


3RD ANNUAL CONFERENCE

australian ADHD  
professionals association

27-28 JULY 2019 ROYAL ON THE PARK BRISBANE, QLD

 aadpa  
**ADHD across  
the lifespan**  
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## 2019 AADPA Conference Programme

*ADHD: Across the Lifespan*

**Saturday and Sunday 27-28 July 2019**



**Sponsors**

Belmont  
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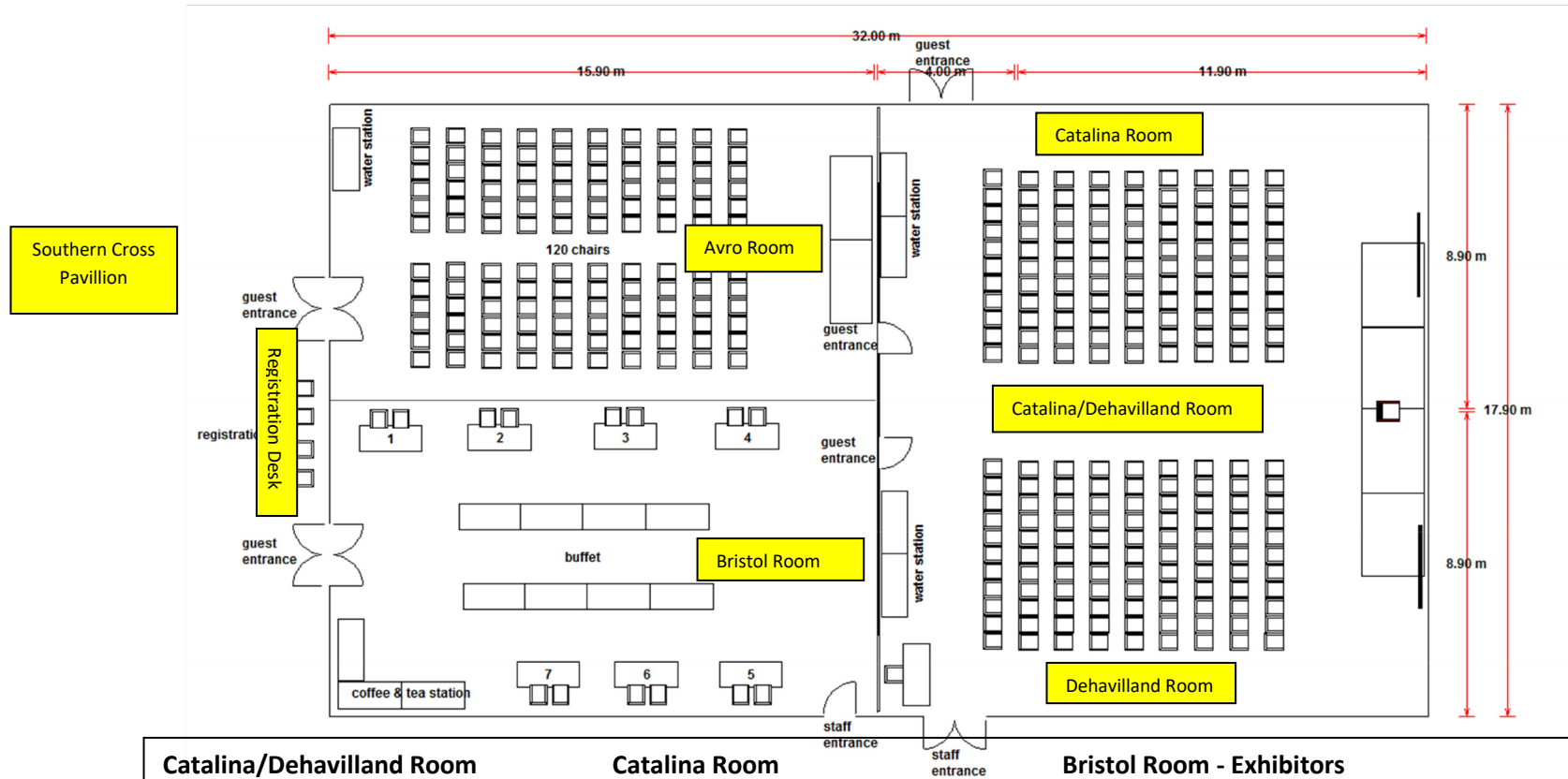


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## ADPA Floor Plan

27-28 July 2019



### Catalina/Dehavilland Room

Plenary Sessions 1, 2, 6  
AGM  
Consumer Group Meeting

### Avro Room

Concurrent Sessions 3 & 7

### Catalina Room

Concurrent Sessions 4 & 8

### Dehavilland Room

Concurrent Sessions 5 & 9

### Bristol Room

Morning/Afternoon Tea & Lunch

### Bristol Room - Exhibitors

1. neuroCare Group
2. NOVARTIS
3. Tova Company
4. Tali Health
5. Belmont Private Hospital
- 6 & 7 Takeda

