Royal Commission into Victoria's Mental Health System

WITNESS STATEMENT OF PROFESSOR DAVID ROCKWELL COGHILL

I, Professor David Rockwell Coghill, Financial Markets Foundation Chair of Developmental Mental Health, of 50 Flemington Road Parkville Victoria 3052, say as follows:

1 I make this statement in a personal capacity but with authorisation from my employers the University of Melbourne and the Royal Children's Hospital (**RCH**), Melbourne.

2 I make this statement on the basis of my own knowledge, save where otherwise stated. Where I make statements based on information provided by others, I believe such information to be true.

BACKGROUND

3 My name is Professor David Rockwell Coghill BSc (Med Sci), MB ChB, MD, FRCPsych, FRANZCP.

Qualifications and experience

4 I have a BSc in biochemistry from University of Edinburgh 1980

5 I qualified in medicine MB ChB from University of Edinburgh 1983.

6 I have a Doctorate in Medicine (MD) from the University of Dundee (2010)

7 I have over 30 years' experience working as a clinician and researcher based in public mental health systems and academia in the area of child and adolescent mental health and neurodevelopmental disorders.

8 I am a fellow of the Royal College of Psychiatrists (UK) (member 1991, fellow 2007) and a fellow of the Royal Australian New Zealand College of Psychiatrists since 2017.

9 I have published over 150 peer-reviewed papers in the area of mental health have edited 5 books, including the Oxford Handbook of Child and Adolescent Psychiatry and the Oxford Textbook of ADHD, and authored 30 book chapters

10 My research has focused on attention deficit hyperactivity disorder (**ADHD**), other neurodevelopmental and disruptive disorders and depression. I have a broad portfolio of research that covers neuropsychopharmacology, neuroimaging and genetics, patient reported outcomes and quality of life, health services research, machine learning and big data, pharmacogenomics, clinical trials, pharmacovigilance and pharmacoepidemiology.

Please note that the information presented in this witness statement responds to matters requested by the Royal Commission.

11 I have a strong track record in knowledge translation and dissemination and continued learning. I have extensive experiences in evidence synthesis with multiple systematic reviews, meta-analyses and network meta-analyses. I been involved in the development of national evidence-based guidelines for ADHD, depression, bipolar disorder and psychosis (National Institute for Health and Care Excellence (**NICE**), Scottish Intercollegiate Guidelines Network (**SIGN**), British Association of Psychopharmacology (**BAP**), European ADHD Guidelines Network (**EAGG**)). I am also currently co-leading the development of Australian Guidelines for ADHD.

12 I have also had extensive experience in the development and implementation of evidence-based and measurement-based care pathways and in mental health service redesign.

13 My clinical work has covered the full range of clinical disorders of childhood and adolescence. I have been very active in promoting evidence-based practice and measurement-based care across a range of settings within developmental mental health and have developed and implemented several innovative clinical pathways and models of care.

14 I am vice president of the Australian ADHD Professionals Association the peak professional body for ADHD in Australia and Chair of EUNETHYDIS International a charity that delivers international conferences and educational events. I am a Board member of the European Network for Hyperkinetic disorders, the leading international ADHD research network and of Neurodevelopment Australia a not for profit that is developing research and clinical cooperation in the field of neurodevelopment across Australia.

Current role

15 I am the Financial Markets Foundation Chair of Developmental Mental Health in the Departments of Paediatrics and Psychiatry at the University of Melbourne. I am also Professor of Child and Adolescent Psychiatry and a Consultant Psychiatrist in the Department of Mental Health at the Royal Children's Hospital Melbourne and an honorary research at the Murdoch Children's Research Institute. I have held these posts since February 2016. Before this I was Professor of Child and Adolescent Psychiatry at the University of Dundee. I also hold honorary Chairs at the Central Institute of Mental Health in Mannheim Germany and the University of Dundee, United Kingdom.

16 As Financial Markets Foundation Chair of Developmental Mental Health my role is to provide academic leadership in developmental mental health services and research, within the University of Melbourne Departments of Psychiatry and Paediatrics, the clinical

services of the RCH, and more broadly across the University of Melbourne, the Murdoch Children's Research Institute and associated Institutes and Hospitals.

17 My hospital role at RCH is focused on developing evidence-based care pathways and measurement-based care in child and adolescent mental health and to provide clinical care for children and adolescents with complex neurodevelopmental disorders.

18 Attached to this statement and marked 'DRC-1' is a copy of my curriculum vitae.

QUESTIONS FOR PANEL MEMBERS

Question 1: What could be done to better identify infants and children:

a. at risk of developing mental illness?

19 For the purpose of this statement I have defined infants as those aged 0–3 years and children as those aged 4-12 years. I do however acknowledge that these boundaries are somewhat arbitrary and should be considered to have some flexibility. Identification of those infants and children at risk for mental disorder is dependent first on understanding the factors that increase vulnerability and risk. These factors include (in no particular order):

(a) poverty;

(b) living away from home;

(c) being Aboriginal or Torres Strait Islander;

(d) other forms of marginalization by culture, ethnicity, colour, sexuality and language;

(e) those who have or are suffering from abuse, neglect and other traumas;

(f) those with refugee backgrounds;

(g) intellectual impairment;

(h) parental mental health problems;

(i) physical health problems;

(j) family history of mental health problems; and

(k) having another mental health problem.

20 There are many ways to improve recognition of those at risk, including:

(a) improved parental mental health literacy;

(b) better mental health education (and specific mental health education) for all of those working with children (health, education, child care, social work); and

(c) work to reduce the stigma associated with mental health — at both community and institutional levels.

Improved parental mental health literacy

21 In the recent RCH Child Health Poll on mental health (https://www.rchpoll.org.au/polls/child-mental-health-problemscan-parents-spot-the-signs/) it was identified that only 35% of parents were confident that they could recognise the signs of a mental health problem in their child and a third of parents believing that a child's mental health problems might be best left alone to work themselves out over time.

22 There is therefore a clear need to increase parental mental health literacy. This is particularly important when one considers the important role parents have in discussing child mental health issues with health professionals. For example, a UK study looking at the barriers to identifying ADHD found that the most important factor in getting recognition of child mental health issues was the way that the parent presented their child's problems to the general practitioner[1].

23 In the RCH Child Health Poll, parents identified several factors that they felt would help them identify mental health problems with their child:

(a) spending more time talking to and connecting with my child (56%);

(b) learning more about the day to day signs of social, emotional and behavioural problems in children (54%);

(c) learning more about social and emotional health in general (49%);

(d) having more information about how my child is going at school (43%); and

(e) having a doctor, psychologists or other professional to talk to me about these things (31%).

24 Although those families with a regular general practitioner appeared to better informed, it was not possible to identify whether it was contact with the general practitioner that made the difference or whether those with better health literacy were more likely to have a regular general practitioner.

Better and specific mental health education for all of those working with children

25 It is generally agreed that the emotional and behavioural aspects of child development and child mental health are not well taught in the basic training of those working with

[1] Sayal K, Goodman R and Ford T. (2006) Barriers to the identification of children with attention deficit/hyperactivity disorder. *J Child Psychol Psychiatry* 47: 744-750.

children. This is true for almost all professions (health, education, child care, social work) even extending to those working in paediatric and specialist mental health settings.

26 There is a need to recognise the importance of such training and implement programs to address the gap. This should extend to continuing professional training and be given equal prominence to other aspects of health and development. Training should include identification of those groups that are most at risk as described above.

