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**The role of paediatricians in the provision of  
mental health services to children and young  
people**

October 2016

The Royal Australasian College of Physicians (RACP) is Australia and New Zealand's largest medical college, representing 23000 physicians, including 4500 paediatricians.

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## RECOMMENDATIONS

1. That governments across Australia and New Zealand capitalise on the knowledge and experience of paediatricians, and other child and adolescent health professional groups, to develop effective and innovative models of care delivery of mental health services for children and young people by:
  - a. involving paediatricians in all stages of strategic planning and policy development concerning the prevention and treatment of children and young people's mental health problems;
  - b. ensuring that strategic frameworks address the unmet needs of children and young people with mental health problems;
  - c. identifying and acknowledging the importance of early life experiences when planning the delivery of mental health care;
  - d. funding and supporting prevention and treatment through new and existing networks and services, such as child and family health, community services and other paediatric mental health services;
  - e. funding regular national surveys of children's and young people's mental health to monitor indicators of child and adolescent health, as well as their economic and social determinants;
  - f. prioritising funding for research into effective interventions for mental health promotion, early intervention and treatment of mental health problems;
  - g. disseminating accurate and accessible information for children, young people, families and the general community; and
  - h. providing opportunities for children and young people to have a voice and contribute to the development of policies and services for their benefit.
  
2. That paediatricians and mental health professionals collaborate to develop a common framework of practice across professional disciplines which:
  - a. emphasises the functional impact of mental health conditions and the relevance of developmental trajectories;
  - b. uses consistent terminology across the disciplines of paediatrics and psychiatry; and
  - c. ensures models of care more effectively integrate paediatric and young people's health services with mental health services for those at risk or diagnosed with mental health problems.

3. That the RACP engages with other professional bodies and other community representatives that facilitate care for children and young people in order to:
  - a. shift therapeutic models of care towards a mental health promotion approach, including for those with chronic physical health conditions;
  - b. develop advocacy, education and professional development activities in partnership with mental health professionals and organisations, such as the Faculty of Child and Adolescent Psychiatry of the Royal Australian and New Zealand College of Psychiatrists (RANZCP); and
  - c. improve access to mental health services, including child and adolescent psychiatrists, particularly in rural areas.

## EXECUTIVE SUMMARY

Mental health problems in children and young people are responsible for significant morbidity and mortality in Australia and New Zealand, with only a minority receiving much needed professional help. Paediatricians play an important and often under-recognised role in caring for children and young people with mental health problems. The role of the paediatrician is particularly important in the face of limited specialised mental health services, especially in rural and remote Australia (RACP, 2007).

In Australia the relatively large number of children and young people with mental health problems contrasts with the limited number of specifically trained clinicians available to help them (McGorry, Purcell, Hickie, & Jorm, 2007). This disparity makes it unlikely that either specialised programs based in secondary and tertiary treatment settings, or psychiatrists in private practice, will be able to provide direct care for all those with mental health problems in Australia (Sawyer et al., 2000). This shortage is exacerbated in country areas where access to child and adolescent psychiatrists and psychologists is limited. In these instances, paediatricians must be incorporated into region-specific networks to provide such care.

The number of children and young people who have mental health problems demands a coordinated approach between general practitioners, paediatricians, child psychiatrists and other mental health professionals. Paediatricians' expertise stems from their long term holistic involvement in caring for children and young people, including those with mental health problems (Sawyer et al., 2001). They are therefore well placed to contribute to strategic policy and service development. A significant proportion of paediatric consultations in Australia relate to issues with development and behaviour, which can precede lifelong mental health problems (Hiscock H, 2016). For some mental health conditions, such as Attention Deficit Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD), paediatricians are the primary medical specialists involved in diagnosis and management (APA, 2013). There is evidence that the prevalence of these diagnoses is increasing (Atladottir et al., 2015; WHO, 2014).