**Southern Cross Pavillion** – Networking Drinks featuring Rose Callaghan

## SATURDAY 27<sup>th</sup> JULY

Tea/coffee on arrival

### 8.30 – 10.45 PLENARY – SESSION 1

**Venue:** Catalina Dehavilland Rooms

**Chair:** *Christel Middeldorp*

8.30 – 8.40 Welcome to Country – Carol Kennedy

8.40 – 8.50 Welcome – Christel Middeldorp

8.50 – 9.20 AADPA President Address – **Prof Mark Andrew Bellgrove**

9.20 – 9.35 Lived experience – **Louisa Brown**

9.35 – 10.20 **Keynote - Prof Jeffrey Newcorn: How Do Drugs for ADHD Work?**

10.20 – 10.45 **3 Lightning talks**

**Alison Poulton:** *Self-rated functional impairment in adults with attention deficit/hyperactivity disorder (ADHD)* (Lightning Talk 1)

**Melissa Mulraney:** *Persistence and neural correlates of Disruptive Mood Dysregulation Disorder in 10-year-old children with ADHD* (Lightning Talk 2)

**Sampada Bhide:** *Attention-Deficit/Hyperactivity disorder and family functioning: A 3-year longitudinal study of community-based primary school children* (Lightning Talk 3)

10.45 – 11.15 **Morning Tea**

### 11.15 – 1.00 PLENARY – SESSION 2

**Venue:** Catalina Dehavilland Rooms

**Chair:** *David Coghill*

11.15 – 12.00 **Keynote – Dr Rick Jarman:** *Social skills training in ADHD: practical strategies for paediatricians, psychologists and psychiatrists.*

12.00 – 12.45 **Sarah Baggio and Emma Dunlop:** *Project ECHO in ADHD*

12.45 – 1.00 **2 Lightning talks**

**Nicole Stefanac:** *Dysfunctional evidence accumulation in Developmental Dyslexia: Support for the neural noise hypothesis* (Lightning Talk 4)

**Alice Garrick:** *Emergency department experiences of parents of children with comorbid ADHD & autism spectrum disorder* (Lightning Talk 5)

1.00 – 2.00 **Lunch**

### 2.00 – 3.30 CONCURRENT SESSIONS 3 – 5

<b>Session 3: 90 minutes</b> <b>Venue:</b> Avro Room <b>Chair:</b> Dianne Grocott	<b>Session 4: 90 minutes</b> <b>Venue:</b> Catalina Room <b>Chair:</b> <i>Jeffrey Newcorn</i>	<b>Session 5: 90 minutes</b> <b>Venue:</b> Dehavilland Room <b>Chair:</b> <i>Mark Bellgrove</i>
<b>Workshop ADHD and Substance Abuse</b> <b>Dianne Grocott</b>	<p><b>2.00 Mark Ryan:</b> <i>What has sleep got to do with it? Circadian rhythm dysregulation in ADHD and treatment with neurofeedback</i></p> <p><b>2.18 Hannah E. Kirk:</b> <i>"The effects of a gamified cognitive training program in reducing inattentive behaviour in the classroom: A randomised controlled trial"</i></p>	<p><b>2.00 Monica Hassall:</b> <i>Beyond Fight Flight and Freezes there a Fourth F The ADHD Mind in Crisis Supporting Those at Risk and Their Significant Others</i></p> <p><b>2.18 Edwina Birch:</b></p> <p><b>2.36 Edwina Birch:</b> <i>ADHD and NDIS</i></p> <p><b>2.54 Sarah Medland:</b> <i>The Effect of Children's Attention-</i></p>

	<p><b>2.36 Alison Poulton:</b> <i>High dose stimulant medication for the management of attention deficit/hyperactivity disorder (ADHD): A retrospective cohort study</i></p> <p><b>2.54 Emma Sciberras:</b> <i>Treating anxiety in children with ADHD using cognitive behavioural therapy: A randomized controlled trial</i></p> <p><b>3.12 Michele Toner:</b> <i>ADHD in the Workplace; The Team Approach</i></p>	<p><i>Deficit/Hyperactivity Disorder Subtype and Comorbidity on Parents' Perceived Stress</i></p> <p><b>3.12 Andrew Sheridan:</b> <i>Establishing and consolidating a public state-wide ADHD assessment and treatment service in Western Australia</i></p>
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**3.30 – 4.00 AFTERNOON TEA**

**4.00 – 5.00 AGM – Chair: *Mark Bellgrove***  
**Venue:** Avro Room

**5.30-7.30** Networking drinks and canapes with Comedian Rose Callaghan  
**Venue:** Southern Cross Pavillion

## SUNDAY 28th

**9.00 –10.45 PLENARY – SESSION 6**  
**Venue:** Catalina Dehavilland Rooms  
**Chair:** *James Scott*

**9.00 – 9.05** Welcome – James Scott

**9.05 – 9.25 Board: costs of ADHD**

**9.25 – 10.05 Keynote - Dr Loretta Giorcelli:** *Critical understandings for Inclusive Schools: The required cultural, curricular, managerial and legal responses to the challenges presented by learners with ADHD*

**10.05 – 10.45 Keynote - Prof Christel Middeldorp:** *ADHD across the lifespan: genetics, transgenerational transmission and the implications for clinical practice*

