

# Western Australia's Children and Their Health

A COLLABORATION BETWEEN THE TELETHON INSTITUTE FOR CHILD HEALTH RESEARCH AND THE WA HEALTH AND WELLBEING SURVEILLANCE SYSTEM



## SOUTH METROPOLITAN AREA HEALTH SERVICE - HEALTH CARE NEEDS

### Health Conditions

In Australia, childhood is typically associated with good health. This is a consequence of our Nation's relative wealth, with the many benefits this brings. Among these is accessible, affordable and high quality health care, which includes effective preventive and promotive programs and world class primary, secondary and tertiary treatment services.

When they are ill, Australian children usually have a condition that is readily treated by their parent(s) or a general practitioner (AIHW, 2005). Thus, most children's health care needs can be met within community settings.

Nonetheless, there are significant and challenging health conditions for which children are at greater risk than those who are older. There are also a variety of health problems that emerge in childhood and sometimes bring lifelong health care needs. This report attempts to shed some light on these aspects of health need.

Insofar as Western Australian Health Areas/Regions are concerned, services for children with chronic health conditions are the focus of considerable effort.

This effort is critically important because chronic health conditions have the potential to disrupt a child's social and emotional development and to impose significant burdens that can adversely affect a whole family (Miller, Recsky and Armstrong, 2004).

In terms of the health care system and health professionals, the demands of treating children with chronic health conditions pose special challenges. Significant effort is often required to coordinate the work of all the services involved with a child that has a chronic condition, including schools, care providers, health professionals and so on (Miller, Recsky and Armstrong, 2004).

Not surprisingly, the standard of health care provided to children with chronic conditions is likely to be better if health professionals are supported by comprehensive practice frameworks that include uniform service protocols and where their practice is supported by high quality information systems.

This report touches on aspects of the following health conditions: asthma, ADHD, diabetes, developmental delay, disability, and injury and poisoning among 0-15 year old Western Australian children.

### Future Papers on Western Australian Children and Their Health

Future papers in this series will focus on the following topics:

- 1. A healthy start to life**  
Pregnancy, birth and early caring behaviours.
- 2. A healthy home life**  
Parenting and the home environment.
- 3. Health care needs**  
Chronic health conditions.
- 4. Health care services**  
Service utilisation.
- 5. Health behaviours**  
Risk and protective behaviours.

POPULATION PROFILE	
HEALTH RISKS	
<input checked="" type="checkbox"/> ILLNESS/DISEASE	INDICATORS OF CHILD HEALTH NEEDS
HEALTH CARE USE	
MORTALITY	
COMMUNITY WELLBEING	INDICATORS OF CHILD WELLBEING
FAMILY WELLBEING	
INDIVIDUAL WELLBEING	

▲ **Indicator:** A statistic chosen to describe (indicate) a situation concisely, help assess progress and performance, and act as a guide to decision making... (AIHW 2006)

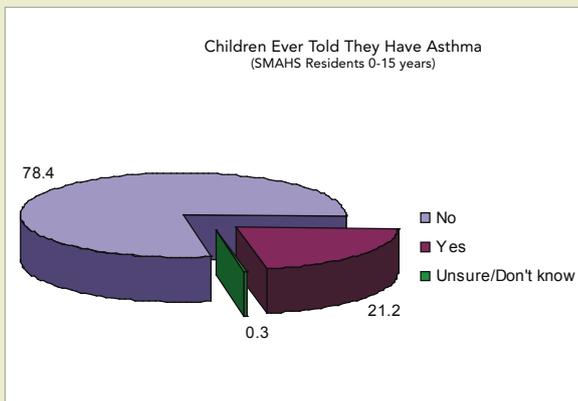
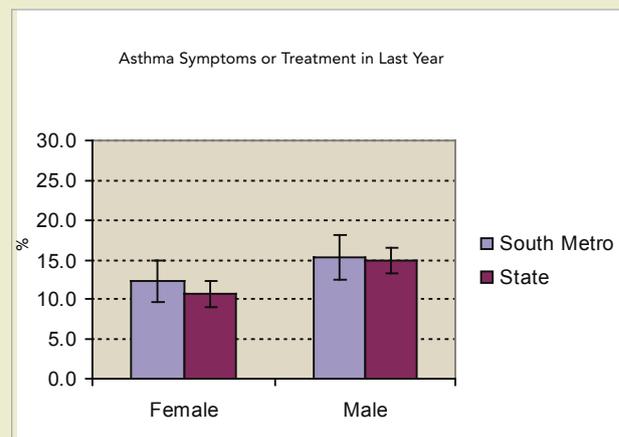
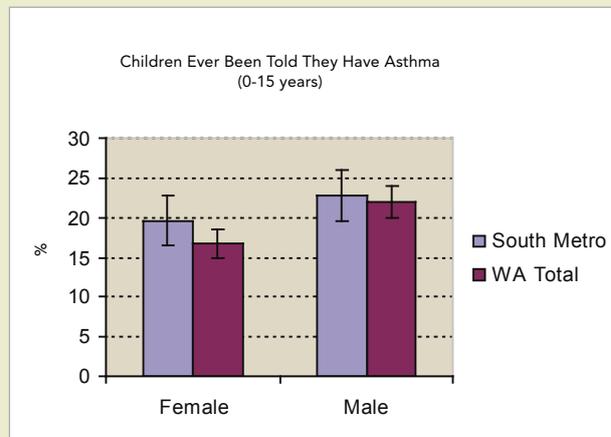
### Asthma