Early childhood experiences influence lifelong mental health trajectories through a complex interplay of individual biological and broader social determinants. It is important for families, health services and the community to work together to enable children and young people to achieve “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO, 2014).”

Improved and innovative models of care that focus on prevention, early intervention and deliver nationwide family focused care across the lifespan are required to improve mental health outcomes for children and young people (DoH, 2009a; Sawyer et al., 2001). Partnerships between paediatricians, psychiatrists, general practitioners, mental health professionals, and maternal and child health services, as well as schools and other community organisations would be useful. They are crucial to identifying and providing effective intervention for children and young people with risk factors for mental illness; such as chronic physical illness, psychosocial adversity and developmental disorders (RACP, 2007).

# MENTAL HEALTH PROBLEMS IN CHILDREN AND YOUNG PEOPLE

## What are mental health problems?

Mental health problems are clinically significant alterations in thinking, mood or behaviour that are associated with distress or impaired functioning (Sawyer et al., 2001). They are chronic health conditions that can have lifelong consequences, although their impact may vary.

There is substantial overlap between mental health problems and neurodevelopmental disorders. Neurodevelopmental disorders are differences in the functioning of the brain that affect a child's behaviour, memory or ability to learn. These can be inherited or may result from alterations in early brain development. Problems may include difficulties in sensory and motor systems, problems with speech and language, intellectual disability and specific learning disability (European-Commission, 2003). ADHD and ASD can be classified as both mental health and neurodevelopmental problems.

## Mental health problems are increasingly common in children and young people

Mental health problems in Australian and New Zealand children and young people account for a very high burden of disease. In Australia, the prevalence of mental health problems is reportedly as high as 14 per cent in children and adolescents aged 4-17 years and 26 per cent in young people aged 16-24 years (Sawyer et al., 2001). Nine per cent of young people aged 16-24 years have high or very high levels of psychological distress (Slade et al., 2009). Similar results are found in New Zealand (AIHW, 2011; Hodges et al., 1998).

In 2013-14 the Second Australian Child and Adolescent Survey of Mental Health and Wellbeing found that almost one in seven 4-17 year olds (13.9 per cent) had experienced a mental health disorder in the past 12 months (Lawrence et al., 2015). The most prevalent disorder was ADHD (7.4 per cent) followed by anxiety disorders.

The prevalence of ASD has been increasing and is now diagnosed in 1 in 68 children (WHO, 2014). In addition to ASD there are increasing rates of diagnosis worldwide of ADHD, Obsessive Compulsive Disorder (OCD) and Tourette syndrome (Atladottir et al., 2015).

## Risk factors or determinants of mental health problems

Mental health problems result from a complex interplay of factors such as individual genetic and developmental susceptibility, socioeconomic status, exposure to trauma and chronic physical health problems. However, providing a more favourable psychosocial environment may reduce the risk or the degree of impairment and promote resilience. Early contact with health professionals, including paediatricians, provides an opportunity to identify and moderate risk factors and contribute to improved mental health and wellbeing (Foy, Kelleher, & Laraque, 2010).

Social and environmental factors that can predispose children and young people to mental health problems have been demonstrated by Matter to include:

1. family issues such as violence, disharmony or relationship breakdown; parents or siblings with serious illness or disability;
2. issues at school such as bullying;

3. living in out of home care; and
4. life events such as death of a family member and physical or sexual abuse (Matter, 2013).

Children and young people with intellectual disabilities associated with conditions such as Fragile X syndrome experience an increased incidence of mental health problems and these must be identified and managed to optimise outcomes for these children (Capone, Goyal, Ares, & Lannigan, 2006; Government, 2009; Hessel et al., 2001). Mental health problems in children and young people with intellectual disability are common, with a population study showing prevalence of over 30-40 per cent (Einfeld et al., 2007). Children and young people with both mental health problems and intellectual disability experience substantially higher levels of impairment and need effective mental health intervention.

