery. These solutions can be



facilitated or hindered by the levels of bureaucracy. Public house eligibility and availability has a complex relationship with empowered families and household income. As the community becomes more empowered, this can help increase income, and as income increases, less of the community is eligible for public housing which can negatively affect housing stock. An unintended consequence may be a lack of motivation to increase income.



Figure 3 Community Factors section of Derby's Casual Loop Diagram

#### 2.1.3 Family Factors Derby

Family factors included parent health, family safety and financial wellbeing (Figure 4). All three factors were linked through drug and alcohol use, and social and emotional wellbeing. Reducing drug and alcohol use in the community could potentially increase social and emotional wellbeing, reduce FDV which can lead to safer home environments, increased social connections, and improved attendance levels at pre-school and school. Of concern is the perceived or real gendered response to FDV by those agencies working in the field as it can impact engagement with services more generally leading to more chronic disease in parents/caregivers that can then influence attendance at preschool and school. Poverty is the major determinant of financial wellbeing as it linked to diet, overcrowding and homelessness. Employment is another important factor as it affects income,



access to transport, dependence on welfare and stigma. Improvements in education levels, childcare availability and affordable transport options were suggested as means to improve employment levels.



#### Figure 4 Family Factors section of Derby's Casual Loop Diagram

#### 2.1.4 Child Factors Derby

Child factors included child development and child health (Figure 5). Child development focused on attendance at pre-school and school. Ear health was seen as a barrier to language development which affected school readiness. The early detection of developmental delay is one means of promoting ear health and school readiness. Child health was dependent on parental health especially parental mental health and the use of drugs and alcohol. Engagement with health services could break the chronic disease reinforcing loop.





#### Figure 5 Child Factors section of Derby's Casual Loop Diagram

#### 2.1.5 Actions and Priorities Derby

Participants were provided with five sticky dots and asked to vote on the action ideas. Actions with the highest number of votes are presented below and grouped within the Impact Pathways (Table 3). Actions that received no votes are presented in A.2.

| Priority Area<br>(casual loop<br>diagram location) | Title   | Description   | Votes |
|--|---|---|-------|
| Family Factors<br>Family Safety                    | Men's behaviour change<br>program and resources | Culturally specific delivery of on-country programs   | 8     |
| Family Factors<br>Parent Health                    | Support for new parents                         | Focus on providing support to families that<br>don't have strong positive kinship network.<br>Not necessarily child health team- child health is<br>only engaged at the 4 day and 4-month check | 7     |

| Table 3 Unique Derby Action Ideas prioritised and grouped using the Im | pact Pathways |
|--|---------------|
|--|---------------|



#### 2.1.6 Next steps

The Group Model Building process brought key service stakeholders together to identify the main enablers and barriers to the health, learning and development of children aged 0-4 years in Derby from a systems perspective. A community plan will next be developed.

#### 2.2 Mowanjum

The CLD for Derby is presented below (Figure 6) and each theme is discussed separately in the following sections. The colour coding in this CLD is as follows:

- 1. Ocean: Culture
- 2. Sky: Service aspects
- 3. Land: Parent health
- 4. Sand: Financial wellbeing
- 5. Flower: Child development
- 6. Dark red: Child health

#### Figure 6 Causal Loop Diagram from Mowanjum





#### 2.2.1 Culture and Language Mowanjum

Cultural practices were seen as essential foundations for healthy child health and wellbeing, with strengthening of cultural practices and language strengthening sense of identity and connectedness to family and relationships more broadly (Figure 7).





#### 2.2.2 Community Factors Mowanjum

The Community Factors incorporated community-level service only (Figure 8). The community felt that by increasing their knowledge of available services then access could be improved.



#### Figure 8 Community Factors section of Mowanjum's Causal Loop Diagram



#### 2.2.3 Family Factors Mowanjum

Family factors included parent health, and financial wellbeing (Figure 9). The two factors were linked through drug and alcohol use, and family sleep routine. Reducing drug and alcohol use in the community could potentially increase social and emotional wellbeing, increase motivation to attend appointments (which can increase access to services), and increase money in the household. The flow-on effects centre on healthiness of diet and affordability of transport. The community believed that access to food was related to feelings of stigma.



#### Figure 9 Family Factors section of Mowanjum's Causal Loop Diagram



#### 2.2.4 Child Factors Mowanjum

Child factors included child development and child health (Figure 10). Child development focused on attendance at playgroup and kindy/school where the incorporation of two-way learning through employment of Aboriginal educators was seen as very important. Alcohol and drug use was seen to impact negatively on both child health and development through lessening ability to supervise children and attachment between parents and children. Child health and wellbeing can be reinforced through attendance at kindy/school, which leads to an increase in learning two-ways, which loops back to attendance at kindy/school which, in turn, increases child development then back to child health and wellbeing. Improving any of these variables or pathways will improve all the others in the reinforcing loop.