**10.45 – 10.50 Conference Closing Address: Mark Bellgrove**

**10.50 – 11.15 MORNING TEA**

**11.15 – 12.45 CONCURRENT SESSIONS 7 – 9**

<p><b>Session 7: 90 mins</b>  <b>Venue:</b> Avro Room  <b>Chair:</b> Heidi Sumich</p>	<p><b>Session 8: 90 mins</b>  <b>Venue:</b> Catalina Room  <b>Chair:</b> Emma Sciberras</p>	<p><b>Session 9: 90 mins</b>  <b>Venue:</b> Dehavilland Room  <b>Chair:</b> Roger Paterson</p>
<p><b>Jonathan Hassall, Madeline O'Reilly and Heidi Sumich</b>  <i>A Multi-Modal Model for Understanding Procrastination and Task Failure in ADHD</i></p>	<p><b>Emma Sciberras &amp; Phil Bird</b>  <i>How to treat sleeping problems in ADHD?</i></p>	<p><b>Moderator: Roger Paterson</b> (child and adult private practice psychiatrist)  Panel Members: <b>Dr Susan O'Dwyer</b> (Chair, Queensland Medical Board), <b>Rachele Mitchell</b> (solicitor, MDA QLD claims manager) and <b>Dr Tony Mander</b> (adult private practice psychiatrist, medicolegal expert)</p>

		<p><i>Gold standard clinical ADHD practice: how to achieve it and thus AHPRA-proof your practice</i></p> <p>A medicolegal symposium on child and adult ADHD practice, highlighting what is considered best practice and how to avoid medicolegal pitfalls which could lead a clinician to fall foul of AHPRA regulations</p>
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**12.45 – 2.00    Lunch**

**2.00            Consumer Group Meeting**

**Venue:** Catalina Dehavilland Rooms

**Chair:** Len Russell

Welcome by Len Russell, CEO of ADHD Australia

**Dr Greg van Wyk** will emcee this event

**2.10            Rose Callaghan - *ADHD: A personal experience***

**2.20            Christine Morgan – Keynote Address: *What is the National Mental Health Commission undertaking at the moment?***

**2.40            Lou Brown – *The importance of self-compassion when you have ADHD***

**2.50            Monica Hassell – *Fight, Flight, Freeze... or Fib?***

**3.00            Emma Sciberras – *ADHD and sleep***

**3.10            Parents for ADHD Advocacy Australia - Parent & carer experiences of ADHD in Australian schools: Critical gaps report (2019)**

**3.15            Michele Toner – *ADHD and education***

**3.25            Mark Bellgrove – *Outline of AADPA and the collaboration with ADHD Australia***

**3.30            Afternoon Tea and networking**

**4.00            Q&A Panel discussion – Emceed by Greg van Wyk**

**5.00            Thank you and Close**

## ABSTRACTS

### Plenary – Session 1

#### Presidential Address – Mark Bellgrove

##### How do drugs for ADHD work?

Keynote: Jeffrey Newcorn

**Objective:** To describe the mechanisms through which medications for ADHD exert their effects, in context of what is known about efficacy of the different medications for ADHD and associated symptoms.

**Method:** Selected literature review, highlighting work done by our research group at Mount Sinai Medical Center.

**Results:** The DSM diagnosis of ADHD is narrowly defined, with a primary focus on inattention and hyperactive/impulsive symptoms, and consistent with a fronto-striatal model of the disorder. However, recent models of ADHD highlight the importance of several other symptomatic/functional domains, including an expanded role for executive dysfunction, mood dysregulation, motivation and salience. Studies of ADHD pathophysiology are consistent with this expanded conceptualization of ADHD and have important implications for diagnosis and treatment. Treatments likewise have a multiplicity of effects, which will be discussed during the talk.

**Conclusions:** ADHD is a multi-faceted neurodevelopmental disorder that has a strong biological basis. The recent expanded conceptualization of the disorder highlights several new clinical domains of interest. Effective treatments impact multiple brain regions, including attention/executive control, default mode, reward/motivation, emotion regulation networks. The different medications for ADHD have common and unique effects, which may provide a window into the neurobiological basis of differential response. Although some studies point to neurobiological predictors of response to different medications, there are not yet biomarkers available to predict treatment response in clinical practice.

##### Self-rated functional impairment in adults with attention deficit/hyperactivity disorder (ADHD)

Poulton, Alison<sup>1</sup> and Sandhu, Adrian<sup>2</sup>

<sup>1</sup>Nepean Clinical School, Sydney Medical School, University of Sydney, Sydney, Australia

<sup>2</sup>Dept of Consultation-Liaison Psychiatry, Blacktown Hospital, Blacktown, NSW, Australia;

**Background and aims:** ADHD is frequently life-long and can affect social and occupational functioning in adulthood. We aimed to survey ADHD-affected participants attending educational meetings of ADDults with ADHD, a community charitable support organisation.

**Method:** From 2016 to 2018, demographic and functional data were collected from 100 attendees at 5 educational conferences of ADDults with ADHD. Data were analysed using independent samples t-tests.

**Results:** The 54 men and 43 women (3 did not specify) who returned questionnaires had a mean age of 42±15 and 44±15 years respectively. They reported being diagnosed with ADHD at age 33±17 and 33±13 years respectively, although most reported symptom onset in childhood (mean age 9±9 years and 7±5 years respectively; 93% reported being symptomatic before age 18).

Of 98 people who rated their level of impairment while off medication on a scale of 0 (not at all) to 3 (very much), the mean level impairment in each of 5 domains ranged from 2.0 to 2.6, with occupational underachievement and poor self-esteem being the domains most affected. Ratings on medication were received from 80 participants, with mean scores ranging from 1.1 to 1.7. Scores in all domains were significantly lower on medication (all  $p < 0.001$ ).