Young people with chronic physical health conditions such as diabetes mellitus are at higher risk of mental health problems, with up to 42 per cent being shown to have a mental health problem (Block, Putzer, & Jaramillo, 2010; Cadman, Boyle, Szatmari, & Offord, 1987; de Ornelas Maia, de Azevedo Braga, Brouwers, Nardi, & e Silva, 2012). A Western Australian study has shown that in 5 year olds more severe and persistent asthma was associated with significantly increased odds of affective, anxiety and somatic complaints, oppositional defiant disorder and conduct problems at ages 5–17 years (Goodwin et al., 2013). Children and young people born prematurely also have an increased risk of significant mental health problems (Botting, Powls, Cooke, & Marlow, 1997; Nosarti et al., 2012).

### **The impact of mental health problems in children and young people**

A mental health problem in childhood can lead to functional impacts at home, in school, and in forming friendships (CDC, 2015). Associated behavioural problems can contribute significantly to maternal stress, parent mental health problems and family dysfunction (Carey, Crocker, Elias, Feldman, & Coleman II, 2009).

Childhood behavioural and emotional problems are a potent risk factor for a range of psychiatric disorders later in life. For example, two thirds of people who experience anxiety or affective disorders have their first episode before age 21 (DoH, 2009b). Suicide is a devastating outcome of mental health problems and was the leading cause of death in the 15-24 year age group from 2011-2013 (AIHW, 2016) (Robinson, Rodgers, & Butterworth, 2008).

However, long-term outcomes may be moderated by effective intervention. Secondary analysis of three prospective longitudinal studies (including two from New Zealand) suggests that treatment at younger ages, while justified in its own right, may also have the potential to reduce the risk for problems in later life (Copeland et al., 2013).



# PAEDIATRICIANS CONTRIBUTE TO PREVENTION, IDENTIFICATION AND MANAGEMENT OF MENTAL HEALTH PROBLEMS IN CHILDREN AND YOUNG PEOPLE

Paediatricians are trained to assess the way children and young people grow, develop and function within the family and in the wider community such as school or preschool. This can provide opportunities for prevention, early diagnosis and early intervention for mental health problems. Paediatricians recognise the importance of the early childhood years and environmental and life experiences on early brain development and its effect on lifelong behaviour, learning and health (Mustard & Australia, 2008).

## Paediatric involvement in the prevention of mental health problems in children and young people

Paediatric involvement with the care of children and young people with complex developmental and behavioural problems usually starts during early childhood and continues through the school years and beyond. For example, the vulnerability of parents of young infants to mental health problems, such as post-natal depression, means that the early infant checks can provide an opportunity for the paediatrician to help identify such problems and refer the parent for treatment. Management of these problems in parents reduces the risk of an adverse outcome for the child (Howard et al., 2014).

Development of a therapeutic relationship with the child and family can assist in navigating through puberty, including detecting the onset of mental health problems which may present during adolescence (Patton, 2014). Paediatricians can also support the child's functioning at school and their subsequent transition to employment or further education.

## Paediatric involvement in the clinical care of children and young people with mental health problems

Concerns about development and behaviour make up a substantial part of the workload of paediatric practice. The *Children Attending Paediatricians Survey* conducted in 2008 reviewed more than 8000 attendances and found that around one in two children had developmental and behavioural issues (Hiscock et al., 2011). A study conducted in the Barwon region (around Geelong in Victoria, Australia) found that 35 per cent of consultations with regional paediatricians were for behavioural issues (Hewson et al., 1999).

The most frequent mental health diagnosis managed by Australian paediatricians is ADHD (Efron, Davies, & Sciberras, 2013). In one study, Hiscock et al found that 30 per cent of consultations were for patients with ADHD alone and 14 per cent for patients with ASD (Hiscock H, 2016). Separately, Hewson found that three quarters of Barwon region patients had a diagnosis of ADHD (Hewson et al., 1999). More recent data indicates that ASD now accounts for 15 per cent of new diagnoses made by general and community paediatricians (Hiscock H, 2016).

