

# Our Children Our Future

A Framework for Child and Youth  
Health Services in Western  
Australia 2008-2012



Delivering a Healthy WA

## Message From the Minister



Improving the health and wellbeing of children and youth in Western Australia is a key priority for the State Government, so it is with great pleasure that I present to you the *Our Children Our Future - A framework for Child and Youth Health Services in WA 2008 - 2012 (Framework)*.

This new *Framework* provides an exciting blueprint for guiding the development and delivery of health services across the State for all children and youth for the next five years, with a particular focus on Indigenous groups and socioeconomically disadvantaged populations. It provides a range of strategies that will help to improve the health experiences and outcomes of these groups.

The *Framework* provides a vision that will assist WA Health, service providers and communities to develop local strategies to achieve the best possible future and opportunities for the children and youth in every part of Western Australia.

We know that the health of children and youth must be viewed within the context of their surroundings and so the *Framework* proposes strategies that take into account social and environmental determinants of health such as lifestyle, housing, unemployment and family functioning. By empowering individuals and communities to address these factors, we can all contribute to improving the overall health and wellbeing of our children and young people.

This *Framework* is an important addition to the extensive reforms being made across WA Health and will continue to ensure that high-quality and accessible health care is made available to all Western Australians and helps to improve the health and wellbeing of our future generations.

A handwritten signature in black ink, appearing to read 'Jim McGinty'.

**The Hon Jim A McGinty**  
**Minister For Health**

## Foreword



Over the past fifty years there have been major demographic, social, and economic changes in Australia that have had a significant impact on the health and wellbeing of our children and young people.

Positively, we have seen rates of serious morbidity and mortality from infectious disease decline, and the rates of survival after pre-term birth and childhood cancers improve. However, there are growing health risks in other areas, such as the increasing prevalence of mental health problems, and an alarming increase in the rates of sexually transmitted infections and child and adolescent risk-taking behaviours such as binge drinking. The rise in the rate

of overweight and obesity in children also has a significant impact on increasing the risk of chronic health problems such as diabetes and cardiovascular disease.

The health of Aboriginal and Torres Strait Islander children continues to pose challenges, with overall health outcomes poorer than other Australian children. Social, cultural, and economic differences impact on the health of Aboriginal people, and these factors must be taken into account when developing, implementing, and evaluating health policies and programs aimed at improving the health of Indigenous children and youth.

*Our Children Our Future - A framework for Child and Youth Health Services in WA 2008 - 2012 (Framework)* provides an important basis for future health service planning for Western Australia's children and youth, and will help to guide the development of locally relevant strategies to address health service delivery and child and youth health priorities at local and regional levels.

The *Framework* identifies five key objectives for improving the health and wellbeing of Western Australia's children and young people:

- Improve the health and wellbeing of all children and youth through perinatal and early childhood intervention and prevention strategies which address the determinants of health
- Improve child and youth health and wellbeing through the early diagnosis, acute care and ongoing treatment of current key health issues
- Improve child and youth health and wellbeing by encouraging self-management and addressing key health-related and risk-taking behaviours
- Improve the health and wellbeing of specific population groups through improved access and cultural sensitivity
- Improve child and youth health and wellbeing by improving child and youth health service provision.

The strategies proposed for each of these priority areas aims to enhance current efforts being made across the health system, as well as present new approaches to improve the physical and mental health, development, and wellbeing of all Western Australian children and young people.

The *Framework* is an important contribution to the ongoing work being delivered by WA Health, and continues to enable the health system to develop equitable and sustainable health services for all children and young people in Western Australia.

I would like to acknowledge and thank the WA Child and Youth Health Network Advisory Group for driving the development of this new strategic agenda for improving child and youth health and wellbeing in this State.

A handwritten signature in dark ink, appearing to read 'Peter Flett'.

Dr Peter Flett  
Acting Director General

## Executive Summary

### Background

One of the most significant developments in health over the past three decades has been the increasing recognition of the need to broaden the response to health to include a more holistic approach. The World Health Organisation's 1986 Ottawa Charter broadened the definition of health stating that "*Health is a positive concept emphasizing social and personal resources, as well as physical capacities*".<sup>1</sup> The promotion of health and wellbeing is attained through enabling individuals and communities to address the determinants of health, which directly and indirectly impact on their health and wellbeing.

There are many aspects of the health and wellbeing of Australian children and youth that indicate the need to more effectively address their health-related issues in this country. The rate of overweight and obesity has increased in children and adults in Australia, increasing the risk of chronic health problems such as diabetes and cardiovascular disease. The prevalence of mental health problems,<sup>2</sup> rate of sexually transmitted infections<sup>3</sup> and child and adolescent risk-taking behaviours such as binge drinking<sup>4</sup> are also increasing at an alarming rate.

In Western Australia particularly, there are inequities in the health status of children and young people. There are also a number of groups who do not have equal access to health care, such as people living in rural and remote areas; the socioeconomically disadvantaged; Aboriginal and Torres Strait Islander people; people with mental health problems; those with disabilities; and the Culturally and Linguistically Diverse (CaLD) population.<sup>5</sup> Reducing social inequality needs to be viewed as a key strategy for promoting health. This will require particular attention and specific strategies since addressing health determinants and health problems will not necessarily reduce health inequalities.<sup>6</sup>

*Our Children Our Future - A framework for Child and Youth Health Services in WA 2008 - 2012 (Framework)*, highlights the issues affecting children and youth and proposes strategies to improve the physical and mental health, development, and wellbeing of all Western Australian children and young people.

### Scope

The *Framework* is designed to guide stakeholder efforts to achieve improvements in the health and wellbeing of children and youth in Western Australia across the continuum of care. Stakeholders of child and youth health in Western Australia include:

- Clinicians
- Planners and designers
- Policy makers, funders and providers
- Professionals and managers
- Other government agencies and non-government health service providers
- Consumers.

The *Framework* is also intended to guide the development of locally relevant strategies to address health service delivery and child and youth health priorities at local and regional levels. It aims to provide sufficient information to enable the reader to understand the context and basis of key strategies and recommendations made.

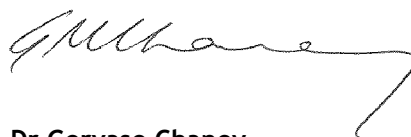
The *Framework* recognises the benefits of appropriately formulated population health and early intervention and prevention actions, and attempts to offer strategies that enhance current and earlier efforts in Western Australia.

## Accountability

The *Framework* has been developed under the auspices of the Western Australian Child and Youth Health Network (WACYHN) Advisory Group for WA Health, to provide a new strategic agenda for improving child and youth health and wellbeing.



**A/Professor David Forbes**  
Network Co-Lead  
WA Child and Youth Health Network



**Dr Gervase Chaney**  
Network Co-Lead  
WA Child and Youth Health Network



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## Introduction

The WA Health reform agenda emphasises the need to rethink approaches to improving the health and wellbeing of all Western Australians by improving the interface between general practice and the public health system; improving clinical practices; reducing length of stay; increasing same day surgery and other procedures; and augmenting primary and community care services. With all sectors working together in partnership to improve the health and wellbeing of Western Australian children and youth, this can be achieved.

### WA Child and Youth Health Network

In November 2005 the WA Health Networks were launched at a major stakeholder meeting by the Health Networks Branch (then Clinical Network Development Unit). Child and youth health was represented at this forum, and at this time Dr Simon Towler, Executive Director Health Policy and Clinical Reform appointed Associate Professor David Forbes and Dr Gervase Chaney as the Co-leads for the WA Child and Youth Health Network.

The WA Child and Youth Health Network was formally established in April 2006 with the first meeting of the Network Advisory Group in May 2006. The WA Child and Youth Health Network is supported by an Advisory Group comprising clinical leaders, organisational representatives, health professionals and consumer representatives (Appendix 1).

The *Framework* has been developed under the auspices of the Western Australian Child and Youth Health Network (WACYHN) Advisory Group. Particular acknowledgement for development of the *Framework* goes to Dr Gervase Chaney, Mr Stephen Cipriani, Associate Professor David Forbes, Ms Colleen O'Leary and Health Networks Branch Executive Support staff.

### Framework Design

The objectives and strategies outlined in the *Framework* are presented using a Continuum of Care Model (refer to Figure 1).<sup>7</sup> This model demonstrates the provision of health care across the lifespan utilising all essential components of the health care system ranging from population based strategies such as health promotion and prevention services, early diagnosis and intervention, through to individual treatment, rehabilitation, and palliation services. In this model, primary, secondary and tertiary care generalists and specialists are fundamental components of the health care system and should not be viewed as mutually exclusive.<sup>8</sup>

All parts of the Continuum of Care Model are seen as essential for ensuring the health and wellbeing of the population, and together they aim to seamlessly provide the right care at the right time, in the right place and by the right people.

Over the past two decades there has been a growing body of evidence indicating that population health is influenced more by the determinants of health such as socio-economic, community, lifestyle and behavioural factors than by the provision of health care services.<sup>9</sup> Current evidence emphasises the need for health services to develop effective strategies for early identification and intervention of health and developmental problems, not only in the early years but whenever problems arise across the life course, and to better address issues around the uptake of health resources.



It is now well accepted that children and youth need to be viewed within the context of the multiple influences within their lives. These include social determinants such as economic, lifestyle, poverty and social exclusion; and environmental factors such as housing, unemployment and family functioning. By enabling individuals and communities to address these determinants, improvements in their overall health and wellbeing can be effected. Therefore, underpinning the Continuum of Care Model is the concept of a health determinants approach to more effectively address the needs of children and youth.

This concept has evolved across Australia to complement the traditional biomedical approach to health care, health interventions, and service delivery, highlighting the need to shift the emphasis away from the provision of acute services towards population health prevention strategies.<sup>5</sup>

By shifting focus away from the provision of health care services aimed at treating the individual who is acutely ill or at high risk of disease, to a Continuum of Care Model underpinned by a population-based approach, we may more effectively address the determinants of health. This approach seeks to alter the underlying causes of disease thereby reducing the risk factors that make disease common.<sup>10</sup>

In recognition of this, the *Framework* places particular emphasis on an early life course approach, that utilises health promotion and prevention, community development, universal access, and strategies that address health-related and risk-taking behaviours, to address the social determinants of child and youth health.

## Contributing Literature

A number of local, national and international policies were reviewed during development of the *Framework*.