#### Figure 10 Child Factors section of Mowanjum's Causal Loop Diagram

#### 2.2.5 Actions and Priorities Mowanjum

Participants were provided with five sticky dots and asked to vote on the action ideas. Actions with the highest number of votes are presented below and grouped within the Impact Pathways (Table 4). There were no actions that received zero votes.

| Priority Area<br>(casual loop<br>diagram location) | Title                   | Description                            | Votes |
|--|-------------------------|--|-------|
| Community  | Community Store         | Reinstate the community store run by   | 9     |
| Factors  |                         | the community for the community        |       |
| Physical Aspects                                   |                         | Will impact food security              |       |
| Family Factors                                     | Community Warden System | Noise control                          | 11    |
| Family Safety                                      |                         | Quiet times                            |       |
|  |                         | May take stereo                        |       |
|  |                         | community                              |       |
|  |                         | Help with sleep                        |       |
| Family Factors                                     | Assistance with paying  | Without access to the app, hard to pay | 2     |
| Financial  | utilities               | utilities at non-work times.           |       |
| Wellbeing  |                         | People need to borrow money from       |       |
|  |                         | families to pay utilities              |       |
| Child Factors /                                    | Two – Way Learning      | Learn Aboriginal way and white man     | 4     |
| Culture &  |                         | way                                    |       |
| Child development                                  |                         |  |       |
| child development                                  |                         |  |       |

| Table 4 Unique N | Aowanium Action | Ideas prioritised a | and grouned usir | ng the Imnact | Pathwavs |
|------------------|-----------------|---------------------|------------------|---------------|----------|



| Child Factors     | Increase access to playgroup  | Hold a playgroup with dads  | 3 |
|-------------------|-------------------------------|---|---|
| Child Gevelopment | for dads                      | For a second state of the | 2 |
| Child Factors     | Increase attendance at        | Encourage parents to go to playgroup  | 3 |
| Child development | playgroup through             | through cooking and sharing food  |   |
|                   | increasing access – linked to | Have more venues for playgroup  |   |
|                   | above                         | Move playgroup around   |   |

#### 2.2.6 Next steps

The Group Model Building process brought key service stakeholders together to identify the main enablers and barriers to the health, learning and development of children aged 0-4 years in Mowanjum from a systems perspective. A community plan will next be developed.

#### 2.3 Pandanus Park

The CLD for Pandanus Park is presented below (Figure 11) and each theme is discussed separately in the following sections. The colour coding in this CLD is as follows:

- 1. Ocean: Culture
- 2. Sky: Service aspects
- 3. Red: Social aspects
- 4. Land: Parent health
- 5. Roo: Family safety
- 6. Sand: Financial wellbeing
- 7. Flower: Child development
- 8. Dark red: Child health

#### Figure 11 Causal Loop Diagram from Pandanus Park







#### 2.3.1 Culture and Language Pandanus Park

Increasing cultural practices such as skills, language and lore were essential for preparing children to lie and learn in two worlds (Figure 12). Challenging elements of cultural practices were also noted, such as the cultural practice of resources sharing (e.g. sharing housing), sometimes led to 'humbugging' where limited resources were spread across multiple people which can lead to a greater proportion of the household income being shared and impact cost of living. Both these pathways affected access to healthy foods; humbugging decreased access whereas, cultural skills increased access.



#### Figure 12 Culture and Language section of Pandanus Park's Causal Loop Diagram





#### 2.3.2 Community Factors Pandanus Park

The Community Factors incorporated community-level service, and social aspects which were linked through domestic violence (DV) (Figure 13). The provision of outreach services was an important issue as this impacted access to services, attendance at child health checks and DCP income support. Water quality was seen as crucial to child health and ability of the child to learn. The houses in Pandanus Park do not have potable, high quality water connected, and this is a cause of many physical and other wellbeing issues. Social issues focused on high levels of community support helping to keep kids out of danger through the provision of informal safe spaces. Youth boredom and crime were viewed as community factors that affected child health. These factors precede the use of drugs and alcohol which fuels domestic violence perpetrated in the home, causing trauma, which negatively impacts upon child health.



Figure 13 Community Factors section of Pandanus Park's Causal Loop Diagram

#### 2.3.3 Family Factors Pandanus Park

Family factors include parent health, family safety and financial wellbeing (Figure 14). All three factors are linked through drug and alcohol use. Drug and alcohol use is seen as a precursor to increases in domestic violence, and child neglect and decreases in employment opportunities. The trauma experienced through domestic violence has two pathways back to domestic violence, the first is that perpetrators learn from past experience which leads to a decrease in domestic violence or, domestic violence can be reinforced as perpetrators repeat their past experiences. Transport issues were major contributors to family financial wellbeing especially around diet and access to education.







#### 2.3.4 Child Factors Pandanus Park

Child factors include child development and child health (Figure 15). Child development focused on attendance at playgroup and kindy/school to increase skills in reading and writing which led to increased ability of the children to live and learn in two worlds which then reinforced their attendance at kindy/school. However, the ability to learn is affected by the child's health, the quality of the water, and quality of sleep at home. Actions that received no votes are presented in A.3.