Asthma is a disease which causes episodes of wheezing and breathlessness (AIHW, 2005). It is the most common long-term medical condition experienced by Australian children, with national data indicating that it affects 12% of 0-14 year olds (ABS, 2006).

Asthma treatment accounts for a small but significant component of the nation's health expenditure, accounting for almost \$700 million in 2000-01 (AIHW Australian Centre for Asthma Monitoring, 2005).

Western Australian research has found that children with a written asthma action plan are less likely to visit emergency departments or to be admitted to hospital as a result of asthma (AIHW Australian Centre for Asthma Monitoring, 2005). This research also highlighted that only one in four children with asthma have a written plan.

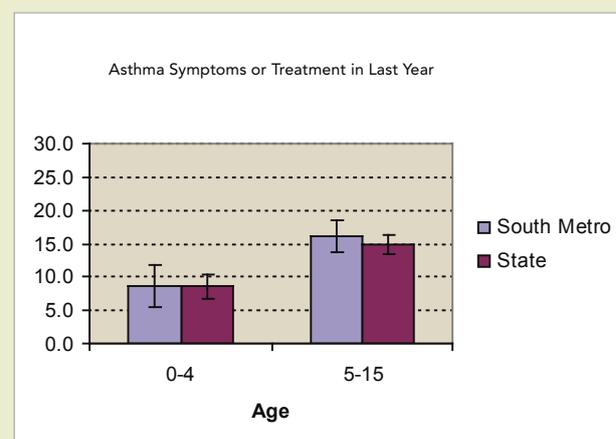
WA Health and Wellbeing Surveillance System (HWSS) data indicates that approximately one in five SMAHS children aged between 0-15 years have ever been told they have asthma (95% C.I. 19.0-23.5 %) (See graph below).



Male children in WA are more likely than their female counterparts to have been ever told they have asthma or to have had recent symptoms of the disease (see following graphs).

The prevalence of asthma among both male and female children in the SMAHS is similar to that found among both sexes across the State as a whole.

HWSS data suggest that the proportion of Western Australian children who have had a recent experience of asthma symptoms increases with age. The prevalence of recent asthma symptoms is twice as common among 5-15 year old West Australians as among those aged 0-4.



Overall, data from the HWSS indicate that there are approximately 21,000 0-15 year old children in the SMAHS who will have had symptoms of asthma at least once in the last year. Of these, approximately 3,700 are within the 0-4 year age range.

### **Asthma and the health care system....**

**While asthma continues to be common among Australian children, the last decade has seen a substantial decline in deaths, hospitalisations, and rates of GP consultation related to the condition.**

**During this period, drug treatments for asthma have changed.**

**The rate of asthma among Australian children is comparatively high. Children aged 0-4 years are most likely to visit a GP, an emergency department or to be hospitalised for asthma.**

**The following groups of people are also more likely to be hospitalised for asthma:**

- Aboriginal and Torres Straight Islanders;
- Those living in remote areas; and
- People living in disadvantaged communities or areas.