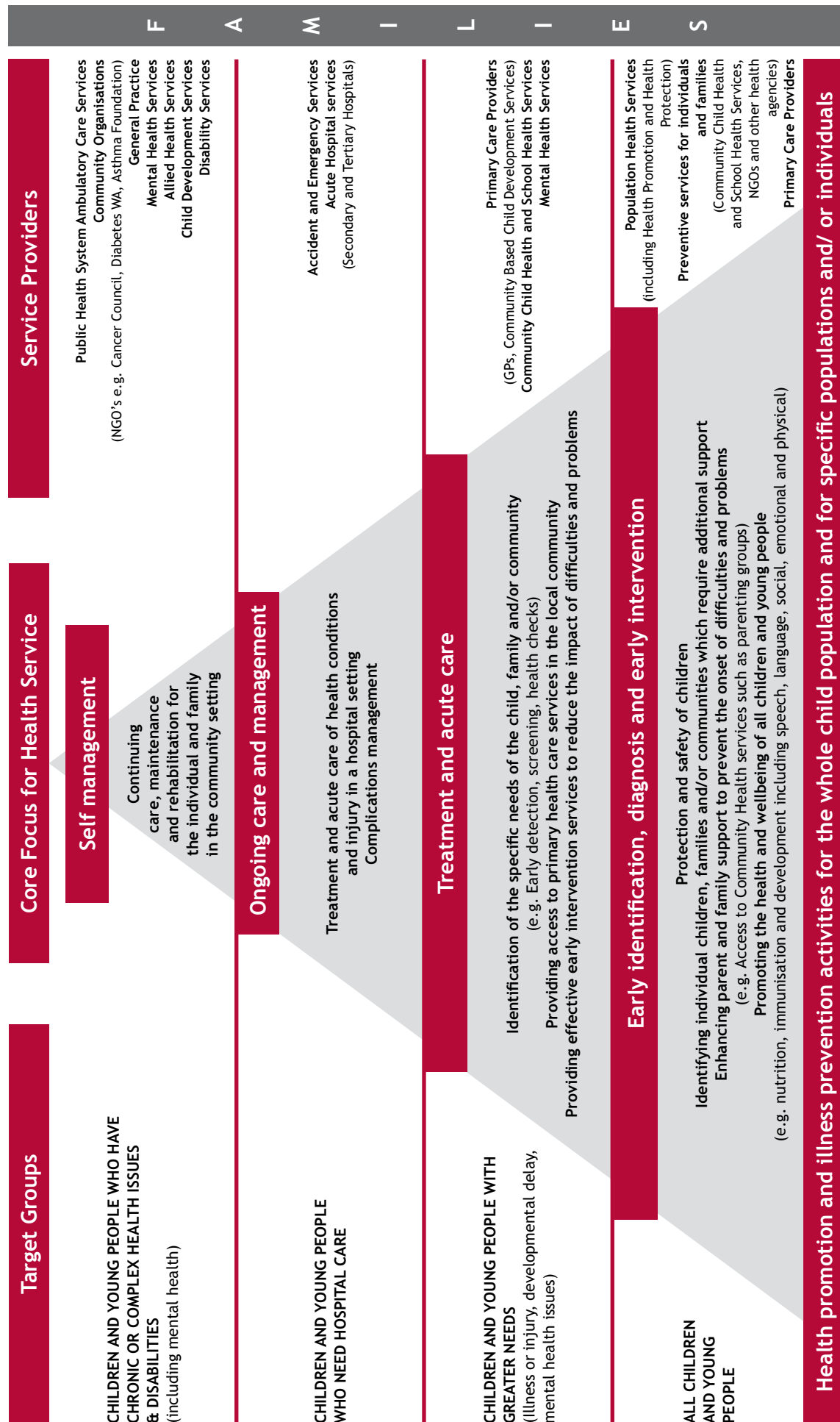
The Commonwealth Government and most States and Territories have published a number of policies and key documents relating to child and youth health over recent years. These documents address issues pertaining to the health and wellbeing of children and young people and there are many lessons to be learned from reviewing the directions, priorities and key strategies identified by each jurisdiction.

The State and Territory policies have a strong focus on service delivery and policy development,<sup>11-16</sup> while at a national level the focus has been on health outcomes.<sup>17,18-20</sup> Both levels of government have addressed the issues of health determinants and early intervention and prevention.<sup>16,21-27</sup> Other relevant documents such as those generated by the National Public Health Partnership through the Child and Youth Health Intergovernmental Partnership (CHIP)<sup>28-31</sup> and a range of indicators of child and youth health,<sup>32-35</sup> identify future directions in child and youth health by highlighting the many factors that influence their health and wellbeing.

There are currently two policy documents underpinning statewide child and youth health policy and planning in Western Australia. The *WA State Health Plan for Children and Adolescents (1994)*,<sup>36</sup> which focussed on service delivery and health outcomes, and the policy *New Vision for Community Health Services for the Future report (2000)*,<sup>37</sup> which encompassed a health determinants model with a focus on early intervention and prevention.

These documents informed the development of the *Framework* and served to advance the understanding of key priorities for children and youth and how to apply the evidence in the development of effective policies and strategies for improving child and youth health. Reference was also made to the Western Australian Department of Health *Youth Health Strategy 2008 - 2013*, currently under development by the Child and Adolescent Health Service Child and Adolescent Community Health Policy Unit (Statewide).

Figure 1: Child and Youth Health Continuum of Care Model



\*\* Families are critical partners in the delivery of services for children and young people and must also be included as part of the target group for services.

## Guiding Principles

Demand for health care and health services is increasing. Total spending on health in Australia has increased over the last decade and in 2003 it was greater than the Organisation for Economic Co-operation and Development (OECD) average. Spending on pharmaceuticals has also increased at double the rate of total health spending.<sup>38</sup> Of the total 2004-05 Western Australian health care budget however, only 2.69% was spent on public health and prevention, substantially less than the 8.57% spent in the Northern Territory<sup>39</sup> and the 8% spent in Canada.<sup>9</sup>

Yet in spite of the increased spending in Australia, health services are struggling to cope. Better and more cost-effective ways to deliver health services with improved coordination across government, private, and community health services are required in order to keep up with the growing demand and consumer expectations.

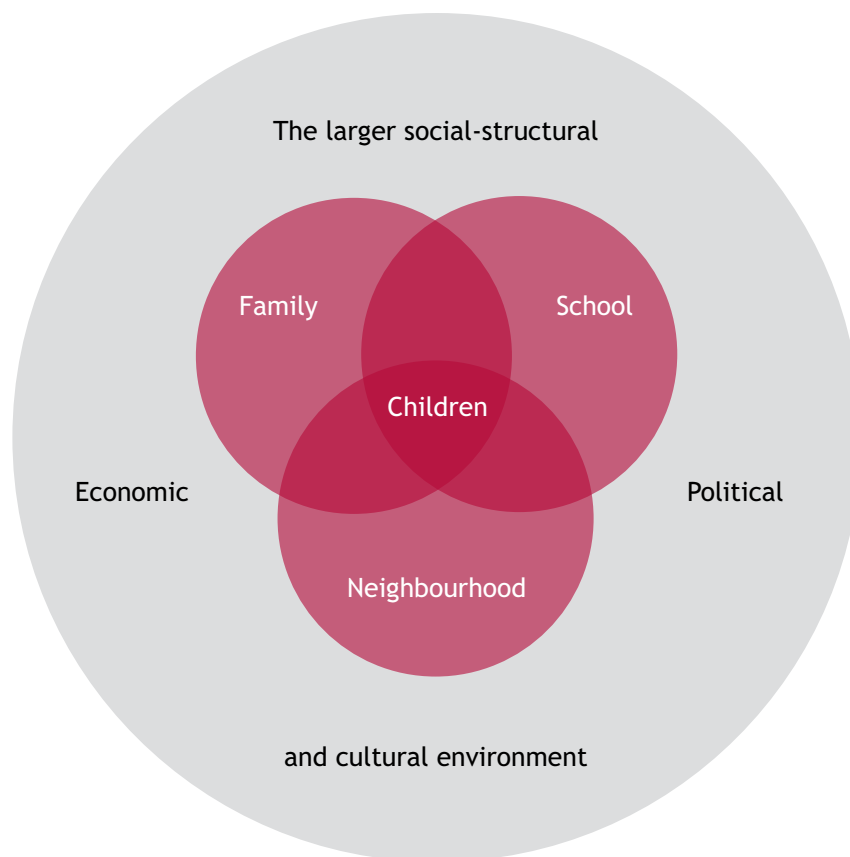
The following guiding principles direct the focus of the *Framework* towards achieving the development of locally relevant strategies to address health service delivery and child and youth health priorities at local and regional levels.

Principle 1	<b>Population Health Approach:</b> A robust and well-resourced population health approach to maintain and improve the health of the entire population, with particular focus on addressing the determinants of health and child and youth health-related and risk-taking behaviours.
Principle 2	<b>Early Intervention and Prevention:</b> Develop an early life course approach emphasising the role of health promotion, prevention and early intervention and community development to more effectively address the needs of children and youth.
Principle 3	<b>Access and Equity:</b> Address inequities in child and youth health status by providing universal access to public health, community health and health promotion and acute health services, especially for Indigenous, Culturally and Linguistically Diverse (CaLD) and socially and economically disadvantaged children and youth.
Principle 4	<b>Child and Youth Focussed and Family Centred:</b> Emphasis on promoting a patient focussed philosophy that recognises children and youth as the most important component of paediatric health care services, and the involvement, support and education of families as fundamental to improving patient health outcomes.

## Population Health Approach

Documents reviewed during the development of the *Framework* contained common themes, with health policies all focusing on a health development model built on a population-based approach that aims to address the relationship between risk and protective factors and the developmental outcome.

Children and youth need to be viewed within the context of the multiple influences within their lives (refer to Figure 2).<sup>40</sup> These include family, school, and the community and the interaction between them. The impact of one cannot be viewed independently. Government policy both directly and indirectly affects social institutions and the social and economic environment, which in turn affects the resources available to families and subsequently impacts upon the ability of families to perform their functions.<sup>40</sup>

**Figure 2: Ecological contexts shaping child development**

Research has also identified factors that contribute to the development of the child and play a role in determining whether a child's development results in positive or negative health and wellbeing. These risk and protective factors include genetic, biological, behavioural, socio-cultural and demographic conditions or characteristics (refer to Table 1). The impact of these factors may occur directly, indirectly, or by mediation through another factor and should be viewed within a larger causal network rather than necessarily as a direct cause of the outcome.

A strong link exists between the number of risk and protective factors an individual is exposed to and their health, academic competence, behaviour, and social and emotional wellbeing.<sup>26,41-43</sup> The presence of multiple risk factors severely undermines the ability of the individual to develop their innate talents. Protective factors are most important when there are a high number of risk factors and it is the total number and balance of risk and protective factors that account for variation in outcome.

There are many widespread and systematic barriers which often limit the ability of individuals to choose health-promoting lifestyles.<sup>44</sup> Individuals and the community require supportive environments for the achievement of good health.