Work to reduce the stigma associated with mental health – at community and institutional levels

27 Continued stigmatisation of mental health problems and disorders is one of the most important barriers to identification. Stigma still exists not only at the individual and community levels but also within many of our institutions. This urgently needs to be addressed and challenged.

28 For example, we were recently asked by an ethics committee to remove the words "possibly suffering from a mental health problem" from a plain language statement that was to be given to the parents of children who had already been accepted as a referral to a Community Mental Health Service, because it may cause distress to those parents. This is unfortunately not an isolated occurrence.

b. experiencing or living with mental illness?

29 All of the above measures are equally important when considering ways to identify those infants and children who are already experiencing and living with mental health disorders.

30 In addition, it is appropriate to consider whether screening can be effective.

Population screening

31 Unfortunately screening at a population level is unlikely to be effective due to the psychometric properties of current screening tools. Screening is based on a probabilistic approach that is dependent on:

(a) the sensitivity (how good is the instrument at correctly identifying those with the problem); and

(b) specificity (how good is the instrument at correctly identifying those who do not have the problem) of the screening instruments and the rate of disorder in the population being screened.

32 The current sensitivities and specificities of the available screening tools for child mental health problems are both around 80%. This means that they correctly identify 80% of those with a problem and 80% of those who do not have a problem.

33 If we take the example of ADHD, the estimated prevalence in 4 – 11 year olds in Australia is 8%. Screening of 100 children would accurately identify between 6 and 7 of the projected 8 cases, which is good. However, it would also identify around 18 false positives who would require further assessment. Acting on this screening would have a huge impact on demand for mental health services, requiring many more assessments than there is capacity for and also could increase the risk of children receiving a wrong diagnosis and inappropriate treatment.

34 As part of a larger project in China (BANANAS) my research group conducted a study in schools within China that augmented traditional screening with questionnaires with a brief teacher to teacher interview[2]. This approach did not increase recognition rates but did significantly reduce the rate of false positives from 19% down to 3%. Whilst very encouraging, these findings need replication within a Western cultural setting. There are many potential approaches to augmentation of screening (e.g. the use of data from wearable or mobile technologies) most of which have not been investigated with regards efficacy, efficiency or cost. This is potentially important research that could lead to a shift in understanding and recognition.

35 Another approach to identification that my research group is currently researching is the use of artificial intelligence to identify those at risk of future mental health problems. This approach takes data which is already available, for example from health and educational screening in early life and adopts machine learning approaches to identify those who have problems later in development. This research again is very much at the early stages of development but, if successful, could lead to new approaches to working with big data that is already being collected to better identify those at risk.

36 All the approaches to population-based screening can also be improved considerably if they are applied to selected high risk samples where the probability of having a mental health problem is already higher. For this to be effective there needs to be a system to identify those at higher risk, using the categories described at paragraph 19 above. Screening procedures, or better still augmented screening procedures, would then applied to this high-risk sample.

[2] Unpublished data. Details available from Prof. D Coghill.

Please consider the role of communities, schools, social services (including maternal and child health services, other health services, child protection services) as well as mental health services.

37 All of these approaches to improving identification have to start with the communities, schools, social services (including maternal and child health services, general practitioner, paediatricians and child protection services). These community-based services need to work together and together with public health and specialist providers to improve understanding, reduce stigma and develop new approaches to identification of mental health problems.

Question 2: What could be done to better support infants and children who are at risk of developing mental illness? What key changes would you recommend to:

a. Victoria's mental health system? Please consider the community-based mental health system and early intervention approaches.

38 Current community-based mental health services set the bar for entry very high. As a consequence, they have very little contact with those at risk of developing mental health problems and focus very clearly on those with existing problems. Although I do not believe that the bar should be as high as it is, there needs to be a much stronger integration of paediatric and community-based mental health. The support of children at risk of mental health problems, but who do not currently have diagnosable problems, should sit much more clearly within the other service systems, as discussed at paragraphs 39 to 41 below. Where specialist community mental health services can provide important input is in training the workforce to recognise and respond to the known risk factors, to accurately identify who is at increased risk and to distinguish them from those that already have problems.

b. other service systems (including maternal and child health services, other health services, child protection services and schools) that support infants and children;

39 These are the key services that are best placed (although not always well trained) to provide support to infants and children at risk of developing mental illness. When we look at the risk factors discussed in paragraph 19, many are social or family-based, are associated with educational difficulties or are associated with other health conditions that are most often recognised in primary care.

40 Currently the services in Victoria that could work together to improve prevention are fragmented and often do not recognise that mental health should be a key focus for their service. Community-based services need to be supported, empowered and resourced adequately to reduce the occurrence and impact of these risk factors on the community.

Reduction in risk is likely to be the most effective way to reduce the occurrence later of actual mental health problems and disorders.

41 Similarly approaches designed to improve wellbeing may act as a buffer to reduce risk and incidence of problems, although this is less well researched. A good example of a program designed to reduce the burden of mental health and neurodevelopmental disorders within the community is Allplay (https://allplay.org.au/). This program focuses on taking an inclusion-based approach to encourage participation in sport, dance and education for children with disability.

c. the way Victoria's mental health system and other service systems work together.

42 For children's mental health, perhaps even more than in adults, their needs to be very close collaboration between services.

43 In terms of providing support for those at risk of mental health problems this collaboration should be led by community facing services with strong support from health as required.

44 The fragmentation of community services (particularly those that would fall under the social work remit in the UK) makes this extremely challenging. Whilst this is not the case for managing existing mental health problems, there is a strong case for stronger collaboration between the various public services (health, social work and education) to provide a focus for prevention and early intervention efforts.

45 I support the notion of community-based networks working together to provide the social supports and interventions aimed at reducing the risks and providing community population or targeted interventions to manage those at risk. This may be through the provision of parenting programs to improve positive parenting, anti-bullying programs, increased educational support or improved financial management.

46 Whilst these networks should be linked with the Infant and Child Mental Health Hubs I have proposed for the management of those with significant mental health problems, the community networks should have a degree of separation as the focus and work, whilst complementary, would be quite different.

47 The development of a Collaborative Centre for Infant and Child Mental Health, discussed below at paragraphs 65 to 72, with links to and interactions at service and research levels with other agencies would facilitate joint strategic planning for such work and be able to help determine the most effective and efficient approaches to implementation.

48 There should also be consideration of joint workforce planning and training in this space.

Question 3: What could be done to better support infants and children who are experiencing or living with mental illness?

a. What key changes would you recommend to Victoria's mental health system? Please consider the community-based mental health system and early intervention approaches.

49 Although the focus for supporting those with existing mental health problems must complement services supporting those at risk, the objectives of these two tasks are somewhat different and require different skills and approaches.

50 A major problem for Victoria's community-based infant and child mental health services, and the paediatric services that also provide support for infants and children with mental health disorders, is a lack of overall leadership and strategic planning. Services work almost independently of each other with no agreed strategy or approach and very little in the way of self-reflection, self-assessment and quality improvement. This seriously limits the potential for development and innovation.

51 There is also a serious knowledge translation gap. The most obvious solution to developing a strong leadership and a sense of shared purpose and vision is the establishment of a Collaborative Centre for Infant and Child Mental Health, similar in purpose and general structure to that suggested by this Commission for adult mental health, and for this centre to support integrated Infant and Child Mental Health Hubs that are the focus for service delivery.