Significant portions of the paediatric case load also include ADHD (Graetz, Sawyer, Hazell, Arney, & Baghurst, 2001), depression (Costello, Erkanli, & Angold, 2006), anxiety (ABS, 2007) and eating disorders (NEDC, 2015).

The referral pathways between general practitioners, paediatricians and mental health professionals are important for accessing appropriate care, especially for younger children. A survey of Australian children found that 22.5 per cent of children and 19.2 per cent of young people with a mental disorder had seen a

paediatrician within the previous 12 months in relation to their diagnosis (Lawrence et al., 2015). Paediatric involvement was highest in the younger children aged 4-11 years. Children and young people with a range of mental health problems therefore are likely to access paediatric diagnosis and management.

Paediatricians are increasingly receiving referrals for children with complex behavioural presentations. Children referred to developmental or behavioural paediatric clinics have a comparable burden of emotional or behavioural symptoms to those referred to a Child and Adolescent/Youth Mental Health Service (CAMHS), although the degree of impairment may be higher in the CAMHS sample (Roongpraiwan, Efron, Sewell, & Mathai, 2007). Paediatricians are seeing increasing numbers of young people affected by substance use and the early presentation of psychosis (Morgan, Freeman, Powell, & Curran, 2016). Other presentations include chronic fatigue and pain syndromes, somatisation syndromes (known as Somatic Symptom Disorder in DSM 5) and conversion disorder. Eating disorders are increasing in young people and the paediatrician is often the first and sometimes only professional involved in treatment (NEDC, 2012).

In rural Australia there is a well-recognised shortage of mental health professionals. This can disproportionately disadvantage Aboriginal and Torres Strait Islander children and young people affected by mental health problems. Given this shortage, paediatricians in regional and rural locations play a key role in handling mental health referrals from general practitioners (Stewart, 2015).

### **Involvement of Adolescent and Young Adult Medicine Physicians in delivering mental health care to young people**

Physicians with specialist expertise in adolescent and young adult medicine (AYAM) play a role in working at the interface between physical and mental health. Much of this work involves caring for young people with chronic fatigue and pain syndromes, somatisation syndromes, eating disorders and conversion disorder. Assistance with transition to adult care is another of the roles of the AYAM specialist.

Transition allows the young person to take responsibility for their health care and learn self-care skills to enhance self-esteem and autonomy and prepares parents for separation from their child.

## **THE WAY FORWARD: DEVELOPING INNOVATIVE MODELS OF CARE**

Paediatric medical care may be delivered through community health services, diagnostic and assessment services or by community child health paediatricians and general paediatricians. Ideally, paediatric medical services should also address mental health problems to ensure adequate provision of mental health care to children and young people (Garling & Wales, 2008). In New Zealand, the public hospital system provides paediatric services for children and young people up to age 15 years. Conditions treated include ASD, ADHD and intellectual disability. There is increasing collaboration between paediatrics and child and adolescent mental health services, with some paediatricians employed by the local child and adolescent mental health service.

Paediatricians are calling for system change in order to develop more efficient, integrated and responsive models of care for children and young people with developmental, behavioural or mental health problems. National strategic frameworks for mental health should be enhanced and include paediatricians in cross sectoral partnerships (DoH, 2009a). Paediatricians and mental health professionals, such as psychiatrists and psychologists, can effectively work together to create developmentally appropriate services which have been identified as an important priority (O'Keeffe & Shelton, 2007; Sonuga-Barke, 2014; Wilson & Payne, 2012).

Developing new models of care that draw on the strengths of both paediatric and child psychiatry approaches may improve treatment of mental health problems in children and young people. Doctors who have joint training in paediatrics and psychiatry can provide unique insights. Some of the differences between paediatric and child psychiatry approaches and emphasises the need to collaborate have been explored by Court, and include (Court, 2014):

- paediatrics tends to focus on biologically driven development and its variants, whereas psychiatry focuses on psychodynamic and attachment models of development to develop a psychological understanding of presentations; and
- paediatricians tend to gather symptom and chronologically focused histories and problem solve while psychiatrists take detailed biopsychosocial histories to better understand the symptoms.