The *Framework* recognises that these supportive environments are attained through intersectorial initiatives addressing physical, social, spiritual, economic and political factors (factors which are linked and have a dynamic interaction), and with sustainable solutions requiring action at local state and national levels.<sup>45</sup>

**Table 1: Early Childhood Risk and Protective Factors Associated with Child Health Outcomes<sup>154</sup>**

Risk Factors in Early Childhood			
Child Characteristics	Parents and Parenting Style	Family Factors and Life Events	Community Factors
Low birth weight	Single Parent	Divorce	Social isolation
Birth injury	Young maternal age	Marital disharmony	Poor housing conditions
Disability	Depression or other mental illness	Family instability, conflict or violence	Socioeconomic disadvantage
Low IQ	Alcohol and other drug problems	Disorganised or chaotic environment	
Chronic illness	Harsh or inconsistent discipline	Large family size or rapid successive pregnancies	
Delayed Development	Lack of stimulating child environment		
Difficult temperament	Lack of warmth and affection	Low level of parental education	
Poor attachment	Rejection of child	Absence of father	
Poor social skills	Abuse and/or neglect		
Disruptive behaviour			
Impulsivity			
Protective Factors in Early Childhood			
Good social skills	Competent, stable care	Family harmony	Positive social networks
Easy temperament	Breastfeeding	Small family size	
Average or above average IQ	Supportive relationship with other adults	Positive relationships with extended family	Participation in community activities such as church
Good problem solving skills	Positive attention from parents	Spacing of siblings by 2 or more years	Access to positive opportunities education
Independence	Religious faith		
Good attachment			

## Early Intervention and Prevention

There is a strong consensus amongst experts that intervening early in the lives of socially and economically disadvantaged children, or other children at risk of negative outcomes, can improve the health and wellbeing of many of these children. Early intervention is aimed at reducing the signs and symptoms of a disorder thereby preventing the onset of a diagnosable disorder through reducing a person's risk factors, or minimising their effect, and enhancing their protective factors. Early intervention programs assist children and their parents through the provision of information and resources, crisis intervention services, and transitional support to help stabilise children and families over the longer term.<sup>46</sup>

There is increasing evidence highlighting the importance of early brain development on health and wellbeing. Good parent-child attachment directly affects brain development and has been shown to be one of the most important determinants of this. The evidence emphasises the need for health services to develop effective strategies for early identification of and intervention into health and developmental problems, not only in the early years but whenever problems arise across the life course, if we wish to address the issues around the uptake of health resources.

Early and appropriate intervention maximises the benefit to children with developmental delay. Delaying interventions or delivering the wrong intervention for the age and circumstances of the child can have a profound and adverse impact on the effectiveness of the intervention and the child's development, compounding the initial problem.<sup>47</sup>

This then requires a greater volume of resources, therapies and time to overcome and eventually will impact negatively on other government departments such as education services and justice. From a family's perspective, the stress, disruption to life and functioning of the child within the family unit and community, ripples out to affect those directly and indirectly involved. The more delayed the intervention is, the more costly it becomes in every way.<sup>47</sup>

Early intervention programs are therefore likely to be more successful when they are responsive to local needs, build community capacity, have an holistic approach, build on family strengths, are accessible and inclusive, intervene early, have a prevention focus and are informed by the evidence.<sup>46</sup>

The *Framework* recognises the benefits of appropriately formulated early intervention and prevention actions and attempts to offer strategies that enhance current and earlier efforts in Western Australia.

## Access and Equity

In Western Australia, there are inequities in the health status of children and young people, as well as a number of groups who do not have equal access to health care. These include Aboriginal and Torres Strait Islander people; people living in rural and remote areas; the socially and economically disadvantaged; Culturally and Linguistically Diverse (CaLD) communities; people with mental health problems; and those with disabilities.<sup>5</sup>

It is important however to recognise that inequalities in health extend across the whole of society, with those at the top of the socioeconomic gradient having the highest level of health, with decreasing health outcomes experienced across the whole of the population, and those at the bottom having the poorest level of health.

Reducing social inequality is hence viewed within the *Framework* as integral for promoting the overall health and wellbeing of all Western Australian children and youth. This has been given particular attention since strategies to address health determinants and health problems will not necessarily reduce health inequalities.<sup>6</sup>



## Child and Youth Focussed and Family Centred

When the person is placed at the centre of interactions, the 'patient journey' improves, people are empowered to self-manage their condition and their wellbeing and quality of life is enhanced. The *Framework* highlights the importance of educating, supporting and empowering people, especially children, youth and their families, to undertake actions that minimise risk factors and risk-taking behaviours and improve patient or population health outcomes.



## Key Objectives for Child and Youth Health

There are many aspects of the health and wellbeing of Australian children that indicate the need to more effectively address their health-related issues. The *Framework* highlights the key priorities for Western Australian children and youth and proposes strategies to improve their overall physical and mental health, development, and wellbeing.

Objective 1	Improve the health and wellbeing of all children and youth through perinatal and early childhood intervention and prevention strategies which address the determinants of health.
Objective 2	Improve child and youth health and wellbeing through the early diagnosis, acute care and ongoing treatment of current key health issues.
Objective 3	Improve child and youth health and wellbeing by encouraging self-management and addressing key health-related and risk-taking behaviours.
Objective 4	Improve the health and wellbeing of specific population groups through improved access and cultural sensitivity.
Objective 5	Improve child and youth health and wellbeing by improving child and youth health service provision.

**Improve child and youth health and wellbeing through perinatal and early childhood intervention and prevention strategies which address the determinants of health.**

## Priorities

### Mortality

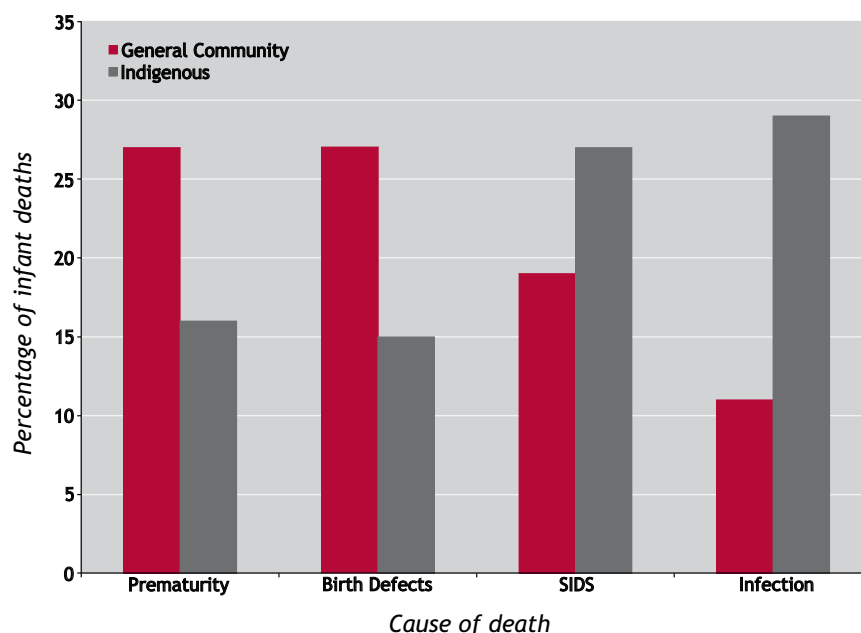
The risk of infant and childhood death is highest from birth through to the fifth year of life. Many of the causes of infant and childhood mortality are preventable due to social and economic factors and inequality, so the rate of infant mortality is an indicator of the social progress of society.<sup>48</sup>

Conditions originating in the perinatal period, such as pre-term birth, fetal growth, birth trauma, respiratory and cardiovascular problems, account for 36% of all hospitalisations for infants.<sup>17</sup> Two health issues arising in the antenatal period, pre-term birth and low birth weight, account for 5.6% of all hospitalisations for children 0-4 years.<sup>19</sup>

The cumulative mortality rate in Western Australia for infants (deaths of live born infants prior to their first birthday), has decreased over the past two decades from 8.4 per 1,000 live births in 1980 to 3.7 per 1,000 live births in 2002. While Indigenous infant mortality decreased over this period it remains significantly higher than the overall rate and in 1998-2001 it was 16.1 per 1,000 live births.

The main causes for infant mortality in the general community were prematurity (27%), birth defects (27%), sudden infant death syndrome (SIDS) (19%) and infection (11%), while for Indigenous infants it was infection (29%), SIDS (27%), prematurity (16%) and birth defects (15%). The rate of Indigenous infant death attributable to infection was nine times higher than in the general community and eight times higher for deaths due to SIDS<sup>48</sup> (refer to Figure 3). The highest rates of infant mortality occurred in rural and remote locations and there has been an increase in recent years in the rate of non-Indigenous mortality in remote locations.<sup>48</sup>

**Figure 3: Main Causes of Infant Deaths within Non-Indigenous and Indigenous Communities, WA, 1980-2001.**



Injury is the leading cause of death in children over one year of age. The leading cause of injury-related death in pre-primary children is drowning, closely followed by road trauma. In Indigenous pre-primary aged children, infections, primarily respiratory, accounted for 28% of deaths.

Cancer caused 25% of deaths in children of primary-school age and older.<sup>48</sup> Furthermore, the incidence of some adult onset cancers can be associated with risk factors stemming from childhood such as sun exposure, obesity and exposure to tobacco smoke.

## Parental Behaviours and Family Functioning

There are a number of basic needs that children require for their development, which transcend cultural differences and changes in parenting behaviour across time.<sup>49</sup> While physical care, nutrition, and protection are basic requirements, the importance of meeting the emotional needs of infants and children should not be underestimated. Children require love, care, commitment, consistency, guidance, and facilitation of their social and emotional development, which is provided through good parent-child attachment, stimulation, involvement, and support.