**Source: AIHW Australian Centre for Asthma Monitoring 2005**

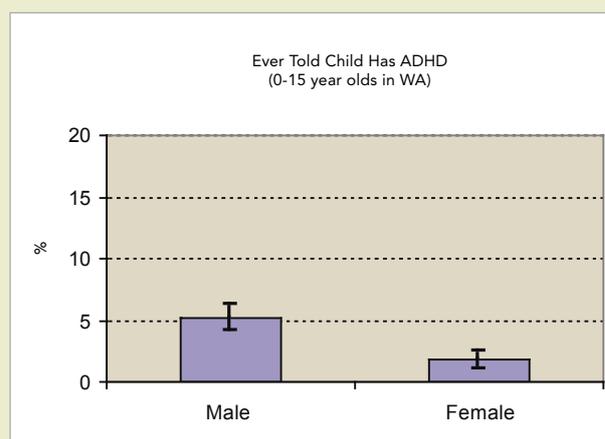
## **Attention Deficit Hyperactivity Disorder (ADHD)**

A diagnosis of ADHD relates to a pervasive pattern of behavioural and cognitive symptoms with impairing levels of hyperactivity, inattention and impulsiveness. It is one of the most common behavioural disorders among children and its symptoms often persist into adulthood (Hill, 2005).

Treatment with psycho-stimulants (dexamphetamine and methylphenidate), either alone or with psychosocial therapies, has been shown to be effective and safe, and has the potential to significantly improve quality of life among children with ADHD and for their families (Hill, 2005).

Nonetheless, ADHD assessment, diagnosis and care have proved to be somewhat controversial in WA. This has been partly due to the fact that the State has the Nation's highest prescribing rate for children for stimulant medication.

One of the items included in the HWSS asked parents whether a doctor had ever advised them that their child had ADHD. Overall, the results indicate that 3.6 percent of 0-15 year old Western Australian children had ever been told they have the Disorder (95% C.I. 2.9%-4.2%). ADHD is three times more common among boys than girls (see following graph). Prevalence estimates for the condition between 2002 and 2005 were similar in each of the State's Health Areas/Regions.



Using HWSS data, it has been estimated that approximately 7,000 children aged between 0-15 years living in the SMAHS have been diagnosed by a medical practitioner as having ADHD (95% C.I. 5218-8829 children).

## Diabetes

Type 1 or juvenile diabetes is a lifelong condition which usually manifests in childhood (AIHW, 2005). People with this disease require daily injections of insulin.

National data on juvenile diabetes highlight that the incidence of the disease is similar among boys and girls (AIHW, 2005). The Australian Bureau of Statistics (2006) has reported that of Australia's population of 20 million, approximately 92,000 people have type 1 diabetes. Of these people, approximately 8000 are estimated to be aged between 0-15 years.

Among the items included in the HWSS, parents were asked whether a doctor had ever told them their child had diabetes. Analysis of this item suggests that approximately 500 0-15 year-old Western Australian children have type 1 diabetes (95% C.I. 45-959). This estimate appears to be broadly consistent with National Health Survey data describing the prevalence of diabetes among Australians (ABS, 2006).

## Developmental Delay

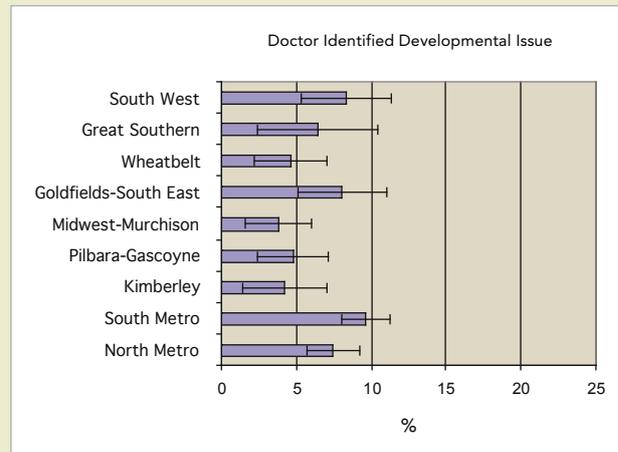
Many health conditions emerge during childhood, becoming evident when expected milestones are not reached at a particular age or perhaps where a child experiences greater difficulty mastering certain tasks or activities than their peers.

Among the questions included in the HWSS, parents were asked whether they had ever been told by a doctor that their child had a problem with coordination, clumsiness, deformity, stiffness or developmental delay.