Improved service provision

52 In regards to multidisciplinary teams, the different professions are represented within the child and adolescent mental health services (**CAMHS**) and child and youth mental health services (**CYMHS**) teams. However, apart from the consultant medical staff, most other staff work within more generic roles and conduct their work independently. Also most paediatricians working in mental health work independently or in single discipline settings and are not part of a multidisciplinary team. This means that there is much less true multidisciplinary working than might be expected.

53 There urgently needs to be a refocussing of services within community mental health teams away from 'case management' and towards the provision of evidence-based and measurement-based care including psychological therapies and medication treatments. Treatment plans need to be based on high quality assessment that accurately identifies the full range of difficulties facing a child and allows for a holistic approach to planning care. There also needs to be better integration between the fragmented services currently providing mental health care for children.

54 At the tertiary level of publicly funded care this means integrating developmental paediatric and CYMHS services alongside psychology and allied health and potentially primary care. This is probably best achieved through the development of local Infant and Child Mental Health Hubs that provide the opportunity for multi professional and multidisciplinary care which are currently lacking in most paediatric settings.

55 The work of these Infant and Child Mental Health Hubs should cover both externalising (including neurodevelopmental disorders) and internalising problems (defined below at paragraph 172). The dichotomy often proposed between these two groups of disorders is not helpful. Comorbidity between the two is very common and separating them has resulted in mental health problems not being picked up in those with neurodevelopmental disorders (**NDD**), or where it is picked up not treated appropriately, and vice versa for NDD in those with mental health problems.

56 An example of this approach in practice is the integrated service model we developed in Dundee which has now been implemented by the RCH Mental Health Neurodevelopmental Disorders Team. We have also very successfully embedded psychiatry expertise into the Gatehouse service and the refugee health clinics at RCH.

57 A key decision will be whether these Infant and Child Mental Health Hubs are designed to provide care to the full range of severity of mental health problems (including those with mild to moderate disorders - the so called missing middle) and if not where the cut offs would be and how they would be applied.

58 If the Hubs were not tasked with seeing mild to moderate then we should consider implementing a ‘kidspace’ concept, similar to headspace for youth, with psychology, GPs, allied health and some psychiatry support.

59 The strongest model would be one that covered the full range of mental disorder that was able to deliver staged care within a single setting. Staged care is the model whereby interventions are delivered at the appropriate intensity for a given level of severity and complexity. It is different to stepped care where one waits to see whether a less intensive intervention fails before moving to the next level.

60 These Infant and Child Mental Health Hubs should have strong consumer representation with both co-design and co-participation in delivery of services

61 They also need a strong integration with education and welfare agencies.

Other initiatives

62 There is a need for greater investment in the use of online therapy programs both those that are delivered live by a remote therapist (often to groups) and those that can be self-administered.

63 The current approach to assessment varies considerably both between different groups and between services, as discussed at paragraphs 231 to 241 below. This should be one aspect of care that is standardised to ensure adequate breadth and quality. Online assessment tools are available and should be investigated as a way of adding value to current assessments.

64 Perhaps one of the biggest impacts could come from the development of the role of nurses in infant and child mental health. They have the potential to provide a significant proportion of the care within the Hubs and at several other levels within a reformed system. Skilled mental health nurses are a craft group that has been central to the development of infant and child mental health services in other countries, particularly the UK. This has not happened in Australia. Our experience in UK of working within a service, where the bulk of face to face assessments and care was delivered by nurses, was very positive. Nurses were excellent at following protocols but also had an ethos of holistic patient/family centred care which meant after delivering the protocol they always looked to see what other problems there were. There is considerable scope and opportunity for increasing the role of nurses in the Australian system.

Leadership and strategy

65 Without significant changes in leadership it will be extremely difficult to engineer effective change in services. Much of this could be most effectively lead by extending the proposed Collaborative Centre concept put forward by the Commission for adult services to infant and child mental health.

66 The Collaborative Centre proposed by the Commission for adult mental health has the potential to make a huge impact on this sector. Orygen already cover this space well in regards to youth mental health but infants and children, and some adolescents with mental health problems not covered by Orygen (e.g. ADHD, eating disorders, gender identity disorders).

67 The development of such a Centre should follow a very similar model to that proposed for adults and bring together people with lived experience, researchers and experts in multidisciplinary clinical and non-clinical care. As with the adult Collaborative Centre, a Collaborative Centre for Infant and Child Mental Health should be jointly lead by a clinical academic with specialist training and experience in mental health and a person with lived experience.

68 As in adults the Collaborative Centre should focus on reducing the knowledge translation gap that is evidence in the field. This will involve conducting and coordinating research into child mental health with a main focus on translational research that allows academic findings to be applied in care settings and 'accelerates the transfer of discovery to health benefit'. As there are currently no Australian evidence-based guidelines for infant and child mental health the Centre should also take a lead in evidence synthesis and the development of evidence-based guidelines and measurement-based care pathways, demonstrate implementation of evidence in clinical practice and develop a strong tradition of quality improvement within routine clinical practice. It should also coordinate and lead the development of high-quality education and professional development for the broad mental health workforce.

69 There are a broad range of basic and clinical researchers in Victoria who through increased collaboration would be ideally placed to start this process. The development of such a Centre would be very likely to act as a magnet to bring high quality clinical academics to Victoria and, if funded appropriately, stimulate and facilitate the development of the next much needed generation of clinical academics and research experience clinicians willing and able to lead the integration and translation of evidence and new knowledge into practice.

70 A Collaborative Centre for Infant and Child Mental Health would be unique within Australia and one of only a few similar Centres across the world. As has already seen with Orygen, with whom the Centre would need to closely collaborate and partner, the centre would have the potential to establish a leadership role in infant and child mental health not only within Australia but also across the word.

71 I have had the benefit of working closely with the leaders of similar Centres in the UK (Institute of Psychiatry, Psychology and Neuroscience), Germany (Central Institute for Mental Health) and the Netherlands (Donders/Karakter/Nijmegen) and am confident that they would be very willing and able to support and advise on the development of a similar Centre in Victoria.

72 Whilst collaboration both with Orygen and the Collaborative Centre for adults would be essential, there are important differences between infant and child mental health. This means that with its' specific focus on youth and young adults Orygen is not able to cover the work which is required for the younger age group.

73 Prevention and early intervention discussed in more detail below.

b. other services systems (including maternal and child health services, other health services, child protection and schools) that support infants and children

74 Prevention and early intervention should be part of the overarching remit of the Collaborative Centre. From a delivery perspective prevention and early intervention would be better thought of as separate from the provision of services through the Infant and Child Mental Health Hubs to those with existing mental disorders. Prevention needs to be embedded in different ways into the community and community-based services.

75 Currently the services in Victoria that could work together to improve prevention are fragmented and often do not recognise that mental health should be a key focus for their service.

76 The keys to prevention in child mental health are those things that improve life in general. These include:

(a) improving and supporting positive parenting and social engagement;

(b) identifying and treating parental mental health problems in a context that understand the impact of these on children; and

(c) reducing poverty, isolation, social disengagement, trauma, neglect and abuse, bullying, stigmatisation, and cultural and language disadvantage and exclusion.

77 In order to improve preventative approaches there needs to be a clear strategy and commitment centrally by government, and by the health, education, social and justice departments and services that is specifically aimed at developing and implementing strategies to improve outcomes in these areas for children and their families. This will need to include a program of joint funding that acknowledges that improvements in one sector may be seen most clearly by evaluating key performance indicators in another.

78 This focus should extend to early intervention for those children and young people with emerging and mild symptoms. For this type of problem interventions are often most effectively delivered in more general community settings through more generic packages by ‘non-specialists’ trained to deliver particular interventions.

c. the way Victoria’s mental health system and other service systems work together.