Family and domestic violence is thought to be more damaging and more closely associated with child behaviour problems than non-aggressive forms of conflict.<sup>50</sup> Children exposed to parental violence are more likely to use violence to resolve conflict than non-exposed children; to believe that their behaviour was in some way responsible for the violent behaviour within the family;<sup>51</sup> and to continue the violence through adolescence and into adulthood.<sup>52</sup> Family and domestic violence sets the foundation for the intergenerational transmission of violence.<sup>52,53</sup>

Children of parents affected by a mental illness are at increased risk of developing emotional and behavioural problems and mental health disorders, but parents accessing mental health services may not disclose that they have children for fear of losing care of them. Many parents with mental health problems are also compromised by substance use/misuse.<sup>54</sup>

Parental alcohol and other drug use/misuse can affect children in a number of ways. In-utero exposure to alcohol and other drugs increases the risk of fetal harm and poor birth outcomes. Exposure to alcohol during pregnancy can result in permanent damage to the fetus resulting in Fetal Alcohol Spectrum Disorders (FASD).<sup>55</sup> Tobacco smoking is associated with low birth weight, preterm birth, birth anomalies, and perinatal death,<sup>17</sup> while the impact of illicit drugs will vary according to the type of drug. The use of narcotics can result in Neonatal Narcotic Abstinence Syndrome, which includes neurological excitability, gastrointestinal dysfunction, and autonomic dysfunction, while the effects of cocaine and non-narcotic drugs appear to be due to the toxic effect of the drug rather than withdrawal. Infants exposed in-utero to these drugs show a range of signs and symptoms that vary with the type of drug used.<sup>56</sup>

Children of parents with a mental illness and those whose parents misuse alcohol and other drugs are exposed to a number of interacting risk factors stemming from their environment and family factors such as poverty, poor antenatal care, a less stimulating home environment, domestic violence and poor parenting.<sup>54,57-60</sup> These negative factors increase the risk of the child developing adverse cognitive, behavioural, and psychosocial problems.<sup>54,59,61,62</sup>

Parents with mental health or substance use issues often access the services of a range of health-care professionals, highlighting the importance of an intersectorial, collaborative approach to service provision for both the drug user and their family.<sup>63</sup> Services need to be coordinated to ensure the transition between services for pregnancy, delivery, and thereafter is smooth and that the potential risk for the child is accurately assessed and monitored. Home-based clinical intervention programs have been found to assist in improving the parenting skills of high-risk parents resulting in improvements in child behaviour and developmental skills.<sup>64</sup>



## Breastfeeding and Early Childhood Nutrition

Normal growth and development requires appropriate energy and nutrients. Not only is a good dietary intake of nutrients essential for the growth and development of children and adolescents, it is also proven to be equally important during pregnancy and infancy. The rate of growth is highest during infancy and adolescence, making these age groups nutritionally vulnerable. However, although the rate of growth is slower in young children they also require appropriately balanced nutrient and energy intake.<sup>65</sup>

All mothers should be encouraged and supported to breastfeed their infants. In Australia, although 83% of women are breastfeeding their infants upon discharge from hospital following delivery, the rate of breastfeeding declines rapidly thereafter and by 6 months, less than two-thirds of infants are breastfed.<sup>66</sup> Demographic, social, and economic factors impact on the rate of breastfeeding, indicating the need for a comprehensive public health strategy and community engagement to support and encourage maintenance of breastfeeding.<sup>67</sup>

## Immunisation and Transmissible Disease

The National Health and Medical Research Council (NHMRC) recommend greater than 90% immunisation coverage for children 2 years of age and almost 100% coverage at school entry.<sup>17</sup> Immunisation rates in Western Australian children are below the levels recommended by the NHMRC with 90.6% of children fully immunised at 2 years of age and only 81.1% fully immunised at 6 years in 2004. This is of considerable concern since vaccine coverage needs to be greater than 90% in order to interrupt transmission of vaccine-preventable diseases.

There has also been a steady addition of new vaccines to the immunisation schedule, particularly since 2000. These additions include vaccines for Hepatitis B, Meningococcal C, Pneumococcus, Rotavirus and Human Papilloma Virus. Despite the current use of more conjugate vaccines, this has led to an immunisation schedule that is more complex, involving a larger number of injections which carries a potential risk of increased immunisation avoidance or error.



## Early Childhood Development

Early Childhood Development (ECD) programs typically intervene in the early years until at least the beginning of primary school, providing assistance primarily to the child but also to the parents. For children at risk of developmental, behavioural or emotional delays/disorders as a result of social determinants, such as teenage pregnancy or parental mental health or substance misuse issues, intervention services need to be provided at the earliest possible age. There are substantial benefits to the individual child, their families and society, as well as substantial financial benefits to governments far in excess of the costs of such programs. Economic evaluations indicate cost-benefit ratios ranging from AUD\$4.00 for every dollar spent<sup>68</sup> up to a high of AUD\$12.90.<sup>69</sup>

It is important to recognise that early intervention strategies should not be confined to the first five years of life. Problem pathways begin not only in early childhood but also across the lifespan with many problems appearing during adolescence. “Early in the pathway” is not necessarily the same as “early in life”.<sup>70</sup>

## Critical or Sensitive Periods

There is rapid growth and development of the brain from conception until pre-school age and by the age of three years the brain has achieved 90% of its adult size. Brain development and restructuring is influenced by physical, social and emotional, cognitive, and nutritional conditions and undergoes structural development at regular intervals during childhood, reaching full size in adolescence.<sup>71</sup> During the early years the child’s brain is responsive to the environment and this period of a child’s life is critical to their development.

The experiences of the infant and young child provide the foundation for cognitive development and long-term physical and mental health. Research has clearly demonstrated a significant negative relationship between adverse childhood experiences (such as abuse and household dysfunction), and adult health and wellbeing.<sup>72</sup>

There are key developmental stages when children are particularly sensitive to environmental circumstances. These ‘critical or sensitive periods’ require specific information from the physical and social environment in addition to their genes, to develop brain structures and processes ultimately responsible for social recognition, growth, behaviour and bonding. Successful negotiation of critical and sensitive periods enhances the likelihood of children and young people developing positive health and wellbeing.<sup>73</sup>

Transition periods in a person’s life, such as the transition to preschool or from primary school to high school, are times of particular risk. During these transition periods, exposure to a complex array of risk factors has the potential to undermine individual development. For that reason, the most effective interventions are targeted to the appropriate life phase, whether this is during early or middle childhood or adolescence.<sup>70</sup> This is referred to as a ‘life course approach’.

Therefore, childhood and adolescence provide both an opportunity for optimal development and a vulnerable period sensitive to negative influences, and it is the balance of these which will determine health outcomes.<sup>71,74</sup>



## Strategies

### Mortality

- Develop an education campaign to reduce the rate of Sudden Infant Death Syndrome, especially in Indigenous communities.
- Support programs that improve public knowledge of prevention and first aid treatment for drowning, burns and scalds, poisoning, and other childhood injuries.
- Promote child-rearing and supervision skills of new parents, with advice on home modifications to improve child safety through home-visiting programs.
- Lobby for the establishment of a system of free, low-cost or loaned home safety equipment, such as child resistant closures, car seats, and smoke alarms for socially and economically disadvantaged families.
- Support population-based public health programs that aim to reduce the incidence of, and mortality, from cancer including programs that target risk factors stemming from childhood such as sun exposure, obesity and exposure to tobacco smoke.
- Support strategies that promote equitable access to cancer and palliative care clinical and support services for all children and youth, especially those living in rural and remote locations.

### Parental Behaviours and Family Functioning

- Reduce the prevalence of maternal alcohol, tobacco, and illicit drug use and periodontal disease during pregnancy through the development of:
  - Guidelines for routine antenatal screening for risk factors
  - Policies and guidelines for the routine use of brief interventions
  - Referral pathways to ensure timely access to appropriate services.
- Develop programs and strategies to ensure equity and access to health care, prevention, and early intervention programs for children 'at risk' due to parental behaviours such as substance misuse or mental health, child abuse, homelessness, especially for Indigenous, CaLD and socially and economically disadvantaged families.
- Undertake economic and outcome based evaluations of current home-visiting programs for high risk new mothers.
- Provide antenatal and postnatal home visiting to all new mothers.
- Provide intensive postnatal home visiting programs (such as Best Beginnings) for all high risk mothers and their infants across all of WA.
- Screen all new mothers for postnatal depression and provide appropriate referral and intervention strategies.
- Develop and disseminate programs to improve family functioning and parenting.
- Provide parenting programs in a variety of settings to:
  - All new parents with an emphasis on providing services to those families identified at high risk of poor outcomes
  - Parents of children entering school and in transition to high school.

## **Breastfeeding and Early Childhood Nutrition**

- Develop health promotion programs to educate pregnant women about the key dietary requirements for a healthy pregnancy.
- Support current programs, and develop and disseminate breastfeeding support policies and programs to increase the percentage of infants fully breastfed at 4 and 6 months.
- Develop health promotion programs to increase the knowledge of good nutrition and to promote the early adoption of healthy eating patterns by parents, children and youth.

## **Immunisation and Transmissible Disease**

- Increase the percentage of children fully immunised at 1, 2, and 6 years to 95% by working with primary care providers and the Department of Education to promote current immunisation programs, as well as immunisation using newer vaccines as they are introduced.
- Encourage the adoption of opportunistic immunisation in the hospital and other health care settings.

## **Early Childhood Development**

- Provide assessment for health and developmental problems for all children, especially children in care.
- Develop evidence-based programs for infants and children who are showing signs of delayed speech and other developmental problems.
- Develop guidelines to ensure quality educational programs are implemented in all childcare settings.
- Extend the availability of play therapy programs for children with severe behavioural problems.
- Implement universal neonatal hearing screening in WA.

## **Critical or Sensitive Periods**

- Promote the development of programs and strategies to enhance transition into pre-primary, primary and high school.

**Improve child and youth health and wellbeing through the early diagnosis, acute care and ongoing treatment of current key health issues.**

## Priorities

### Child Abuse

Child abuse and neglect can have a profound negative impact on the health and wellbeing of children and young people, both in the short term and long term. There is no reliable data in Australia to determine the extent of child abuse. Child protection substantiations, which are an underestimate of the true prevalence of child abuse and neglect, are used as a proxy measure.

Rates of protection substantiations are highest in children under one year of age, decreasing thereafter with age. There has been an increase in rates of child protection substantiations across Australia from 5.1 per 1,000 children 0-14 years in 1997-98, to 7.2 per 1,000 in 2002-03. The rate of substantiations in most States and Territories is around 2.5 times higher than in WA where the rate is 2.3 substantiations per 1,000 children. In the ACT and Queensland the rate is 5-6 times higher.<sup>75,76</sup>

Physical abuse and neglect account for over two-thirds of all substantiations in WA.<sup>75</sup> It is however, difficult to determine the true extent of the trend as changes in child protection policies and practices are thought to have contributed to some of the changes in these rates.<sup>17</sup>

Western Australia is the only state in Australia that does not have universally applicable mandatory reporting of child abuse. Only Family Court personnel, counsellors, mediators and licensed providers of child care and outside school hours care services are required by legislation to report allegations or suspicions of child abuse. A recent review of the Department for Community Development, now called the Department for Child Protection (DCP),<sup>77</sup> recommended better implementation of policy, improved interdepartmental cooperation and accountability and improving service provision for vulnerable children and young people. Under recommendations in the review report, mandatory reporting by doctors and nurses of evidence of child sexual abuse is to become mandatory from 2008.

There are a number of factors which increase the risk of child abuse and neglect, such as poverty, family disruption, domestic violence and substance abuse.<sup>17</sup> Effective parenting is necessary for the social and emotional wellbeing of the developing child,<sup>78</sup> and the quality of parenting and child development can be severely hampered by family stress and negative life experiences.<sup>79-82</sup> Marital distress impacts negatively on parent-child relationships<sup>83</sup> with parents in conflict more likely to portray inconsistent, harsh parenting<sup>84,85</sup> and to have negative views of the child's behaviour.<sup>84</sup> These features of marital discord can negatively impact on the child's behaviour and mental health.<sup>86</sup>

Prevention of child abuse and neglect is a key issue for every jurisdiction and strategies need to be implemented which decrease the risk of child abuse and neglect, and enhance the number and range of protective factors within a child's life.