**Conclusions:** Our results suggest that adults with ADHD experience substantial impairment across multiple domains. They report significant benefit from medication. Although predominantly being diagnosed as adults, most recalled troublesome symptoms dating from childhood. This implies delays in diagnosis and treatment, associated with years of impaired function and poor self-esteem.

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##### Persistence and neural correlates of Disruptive Mood Dysregulation Disorder in 10-year-old children with ADHD

Mulraney, Melissa<sup>1,2</sup>; Silk, Timothy<sup>3,1</sup>; Efron, Daryl<sup>1,4</sup>; Hazell, Philip<sup>5</sup>; Gulenc, Alisha<sup>1</sup>; Sciberras, Emma<sup>3,1,2</sup>

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<sup>3</sup>School of Psychology, Deakin University, Geelong, Australia

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<sup>5</sup>Sydney Medical School, University of Sydney, Sydney, Australia

**Background and aims:** This study aimed to: 1) determine the proportion of children with ADHD with persistent disruptive mood dysregulation disorder (DMDD); and 2) explore differences in cortical thickness and gray matter volume (GMV) between children with ADHD+DMDD and ADHD-DMDD.

**Method:** Participants were children with ADHD (n=135) participating in a cohort study with data available at age 7 and age 10. DMDD status was ascertained using proxy items from the Diagnostic Interview Schedule for Children, Version IV. Magnetic Resonance Imaging data were collected in a subset (n=77) of participants at age 10. Extracted using Freesurfer, cortical thickness and GMV were compared between children with ADHD+DMDD and ADHD-DMDD using t-tests.

**Results:** At age 7, 29 (21.5%) children had comorbid DMDD; this decreased to 16 (11.9%) at age 10. Of those with DMDD at age 7, eight (27.6%) had DMDD that persisted at age 10. Compared to ADHD-DMDD,

those with ADHD+DMDD at either time point had lower thickness in the right anterior ( $d=0.6$ ,  $p=.03$ ) and posterior cingulate ( $d=0.7$ ,  $p=.02$ ), right medial orbitofrontal ( $d=0.6$ ,  $p=.02$ ), and both the left ( $d=0.6$ ,  $p=.04$ ) and right insula ( $d=0.6$ ,  $p=.04$ ) cortices. Children with ADHD+DMDD also had reduced GMV in the posterior cingulate ( $d=0.6$ ,  $p=.04$ ).

**Conclusions:** In the first study investigating the longitudinal course of DMDD in ADHD one in four children with ADHD+DMDD at age 7 had persistent DMDD three years later. Several neural correlates of DMDD were found indicating that, although DMDD can be transient, it is associated with structural differences on neuroimaging.

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### **Attention-Deficit/Hyperactivity disorder and family functioning: A 3-year longitudinal study of community-based primary school children**

Bhide, Sampada<sup>1,2,5</sup>, Efron, Daryl<sup>2,3,4</sup>, Sciberras, Emma<sup>1,2,3</sup>

<sup>1</sup>School of Psychology, Deakin University, Geelong, Victoria, Australia; <sup>2</sup>Murdoch Children's Research Institute, Melbourne, Australia; <sup>3</sup>School of Psychological Sciences, University of Melbourne, Melbourne, Australia; <sup>4</sup>Department of Pediatrics, University of Melbourne, Melbourne, Australia; <sup>5</sup>The Royal Children's Hospital, Melbourne, Australia; <sup>5</sup>Allied Health Department, The Royal Melbourne Hospital, Melbourne, Australia

**Background and aims:** There is a paucity of longitudinal research examining associations between Attention-Deficit/Hyperactivity disorder (ADHD) and family difficulties. This study compared family functioning outcomes between children (62.5% male) with ADHD ( $n=179$ ), subthreshold ADHD (ST-ADHD;  $n=100$ ) and non-ADHD controls ( $n=212$ ).

**Method:** ADHD was assessed at Time 1 ( $M_{age}=7.31$ ;  $SD=0.42$ ) using the Conners 3 and Diagnostic Interview Schedule for Children. Three years after initial recruitment ( $M_{age}=10.5$ ;  $SD=0.51$ ), parent-rated scales were used to assess parent distress, parent-partner relationship conflict and support, stressful life events, and family quality of life (FQoL) i.e. impact of child factors on family activities (FA), parent's time (PT) and emotional functioning (PE).

**Results:** Linear regression analyses controlled for school-clustering, child age, child sex, externalising co-morbidities and parent education. FQoL was lower for the ADHD group compared to both non-ADHD ( $\beta_{FA}=-.82$ ;  $\beta_{PT}=-.83$ ;  $\beta_{PE}=-.95$ ; all  $p<.001$ ) and ST-ADHD ( $\beta_{FA}=-.48$ ,  $p<.001$ ;  $\beta_{PT}=-.25$ ,  $p=.07$ ;  $\beta_{PE}=-.34$ ,  $p=.01$ ) groups; and for the ST-ADHD group compared to the non-ADHD ( $\beta_{FA}=-.34$ ,  $\beta_{PT}=-.57$ ;  $\beta_{PE}=-.61$ ; all  $p<.01$ ) group. Both ADHD ( $\beta=.51$ ,  $p<.001$ ) and ST-ADHD ( $\beta=.31$ ,  $p=.03$ ) groups reported significantly higher parent distress than the non-ADHD group. There were no group differences in other outcomes.