#### Figure 15 Child Factors section of Pandanus Park's Causal Loop Diagram

| Priority Area<br>(casual loop<br>diagram location) | Title                                       | Description   | Votes | Community |
|--|---|---|-------|-----------|
| Community<br>Factors                               | Access to local schooling                   | Have a school in community until year<br>3 and include cultural learning and<br>language  | 9     | PPW       |
| Community<br>Factors<br>Physical Aspects           | Increase access to<br>potable/good<br>water | Can't drink water – can't use water<br>need clean water, water purifier on<br>each house, so can't can drink, bathe,<br>need drinking water<br>Water is not potable – high sulphate<br>content in water<br>Community has a water station at<br>beginning of community.<br>Everyone works to collect.<br>Hot, transport lack, people drinking<br>from taps, especially elderly and early<br>years new parents.<br>Water<br>Water quality causes skin health<br>conditions in children (and sometimes<br>kids do drink the water) | 4     | PPW       |

#### Table 5 Unique Pandanus Park Action Ideas prioritised and grouped using the Impact Pathways



|                |                    | Need good water throughout whole<br>house not just in kitchen<br>Filtered watered to each household<br>(Watercorp) and BIG PICTURE of next<br>steps to be explored (Pat Riley)<br>Pregnant women at risk of giving birth<br>to babies with 'blue baby syndrome'<br>(less oxygen in brain) |   |      |
|----------------|--------------------|---|---|------|
| Family Factors | Lack of basics     | Food, clothing shortage   | 4 | PPW  |
| Financial      |                    |   |   |      |
| Family Factors | Access to white    | Provide free or subsidised white goods  | 1 |      |
| Financial      | goods – similar to | Air conditioning x 2 actions (hot –   | T | FFVV |
| Wellbeing      | above              | can't sleep – overcrowding – sleep –  |   |      |
|                |                    | health)   |   |      |
|                |                    | Washing machines x 2 actions  |   |      |
|                |                    | (hygiene  |   |      |
|                |                    | (even to make loans available)  |   |      |

#### 2.3.5 Next steps

The Group Model Building process brought key service stakeholders together to identify the main enablers and barriers to the health, learning and development of children aged 0-4 years in Pandanus Park from a systems perspective. A community plan will next be developed.



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#### A.1 List of GMB attendees

List of attendees to be confirmed



## A.2 Derby Actions with nil votes

Table 6 Derby actions with nil votes and not included in the combined actions (DW actions were not prioritised or voted upon)

| Priority Area<br>(casual loop<br>diagram location) | Title   | Description   | Community |
|--|---|---|-----------|
| Community  | Engagement of                                       | Increase engagement of services   | DW        |
| Factors  | services  | Increase cultural appropriateness of services   |           |
| Service Aspects                                    |   |   |           |
| Community  | Awareness of  | Increase awareness of culturally appropriate  | DW        |
| Factors  | services – linked to                                | services  |           |
| Service Aspects                                    | above   |   |           |
| Community  | Development of a                                    | Develop and introduce a cultural awareness  | DW        |
| Factors  | Cultural Awareness<br>Card – <mark>linked to</mark> | check and certification for services – similar<br>to a Working with Children's Check or a |           |
| Service Aspects                                    | above   | Working with Vulnerable Person's Check  |           |
| Community  | Child registration                                  | Provide incentives to register a baby   | DW        |
| Factors  |   | Provide immunisation payments as<br>incentives  |           |
| Service Aspects                                    |   |   |           |
| Community  | Increase  | Explore sustained funding models so can   | DW        |
| Factors  | sustainability of<br>Services                       | have a long-term plan for training and education for mums                                 |           |
| Service Aspects                                    |   |   |           |
| Family Factors                                     | Assist in Obtaining                                 | Financial help to obtain driver's licence   | DW        |
| Financial  | Driver's Licence                                    | which would lead to more independence.  | 511       |
| Wellbeing  |   | ability to transport kids to sport, education   |           |
|  |   | and other places, can use car to go shopping  |           |
|  |   | instead of a taxi   |           |
| Family Factors                                     | Engagement with                                     | Receiving culturally sensitive care   | DW        |
| ,<br>Maternal Health                               | Antenatal and                                       | Make services accessible  |           |
|  | Postnatal care                                      | Provide support at any stage from a midwife   |           |
|  |   | or healthcare worker who is known to the  |           |
|  |   | women   |           |
|  |   | Improve cross/multidisciplinary   |           |
|  |   | Cuiduui dululi  |           |
|  |   | strategies that are appropriate to the local  |           |
|  |   | community   |           |



#### A.3 Pandanus Park actions with nil votes

#### Table 7 Pandanus Park actions with nil votes and not included in the combined actions

| Priority Area<br>(casual loop<br>diagram location) | Title                           | Description                                   |
|--|---------------------------------|---|
| Family Factors                                     | Food security                   | Don't have fridge so can't store food         |
| Financial  |                                 | Long drive to Derby and costs \$s             |
| Wellbeing  |                                 |   |
| Family Factors                                     | Food security – linked to above | Online ordering from Woolworths – delivery to |
| Financial  |                                 | Pandanus Park                                 |
| Wellbeing  |                                 |   |