## Mental Health and Behaviour

Although 80-90% of adolescents will develop into healthy young adults, the remaining adolescents will develop serious problem behaviours between 12 to 18 years of age. Many of these problems are not new but they are increasing in prevalence, burden, and complexity, particularly in association with socioeconomic inequality. Although data is limited, the evidence indicates that between 7% and 14% of children aged 4-14 years have psychological and behavioural/emotional problems, with the three most frequently recorded disorders being attention-deficit hyperactivity disorder (ADHD), depressive disorder and conduct disorder. Mental health problems are directly associated with physical health, quality of life, poor academic achievement, and risk-taking behaviours.<sup>17,19</sup>

Almost one-third of young people will have an episode of mental illness and over 75% of all serious mental health and substance use disorders commence prior to 25 years of age.<sup>41</sup> Around 10% of young people 15-24 years of age report long-term mental health and behavioural disorders however this rate is higher in Indigenous children. The Western Australian Aboriginal Child Health Survey (2005) indicated that 24% of Indigenous children aged 4-17 years had clinically significant emotional or behavioural problems compared with 15% of all children in WA.<sup>87</sup>

Social and emotional problems result from an interaction between the social environment and human biology, and are compounded by intergenerational transmission of risk. The rate of mental health and behavioural problems in children is not uniformly distributed across the population; a number of demographic factors have been found to be associated with child mental health problems. The rates of externalising and internalising problems, for example, are higher in children who live in step/blended families, single parent families and households with a low income, than in two-parent households and households in the higher socioeconomic groups.<sup>17</sup>

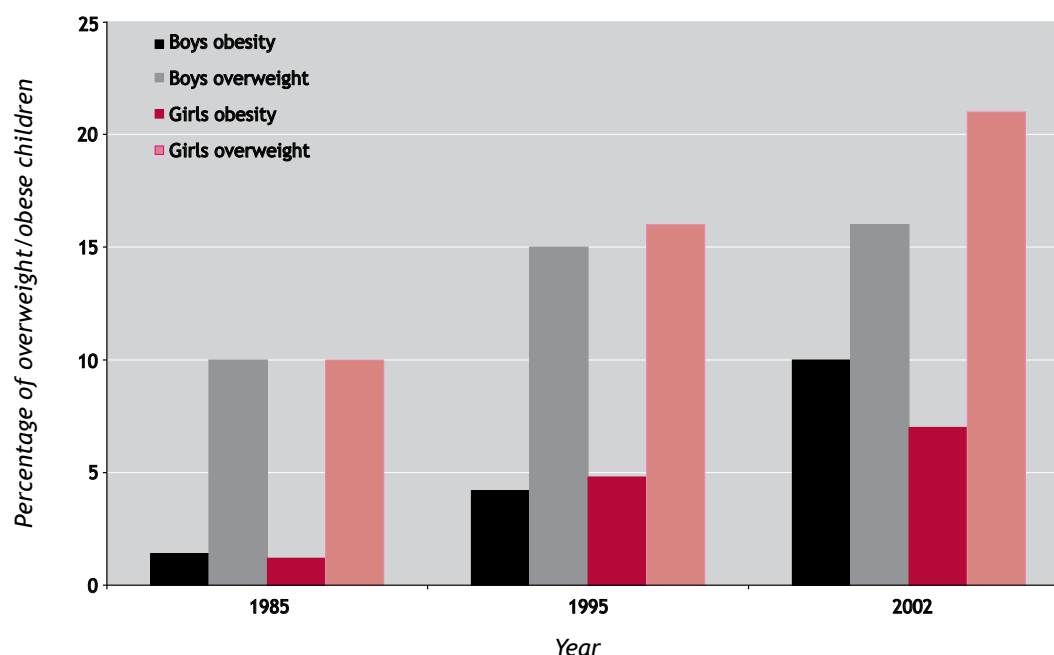
Data from the Australian Institute of Health and Welfare indicates that mental health and behavioural disorders are the fourth most common reason for hospitalisation of young people 12-24 years of age with a rate of 1,265 hospitalisations per 100,000 young people.<sup>18</sup> It is considered however, that these rates underestimate the true prevalence of mental health problems in young people.

## Diet and Nutrition

Good eating patterns need to be established early in childhood to help prevent the development of weight problems and disordered eating patterns. Early dieting is a predictor of the development of disordered eating and a range of disordered eating patterns such as dieting, binge eating, with purging and concerns about body size and image being relatively common in adolescents.<sup>65</sup>

## Overweight and Obesity

There has been a dramatic rise in the rates of overweight and obesity in children and young people in Australia over the past two decades.<sup>88</sup> In 1985 around 10% of boys and girls 7-15 years of age were overweight and the prevalence of obesity was 1.4% for boys and 1.2% for girls. By 1995, 15% of boys and 16% girls were overweight while the prevalence of obesity had tripled in boys and increased four-fold in girls.<sup>89</sup> More recent data from New South Wales indicates a worsening of this trend with 16% of boys and 21% of girls aged 7-11 years overweight while the prevalence of obesity was 10% and 7% respectively<sup>90</sup> (refer to Figure 4). South Australian data also indicates that the same trends are occurring in preschool children with 21% of four year old girls and 17% of four year old boys being either overweight or obese in 2002; a significant increase from 1995.<sup>91</sup>

**Figure 4: Overweight and Obese Children and Young People, WA, 1985-2002**

Individuals who are obese are at increased risk of poor health outcomes, in particular Type 2 diabetes, cardiovascular disease, osteoarthritis, cancer and mortality. In 2006 the cost of obesity in Australia was estimated to be almost \$3.8 billion in health, productivity, and other costs. These costs are carried primarily by individuals, their family and carers, and the Federal and State Governments, however, obesity is a major concern for the whole community.<sup>92</sup>

Obesity is difficult to treat and the associated physical and psychological problems and the high risk of overweight children becoming obese adults make prevention of overweight and obesity in children and young people a key priority area.<sup>65</sup>

### Physical Activity

Physical activity is also an essential part of life contributing to physical growth, the development of skills, and helping to balance energy intake and output. Low levels of physical activity are associated with higher rates of overweight and obesity. Physical activity decreases through adolescence and with increasing television viewing and use of computers and electronic games. Television viewing also exposes children and young people to a large array of food advertisements, which have been shown to influence food choices.<sup>65</sup> The Royal Australasian College of Physicians (RACP) highlight research findings that indicate Australian children's television has one of the highest rates of advertising in the world. They recommend that parents and carers take an active role in supervising children's television viewing habits.<sup>93</sup>

### Chronic Conditions

Chronic health conditions are a significant contributor to the disease burden among Australian children and young people. Diseases of the respiratory system are the most common long-term conditions in children and youth, with around 13% of children 0-14 years reporting asthma as a long-term condition and around one-third of young people 15-24 years of age having a respiratory condition, primarily asthma (12%) and hay fever.<sup>17,18,94</sup> The increasing incidence of Type 2 diabetes is another major contributor to the chronic disease burden in Australia, and is shown to be linked closely to the prevalence of childhood overweight and obesity.

## Respiratory

Respiratory conditions contribute the greatest health burden for health services with 11% of hospital admissions for children 0-4 years of age due to bronchiolitis, otitis media, and asthma, while in the 5-9 year age group 15.7% of hospital admissions are due to tonsils and adenoids, otitis media, and asthma. In young people aged 12-24 years respiratory conditions are the sixth most recorded reason for admission with a rate of 1,129 hospitalisations per 100,000 young people. The rate of hospitalisation for asthma is higher than for any other chronic condition.<sup>95</sup>

Respiratory conditions make up five of the top six most commonly managed problems by GPs, accounting for 29.8% of all problems managed.<sup>25</sup> Of chronic health conditions, asthma is the most frequent presenting problem accounting for 47.9% of all presentations to GPs for chronic disease conditions.<sup>95</sup>

## Diabetes

There is evidence to indicate that the rate of diabetes mellitus is increasing in children and youth. The incidence of Type 2 diabetes, previously uncommon in children, has increased as the prevalence of overweight and obesity has increased,<sup>96</sup> and this increases the risk of health problems such as heart disease, stroke and blindness.<sup>88</sup> The rate of Type 1 diabetes is 20.3 per 100,000 for boys and 18.9 per 100,000 for girls and the rate increases with age; this too has been steadily increasing over time.<sup>17</sup>

The hospitalisation rate for diabetes is 37.6 per 100,000 children 0-14 years, with the highest rate seen in boys (93.4 per 100,000) and girls (45.7 per 100,000) aged 10-14 years.<sup>95</sup>

## Dental

Dental health issues contribute a high proportion of hospital admissions for 5-9 year olds, with dental caries accounting for 6.7% of admissions and impacted teeth accounting for just over 3% of hospitalisations for 10-14 year olds.<sup>97</sup>





## Strategies

### Child Abuse

- Encourage and support parents, families and communities in safeguarding and promoting the wellbeing of children.
- Develop prevention and early intervention responses to child abuse that support families and communities most at risk.
- Utilise guidelines for all staff working with children to delineate responsibilities for issues relating to child protection.
- Develop therapeutic support programs for children-in-care who have been exposed to domestic violence and abuse and their foster-carers.

### Mental Health and Behaviour

- Develop programs to enhance positive mental health in all children and youth across Western Australia with targeted strategies for high risk groups, such as Indigenous children and youth and refugees from war-torn countries.
- Promote collaboration between policymakers in the mental health, alcohol and other drugs and child protection areas to develop policies for routine health screening and appropriate referral to health services of children who are in high risk settings where there is concern about their health, including their mental health and development.
- Increase the number and accessibility of culturally appropriate mental health services for children and youth, particularly Indigenous, CaLD and socially and economically disadvantaged populations.

### Diet and Nutrition

- Develop evidence based programs to promote the uptake of healthy eating and the maintenance of healthy weight.
- Develop training strategies and health promotion programs for childcare workers to increase their knowledge of best practice and their ability to educate parents about healthy eating and active play.
- Develop strategies to improve the skills of staff working in the health sectors including hospitals, community health services, and primary care service providers to routinely educate parents about good nutrition and physical activity for their children.
- Develop guidelines for the treatment and referral of children and young people who are overweight or who may have an eating disorder to programs and clinical management services in consultation with key stakeholders.
- Improve access to nutritious, reasonably priced food for people in remote areas and socially and economically disadvantaged groups.
- Develop guidelines promoting healthy eating and active play in all childcare settings.
- Support and develop programs for healthy eating and increased physical activity at schools.

## Chronic Conditions

- Support the implementation and ongoing monitoring of key current national chronic disease prevention strategies, including:
  - National Public Health Strategic Framework for Children 2005 - 2008
  - Healthy Weight 2008 - Australia's Future: The National Action Agenda for Children and Young People and Their Families
  - National Service Improvement Framework for Asthma
  - National Service Improvement Framework for Diabetes
- Support consistent health messages that address the common behavioural risk factors for chronic disease, especially respiratory conditions and diabetes.
- Provide support to families to allow them to care for children who have a chronic health condition in their own home.
- Support children, youth and their families to participate in developmentally and culturally appropriate chronic disease self-management activities, especially Indigenous, CaLD and socially and economically disadvantaged families.