79 For children’s mental health, perhaps even more than in adults, their needs to be close collaboration between services. The approach to working together also needs to be different when providing support for infants and children with established problems in comparison to those at risk of future problems.

80 Although it seems clear to me that we would benefit from a more integrated social work system in Victoria it is tempting to suggest that one could go further and amalgamate our public services (health, social work and education) under one organisational umbrella. However, the experience of other countries that have attempted this (such as some regions of the UK) have not been positive. They resulted in an imbalance in provision which ultimately was detrimental to the provision of high-quality mental health support which was relegated behind child protection, welfare and educational concerns.

81 The development of a Collaborative Centre for Infant and Child Mental Health that had links to and interactions at service and research levels with other agencies would facilitate joint strategic planning and be able to determine the most effective and efficient approaches to implementation. The development of integrated multi-professional Infant and Child Mental Health Hubs, which may include a 'kidspace', would also improve collaboration and integration.

82 There should also be consideration of joint workforce planning and training in this space.

Question 4: What features of system design need to be considered to make specialist mental health expertise available to advise other service providers, such as those working with infants, children or their families who are or who have experienced trauma?

83 It is important that we always recognise the importance of trauma but it is often not helpful to dichotomise between trauma related disorders and other, usually more biological, causes of mental ill-health. For example, ADHD increases the risk of abuse and neglect through a cycle that includes both genetic and environmental factors and the interaction between these.

84 My comments therefore are relevant to all causes of mental health problems but clearly understanding the multiple risks and vulnerabilities described earlier is an important consideration.

85 The development of a high quality and easy to navigate online child and infant mental health resource that collates and presents evidence-based information on detection, assessment and management of infant and child mental health problems is needed. This includes access to reliable scales and measures and appropriate treatment resources. This is currently being considered as a part of the development of the Melbourne Children's Campus wide mental health strategy.

86 High quality integrated workforce training and development (started during basic training) in infant and child mental health for <u>all</u> of those working with parents, children and infants should also be considered.

87 Skilled and experienced nurses with the support of medical staff and psychology and working closely with consumers could provide a link between community services, primary care and paediatrics on the one hand and specialist CYMHS on the other. For example, nurses could be trained to staff an advice line that supports community and primary care staff to facilitate identification of infant and child mental health problems, continued management and/or appropriate referral when community services or primary care practitioners feel uncertain about how to manage a case. This would have the benefit of modelling appropriate responses, reducing unnecessary referrals, whilst facilitating appropriate ones and ongoing education and could be considered as a state-wide resource linked to and delivered by the Collaborative Centre.

88 A multi-agency focus on prevention and early intervention for high risk groups and those with emerging and mild symptoms, linked into the Collaborative Centre, would support and facilitate the development of shared purpose and vision, encourage collaborative working, joint planning and working, knowledge dissemination and continued learning.

89 One further helpful change would be to redefine the overall objectives of child and adolescent mental health. In adult mental health there is an appropriate focus on the Recovery Model. Infants and children are in the process of development which if interrupted by mental health problems means that on recovery we are looking for them to not only recover to where they were but to catch back up to where they should be. This is potentially captured better through the concept of 'Thriving' rather than 'Recovering'.

Question 5: What changes could be made to the current system that would better organise mental health and other social services around the needs of an individual child or cohorts of infants and children?

90 The system needs a balance between personalised needs and evidence-based approaches.

91 Clinicians will often argue that "each of my cases is so different from each other that I can't use a generic evidence-based approach". However, the reality is that if every patient is so different then this is exactly when you need to use an evidence-based approach based on probabilistic reasoning.

92 Another argument is that "the children I see are too complex to be treated using the evidence base which is based on less complex cases". The result is often that the child will not receive targeted therapies as the clinician will get caught up in case management and 'fire-fighting' or the child will receive small amounts of multiple therapies or multiple medications as the clinician chases the symptoms around.

93 In both situations the most effective solution is usually to 'deconstruct' complexity through the use of a comprehensive and structured assessment process that allows you to look

at the different presenting problems and needs, make a comprehensive diagnosis and formulation and to plan your intervention accordingly. Current approaches to assessment in Victoria are generally not well structured.

94 These arguments hold equally for specialist community mental health services and paediatric community–based services.

95 Having said that, individuals do present with their own unique constellation of problems. The system needs to be able to better organise the 'team around the child' and facilitate joint working. A big difference between working in Scotland and Australia for me has been the differences in the way that social services are organised and the impact this has on how the systems that look out for the welfare of the child work.

96 In Scotland it was much easier for the mental health staff to focus on supporting the mental health needs of the child because the responsibility for any additional welfare needs were coordinated and delivered by the social work department. There were different branches within social work but there was always one identified social worker/case manager from within the social work service whose role included case management and coordination.

97 In Australia, the fragmented organisation of social care and welfare across multiple organisations means this does not happen and case management takes up much of the time for mental health clinicians within CYMHS. This significantly reduces their ability to deliver therapeutic interventions.

98 If there was a greater clarity about who has the role of care management in the broadest sense (linking welfare, health and educational needs) and this role was explicitly funded (i.e. not coming out of a budget that is meant to be providing therapeutic interventions) then it would be much more possible to address the individual needs of the child.

99 The development of integrated community Infant and Child Mental Health Hubs that has strong interdisciplinary representation and that provided true multi-disciplinary care would go a long way to resolving these issues.

a. What are the strengths and weaknesses of these approaches?

100 The strengths are clear. I think the 'weakness' is additional cost to the State.

Question 6: Should services for children, adolescents and youth be streamed by age? If so why and how?

101 This is an extremely complex question with no simple answer.

102 On the one hand, CYMHS services that run from 0-25 years always have their work heavily slanted towards adolescents and youth where the degree of urgency is often higher.

103 On the other, services like RCH Mental Health which stops at 15 years cannot easily follow up care for those younger adolescents whose problems they understand well and in particular those for whom a neurodevelopmental disorder is a component of their difficulties.

104 There are many common generic skills required to successfully assess and manage mental health problems across infancy, childhood and adolescence/youth. These include:

(a) the ability to conduct a high quality and comprehensive mental health assessment;

(b) to understand the importance of development and a person's developmental history; and

(c) knowledge of systems and family functioning.

105 There are however also very clear differences in focus for managing mental health problems across these developmental stages and the skills required to manage the common mental health problems seen at different points of development. Child and adolescent psychiatrists, in my view should, through their specialist training, be in a position to work across all of these stages in development, but as our work becomes more specialist and focussed it is not unreasonable for practitioners to specialise, for at least part of their time, in particular areas of work.

106 In my opinion it would make more sense to combine streaming by type of disorder with a more flexible approach to streaming by age.

107 For example, within Orygen, specialist services for psychosis, bipolar disorder, depression and personality disorder have been developed and these are fully appropriate for the 15 – 25 age range served by the service. There are cases where these disorders develop earlier in life and it would probably be more effective to offer them treatment by staff with specialist knowledge. Orygen, however, have much less experience in neurodevelopmental disorders such as ADHD and do not offer services for eating disorders. Eating disorder services (located within adolescent medicine at RCH) and the neurodevelopmental disorders team at RCH both see patients beyond the official cut off for RCH mental health. However, there is not the same degree of flexibility across all services.