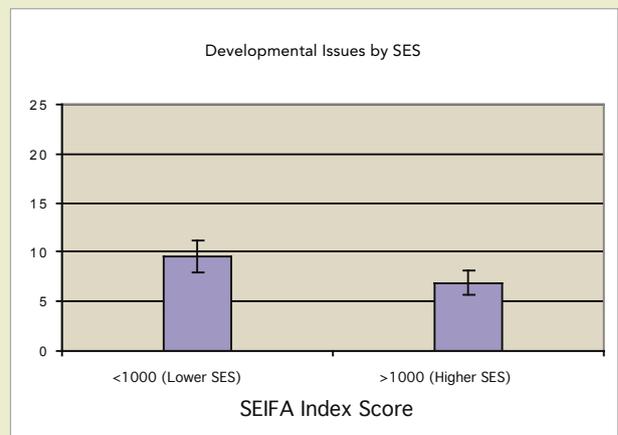
Analysis of HWSS responses to this question indicated that 4.7 percent of 0-4 year old Western Australian children had ever been identified by a medical practitioner as having a problem with coordination, clumsiness, deformity, stiffness or developmental delay (95% C.I. 3.4-6.1%). Of those children who had ever been identified as having one of these developmental problems, males outnumbered females by a factor of 2:1.

Among 5-15 year old children, approximately one in ten (9.4 percent) had ever been found to have a problem with coordination, clumsiness, deformity, stiffness or developmental delay (95% C.I. 8.2-10.5%). In this age group, males comprised two in three of those ever identified by a medical practitioner as having a problem (64%).

The following graph profiles Regional/Area estimates for the HWSS developmental item.



Based on HWSS data, it is estimated that approximately three thousand 0-4 year olds and twelve thousand 5-15 year olds living within the SMAHS have ever been identified by a medical practitioner as having a problem with coordination, clumsiness, deformity, stiffness or developmental delay. Children identified as having these problems are more likely to live in socio-economically disadvantaged areas (see graph below).



As part of the HWSS, parents were asked whether their child was late to talk and whether they believed their child needed professional help with their speech. Overall, 18.2 percent of 0-4 year olds (95% C.I. 15.2-21.2%) and 12.8 percent of 5-15 year olds (95% C.I. 11.4-14.1%) were considered late talkers. The smaller proportion of 5-15 year olds reported by parents to be/have been late talkers is difficult to interpret. It may be that as children grow, many parents reassess their concerns about development in light of the degree to which milestones are achieved. Thus, a child that might have been regarded by a parent as having delayed speech at age 3 or 4 might be subsequently reassessed as having shown a "normal" pattern of speech and language development once age-appropriate skills are attained.

HWSS data highlight that 9.6 percent of 0-4 year old (95% C.I. 7.3-11.9%) and 8.1 percent of 5-15 year old (95% C.I. 7.0-9.2%) children are classified by their parents as being in need of professional help with their speech. This level of "felt-need" for speech therapy is unlikely to be within the capacity of the public health system.

With respect to the validity of parent perceptions of language delay, the estimate obtained from the HWSS is well within the range identified in a detailed review conducted by Law et al (1998). The HWSS data also indicate that parents discriminate between the issue of delayed speech and language development and whether there is a need for professional speech interventions for their children.

Overall, HWSS data suggest that within the SMAHS, there is a current parent assessed need for speech interventions for approximately four thousand 0-4 year olds and nine thousand 5-15 year olds.

## Disability

Providing adequate care for any child involves meeting a spectrum of demands. Where the child has a disabling condition or long term illness, the demands placed on families are often significantly increased.

Parent participants in the HWSS were asked whether their family experienced any burden as a consequence of having a child with a disability, long-term illness or who suffered with chronic pain.

An estimated one in thirty (3.2% 95% C.I. 1.3-5.2%) 0-4 year olds have a disability or a long-term health issue that places a burden on their family. The data suggest that among 5-15 year olds, one in twenty (5.3% 95% C.I. 3.8-6.7%) have a disability or long-term health issue that places a burden on their family. Male children are more likely than females to have a disability or long-term health issues that places a burden on their family. Overall, the HWSS data suggest that seven thousand 0-15 year olds living in the SMAHS have a disability or long-term health issue that places a burden on their families.