**Conclusions:** Families of children with ADHD and ST-ADHD experience greater parent distress and poorer

QoL over time. Early identification of children with, or at risk of ADHD is needed to facilitate timely support for parents and families.

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## **Plenary – Session 2**

### **Social skills training in ADHD: Practical strategies for paediatricians, psychologists and psychiatrists**

Keynote: Rick Jarman

Social connectedness is arguably the most important determinant of happiness and self esteem in children and adolescents. ADHD children are at much higher risk for being actively excluded and rejected by their peers than others their age. In this session we will review the major categories of social ability, look at what factors are associated with popularity or rejection, and outline practical strategies for helping children make friends, handle negativity and control anger.

### **ADHD ECHO: Respect, integrity, care and imagination: Consumers as project partners – integrating care via Project ECHO®**

Sarah Baggio, Project ECHO Clinical Engagement Officer, and Emma Dunlop, Project ECHO Consumer Representative, will discuss the evolution of the 'flagship ADHD ECHO program' from Children's Health Queensland. This presentation will include how it all began, the consumer experience and the importance of consumer partnerships, lessons learnt along the way, and future plans for the ADHD ECHO program.

### **Dysfunctional evidence accumulation in Developmental Dyslexia: Support for the neural noise hypothesis**

Stefanac, Nicole R.<sup>1</sup>; Zhou, Shou-Han<sup>1</sup>; Spencer-Smith, Megan M.<sup>1</sup>; Castles, Anne E.<sup>2</sup>; O'Connell, Redmond<sup>3</sup> and Bellgrove, Mark A.<sup>1</sup>

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<sup>3</sup>Trinity College Institute of Neuroscience and School of Psychology, Trinity College, Dublin, Ireland.

**Background and aims:** Evidence of deficits in visual attention have been widely reported in the Developmental Dyslexia (DD) literature on a range of perceptual decision-making paradigms. However, consensus regarding the precise neural correlates underpinning behavioural patterns and their relationship with reading ability remains elusive.

**Method:** Thirty-two children with DD (16 females) were compared with 22 age-matched (AM; 11 females) and 16 reading-matched controls (RM; 9 females) on a Random Dot Motion task with concurrent EEG recording.

**Results:** The DD group were slower overall, had an earlier centro-parietal positivity (CPP) peak time,

reduced slope and lower amplitude but did not differ in onset compared with both AM and RM controls. Pre-target alpha amplitude was also lower for the DD group, but only compared with AM controls. These findings were moderately correlated with age-corrected reading ability. No differences were seen in N2pc or motor-evoked potentials for the DD group.

**Conclusion:** Children with DD demonstrate disorder-specific dysfunction in their evidence accumulation (CPP) in that they have a reduced rate of accumulation and reach thresholds sooner but remain cautious in their responses. This is in keeping the neural noise hypothesis contending that children with DD have weaker sensory representations of coherent motion potentially associated with increased neural noise. While markers of attentional engagement (pre-target alpha) were also reduced, performance was similar to RM controls suggesting that this indexes reading immaturity rather than being a unique contributor to reading dysfunction.

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### **Emergency department experiences of parents of children with comorbid ADHD & autism spectrum disorder**

Garrick, Alice<sup>1</sup>; Lee, Marie<sup>1</sup>; Scarffe, Carrington<sup>1</sup> and Johnson, Beth<sup>1</sup>

<sup>1</sup>Monash University, Melbourne, Australia

**Background and aims:** Children with attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) attend emergency departments (ED) at a greater rate than their typically developing peers. What we know is that ED is a very stimulating and unpredictable environment, bustling with people, noise and bright lights. However, the experiences of families attending ED with their child with comorbid ADHD and ASD is unknown, and the unique challenges they may face. We evaluated experiences and perceptions of Australian parents of children with comorbid ADHD and ASD attending ED.

**Methods:** Parents completed an online self-report survey of 58 mixed-methods questions, qualitative and quantitative, regarding experiences in ED when attending with their child. The survey captured demographics, reason for presentation, child's communication and sensory needs, child's communication and sensory experience in the Emergency Department (ED), child's perception and communication of pain and the resources parents have used to support their child in the Emergency Department. A total of 174 parents who had a child with comorbid ADHD and ASD took part.

**Results:** Two thirds of children presented with accidental injuries, 24% with gastrointestinal issues, 13% for asthma, 7% for self harm and 5% for infection/virus. Most parents reported barriers to safe and effective care for their children and three quarters described the experience in the ED as very or extremely stressful for their child due to the sensory environment. Sensory overload and emotional

dysregulation as a result of prolonged ED stays was common.

**Conclusion:** Although triage in ED is primarily based on medical need, a prolonged stay in ED can mean that additional mental stress can arise in a child with comorbid ADHD and ASD, which can further complicate their diagnosis and treatment. There was strong interest from parents in an evidence based visual resource that clearly communicates the child's individual sensory and communication needs to ED staff.