108 It would be more efficient to design our service delivery systems around evidence-based clinical pathways, under the general headings of internalising and externalising (or neurodevelopmental disorders, mood and emotional disorders, psychosis and eating disorders) that had some flexibility with regards age limits. This would help to ensure that the mental health needs of younger children are met and that these needs are not constantly put to the back of the queue as often happens in the current system. This was the approach used successfully by the Tayside CAMHS service in Scotland where we were then able to manage risk and need for the different clinical groups independently of each other.

Question 7: What are the challenges associated with age-based streaming?

109 See paragraphs 101 to 108 above.

Question 8: Could the aims of age-based streaming be met through alternative means? For example, by streaming based on different criteria.

110 As above I think that it makes more clinical sense to stream by disorder with evidence-based care pathways. However, this requires thought and planning as one needs to be able to seamlessly manage care for those with coexisting disorders that do not fit neatly into any one category. This can be well managed where there is a well-trained workforce able to understand the needs of those with different presentations and the use of a staged care approach that has the potential for more experienced clinicians to look after the more complex presentations.

111 There is an important and complex balance to be met between specialist knowledge and skills for expertly managing particular clinical presentations and being able to manage the volume of cases. This is particularly so for the more common problems such as anxiety, depression and ADHD.

112 As noted above, the models of care vary by presenting disorder rather than age but when you stratify by problem you de facto also stratify to a significant degree by age. However, there are always exceptions and staff need to be skilled across the age range and prepared to work in this way.

113 For example:

(a) working with maternal/child mental health problems and attachment difficulties in this context will often mean working with infants and young children;

(b) working with neurodevelopmental disorders and the coexisting mental health problems will often start in childhood but generally continue into adolescence, youth and indeed adult life;

(c) anxiety disorders also tend to start early in life and often continue. There are however different profiles and patterns as one gets older, similar trends are seen with OCD and trauma-based problems all which will require more psychology input than psychiatry;

(d) depression is more likely to start at or after puberty and continue; and

(e) bipolar disorders, psychosis and personality disorders will also be more common in adolescence and youth but can often, in retrospect, be seen to have started earlier in development.

114 This does not mean that we need individual specialist services for each clinical group but that we need to think carefully about how these requirements can be best met and organised within services. As described above at paragraph 105 in Tayside we split our 0 – 18 years CAMHS service into two functional units broadly defined as emotional disorders and neurodevelopmental disorders. These teams then subdivided in the ways that they found best to serve the numbers of referrals and the needs of patients referred. Within team flexibility and a positive change orientated culture were essential components of this system.

Question 9: How important is family and carer engagement in the delivery of services to infants and children?

115 Extremely important as family and carers are key in understanding the problems and a primary vehicle for delivering treatments — both psychological and pharmacological.

a. What assists and what hinders successful family/carer engagement?

116 Traditional mental health services have been provider driven. This is still the case for many. Consequently, there are high rates of non-attendance, low retention rates with treatment over time. There is a need for services to move towards co-production recognising the key roles that both consumers and professionals can play in the development and delivery of services.

117 When considering the engagement of families and carers with clinical services it is important to recognise the different components of engagement:

(a) Behavioural components include attendance, participation in sessions (e.g., talking about relevant topics, practicing new skills), completion of homework assignments, demonstration of progress towards goals, discussing feelings, and engaging in efforts outside of sessions.

(b) Attitudinal components include emotional investment and commitment to treatment that result from a clients' belief that treatment is worthwhile and beneficial.

118 In addition, several barriers to engagement have been described these include logistical barriers to service use, such as:

(a) concrete barriers (e.g., insufficient time, lack of transportation);

(b) contextual barriers (e.g., community unrest, violence); and

(c) agency obstacles (e.g., length of time on waiting lists).

119 Perceptual barriers may also exist such as:

(a) poor therapeutic alliance;

(b) perceived need for treatment;

(c) perception of barriers;

(d) expectations for therapy; and

(e) beliefs about the therapeutic process .

120 Ethnocultural beliefs and attitudes further influence engagement. For example, some cultural groups subscribe to a belief that parents, or indeed the child, should overcome child mental health problems on their own. In others, mental health problems are associated with particularly high stigma. In Indigenous Australian culture, many mental health problems are seen within a trauma context which may conflict with the explanation of a biological basis given by a health professional.

121 Engagement has often been measured through rates of drop out from services. There are several factors that predict drop out from services:

(a) Rates of treatment drop out vary by disorder. Those with disruptive disorders and delinquency are more likely to drop out than those with anxiety and mood disorders.

(b) Socially disadvantaged families are more likely to drop out of treatment.

(c) Parent child interactions also impact with those families who show less positive and more negative parenting engaging less well.

(d) Poor mental health literacy is associated with poor treatment uptake.

(e) Poor therapeutic alliance and feeling disrespected or not listened to is a negative indicator. Whilst a positive treatment alliance is the strongest predictor of therapeutic success across all psychotherapies.

122 As an example, I was distressed recently to meet a young person in an inpatient unit with complex mental health issues who had been discharged from out-patient care on several occasions. There were repeated mentions in the notes that discharges were due to she

and her family ‘not engaging with care’. In reviewing the notes, it was clear that there were many reasons why this was likely to happen but that these had not been addressed. It was as if it was her responsibility to drive engagement rather than that of the clinical service.

123 In summary, those who are most vulnerable and most need the engagement are the least likely to engage with clinical services and it is very likely that similar factors will be important in engaging families in the partnering with professionals to help design and deliver services.

Ways forward to improve engagement

124 Models of practice should be consumer rather than provider focused (whilst recognising the contribution of specialist knowledge from the service perspective) and co-produced with consumers. They should actively acknowledge and address the known barriers and accept that engagement with mental health services is challenging and needs to be actively developed.

125 Clinicians need to be transparent and honest in their communication with patients and their families. This includes providing clear psychoeducation for patients and their families about the diagnosis, formulation and the evidence for and against proposed treatments. It is important not to hide from the unknown and explain why it is often necessary to use a trial and error approach to identify the most effective treatment. But also, that one is not using the child as a Guinea pig but following a clear plan that is backed up by evidence.

126 Time is often important in this process and it is not by chance that mental health appointments are generally longer than other health appointments. In this respect paediatricians are at a clear disadvantage as the current system of reimbursement does not allow them adequate time to conduct thorough mental health assessments or to provide adequate psychoeducation or follow up. This should be addressed.

127 We have found that nurses are particularly good at engaging with families and represent an under-utilised and cost-effective resource within infant and child mental health.

128 There is also increasing evidence to support the important roles that paraprofessionals such as a trained parent, family or advocates can play in improving engagement. Many will have had lived experience of mental health problems or children who themselves have had these problems and their own experiences of services. Whilst there are several such advocates in Victorian CAMHS it seems that most are engaged in service development rather than direct patient engagement. Family advocates can be trained to coach and support families in need of mental health services utilising the skills and

knowledge they have already developed by successfully navigating the mental health service system for their own children.

129 There is also some evidence that the use of technology can support engagement although the research is not yet particularly sophisticated. This should be one of the priorities for research funding.

130 The engagement of schools and their staff in supporting and destigmatising mental health for children and families can also support engagement.

Question 10: What are the professional mindsets, capabilities and skills that are needed for working specifically with infants, children and their families and carers in mental health?

Mindsets

131 Clearly a genuine interest in people and strong interest in children, their development, families, and in mental health. This must be linked with an enthusiasm for working in the field and with this client group. An ability to demonstrate warmth and empathy are key skills but this needs to be matched by an inner strength and ability to deal with challenging and often difficult situations and feelings. An ability to self-reflect and a problem solving rather than problem finding approach are key to contributing to a change orientated workplace culture.