For approximately three in five children with a disability or health condition that places a burden on their family, the extra demands are considered to be relatively minor. However, for the remainder the extra burden is considered significant.

## Possible sequelae of speech and language problems

... there are clear adverse sequelae of speech and language problems, including poor socialisation, difficulties with literacy (reading, spelling), and comorbidity with psychiatric disorders (especially when there are comprehension problems)... It is helpful to continue to review children who have developmental language disorders, particularly into the early school years, to assess the risk of these comorbidities. Children who have difficulty with speech (sound) development are at risk of literacy difficulties, including spelling — particularly those with atypical patterns of speech development (eg, developmental verbal dyspraxia), and children who have severe and ongoing speech and language difficulties.

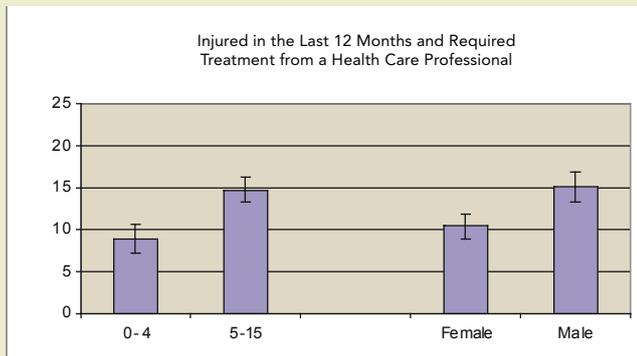
Source: Wray, Silove and Knott (2005)

### Injury and Poisoning

Injury and poisoning are the most common causes of death among 1-14 year old children in Australia (AIHW, 2005). Injury and poisoning are also an important cause of ill-health and disability among children and account for substantial treatment costs.

The HWSS includes a series of items on different categories of injury and associated requirements for treatment.

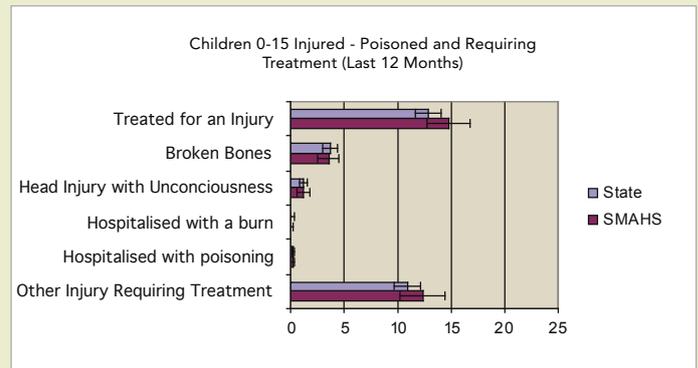
Overall, 12.9 percent of 0-15 year olds Western Australians experienced an injury that required treatment from a health professional at some time in the last year (95% C.I. 11.7-14.0%). Injuries that required treatment from a health professional were more common among children aged between 5-15 years than among those in the 0-4 age-group. Injuries requiring treatment from a health professional were also more common among male children (see following graph).



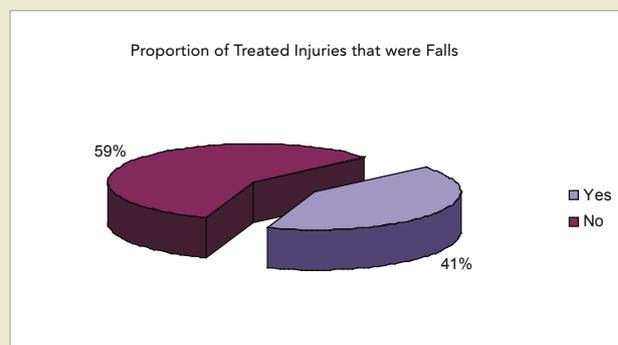
HWSS data suggest that the annual rate of childhood injury in the NMAHS is similar to that found across Western Australia as a whole. It is estimated that one in four cases of childhood injury for which treatment from a health professional is required involves a broken bone. In the SMAHS, this translates into an estimated 5200 (95% C.I. 3755-6741) children requiring treatment for a broken bone each year.

HWSS data suggests that poisoning and burns are a relatively rare cause of recent hospitalisation. Both were cited as affecting only 0.2 percent of the population during the past year (95% C.I. poisoning 0.1-0.4% burns 0.0-0.3%).