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### **ADHD and Substance Use Disorder (SUD): A Great Opportunity to Improve Lives** Dianne Grocott

ADHD complicates the course of SUD, with earlier onset, greater severity, more co-morbidities, higher rates of relapse and increased harms.

The International Collaboration on ADHD and Substance Abuse (ICASA) Guidelines 2018 recommend all people seeking treatment for SUD should be screened for ADHD and then accurate diagnosis made by experienced clinicians.

Australian sites in Vic, NSW and SA are participating in ICASA research project "International Naturalistic Cohort Study on ADHD & Substance Abuse (INCAS)

Australia has "Guidelines on the Management of Co-occurring Alcohol and Other Drug and Mental Health Conditions in AOD Treatment Settings" from Centre of Research Excellence in Mental Health and Substance Use at NDARC (National Drug and Alcohol Research Centre) at UNSW Australia, 2016.

These recommend treatment should take an integrated, multimodal approach; considering ADHD, SUD and other comorbidities. Psychoeducation, Psychotherapy for individuals/ groups, Peer & Family Support, Pharmacotherapy, eHealth interventions, smartphone Apps, physical activity, complementary and alternative therapies, diet and lifestyle change all have a role. Medication includes Methylphenidate, Dexamphetamine, Lisdexamfetamine, and Atomoxetine. Clinical challenges include making the diagnosis, possibilities of medication abuse and responding to increased pressure on services. An ADHD diagnosis often prompts relief, hope and gratitude, but may precipitate temporary emotional destabilisation. However, this group of patients bring their creativity, sense of humour and exuberance for life. There are indeed great opportunities to significantly impact many lives by treating ADHD/SUD.

This Symposium will highlight research evidence, treatment protocols and clinical vignettes.

### **What has sleep got to do with it? The sleep-wake cycle and circadian rhythm dysregulation in ADHD and treatment with neurofeedback**

Ryan, Mark<sup>1</sup>; Arns, Martijn<sup>2,3,4</sup> and Brown, Trevor<sup>5</sup>



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<sup>2</sup>neuroCare group, Munich, Germany

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<sup>4</sup>Dept of Experimental Psychology, Utrecht University, Utrecht, The Netherlands

<sup>5</sup>neuroCare group, Melbourne, Australia

While causation is not one thing, but many, converging evidence points to an important role of sleep disturbance, most commonly a circadian rhythm sleep disorder in ADHD. A consistent association has been described between ADHD and circadian phase delay, resulting in delayed sleep onset (Coogan and McGowan, 2017), with causality implied for the largest subgroup of ADHD patients (Arns and Kenemans, 2012). The relevant range of consequences of sleep problems and the role of the visual system, retinal ganglion and amacrine cells and the dopaminergic DRD4-7R genotype in the regulation of the sleep-wake cycle will be briefly discussed.

The likelihood of heterogeneous causation in ADHD and the high prevalence of sleep disorders in this patient group encourages personalised medicine methods, specifically assessing sleep and identifying neuromarkers and biomarkers, enabling identification of subgroups of ADHD and thereby allowing for more specific, individualised treatment.

Sleep disorders have an aetiological/pathogenetic role in at least a large subgroup of those with ADHD and specific QEEG informed neurofeedback protocols are emerging as effective and potentially curative treatments for ADHD for the largest subgroup. Psychostimulants, the mainstay of pharmacological treatment for ADHD while helpful in the short and medium terms, do nothing for the sleep problem and in fact can worsen it by increasing sleep onset latency.

Sleep hygiene, CBTi and chronotherapy have an important role in ADHD treatment and neurofeedback, the operant training of EEG activity, has been shown to have a specific effect on sleep and ADHD symptoms. (Arns et al, 2013; Arns et al, 2014). Arns et al (2009) have reported that at the group level, both frequency band and slow cortical potential neurofeedback for ADHD achieve a large effect size for inattention and impulsivity and medium effect sizes for hyperactivity. A more recent meta-analysis (van Doren et al., 2018) indicates that the effects of neurofeedback are maintained at 3-12 month follow up, suggesting persistent effects of this intervention. The effects of SMR neurofeedback in ADHD have been demonstrated to be mediated by the normalisation of sleep prior to the improvement of ADHD symptoms (Arns et al., 2014).

An over view of sleep and ADHD and neurofeedback for ADHD and the importance of adequate assessment of sleep will be presented.

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### **The effects of a gamified cognitive training program in reducing inattentive behaviour in the classroom: A randomised controlled trial**

Kirk, Hannah E.<sup>1</sup>; Spencer-Smith, Megan<sup>1</sup>; Wiley, Joshua F.<sup>1</sup> and Cornish, Kim M.<sup>1</sup>

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**Background and aims:** Difficulties in attention are commonly reported in childhood and have a cascading impact on subsequent behavioural regulation and learning. The current randomised controlled trial aimed to determine the immediate and long-term efficacy of a classroom-based attention training program (Tali Train) on attention, inattentive/hyperactive behaviour, working memory and numeracy in primary school children.

**Method:** A total of 98 children (5–9 years) were randomly assigned to Tali Train, a non-adaptive placebo program or usual classroom education. Classes assigned to Tali Train and placebo program were provided with touchscreen tablets and teachers were instructed to complete their assigned program 5 times a week for a 5-week period. Primary outcome measures included neurocognitive assessments of attention. Secondary outcomes measures included parent/teacher rated questionnaires of ADHD symptoms, assessments of working memory and numeracy. Performance was assessed at the start of the trial, immediately after the 5-week training period, and 6 months after the training period had ceased.