132 More generally we need a workforce that:

(a) has a curiosity and imagination;

(b) encourages and supports critical thinking and problem solving;

(c) can collaborate across networks and break down barriers and siloes;

(d) can model positive attitudes and behaviours;

(e) is agile and adaptive and is able to change practice and pick up new ideas and skills quickly; and

(f) that recognises and supports initiative, innovation and entrepreneurialism in others as opposed to feeling threatened by this.

133 It is important that all staff recognise the key role that research can play in the development and delivery of quality services and the ways that they can contribute to the research effort. In a similar vein it is important that staff working in mental health recognise that measurement and particularly outcome measurement is as important in mental health practice as it is in physical health.

Capabilities and skills

134 A strong knowledge of child development and child mental health that has been developed first through a formal learning and training process and then built through experience.

135 High quality communication skills are required by everyone who works with children and families. These need to be linked to an understanding of how to most effectively actively listen to what is being said by children and their families (verbally and non-verbally) and how best to communicate what needs to be said.

136 Staff need to:

(a) have high quality up to date evidence-based knowledge and understanding that reflects the current evidence base within the field whilst also recognising their own knowledge gaps and how to best manage these;

(b) understand how to access evidence-based information and how to critically appraise the evidence presented to them;

(c) have access to high quality ongoing professional development and training; and

(d) be trained in high quality comprehensive mental health assessments.

137 Those providing therapies need to be specifically trained in these and able to deliver these with high fidelity.

138 Staff working within teams also need to properly understand the range of skills available within their team, how to make best use of these and what the process is for addressing gaps within a team

a. What are the implications of the required professional mindsets, capabilities and skills you have identified above for the composition, training and deployment of:

i) clinical workforces?

139 In my experience, most clinicians who choose to work in this field do have many of the attitudes required for working in the field.

140 One area where some clinicians struggle is in recognising that there will be situations where, often because of social circumstances and situations, it is not possible to have the positive impact you would like and there is a need to ask welfare services to step in without feeling like you have let the child down. This is however something that can be learned and trained.

141 The major issue facing the workforce is related to capabilities and skills. There is a need for improvements in opportunities for training, both in the pre-service period and then ongoing and continuing professional development. This is true across all of the craft groups and has a major impact on the way services are delivered. All of the capabilities and skills highlighted above require access to training. Currently training in child and adolescent mental health and specifically in delivering evidence–based child mental health is extremely limited.

ii) non-clinical workforces?

These are very similar to those described in (i).

iii) workforces in other service settings who may identify presenting mental health needs in infants and children (e.g. maternal and child health and early education staff)?

142 Again, I think many staff in these agencies have similarly positive mindsets about children and families. However, there is considerable variability in the acceptance of issues related to mental health and particularly infant and child mental health problems as a real and important problem.

143 Training in mental health should be a core aspect of training for everyone working with children and families. This training needs to be framed in such a way that both the importance and potential for change is clearly highlighted. Training and development in all areas has to be fit for purpose, up to date and relevant to day to day practice. Not everyone needs to know or learn everything, but core skills in identification and an understanding of how to get help and support for children and families where there are mental health problems and how to provide appropriate support within your own workplace are relevant to all.

Question 11: What prevents existing workforces from providing optimal care, treatment and support to infants and children, and what steps can be taken to overcome these factors?

Barriers

144 A lack of strategic planning and leadership which has led to a lack of a clear shared purpose and vision. This is reflected in fragmentation not only of services but also approaches and at times ideologies across different regions/services and professional groups. All of which contributes to high levels of variability in practice.

145 Within leadership circles there is also a polarisation between those focused on prevention and those focussed on providing care for those with established mental health problems. This is not helpful and must be addressed. Whilst there are very important differences in

the responses needed for each of these key aspects both are extremely important and require mutual recognition and respect if we are to holistically address the mental health needs of the community.

146 The gaps between specialist mental health services and paediatrics are an area of concern as well as the challenges of a system that has to negotiate the balance between publicly and privately funded services. There needs to be considerable effort to enhance the value of collaboration.

147 There is a lack of emphasis on bridging the knowledge translation gap and delivering evidence-based and measurement-based care across all levels of care and professional groups (CAMHS/CYMHS, psychology, paediatrics).

148 Within specialist CAMHS/CYMHS the needs of adolescents tend to overwhelm services meaning that resources are pushed towards these cases with results in a lack of service for the 0-12 age group.

149 Communication between different parts of the health systems and between health and other agencies is not optimal. This results in many unmet, and often unrecognised, educational, welfare, physical and mental health needs in children and families who fall between the cracks.

150 Within the community mental health setting, this contributes to a need for mental health clinicians to focus on and case manage non-health aspects rather than an assessment and treatment of mental health problems.

151 As highlighted above there are a wide range of unmet training needs across all craft groups that makes it very difficult for any single service to respond to the complex needs of many of those infants and children with mental health needs. The current funding systems also make delivery of high-quality services difficult in some settings particularly paediatrics.

152 These are all compounded by a relative underfunding of child mental health in comparison to child physical health and to most other aspects of mental health.

Potential solutions

153 Many of the needs for a clearer leadership and an integrated strategy could be delivered most effectively through the establishment of a Collaborative Centre for Infant and Child Mental Health and Wellbeing. This Centre should be developed along very similar lines to that proposed for adult mental health so that it can:

(a) ensure full and effective participation of parents and carers of children with mental health problems in the development and delivery of clinical care;

(b) provide strategic leadership in service design and service delivery for infant and child mental health across Victoria;

(c) conduct interdisciplinary, translational research into new treatments and models of care and support to inform service delivery, policy and law making; and

(d) provide a focus for education and training of the broad mental health workforce through improvement, training and professional development programs.

154 As with the proposed adult Collaborative Centre driving change will be a key focus for the Infant and Child Collaborative Centre. This would involve the integration of research, clinical service delivery and education training

155 From an outcomes perspective the collaborative centre should have a focus on developing strategies and interventions that improve:

(a) The effectiveness of prevention and early intervention, with a community facing program that seeks to develop and implement evidence-based strategies to reduce the incidence of later mental health problems. For example, by improving the quality of parent child interactions and positive parenting, enhancing parental supervision, reducing levels of maltreatment and adverse childhood experience, reducing bullying and improved school experience, improving mindfulness, improving social and communication skills.

(b) Access to care to increase the proportion of infants and children with mental health problems who are offered treatment, increasing the uptake and increased duration and exposure to treatment when it is offered.

(c) Improving the quality of care through the development and implementation of evidence and measurement-based clinical care pathways. This will include evidence synthesis, guideline development and the adaptation of guidelines into realistic care pathways and implementation of these into the clinical setting.

(d) Education and training of the broad infant and child mental health workforce in the knowledge and skills required to deliver these pathways in the broader clinical setting.

156 The broader clinical setting will also require service reform if it is to become a more efficient and effective vehicle for the delivery of high-quality evidence-based infant and child mental health.

157 The proposal is for multidisciplinary clinical Infant and Child Mental Health Hubs that include specialist infant and child mental health clinicians (including nurses), clinical and

neuropsychologists, allied health and paediatricians, and have a strong consumer representation in service design, management and implementation. It would also be appropriate to investigate the potential for general practitioners and other primary care staff to be included in the Infant and Child Mental Health Hubs. There is also a strong argument for inclusion of staff from welfare and education to at least some degree.

158 This recommendation is in line with the proposals being developed by the Commonwealth governments 0 – 12 mental health working group.