DoH surveillance data suggests that each year, head injuries resulting in unconsciousness are experienced by 1.2 percent of the State's 0-15 year old children (95% C.I. 0.8-1.7%). For the SMAHS, this translates into 1,700 0-15 year old children experiencing an injury that will render them unconscious during the course of a year (95% C.I. 795-2701).



HWSS data suggest that of all injuries, four in ten are caused by falls (see graph below).



## **Priority Activities for Injury Prevention among Children from The National Injury Prevention and Safety Promotion Plan: 2004-2014.**

- Raise awareness of the leading causes of injury-related death and disability among children.
- Raise awareness of accidental injuries and abuse and neglect.
- Create cultural acceptance that injuries to children are largely preventable and that investing in prevention is worthwhile.
- Promote knowledge of child development among those who design, market and sell products for use by children or in places where children live or play.
- Ensure that planning for safety promotion among children considers the role of parents and carers, child care services, the education sector and sport and recreational organisations.
- Ensure the prevention of injuries in children is given an appropriate level of consideration in decision-making relative to legislation and standards for products and environments.
- Provide culturally appropriate and educationally relevant information to reach all communities, including low socio-economic status and culturally and linguistically diverse communities, and Aboriginal and Torres Strait Islander peoples about child safety promotion.
- Provide equity of access to health care and safe, quality child care.
- Provide safer products and environments for children that are appropriate to their age specific development.
- Provide information to communities, organisations, families and individuals that explains the size and nature of problems and solutions. (NPHP, 2004)

## The data indicate that...

- One in five SMAHS 0-15 year olds have ever been told they have asthma. Experience of asthma symptoms in the past year is more common among male children and increases with age. One in six 5-15 year old children in the SMAHS have experienced asthma symptoms in the last year.
- Among 0-15 year olds in the SMAHS, approximately one in fourteen males and one in fifty females have ever been diagnosed by a medical practitioner as having Attention Deficit Hyperactivity Disorder.
- Developmental delay and disability affect a small but significant proportion of 0-15 year old children in the SMAHS. Among 5-15 year old children, approximately one in ten have ever been assessed by medical practitioner as having a problem with coordination, clumsiness, deformity, stiffness or developmental delay. Among this age-group, approximately one in twenty children has a disability or chronic health problem that places a burden on their families.
- One in seven 0-15 year old children in the SMAHS required treatment from a health professional for an injury sustained in the last 12 months.

## About the Data...

The WA Health & Wellbeing Surveillance System (HWSS) is a continuous data collection system using Computer Assisted Telephone Interviews (CATI) to survey 550 people throughout Western Australia every month. The system began in March 2002 and up to July 2006, 27,000 interviews had been conducted.

People are asked questions on a range of indicators related to health and wellbeing. Topics include chronic health conditions, lifestyle risk factors, protective factors and socio-demographics. Since the surveillance system began, response rates have been between 78-80 percent of all the people contacted.

### References

1. Australian Bureau of Statistics. (2006) *National Health Survey: Summary of Results*. ABS cat. No. 4364.0. Canberra: ABS.
2. AIHW Australian Centre for Asthma Monitoring. (2005). *Asthma in Australia 2005*. AIHW Asthma Series 2. AIHW cat. no. ACM 6. Canberra: AIHW.
3. AIHW (2005). *A picture of Australia's children*. AIHW Cat. No. PHE 58. Canberra: AIHW.
4. Hill, P. (2005). *Attention deficit/hyperactivity disorder: Introduction*. *Archives of Disease in Childhood*, 90 (Suppl 1), i1.
5. Law, J., Boyle, J., Harris, F., Harkness, A. and Nye, C. (1998). *Screening for speech and language delay: a systematic review of the literature*. *Health Technology Assessment*; 2 (9).
6. Miller, A.R., Recsky, M.A., and Armstrong, R.W. (2004). *Responding to the needs of children with chronic health conditions in an era of health services reform*. *Canadian Medical Association Journal*, 171 (11), 1366-1367.
7. National Public Health Partnership (NPHP). (2004). *The National Injury Prevention and Safety Promotion Plan: 2004-2014*. Canberra: NPHP.
8. Wray, J. Silove, N. and Knott, H. (2005). *Language disorders and autism*. *The Medical Journal of Australia*, 182 (7), 354-360.