Narrowing the culture gap between paediatrics and child psychiatry is necessary and achievable, as demonstrated by child psychiatrist Leo Kanner's pioneering a joint clinic with paediatricians at Johns Hopkins Hospital in the 1940s. In 2010, Kraemer argued that there were successful partnerships between paediatric and mental health services in the UK, although this approach to care was not widely embedded in service frameworks (Kraemer, 2010). General practitioners also play a key role in the care of these patients and need adequate support for managing increasing numbers and complexity of cases.

In developing new models of care, the following principles need to be recognised:

- models of mental health care should be grounded in contemporary knowledge of normal developmental processes, their neurobiological underpinnings and the important role of the environment;
- common causal and developmental mechanisms can result in remarkably different outcomes;
- sustained and effective collaboration between paediatric and mental health professionals may lead to valuable new models of care; and
- longitudinal studies are essential to understand the causes, impact and optimal treatment of childhood disorders.

Models of care also need to address areas that are emerging as new priorities. These include:

- infant mental health, which links with both adult and child psychiatry as well as paediatrics (AAIMHI, 2016);
- transitioning young people to adult health services. This requires flexibility, taking into consideration the developmental level of the young person and ensuring that transition is continuous, comprehensive and coordinated (RACP, 2014); and
- adequate provision for common diagnoses. Children with behavioural problems referred to paediatricians may wait a significant period for initial assessment. Models of care that involve paediatricians working with primary health professionals may increase efficiency and reduce waiting times.

Paediatricians already contribute to state and national strategic policy development, design and delivery of programs for intervening in aspects of early childhood development that reduce the risk of later mental health problems. These initiatives include the Healthy, Safe and Thriving: National Strategic Framework for Child and Youth Health and the Royal Children's Hospital of Melbourne's Policy Brief series ((AHMAC, 2015; DSS, 2015; RCHM, 2015). In Australia, there continue to be calls for major reviews of services for young people with mental health problems (Brown, 2014). The knowledge and experience of paediatricians forms an essential contribution to such a process.

## SUMMARY

Given the shortage of specialist psychiatric support for children and young people, the necessity for paediatricians to deliver clinical care to children and young people with mental health problems must be recognised.

Paediatricians with appropriate training and experience can make a valuable contribution to effective multidisciplinary and/or integrated care in collaboration with child and adolescent psychiatrists and other clinicians, and must be supported to do so.

The rewards to the individual and the community of effective early intervention for children and young people are substantial in terms of lifelong benefits to their mental health, social and occupational functioning.

The RACP holds that it is imperative that paediatric knowledge and expertise is incorporated into child mental health planning at every level, and is committed to engaging with medical Colleges, professional groups, community stakeholders, including individuals and their families, and government, to develop effective and innovative models of care for children and young people with mental health problems.

*Note: The mental health of Aboriginal and Torres Strait Islander and Maori children and young people is an important concern. As of 2016, the RACP has convened a Working Group to explore Indigenous Child Health specifically, including mental health care.*