159 These community-based Infant and Child Mental Health Hubs would provide the bulk of generic mental health care (including that for neurodevelopmental disorders) with an integrated evidence and measurement-based care approach taking the lead from the Collaborative Centre. A staged care approach would work well for such a Hub. It is likely that there will still be a requirement for some more specialised services and teams for more complex high impact presentations. These would be more regionalised and accessed by multiple Infant and Child Mental Health Hubs.

160 Special consideration needs to be given to the needs of rural and regional populations. Potential solutions include increased use of telehealth and remote psychotherapies however there needs to be considerable thought and consultation given to this. One possible approach to the development of new approaches would be to have a rural arm of the Collaborative Centre closely aligned to the main centre that focuses specifically on the adaptation and development of solutions for these communities.

161 Similarly, it would be important to think more deeply about ways that other marginalised communities (Indigenous, culturally and linguistically diverse, refugee, LGBTIQ, out of home care) would be appropriately included in the Collaborative Centre and then how this knowledge is passed out to the Infant and Child Mental Health Hubs.

Question 12: What capabilities and skills are needed within the workforce to better engage with families and carers of infants and children as partners in their care, treatment and support?

162 See paragraphs 115 to 130 above.

OPPORTUNITIES FOR EARLY INTERVENTION

Changes in the prevalence of mental health issues and mental illness for infants and children in Victoria

163 For both infants and children, the most recent evidence does not suggest a worsening over time of mental health symptoms, either internalising (anxiety and depression) or externalising (ADHD, conduct disorders). In adolescents, the burden of externalising

problems appears to be stable. However, most studies report an increase in internalising problems in adolescent girls. The findings for internalising problems in boys are mixed.

164 All types of mental health problems are over represented in children who experience disadvantage such as poverty, living away from home, being Aboriginal or Torres Strait Islander, marginalisation by culture, ethnicity, colour, sexuality and language, who suffer from abuse, neglect and other traumas, and in those with refugee backgrounds regardless of ethnicity. The prevalence of mental health problems will therefore change along with the numbers of children in these categories. However, there is also likely to be an interaction between the increase in prevalence and the availability of supports in the community (not just health). Unless adequate supports are in place this will further increase the prevalence of mental health problems for these more vulnerable children.

165 Even though the prevalence of mental health problems are not increasing for many groups in Victoria we are seeing a continual increase in recognition referral and diagnosis of mental health problems in children. This is however, occurring on a longstanding background of under recognition, under diagnosis and under treatment.

166 Many mental health problems start early in life. For example, we often hear that 75% of mental health problems start before the end of adolescence but it is less often stated that in this same sample 50% started before the age of 14 years.

167 The most recent national survey of mental health problems in Australian children and adolescents (Young Minds Matters) identified that:

(a) 1 in 7 (13.9%) children and adolescents (4-17 years) have mental health problems within the past year that warrant a formal diagnosis;

(b) of these, less than 50% had had any health contact in last 12 months;

(c) for males aged 4-11 years the rate was 16.5% had mental health problems within the past year that warrant a formal diagnosis; and

(d) for females the rate was 10.6% mental health problems within the past year that warrant a formal diagnosis.

168 In Victoria there were 11,945 registered clients for CYMHS in 2017-18 which represents just 1.1% of children and young people aged 5 – 19. I note that children less than 5 years make up only a small proportion of those seen by generic CAMHS services.

169 Taken together the data strongly suggest that mental health problems are not only common but are currently significantly under recognised. In this context the increased recognition is welcome. However, it has not been matched by an increase in service provision.

Vulnerabilities in infants and children to mental health issues

170 Vulnerabilities of infants and children to mental health issues include, in no particular order:

(a) intellectual impairment;

(b) parental mental health problems;

(c) physical health problems;

(d) family history of mental health problems;

(e) poverty;

(f) living away from home;

(g) having another mental health problem;

(h) being aboriginal or Torres Strait Islander;

(i) marginalization by culture, ethnicity, colour, sexuality and/or language;

(j) abuse, neglect and other traumas; and

(k) those with refugee backgrounds.

171 It is helpful to split childhood mental health disorders into 2 broad categories internalising and externalising.

Internalising disorders

172 Internalising includes two main diagnostic categories anxiety and depression.

(a) Anxiety disorders can present very early in life (separation anxiety, phobias, social phobia, panic, generalised anxiety) but continue to increase throughout childhood with new presentations across the lifespan. Presentations include fears, scared, nervous, clingy, find new situations difficult, seem worried, they can also somatise.

(b) Depression much less common before puberty but can present even in infants. Presentation is typically unhappy, depressed, tearful, irritable.

(c) Attachment problems present as difficulties in the parent child interaction. Those with poor attachment are particularly vulnerable to other mental health problems these will tend to start in infancy but the effects continue throughout life. Many other disorders and experiences are associated with increased risk of poor attachment.

(d) PTSD and adjustment disorders in those with trauma.

(e) Obsessive Compulsive Disorder can also start in childhood and when does is often very impairing. There are also links with neurodevelopmental disorders such as autism, Tourette's and anxiety.

(f) Somatic disorders often start in childhood and can be seen in infancy. They are relatively uncommon in community mental health but very important in hospitals like RCH and in paediatric practice.

Externalising disorders

173 Externalising ADHD is the most common but also Oppositional Defiant Disorder (**ODD**) and Conduct Disorder (**CD**):

(a) ADHD presents early in most but can't have accurate diagnosis for most before 5 years. The presentation is typically attention, concentration and impulsivity issues;

(b) ODD also commonly starts early in life for most (extension of terrible 2s). The presentation can be a child who loses their temper, fights, bullies, is argumentative, spiteful.

174 ADHD increases the risk of ODD and CD and also of Specific Learning Disabilities (**SLD**)

175 CD are usually later typified by extreme rule breaking but when they appear early it is indicator of severe problems. The child may engage in physical harm, stealing, truancy, running away, fire setting or vandalism.

176 We are starting to recognise that irritability is an important transdiagnostic (seen across several different disorders) indicator of mental health problems in children.

177 Often the externalising disorders are called 'behavioural disorders' and assumed to be a behavioural consequence of sub optimal parenting, however strong evidence that they are neurodevelopmental and related to differences in the way that brains are developing and that there is a strong genetic component.

178 Autism is also a neurodevelopmental disorder presenting early in life. It presents as early social and language difficulties with some specific indicators:

(a) no social smiling by 6 months;

(b) no one-word communications by 16 months

(c) no two-word phrases by 24 months;

(d) no babbling, pointing, or meaningful gestures by 12 months;

(e) poor eye contact;

(f) not showing items or sharing interests;

(g) unusual attachment to one particular toy or object;

(h) not responding to sounds, voices, or name; and

(i) loss of skills at any time.

179 Similarly:

(a) Tics and Tourette's often start in childhood and peak in adolescence; and

(b) Enuresis, encopresis and sleep disorders are common from infancy up through childhood.

Other disorders

180 Major eating disorders anorexia and bulimia are uncommon in children and tend to start in adolescence but a range of feeding disorders are common in children.

181 Psychosis and bipolar disorder are also uncommon, but can occur, in childhood.

Recognition

182 Parents are clearly key to identification however parental mental health literacy is currently poor with the recent RCH mental health poll highlighting that only a third (35%) of Australian parents are confident they could recognise the signs of a mental health problem in their child.

183 Teachers and early learning/childcare specialists are the next line of identification. Again, in discussions with teachers they often report feeling under equipped and under supported to take on this role.