The trial was pre-registered with the ANZCTR and analyses were performed on an intention to treat basis.

**Results:** Latent growth models indicated that children assigned to Tali Train showed significantly greater reductions in ADHD symptoms within the classroom immediately after the training period compared to children in the control arms. Some small gains in selective attention were also observed, however there was no effect of the intervention on working memory, numeracy or sustained attention.

**Conclusions:** These findings suggest that attention training may have select immediate benefits in reducing ADHD symptoms within the classroom.

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### **High dose stimulant medication for the management of attention deficit/hyperactivity disorder (ADHD): A retrospective cohort study**

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**Background and aims:** Dose titration to optimise functioning in ADHD is limited by a maximum dose. In NSW the Ministry of Health authorises high dose (HD) stimulant use when clinically necessary. The aim of this study is to describe the clinical characteristics of children authorised to receive HD stimulant and to compare them with those on regular doses (RD) within one paediatrician's practice.

**Method:** Clinical records of children treated by AP with HD stimulant from 2003-2016 were identified using a database of prescription records. Children on RD who were issued a prescription on the same day that a study child commenced HD constituted a RD comparison group. Data were analysed using chi-square and t-tests.

**Results:** Records identified 53 HD and 117 RD children. The HD children were more likely to be male (89% vs 74%  $p=0.034$ ) and have oppositional defiant disorder (ODD) (81% vs 55%,  $p=0.001$ ), and started medication at a younger age ( $6.4\pm1.7$  vs  $8.3\pm2.8$  years,  $p<0.001$ ). HD children were no more likely to take other medications apart from risperidone (38% vs 15%,  $p=0.001$ ) and melatonin (57% vs 31%,  $p=0.001$ ). The HD children grew significantly more slowly in height ( $p=0.001$ ) and weight ( $p=0.002$ ) over a treatment period of  $5.2\pm3.0$  and  $4.1\pm3.2$  years respectively. HD treatment was not associated with higher blood pressure.

**Conclusions:** Children on HD stimulant were more likely to be male and on risperidone for ODD but were not otherwise more complex than children on RD. They had more growth attenuation, but no major adverse events.

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### **Treating anxiety in children with ADHD using cognitive behavioural therapy: A randomized controlled trial**

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**Background and aims:** Up to 50% of children with ADHD meet criteria for at least one anxiety disorder. The aim of this randomised controlled trial (RCT) was to examine whether treating anxiety in children with comorbid ADHD and anxiety improves child and family functioning 5 months later compared with usual clinical care.

**Method:** To be eligible, children needed to be aged 8-13 years and needed to meet full criteria for ADHD and separation, generalised, and/or social anxiety. Consenting families were randomised to receive a modified version of the 'Cool Kids' cognitive behavioural therapy program or usual clinical care from their paediatrician. Multi-informant (parent-, child-, teacher-report) measures were collected at baseline and 5 months post-randomisation including blinded assessments of anxiety diagnosis and cognition, and scales assessing child and parent functioning.

**Results:** 250 children were identified as eligible and of these 232 (77% male) enrolled. Participants met diagnostic criteria for social (79%), generalised (74%), and/or separation anxiety (51%) and in addition, 40% met criteria for oppositional defiant disorder. Most were taking medication for ADHD (96%). Five month outcomes will be collected by March 2018 and will be the focus of the presentation (study tracking for 82% completion of follow-up). Analysis of the primary (anxiety diagnosis) and secondary outcomes will be carried out using mixed effects regression.

**Conclusions:** Targeting anxiety may be an effective way of improving functional outcomes children with ADHD. This study is the first powered RCT to test whether treating anxiety in children with ADHD leads to improved outcomes.

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### **ADHD in the Workplace; The Team Approach**

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The symptoms of ADHD cause functional impairments across several domains, including the workplace. According to the minimal research in this area people with ADHD tend to quit or lose their jobs more often

and take more time off work than their non-ADHD peers. Coaching case studies provide valuable information about the nature of common challenges and potential accommodations.

People with ADHD are reluctant to disclose their diagnosis at the time of employment due to the stigma associated with their condition. This prevents them requesting simple accommodations. They may excel at aspects of their job but be hampered by Executive Function impairments relating to time management, project deadlines, and prioritisation. In addition, they may misread social clues and fail to negotiate the relationships required to be successful at work.

Disclosure often occurs when problems are identified by management and a performance review is put in place. This is a challenging process for individuals with ADHD for several reasons. For example, Human Resources personnel tend to have limited knowledge about ADHD, and often request input from clinicians who are not ADHD experts. Individuals with ADHD may 'over-disclose' or agree to performance plans that are unrealistic.

Coaches, clinicians and HR professionals can work together with individuals to ensure the best outcomes in the workplace. Examples of successful team approaches will be provided, along with a model for addressing workplaces issues in a timely manner.

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### **Beyond Fight Flight and Freeze -Is there a Fourth F and the ADHD Mind in Crisis. Supporting those at risk and their significant others.**

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**Background and aims:** The evolution of the Neocortex and consequent development of advanced social language and complex thinking has given humanity a new tool in self-preservation, albeit a maladaptive strategy at times. With consideration of the executive function challenges faced by those with ADHD, it has been observed that overwhelming situations may render a new protective mechanism in addition to Fight, flight and Freeze to come into play., and that is "Fib."