## REFERENCES

- AAIMHI. (2016). Australian Association for Infant Mental Health. Retrieved 07.03.2016, from <http://www.aaimhi.org/about-us/about-us/>
- ABS. (2007). At a Glance - Mental Health of Young People, 2007 (pp. 1): Australian Bureau of Statistics.
- AHMAC. (2015). Healthy, Safe and Thriving: National Strategic Framework for Child and Youth Health. Canberra: COAG.
- AIHW. (2011). Young Australians: their health and wellbeing 2011.
- AIHW. (2016). Leading causes of death. from <http://www.aihw.gov.au/deaths/leading-causes-of-death/#leading-age>
- APA. (2013). *Diagnostic and statistical manual of mental disorders*: American Psychiatric Association.
- Atladottir, H. O., Gyllenberg, D., Langridge, A., Sandin, S., Hansen, S. N., Leonard, H., . . . Parner, E. T. (2015). The increasing prevalence of reported diagnoses of childhood psychiatric disorders: a descriptive multinational comparison. *European Child and Adolescent Psychiatry*, 24(2), 173-183. doi: 10.1007/s00787-014-0553-8
- Block, W. M., Putzer, G. J., & Jaramillo, J. R. (2010). Children with type 2 diabetes mellitus and the prevalence of psychiatric disorders. *Southern medical journal*, 103(12), 1214-1218.
- Botting, N., Powls, A., Cooke, R. W., & Marlow, N. (1997). Attention deficit hyperactivity disorders and other psychiatric outcomes in very low birthweight children at 12 years. *Journal of child psychology and psychiatry*, 38(8), 931-941.
- Brown, S. L. (2014). Mental health services 'deteriorating': Patrick McGorry. <http://www.abc.net.au/news/2014-10-08/mental-health-services-deteriorating-says-patrick-mcgorry/5798548>
- Cadman, D., Boyle, M., Szatmari, P., & Offord, D. R. (1987). Chronic illness, disability, and mental and social well-being: findings of the Ontario Child Health Study. *Pediatrics*, 79(5), 805-813.
- Capone, G., Goyal, P., Ares, W., & Lannigan, E. (2006). *Neurobehavioral disorders in children, adolescents, and young adults with Down syndrome*. Paper presented at the American Journal of Medical Genetics Part C: Seminars in Medical Genetics.
- Carey, W. B., Crocker, A. C., Elias, E. R., Feldman, H. M., & Coleman II, W. L. (2009). *Developmental-Behavioral Pediatrics: Expert Consult-Online and Print Fourth Edition*: Elsevier Health Sciences.
- CDC. (2015). Children's Mental Health – New Report. Retrieved 07.03.2016, from <http://www.cdc.gov/features/childrensmentalhealth/>
- Copeland, W. E., Adair, C. E., Smetanin, P., Stiff, D., Briante, C., Colman, I., . . . Jane Costello, E. (2013). Diagnostic transitions from childhood to adolescence to early adulthood. *Journal of child psychology and psychiatry*, 54(7), 791-799.
- Costello, J. E., Erkanli, A., & Angold, A. (2006). Is there an epidemic of child or adolescent depression? *Journal of child psychology and psychiatry*, 47(12), 1263-1271.
- Court, A. (2014). Paediatricians and psychiatrists working together: what works best? *Archives of disease in childhood*, 99(8), 708.
- de Ornelas Maia, A. C. C., de Azevedo Braga, A., Brouwers, A., Nardi, A. E., & e Silva, A. C. d. O. (2012). Prevalence of psychiatric disorders in patients with diabetes types 1 and 2. *Comprehensive psychiatry*, 53(8), 1169-1173.
- DoH. (2009a). Fourth National Mental Health Plan: an agenda for collaborative government action in mental health 2009-2014. Canberra: Commonwealth of Australia.
- DoH. (2009b). Fourth National Mental Health Plan: an agenda for collaborative government action in mental health 2009-2014 - Setting the Context. Canberra: Commonwealth of Australia.