## Dental

- Promote good oral health promotion messages directed towards parents and focusing on twice daily brushing of teeth with fluoride toothpaste and reducing frequent exposure to sugars.
- Support school based oral health promotion and education programs across Western Australia.
- Improve access to dental services for all children and youth, especially pre-school children and school-leaving age youth of Indigenous, CaLD and lower socioeconomic status.

**Improve child and youth health and wellbeing by encouraging self-management and addressing key health-related and risk-taking behaviours.**

## Priorities

### Self-Management

Self-management is the active participation by people in their own health care. Self-management incorporates health promotion and risk reduction, informed decision making, care planning, medication management, and working with health care providers to attain the best possible care and to effectively negotiate the often complex health system.<sup>98</sup>

There has been a recent surge in interest in patient self-management as a result of a number of converging influences: new ideas about clinical care, universal concern about costs, shifting consumer habits and expectations of health services, and an explosion of technological innovation.<sup>99</sup>

Optimising self-management is essential to achieving person-centred care and needs to be supported at all levels of the health system. Self-management enhances people's capacity to take responsibility for their own health, and with the support of health care providers, make informed decisions and undertake responsible health service utilisation and health-related behaviours that maximise their wellbeing and quality of life.<sup>98</sup> The involvement of children, youth and their families in self-management activities, is integral to the early initiation and maintenance of these behaviours into adulthood.



The ability of health care professionals to facilitate the flexible delivery and content of self-management education programs to children, youth and their families has been shown to be more successful at raising awareness and participation in self-management than reliance on social marketing alone. Furthermore, social marketing approaches to improving patient participation in self-management activities do not sufficiently engage marginalised sectors of the community, leading to concerns that inappropriate promotion and implementation of self-management activities can in fact increase social inequities, as people with limited education and low economic resources are not being reached.<sup>100</sup>

Support for self-management should be put in place at the earliest opportunity as the ability of individuals to self-manage is likely to be enhanced the earlier it is started. General practice and other primary health care settings are particularly well suited to encouraging the appropriate early adoption of self-management practices by children, youth and their families.<sup>98</sup>

In recognition of this, the Australian Government has made an unprecedented provision for the implementation of chronic disease self-management education and training activities for both patients and clinicians over the next five years through the National Chronic Disease Strategy,<sup>98</sup> National Service Improvement Frameworks and the Blueprint for Chronic Disease Surveillance.<sup>101</sup>

## Health-Related and Risk-Taking Behaviours

Behaviours adopted during childhood and adolescence influence attitudes and behaviours throughout life, and establishing responsible patterns of behaviour early in life helps to reduce the negative impact on health, both in the short-term and long-term.<sup>17</sup> Alcohol and other illicit drug use also affects the incidence of other child and youth health-related and risk-taking behaviours such as drunk/drug driving, risky sexual health practices, anti-social and aggressive behaviours and intentional self-harm and suicide. In 1999-2000, alcohol-attributable injury and disease accounted for over 3,300 14-17 year olds being hospitalised.<sup>102</sup>

### Alcohol Use

The contribution of alcohol to preventable harm in Australia is second only to tobacco.<sup>103</sup> Over two-thirds (71%) of young Australians aged 14-19 years report that they consume alcohol.<sup>104</sup> While the proportion of young people 12-17 years of age drinking alcohol has not changed over the past two decades, the proportion drinking at risky/high risk levels has increased. In the 16-17 year olds currently drinking alcohol, binge drinking has increased from around 34% in 1984 to 41% in 2002 for both boys and girls. The same pattern can be seen for 12-15 year olds with the percentage of girls binge drinking increasing more rapidly over this period from 14% in 1984 to 21% in 2002 compared with 11% and 16% (respectively) for boys of this age.<sup>4</sup> It has been estimated that over 80% of alcohol consumed by young people in Australia is consumed at levels that place them at risk or high risk of acute harm.<sup>102</sup>

Excessive and/or risky patterns of alcohol consumption not only place young people at risk of short-term harm, it also increases the risk of harmful drinking patterns continuing in later life.<sup>105,106</sup> Conversely, those using alcohol less than once per week are more likely to maintain this pattern into adulthood.<sup>107</sup>

The age of initiation of the use of alcohol and other drugs has decreased over the past 50 years. While only 16% of people born between 1940-44 used alcohol by the age of 15 years, this increased to 56% for people born between 1980-84.<sup>108,109</sup>

Parenting behaviours, parental characteristics, and the quality of the parent-adolescent relationship have been demonstrated to influence adolescent alcohol use, problematic use, and chronic misuse.<sup>106</sup> There is some evidence to indicate that delaying the uptake of alcohol during adolescence reduces the likelihood of alcohol problems in later life. Teenagers who start drinking by 14 years of age are four times more likely to develop alcohol dependence than young people who start drinking at 20 years of age or older.<sup>106</sup>

### Tobacco Use

Tobacco use is estimated to be the greatest contributor to preventable health and social costs,<sup>107</sup> contributing almost 10% of the total burden of disease in Australia.<sup>17</sup> Prevention of smoking by young people is an important public health goal since people who do not commence smoking when they are young are unlikely to begin at all. There has been a decreasing trend since 1984 for young people to smoke,<sup>17</sup> however there is still a substantial minority of young people using tobacco. The 2004 National Drug Strategy Household Survey findings indicate that almost 13% of 14-19 year olds use tobacco, with 9.5% using on a daily basis, 2% weekly and 1.3% less than weekly.<sup>108</sup> These data show that the rate of smoking in young people increases with age from around 3% of 12-15 year olds, 12% at 16-17 years of age and increasing to 21% at 18-19 years of age with the rate peaking in the 20-29 year old age group at almost 30%.

### Illicit Drug Use

Almost 30% of young people 14-19 years of age have used illicit drugs at least once, with 21% reporting use within the past year. This increases to 58% of 20-29 year olds reporting use at least once in their lifetime, of which 31.5% report recent use. The most commonly used illicit drug is marijuana/cannabis, with 5.2% of 12-15 year olds reporting recent use, increasing to 26.5% of 18-19 year olds.<sup>108</sup> Cannabis use is associated with both short-term harms such as impaired cognition and mental health problems, and long-term harms such as cognitive and memory deficits, low academic performance, respiratory damage, and dependence. Adolescent cannabis use increases the likelihood of other illicit drug use.<sup>107</sup>

The percentage of young people 12-19 years reporting recent use of other illicit drugs is low with around 3% reporting the use of methamphetamines, ecstasy, and analgesics for non-medical purposes<sup>108</sup>. The use of more than one substance in a single occasion, known as poly drug use, increases the risk of later substance use problems with early poly drugs use an important predictor of adult poly drug use.<sup>108</sup>

### Intentional Self-Harm and Suicide

In young people aged 17-23 years, death attributable to suicide accounts for 26% of all deaths, and 41% for Indigenous young people of the same age. The rate of intentional self-harm and suicide also increases with age and with the use of alcohol and/or illicit drugs and is five times higher in Indigenous youth than in the general community.<sup>109</sup>

### Sexual Health and Practices

Adolescents and young adults have the highest rates of sexually transmitted infections (STIs) in Australia. STIs are a cause of morbidity, infertility, pelvic inflammatory disease, ectopic pregnancy, complications in pregnancy, disability, premature mortality and increase the risk of HIV transmission three- to five-fold.<sup>3,110</sup>

Chlamydia and gonorrhoea are the most commonly notified STIs<sup>8</sup> and since 1993, the rate of chlamydia has increased six-fold and the rate of gonorrhoea has doubled.<sup>111</sup> The highest rates of notifications for chlamydia are found in 20-24 year olds (36% of notifications) and 15-19 year olds (30% of notifications) while for gonorrhoea the percentages are 23% and 30% respectively. Syphilis notifications are low across the general community, however the rates are twenty-eight times higher among Indigenous people.<sup>111</sup>



The birth rate for 15-19 year olds in WA and SA is around 21 per 1,000,<sup>112,113</sup> with rates much higher for Indigenous females.<sup>19</sup> The abortion rate for 15-19 year olds in 2005 in WA was 21 per 1,000, giving a pregnancy rate of 42 per 1,000.<sup>113</sup> While there is evidence to indicate that school sex and relationship education (SRE) programs improve knowledge of sexual health,<sup>114</sup> there is a wide gap between knowledge of sexual health and delaying sexual initiation, safer-sex practices and pregnancy prevention.<sup>115-123</sup>

Adolescents often delay practising contraception for up to a year after becoming sexually active<sup>124</sup> and around a third of teenagers do not use any contraception the first time they have sex<sup>125</sup> or at their most recent intercourse.<sup>126</sup> There is a high failure rate of individual contraceptive methods indicating the need for increasing the use of dual contraceptive methods in order to prevent conception and the transmission of STIs. The use of both condoms and a female method of contraception however is not generally promoted or widely understood and practised in Australia.<sup>127</sup>

There is increasing recognition that programs focusing only on the sexual antecedents have limited success in preventing unplanned adolescent pregnancy.<sup>128,129</sup> The evidence clearly highlights the need to adopt a range of strategies, in addition to SRE programs, targeting non-sexual factors such as individual and peer characteristics, family, school, and community features including strategies aimed at delaying initiation of sexual activity and enhancing life choices.<sup>127,128</sup>





### Road Safety and Driver Behaviour

Motor vehicle accidents were the main cause of death for children and youth up to 23 years of age (54% of deaths in young people 17-23 years of age and 48% for Indigenous youth of the same ages). Alcohol and illicit drugs were present in 49% of non-Indigenous motor vehicle deaths and in 58% of Indigenous motor vehicle deaths. Over 50% of all alcohol-related crash victims are between 15-24 years of age<sup>129</sup> and almost one-third of all alcohol-related hospital admissions for assault injuries are in this age group.<sup>130</sup>

### Sun Protection

Australia has the highest rate of non-melanoma skin cancer (NMSC) in the world<sup>131,132</sup> with the incidence rate reported to be 1,000-2,000 per 100,000 per year<sup>131</sup>. The rate of NMSC has been increasing worldwide since the 1960s due to in part to increased sun exposure through changes in behaviour and depletion of the ozone layer.<sup>131</sup> Around 374,000 Australians are treated for NMSCs each year, almost 9,000 are diagnosed with melanoma each year and more than 1,400 die each year.<sup>132</sup> In Australia and New Zealand, malignant melanoma ranks as the fourth most common cancer.<sup>131</sup>

Parental sun protection behaviours directly impact on the adoption of sun protection measures by children and young people. Adolescents, however, are recognised as having a low rate of using sun protection.<sup>135</sup> Primary prevention of sun exposure and intense intermittent sun exposure in children and young people are key strategies to reduce the rates of NMSC and malignant melanoma.<sup>131,133,134</sup>



*Image courtesy of Queensland Health*

## Strategies

### Self-Management

- Support the integration of tailored self-management with medical management that is developmentally and culturally appropriate for children, youth and their families, especially for Indigenous, CaLD and socially and economically disadvantaged groups.
- Support alternative approaches to improving appropriate participation in self-management by children, youth and their families, including:
  - Targeted and appropriate social marketing and health promotion
  - Self help and internet-based resources
  - Telephone counselling
  - Mentoring and peer-based support.
- Encourage greater participation by health care professionals in formal self-management education and training to support children, youth and their families to engage in self-care.