The aim of this presentation is to discuss practical solutions to support people with ADHD and their significant others when at risk. Knowing that the "Fib" response is triggered often by fear, supporting all involved how to address this issue and how to resolve reducing harm to the relationships at risk.

**Method:** Four case studies are presented-each representing a proposed "protective mechanism"; being Protection, deflection, extension and Self-preservation. These topics are explained in order to understand what elements or means are being employed.

**Results:** Key strategies have been developed in order to provide parents, partners, clinicians, teachers and other caregivers tools with which to deconstruct the "fib" in order to avoid damage to the relationship.

**Conclusion:** By reviewing key elements of executive functioning underpinning why "fibbing" occurs and strategies to reduce their impact to the individual

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### **AHDH and NDIS**

Birch, Edwina<sup>1</sup>

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The NDIS can be a game changer for people who have moderate to severe functional impairment as a result of ADHD. It provides opportunities which have never been available before. However, it can be difficult to access. This presentation will primarily address the needs of adults with ADHD, although its role for children will be discussed.

This paper aims to address:

The disability status of ADHD

The eligibility criteria for entry to the NDIS

How it works

What documentation is required from professionals

What the NDIS can provide for those with ADHD

Limitations and troubleshooting

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### **Establishing and consolidating a public state-wide ADHD assessment and treatment service in Western Australia**

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**Background and aims:** YACADS was set up with the aim of providing a comprehensive assessment to adults with complex mental health issues and suspected ADHD (or previously diagnosed ADHD and difficulties with accessing treatment); and providing treatments and recommendations for improving clients' functioning.

**Method:** We provide a Psychiatry and Neuropsychology assessment, including collateral interview/reports/questionnaires, followed by Neuropsychological recommendations and Psychiatric medication management. We are also working towards establishing a group psychosocial intervention for those with ADHD symptoms, focused on improving inattentive, dysexecutive, and impulsive symptoms and everyday adaptive functioning.

**Results:** We have established a steady stream of referrals, maintained a low-medium waiting list time, and provided a service with high levels of client satisfaction (though of course challenges and opportunities for improvement exist, and for example we are hoping that providing a group intervention will fill some of the service 'gaps').

**Conclusions:** The service continues to evolve over time, and while the initial phases of establishing the service have been positive, there are opportunities to improve the work that we do in order to provide the best possible service within the constraints that we have. As a small service there are limitations inherent in what we can provide, but we are often looking for ways that we can improve the quality of what we offer to clients.

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**Critical understandings for inclusive Schools: The required cultural, curricular, managerial and legal responses to the challenges presented by learners with ADHD**

Keynote: Loretta Giorcelli

In this presentation Dr Giorcelli will draw from 50 years of educational practice, school and systems leadership and active research to explore the critical characteristics of schools that are able to include and support learners who struggle with the challenges of ADHD including, inter alia, maintaining focus and curbing impulsivity, attention and task completion issues as well as being able to capitalise on the strengths of learners with ADHD. The need for collaborative practice with parents and other professionals in addressing issues of academic, social and executive functioning for these learners will also be explored.

**ADHD across the lifespan: genetics, transgenerational transmission and the implications for clinical practice**

Keynote: Christel Middeldorp

It is well known that ADHD can run in the family. In this presentation, the role of genetic factors in the familial resemblance as well as in the continuity in symptoms from childhood to adulthood will be discussed. The presentation will end with the findings from a clinical study focusing on families with both the child and the parent affected with mental disorders, including ADHD, showing the clinical implications.

**Session 7**

**Jonathan Hassall, Madeline O'Reilly and Heidi Sumich**

***A Multi-Modal Model for Understanding Procrastination and Task Failure in ADHD***

This workshop will present a cognitive-behavioural/coaching model of procrastination and task failure in ADHD. The model aims to assist clinicians to help their patients identify the barriers to successful task completion, with discussion and collaborative brain-storming of various therapeutic strategies that can be employed based on the nature of the barrier. Of particular importance are the roles of emotional evaluation, organisational capability

evaluation, and time/consequence evaluation on one's willingness to approach and persist with a task.

**Session 8**

**Emma Sciberras & Phil Bird**

***How to treat sleeping problems in ADHD?***

This workshop will focus on best practice assessment and treatment of sleep problem in ADHD across the developmental spectrum including children, adolescents and adults. We will cover practical ways that you can assess for sleep problems in clinical practice and practical strategies that can be used in clinical practice to improve sleep.

**Session 9**

**Gold standard clinical ADHD practice: how to achieve it and thus AHPRA-proof your practice**

**Moderator: Roger Paterson** (child and adult private practice psychiatrist)

Panel Members: **Dr Susan O'Dwyer** (Chair, Queensland Medical Board), **Rachele Mitchell** (solicitor, MDA QLD claims manager) and **Dr Tony Mander** (adult private practice psychiatrist, medicolegal expert)

A medicolegal symposium on child and adult ADHD practice, highlighting what is considered best practice and how to avoid medicolegal pitfalls which could lead a clinician to fall foul of AHPRA regulations