- DSS. (2015). Health Checks for four year old children. from <https://www.dss.gov.au/our-responsibilities/families-and-children/programs-services/health-checks-for-four-year-old-children>
- Efron, D., Davies, S., & Sciberras, E. (2013). Current Australian pediatric practice in the assessment and treatment of ADHD. *Academic pediatrics, 13*(4), 328-333.
- Einfeld, S., Tonge, B., Chapman, L., Mohr, C., Taffe, J., & Horstead, S. (2007). Inter-rater reliability of the diagnoses of psychosis and depression in individuals with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 20*(5), 384-390.
- European-Commission. (2003). Draft Baseline Report on Neurodevelopmental disorders in the framework of the European Environment and Health Strategy (COM(2003)338 final) European Commission.
- Foy, J. M., Kelleher, K. J., & Laraque, D. (2010). Enhancing pediatric mental health care: strategies for preparing a primary care practice. *Pediatrics, 125*(Supplement 3), S87-S108.
- Garling, P., & Wales, N. S. (2008). *Special Commission of Inquiry Into Acute Care Services in New South Wales Public Hospitals: Inquiry Into the Circumstances of the Appointment of Graeme Reeves by the Former Southern Area Health Service*: NSW Department of Premier and Cabinet.
- Goodwin, R., Robinson, M., Sly, P., McKeague, I., Susser, E., Zubrick, S., . . . Mattes, E. (2013). Severity and persistence of asthma and mental health: a birth cohort study. *Psychological medicine, 43*(06), 1313-1322.
- Government, A. (2009). Priority Area 2: Prevention and Early Intervention. Fourth National Mental Health Plan. Canberra.
- Graetz, B. W., Sawyer, M. G., Hazell, P. L., Arney, F., & Baghurst, P. (2001). Validity of DSM-IV ADHD subtypes in a nationally representative sample of Australian children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*(12), 1410-1417.
- Hessl, D., Dyer-Friedman, J., Glaser, B., Wisbeck, J., Barajas, R. G., Taylor, A., & Reiss, A. L. (2001). The influence of environmental and genetic factors on behavior problems and autistic symptoms in boys and girls with fragile X syndrome. *Pediatrics, 108*(5), e88-e88.
- Hewson, P., Anderson, P., Dinning, A., Jenner, B., McKellar, W., & Weymouth, R. (1999). A 12-month profile of community paediatric consultations in the Barwon region. *Journal of paediatrics and child health, 35*(1), 16-22.
- Hiscock H, D. M., Efron D et al. (2016). Trends in paediatric practice in Australia: 2008 and 2013 national audits from the Australian Paediatric Research Network. *Journal of paediatrics and child health.*
- Hiscock, H., Roberts, G., Efron, D., Sewell, J. R., Bryson, H. E., Price, A. M., . . . Wake, M. A. (2011). Children Attending Paediatricians Study: A national prospective audit of outpatient practice from the Australian Paediatric Research Network-What conditions are paediatricians seeing in outpatient settings? *Medical Journal of Australia, 194*(8), 392.
- Hodges, I., Maskill, C., Coulson, J., Christie, S., & Quigley, R. (1998). Our children's health: Key findings on the health of New Zealand children. *Wellington: Ministry of Health, Chapter 12.*
- Howard, L. M., Molyneaux, E., Dennis, C.-L., Rochat, T., Stein, A., & Milgrom, J. (2014). Non-psychotic mental disorders in the perinatal period. *The Lancet, 384*(9956), 1775-1788.
- Kraemer, S. (2010). Liaison and co-operation between paediatrics and mental health. *Paediatrics and Child Health, 20*(8), 382-387.
- Lawrence, D., Hafekost, J., Johnson, S. E., Saw, S., Buckingham, W. J., Sawyer, M. G., . . . Zubrick, S. R. (2015). Key findings from the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry.* doi: 10.1177/0004867415617836
- Matter, K. (2013). Mental health risk