### Health-Related and Risk-Taking Behaviours

- Support prevention programs that aim to prevent the uptake of adverse health-related and risk-taking behaviours in children and youth, including alcohol, tobacco and illicit drug use, risky sexual practices, risky driving behaviours and prolonged exposure to the sun.
- Develop mentoring programs for high-risk adolescents with the aim of reducing risky alcohol, tobacco and illicit drug use, behaviour problems, and risky sexual practices, and enhancing school attendance and achievement.
- Support measures to identify children and youth at high risk of engaging in intentional self-harm and attempted suicide, especially Indigenous, socially and economically disadvantaged groups and refugees from war-torn countries, and provide culturally appropriate support and acute interventions.
- Support a range of strategies to promote safe sex practices targeting both sexual and non-sexual factors such as individual and peer characteristics, family, school, and community features, and strategies aimed at delaying initiation of sexual activity and enhancing life choices.
- Promote advanced driving skills training programs through high schools.
- Support family-focused and community-focused (including schools, sport and recreation and outdoor employment) strategies that increase awareness of responsible sun protection behaviours, and early uptake of sun protection behaviours by children and youth.

## Improve the health and wellbeing of specific population groups through improved access and cultural sensitivity.

### Priorities

Over the past fifty years there have been major demographic, social, and economic changes in Australia that have had a significant impact on the lives of Australian children and their families, often constructing systematic barriers which limit the capacity of individuals to live healthy lives. One significant barrier is the unacceptably high level of inequality within Australia. The OECD measure of inequality places Australia 15th out of 26 nations, indicating greater income inequality within Australia than in the majority of OECD countries.<sup>38</sup>

Improvements in the health of Australians during the 20th century have not been experienced equally by all members of society and in some areas the disparities have been expanding.<sup>135</sup> People from disadvantaged backgrounds have more risk factors present in their life and are significantly more likely to experience poor health, to engage in risk-taking behaviours, and are less likely to use preventative health care services in favour of GP services, than more affluent members of society.



### Indigenous

Social, cultural, and economic differences impact on the health of Aboriginal people. Overall, the health of Aboriginal and Torres Strait Islander children is much worse than for other Australian children, with higher rates of hospitalisation among Indigenous children a measure of this.<sup>17</sup> The rate of hospitalisation of Indigenous infants is 1.7 times that of non-Indigenous infants and for children 1-14 years it is 1.4 times higher.

This data clearly indicates that we would need to spend around 40% to 70% more on health care for Indigenous children compared with non-Indigenous children in order to reflect the discrepancies in health and wellbeing and address Indigenous health disadvantage. Currently though, health care expenditure for Aboriginal and Torres Strait Islander peoples is only 18% higher than for other Australians<sup>136</sup> and at this level of funding we have not been able to reduce the disparity in health status.

A serious commitment for increased funding directed at prevention and early intervention programs and early treatment services is required.<sup>137</sup>

## **Socially and Economically Disadvantaged**

Children and young people raised in socially and economically disadvantaged families are often exposed to a myriad of risk factors such as insufficient or sub-optimal food, poor quality housing, and a lack of timely health care. They are less likely to finish high school and to be gainfully employed, and more likely to suffer from health and mental health problems and be involved in criminal activities and antisocial behaviour.<sup>64</sup>

In Australia, the mortality rate of infants living in the most disadvantaged 20% of society was twice that of the least disadvantaged 20% while for Indigenous infants the rate was three times that of other Australian infants.<sup>19</sup> The greatest difference in rates was for injuries and poisoning with a rate of 18.5 deaths per 100,000 Indigenous children 1-14 years compared with 7.3 per 100,000 for other Australian children in the same age group.<sup>19</sup>

## **Culturally and Linguistically Diverse**

Based on 1996 Australian Bureau of Statistics estimates, 29.3% of Western Australia's population was born overseas (23.3% nationally). Those from non-english speaking backgrounds (NESB) constitute less than half of these. There is diversity within this group and the clusters of same language speaking groups are small and many. While most from English speaking backgrounds are from the United Kingdom, some 5% with varied cultural backgrounds come from other areas such as the African and South American continents. Not included in these statistics are those people who are Australian born but who identify with the culture and/or language of another country.<sup>138</sup>

The determinants of health status for people from Culturally and Linguistically Diverse (CaLD) backgrounds are a complex interaction of factors. These include historical exposure to disease (e.g. tuberculosis or malaria), communication (language barriers and English proficiency), cultural norms and attitudes to health issues, employment status, gender, family and community contacts, service utilisation and environmental factors.<sup>138</sup>



### Refugee Children and Youth

Children and young people make up a significant proportion of the humanitarian refugee intake in Australia and New Zealand and are arguably the most vulnerable subgroup. The health needs of refugee children and young people have been well documented and include high rates of preventable conditions including psychosocial morbidity and sequelae, due to poor access to health services. Of particular concern are those children and young people who are 'unaccompanied minors', who lack the protection and support of their families.<sup>139</sup>

Despite complex health needs in refugee children and young people, service delivery is fragmented and there are many barriers to providing the most effective health care. There are wide local variations in the health care provided, and preventive activities known to be highly effective, such as immunisation and early detection of infectious disease, are not routinely offered. Health care delivery is further complicated by the shifting responsibility between state and federal governments, and government and non-government organisations.<sup>139</sup>



## Strategies

- Provide culturally and linguistically competent child and youth health services across the continuum of child and youth health care, with particular emphasis on:
  - Patient and parent support services
  - Child protection and safety services
  - Family and domestic violence intervention
  - Acute and chronic care services.
- Advocate for improved access to services for disadvantaged groups of children and youth, particularly for Indigenous, CaLD, socially and economically disadvantaged, and children and youth living in rural and remote regions of Western Australia.
- Develop strategies and policies to improve access to transport for Indigenous, CaLD and socio-economically-disadvantaged children and youth and their families to attend outpatient services in the metropolitan area.
- Promote the use of video conferencing by health specialists for the provision of prevention, early intervention, and treatment services to people living in rural and remote regions of Western Australia.
- Increase the number of culturally appropriate video conferencing services targeting the health needs of Indigenous children and youth living in rural and remote regions of Western Australia that provide prevention, early intervention, and treatment services.
- Develop policies and guidelines that assist in transforming existing mainstream health promotion, and perinatal and early childhood intervention and prevention services so that they are more accessible and culturally appropriate for Indigenous, CaLD, and socio-economically disadvantaged children and youth and their families.
- Encourage the involvement of Indigenous, CaLD and socially and economically disadvantaged community members in the development of culturally and linguistically responsive child and youth health policy.
- Encourage the involvement of Indigenous, CaLD and socially and economically disadvantaged community members in the planning and design of child and youth health services.
- Further raise the awareness of the particular health needs of refugee children and youth and improve methods to address these across the continuum of care.



## Improve child and youth health and wellbeing by improving child and youth health service provision

### Priorities

The *Framework* recognises that although the determinants of health and health-related behaviours have significant influence on child and youth health and wellbeing, health service provision and usage also affects the health outcomes of children and youth. In order to improve the quality of child and youth health, attention must also focus on improving health service delivery. In order to address this, a number of approaches must be utilised.

### Integration and Coordination of Services

One such approach is through the integration and coordination of services. A coordinated and integrated approach across the continuum of child and youth health care will ensure the seamless and effective provision of care using integrated care pathways and innovative models of care.

It is well recognised that there is considerable fragmentation within health systems, increasing complexity of patient care, and a lack of focus on population health. The concept of community-based integrated care re-orientates the focus of health systems back to the core health goals in which the aim of the health system is to support and maintain health.

An example model of community based integrated care based upon coordination and cooperation and driven by community health needs has been developed in The Netherlands. This model enhances community participation through qualitative research with patients to determine their health care experiences and satisfaction to inform the development of the health care system with the aim of promoting a more coordinated health care service and ultimately a more positive patient journey.<sup>140</sup>

Integrated care pathways are also increasingly being used as a tool to coordinate patient care in Australia, the United Kingdom, and the USA.<sup>141</sup> The aim of these integrated care pathways is to improve patient care and health outcomes through increased coordination and reduced fragmentation of care<sup>142</sup>. Integrated care pathways are based on the evidence, and attempt to focus not only on 'what should be done' but also identify 'who should do it, when, and where' taking into account the organisation of the health care delivery process as experienced by the patient.

The National Pathways Association (1998) has published a working definition of integrated care pathways, also known as coordinated care pathways, care maps, or anticipated recovery pathways following consultation with its membership:

*"An integrated care pathway determines locally agreed, multi-disciplinary practice based on guidelines and evidence, where available, for a specific patient/client group. It forms all, or part of, the clinical record, documents the care given and facilitates the evaluation of outcomes for continuous quality improvement."*<sup>141</sup>

In essence, integrated care pathways are structured, multi-disciplinary care plans. The aim of having a care plan is to improve multi-disciplinary communication and collaboration, promote standards of practice, reduce length of hospital stay and care costs, and enhance systematic collection of data to enable auditing and evaluation of clinical practice.<sup>141,143</sup>

The implementation of integrated care pathways enables the health care system to be redesigned to focus on patient groups and/or diseases. This encourages active management of the whole care process. This has been termed 'community-based integrated health care'.<sup>140</sup>



### **Collaborative and Flexible Partnership Approach**

Efforts to improve the health and wellbeing of children and youth may be enhanced by a collaborative and flexible partnership approach to health care delivery. This should involve a commitment to developing new partnerships among all child and youth health providers, which actively engage government and non-government organisations, the private business sector, communities, families, and children and youth. Existing partnerships also need to be strengthened and enhanced.

The emphasis on a whole of Government, multi-disciplinary approach to planning and development of child and youth health services and the promotion of healthy environments is underpinned by partnership development with patients, parents and consumers. The Department of Health will have a primary focus on health gains in these partnerships, but the partner organisations may have additional objectives of which government agencies must be aware.<sup>6</sup>

It is well documented that population health is influenced by policies from sectors outside the health sphere, while in turn the health and wellbeing of the population impacts on the goals of other sectors and the economic prosperity of the community. As such, policy makers both within and outside of health should consider how their decisions, policies, and actions are likely to impact on the health and wellbeing of the population.<sup>6</sup>

The United Kingdom Government, for example, has established a requirement that government agencies must form partnerships and make a clear commitment to work collaboratively in order to be eligible to access government sources of funding.<sup>144</sup> Partnerships are recognised as critical to achieving objectives but it is recognised that they encounter many obstacles, which often overwhelm them. In order to assist partnerships in achieving their objectives, a set of key ingredients for success have been identified:

- Clear, shared objectives defined at the outset
- A realistic plan and timetable for reaching these objectives
- Commitment from the partners to take the partnership's work into account within their mainstream activities
- A clear framework of responsibilities and accountability
- A high level of trust between partners
- Realistic ways of measuring the partnership's achievements.

Formation of the WA Health *Health Networks* across the clinical disciplines is an example of state level efforts to improve the integration and coordination of clinical services through improved communication between service providers and other stakeholders, and by collaborating across area health service and institutional boundaries. The strategic role of the *Health Networks* is to provide advice and direction on where and how services should be delivered encompassing service planning and the development of policies and protocols including new models of care, which will subsequently influence the priorities on how resources are allocated across the system.<sup>145</sup>

## Workforce Development

The delivery of high-quality health services for children and youth requires a highly skilled and knowledgeable workforce. The importance of addressing workforce issues and the need to enhance and sustain the current level of quality of the WA Health workforce has been detailed in the WA Health *Healthy Workforce Strategic Framework 2006 - 2016*.<sup>146</sup> There is an urgent need to increase the numbers of health professionals in the health system in order to meet the continuing growth of health services across the state. The key workforce issues for WA are workforce supply and distribution, workforce design, workforce skill development, workforce data and planning and workplace culture and environment.

The *Healthy Workforce Strategic Framework 2006 - 2016* should be viewed as complementary to the *Framework* as it identifies a comprehensive range of strategies relevant to the child and youth health workforce, including:

- Development of education and training frameworks
- Attraction and retention initiatives
- More effective utilisation of workforce resources including the development of new models of care
- The need to identify and implement work redesign opportunities and initiatives
- Initiatives to improve the clarity of roles
- A broadening of approaches to address the particular issues of health services in rural and remote Western Australia
- Regulation and recognition of Aboriginal and Torres Strait Islander health workers
- The need to provide positive workplace cultures
- Developing leadership and change management skills in staff
- Engaging staff on workforce reform and implementation and promoting a balance between work and life for all staff.<sup>146</sup>

The specialist nature of child health services necessitates continued post-graduate education and training of health staff in order to maintain staff skills and to increase the effectiveness and efficiency of the health workforce to deliver innovative programs and treatment. Hence there is a clear recognition in the *Healthy Workforce Strategic Framework 2006 - 2016* of the need to invest in workforce development and training to develop partnerships with the higher education and vocational education and training systems to promote flexibility in education and training.<sup>146</sup>

Integrated workforce planning frameworks and workforce modelling systems are also identified as key strategies in the *Healthy Workforce Strategic Framework 2006 - 2016*.<sup>146</sup> Integrated workforce data collection and analysis needs to be developed across the WA child and youth health sector in order to provide the evidence base for workforce planning initiatives and monitoring and evaluation of these initiatives. In order to increase the use of health outcomes and health services data and promote monitoring and evaluation of services and programs, a wide range of health staff, including policy officers, will need to have the knowledge and skills to work with this information.

Workplace culture and environment such as stability of the work situation, social support, decision latitude, work loads, resource availability and psychosocial work factors impact on staff stress levels, health, mental health and wellbeing, absenteeism and the quality of patient care.<sup>147-152</sup> Prevention of staff burnout, absenteeism, and turnover can be achieved through the provision of mentoring programs, organisational engagement and intervention strategies,<sup>147,153</sup> improved leadership and management practices and appropriate staffing levels.<sup>152</sup> WA Health has commenced addressing these issues through work life balance initiatives aimed at providing a flexible and responsive workplace, which enables employees to balance work and family responsibilities and promote a positive work environment.





## Strategies

### Integration and Coordination of Services

- Support qualitative research with children and youth and their families to inform the development of improved health care services and coordination of service delivery.
- Identify common and/or costly treatment and clinical outcomes associated with frequent child and youth presentation and/or hospital admission or increased in-patient stay, such as perforated appendicitis, and establish clinical care pathways.
- Promote these clinical care pathways to primary care providers including general practitioners, emergency care physicians and paediatricians located at hospitals outside of all hospitals caring for children, including in rural regions.
- Develop models of care that streamline the patient journey across services, especially in transition from paediatric to adult health services, public to private hospitals (and vice versa), and between hospital and community-based government and non-government services.
- Promote the co-location of service providers working with children and youth, such as general practitioners, child development, mental health, community health, private hospital and other non-government services in order to facilitate greater cooperation.
- Promote the co-location of population health, non-government services, and community development programs such as playgroups, childcare and parenting programs to increase ease of access.
- Promote joint appointments for health professionals working with children and youth across public and private hospitals and other government and non-government health services.
- Promote hospital-community service interfaces such as ambulatory care services.
- Promote the requirements for hospitals to have separate areas for child and youth health care, including in-patient and emergency services.
- Where feasible and appropriate, extend health services into youth settings and promote a youth focus.

### Collaborative and Flexible Partnership Approach

- Develop links and partnerships across government and non-government agencies to enable the development of policies, early identification procedures, and programs to address the health and developmental needs of children and youth coming into contact with service providers from other sectors. Key agencies include agencies both within the health system, other government, and non-government agencies:
  - Child and Adolescent Health Service
  - Western Australian Health Networks
  - Mental Health Services, including child and adolescent and adult mental health services
  - Drug and Alcohol Office
  - Justice Department
  - Department of Education and Training
  - Office of Aboriginal Health
  - Aboriginal Health Council of Western Australia
  - Disability Services Commission
  - Department of Child Protection

- Department for Communities
- Department of Immigration and Multicultural Affairs
- Telethon Institute for Child Health Research
- Private Hospitals
- Non-government community health services
- General Practitioners
- Promote coordination and cooperation between all child and youth health care service providers.
- Develop links and partnerships across all WA Health *Health Networks* to ensure specific issues pertaining to child and youth health are prioritised and addressed at all levels within the health system.
- Promote recognition within government and non-government service providers outside the health sector, including those providing services to adults, of the health and development needs of children and adolescents exposed to high-risk situations and environments.
- Promote child and youth health representation on committees working on legislative issues, which have an impact on child and youth health.
- Develop links between families and paediatric and palliative and supportive care programs and strategies to support families to care for children who have a chronic health condition in their home.

## Workforce Development

- Promote workforce planning and research looking at job expectations, attraction and retention of staff for hospital-based and community-based child and youth health services.
- Promote or develop policy and frameworks that:
  - Support clinical, nursing, and allied health placements in child and youth health services in both the public and private sectors
  - Aim to increase the number of Aboriginal health professionals and Aboriginal health workers undertaking specialist training in child and adolescent health
  - Increase recruitment and retention of staff and improve education and training for the rural and remote child and youth health workforce, particularly for staff working with Indigenous people
  - Identify gaps and priority areas in the current continuing education and training programs and improve the accessibility of quality education programs to enhance workforce development in relation to child and youth health.
- Develop programs to educate hospital staff, primary care providers, and general practitioners about child and youth health.
- Promote development of youth friendly services across the community by offering training in adolescent medicine skills to general practitioners, community nurses and school health staff.
- Develop statewide training programs around priorities in child and youth health, for relevant public and private hospital staff, emergency department staff, general practitioners and child and community health staff.
- Develop information, education, and training packages on issues relating to child and youth health and development particularly for staff working in the mental health, alcohol and other drugs, and child protection.
- Develop the role of paediatric nurse practitioners in hospitals currently unable to provide a sufficient level of paediatric physicians.



- Develop education and employment policies and procedures, in conjunction with human resources and professional organisations, to support qualified health workers re-entering the child and youth health workforce.
- Expand post-graduate education and training to increase the number of qualified medical, nursing, allied health workers and Aboriginal health workers entering the child and youth health workforce.
- Strengthen the focus on issues pertaining to child and youth health in the undergraduate and postgraduate education and training sectors, particularly university schools of medicine, nursing, and allied health, and increase the number of students undertaking postgraduate training in these areas.
- Develop programs to educate professionals working outside the health sector who work with children and youth either directly or through contact with their parents about child and youth health.

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## Appendix

### Appendix 1: WA Child and Youth Health Network Advisory Group Membership

Name	Area
A/Professor David Forbes	Co-lead, WA Child and Youth Health Network
Dr Gervase Chaney	Co-lead, WA Child and Youth Health Network
Dr John Boulton	Senior Regional Paediatrician, Kimberley Health Service
Ms Anne Bourke	Executive Director, Nursing and Patient Support Services, Child and Adolescent Health Service
Ms Geraldine Carlton*	Executive Director, Rockingham Peel Group
Ms Kate Gatti	Area Director of Population Health, WA Country Health Service
Dr Bret Hart	Public Health Physician, North Metropolitan Area Health Service
A/Professor Colleen Hayward*	Aboriginal Health Researcher, Telethon Institute for Child Health Research
Dr Brad Jongeling*	Developmental and General Paediatrician, Joondalup Child Development Centre
Mr Colin Kikiros*	Chair Paediatric Surgery Clinical Care Unit, Princess Margaret Hospital
Dr Alan Leeb	GP Representative, Division of General Practice
Ms Libby Lloyd*	Head of Department, Social Work, Princess Margaret Hospital
Ms Jennifer Mace	Head of Department, Social Work, Princess Margaret Hospital
Mr Patrick Marwick	Clinical Director, North Metropolitan Area Health Service, Child and Adolescent Mental Health Services
Ms Anne McKenzie	Consumer Representative, Health Consumers' Council of WA
Ms Paulina Montibeler	GP Liaison Officer, Osborne Division of General Practice
Mr Mark Morrissey	Executive Director, Child and Adolescent Health Service
Ms Colleen O'Leary*	Project Officer, WA Child and Youth Health Network
Ms Sue Peter	Nursing Director, Ambulatory Care, Paediatric Medicine Clinical Care Unit, Princess Margaret Hospital
A/Professor Trevor Parry	Developmental Paediatrician, Board Member NIFTy Australia and WA Chair
Ms Elizabeth Prime	Director of Nursing, Joondalup Health Campus
Dr Desiree Silva*	Consultant Paediatrician, Joondalup Health Campus
Prof Karen Simmer*	Medical Director of Neonatology Clinical Care, King Edward Memorial Hospital and Princess Margaret Hospital
Prof Fiona Stanley	Director, Telethon Institute for Child Health Research
Dr Judy Straton*	Director, Child and Adolescent Community Health Policy Unit (Statewide), Child and Adolescent Health Service
Ms Melissa Vernon*	Area Director of Population Health, WA Country Health Services
Ms Judy Walsh	Clinical Services Manager, State Child Development Centre
Dr Geoffrey Williamson	Director, Clinical Services, Rockingham/Kwinana District Hospital

\* Denotes past Member

**Notes:**



Notes:

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