- and protective factors. Retrieved 07.03.2016, from [https://www.kidsmatter.edu.au/sites/default/files/public/KMP\\_C3\\_RPFCMH\\_MentalHealthRiskAndProtectiveFactors.pdf](https://www.kidsmatter.edu.au/sites/default/files/public/KMP_C3_RPFCMH_MentalHealthRiskAndProtectiveFactors.pdf)
- McGorry, P. D., Purcell, R., Hickie, I. B., & Jorm, A. F. (2007). Investing in youth mental health is a best buy. *Medical Journal of Australia*, 187(7), S5-S7.
- Morgan, C., Freeman, T., Powell, J., & Curran, H. (2016). AKT1 genotype moderates the acute psychotomimetic effects of naturalistically smoked cannabis in young cannabis smokers. *Translational Psychiatry*, 6(2), e738.
- Mustard, J. F., & Australia, S. (2008). *Investing in the early years: Closing the gap between what we know and what we do*: Department of the Premier and Cabinet Adelaide, SA.
- NEDC. (2012). *An Integrated Response to Complexity—National Eating Disorders Framework 2012*. Crows Nest, Australia: Author: National Eating Disorders Collaboration.
- NEDC. (2015). *Eating Disorders in Australia*. Retrieved 08.03.2016, from <http://www.nedc.com.au/eating-disorders-in-australia>
- Nosarti, C., Reichenberg, A., Murray, R. M., Cnattingius, S., Lambe, M. P., Yin, L., . . . Hultman, C. M. (2012). Preterm birth and psychiatric disorders in young adult life. *Archives of general psychiatry*, 69(6), 610-617.
- O’Keeffe, M. J., & Shelton, D. C. (2007). Personal supervision for paediatricians. *Journal of paediatrics and child health*, 43(3), 103-106.
- Patton, G. (2014). Teen blues should be taken seriously, says Professor George Patton of Murdoch Childrens Research Institute in Melbourne. <http://www.news.com.au/lifestyle/parenting/teen-blues-should-be-taken-seriously-says-professor-george-patton-of-murdoch-childrens-research-institute-in-melbourne/story-fnjco7gt-1226803700842>
- RACP (Producer). (2007, 07.03.2016). Submission to the Community Affairs Committee - Inquiry into Mental Health Services in Australia.
- RACP. (2014). *Transition of Young People with Complex and Chronic Disability Needs from Paediatric to Adult Health Services*. Sydney, Australia: Royal Australasian College of Physicians.
- RCHM. (2015). *Centre for Community Child Health Policy Brief Series*. from <http://www.rch.org.au/ccch/policybrief/>
- Robinson, E., Rodgers, B., & Butterworth, P. (2008). Family relationships and mental illness: Impacts and service responses. Retrieved 7.03.2016, from <https://aifs.gov.au/cfca/publications/family-relationships-and-mental-illness-impacts-and-service>
- Roongpraiwan, R., Efron, D., Sewell, J., & Mathai, J. (2007). Comparison of mental health symptoms between children attending developmental/behavioural paediatric clinics and child and adolescent mental health service. *Journal of paediatrics and child health*, 43(3), 122-126.
- Sawyer, M. G., Arney, F., Baghurst, P., Clark, J., Graetz, B., Kosky, R., . . . Raphael, B. (2000). *The mental health of young people in Australia*. Blackwell Science.
- Sawyer, M. G., Arney, F. M., Baghurst, P. A., Clark, J. J., Graetz, B. W., Kosky, R. J., . . . Raphael, B. (2001). The mental health of young people in Australia: key findings from the child and adolescent component of the national survey of mental health and well-being. *Australian and New Zealand Journal of Psychiatry*, 35(6), 806-814.
- Slade, J., Teesson, W., & Burgess, P. (2009). *The mental health of Australians 2: report on the 2007 National Survey of Mental Health and Wellbeing*.
- Sonuga-Barke, E. J. S. (2014). Editorial: Developmental foundations of mental health and disorder – moving beyond ‘Towards...’. *Journal of child psychology and psychiatry*, 55(6), 529-531. doi: 10.1111/jcpp.12265
- Stewart, N. (2015). [President of Australian Paediatric Society.]

- WHO. (2014). Mental health: a state of well-being. from [http://www.who.int/features/factfiles/mental\\_health/en/](http://www.who.int/features/factfiles/mental_health/en/)
- Wilson, H., & Payne, D. (2012). Real medicine. *Journal of paediatrics and child health*, 48(10), E161-E164.