184 General practitioners also have a big role to play but again often feel that they are not adequately trained or skilled for this role.

185 In Australia, paediatricians (most of whom are working in private practice) are often the first health professionals to meet these children. They take a lead in identifying and treating ADHD and are also the main providers for autism and those with intellectual disabilities and behavioural problems. They are also often asked to see and work with children suffering from internalising problems, often but not always, when these present in context of a neurodevelopmental disorder.

186 There is very limited specialist mental health training available for paediatricians in Australia and most say that they do not feel well trained in mental health but feel they must take on these cases as there is no alternative available for them.

187 Also psychologists, again usually in private practice, are the first mental health contact for many families with a wide range of both internalising and externalising disorders.

188 There are relatively few private child psychiatrists in Victoria, and they are very unevenly distributed. Those that are in practice are more focused on internalising disorders and on adolescents rather than infants and children.

189 There is a significant gradient in access to private paediatric, psychological and psychiatric care across Victoria with access greatest in the Eastern Metro region, much less in the Western Metro region and least in rural areas.

190 Public CAMHS and CYMHS services restrict access to those with the most severe problems and are therefore less likely to be involved in primary identification of MH problems. They also tend to see adolescents much more than children as problems are seen as 'more severe' and 'more acute' in adolescents.

191 CYMHS are not well trained in ADHD and neurodevelopmental disorders, although they do diagnose a proportion of children and adolescents with ASD. The lack of experience and confidence with ADHD is a major issue as many cases who come though CYMHS have ADHD as a part of the picture. This often does not get diagnosed or managed appropriately which results in considerable unnecessary suffering for these children and young people. Similarly, paediatricians may recognise ADHD but not the internalising comorbidities.

Access to services for infants and children with mental health difficulties or vulnerabilities

192 Many infants and children with mental health problems are currently missing out on the care that they need. We have recently completed and National Health and Medical Research Council (**NHMRC**) funded program of research looking at variability in provision of care for this group.

193 Using data from national surveys of mental health we found that[3,4]:

(a) less than 50% of those with a mental health problem had seen any health professional within the last 12 months (Young Minds Matter);

(b) only 9-27% of those with mental health problems received and MBS services (Longitudinal Study of Australian Children (**LSAC)**);

[3] Hiscock, H., Mulraney, M., Efron, D., Freed, G., Coghill, D., Sciberras, E., . . . Sawyer, M. (2019). Use and predictors of health services among Australian children with mental health problems: A national prospective study. *Australian Journal of Psychology, 72*(1).

[4] Mulraney, M., Hiscock, H., Sciberras, E., Coghill, D. & Sawyer, M. 2019. Mental health difficulties across childhood and mental health service use: findings from a longitudinal population-based study. Br J Psychiatry, 1-6.

(c) only 12% of those that got treatment received what would be considered as minimally adequate treatment (LSAC); and

(d) over a period of 1 year, 1.1% of children and adolescents in Victoria received care from CAMHS/CYMHS (VIAGO). There were however high rates of contacts with a reported mean of just under 30 per person. Data on effectiveness of interventions were not reported.

194 Rates of diagnosis of ADHD are also much lower than would be expected from the epidemiological prevalence. As most cases of ADHD are currently treated by private paediatricians there is concern about whether the common comorbidities are being detected and properly managed.

195 On the other hand, there is also concern that children with ADHD and other mental health problems are not getting their ADHD recognised or treated appropriately when they are seen in CAMHS/CYMHS clinics. This is why the often-discussed dichotomy between neurodevelopmental disorders and mental health disorders is not generally helpful.

196 The two groups most likely to be missing out are those with the greatest likelihood of having mental health problems and those with mild to moderate problems (similar to those adolescents currently seen by headspace) for whom there is currently no service.

197 The highly vulnerable, discussed at paragraph 19, also generally the most marginalised and therefore need special efforts to reach out to them and additional strategies to engage them with services.

198 For the mild to moderate 'missing middle' there needs to be a provision this would be best integrated into the Infant and child mental Health Hubs or as a separate 'kidspace'. The most sensible arrangement would be similar to that between Orygen and headspace where there are two distinct entities but with common management and strategic development.

COMMUNITY-BASED MENTAL HEALTH SERVICES

Ideal care and service types in community-based mental health services

199 Services should be redesigned into Hubs as described above. These should bring together in an integrated way services currently delivered by paediatrics and the community-based mental health services.

200 All care should be based on a comprehensive structured assessment that goes beyond the presenting complaint and looks holistically and more broadly at the mental health and other needs of the identified patient in the context of their family/care system. The assessment needs to be individualised for each case but should be based on a structured

standardised approach supported by evidence with clear expectations that it is rigorously applied.

201 Based on the findings of this assessment a formulation/diagnosis should be made that accounts for all issues identified and this should be communicated to the patient/family.

202 Where no further mental health intervention is required this should be clearly communicated to the patient/family and they should be offered psychoeducation about the infant/child's difficulties and guidance on how to manage these and/or advice about other services that they can link in with. Preferably an onward referral or communication will be made as appropriate.

203 Where further mental health intervention is indicated the formulation should be used to co-develop, with the family, a treatment plan. Treatment should be based on evidence-based care pathways that account for severity and complexity and which guide decision making at each stage of the patient journey.

204 Community-based mental health services should have both the capacity and skills required to deliver a full range of evidence-based mental health treatments described in these care pathways. This will include psychological therapies, medication treatment and allied health interventions, such as speech therapy and occupational therapy.

205 In Scotland, a national child and adolescent psychological therapies matrix has been developed which identifies the appropriate evidence-based psychological therapies for mental health problems presenting in childhood and adolescence. This has been extremely useful for service planning and the delivery of face to face patient care. A similar exercise would be useful for Victoria.

206 After assessment the delivery of evidence-based therapy should be the primary focus of these services.

207 Care should be measurement-based as well as evidence-based. There is now clear evidence that measurement-based care is an effective way of improving outcomes in mental health and our own experience developing measurement-based models of care in Dundee were very successful.[5] This allows better quality improvement and audit of care and is an effective way to first benchmark and then track improvements at a group level. It is also the most effective way to optimise individual care and ensure that where treatment is not effective the clinician is prompted to move to the next step on the care pathway.

[5] Coghill D., Seth S. Effective management of attention-deficit/hyperactivity disorder (ADHD) through structured re-assessment: the Dundee ADHD Clinical Care Pathway. 2015. Child and adolescent psychiatry and mental health 9 (1), 1-14

208 There needs to be high quality supervision as well as support for multi-disciplinary/professional working and co-working. These services need to be led by high level clinical staff with training in mental health.

Care and services which should be offered by other services to infants, children and their families and carers

209 Education staff need training in identification of mental health problems in children.

210 They also should be clear about what supports are available for children with problems and a clear route for referral to an appropriate next level.

211 They would clearly benefit from a basic training in how to support a child with mental health problems at school both in the classroom and at breaks.

212 If schools were willing and supported some teachers could be trained to deliver more specialist interventions such as those directed at social skills or anxiety management and parent management programs.

213 Social work staff who work in a child setting also need increased training in recognition of mental health problems in infants and children and access to appropriate referral options.

214 There are already programs in infant mental health specifically aimed at Maternal and Child Health Nurses. This should be extended to all and considered as part of the strategy for infant mental health. This training could also be extended with increased focus on identifying increased risk of mental health problems at the 3.5 year old check.

215 General practitioner training should include a stronger component on child mental health than is currently the norm. In Scotland, there are general practitioners with Special Interest (**GPWSI**), some of whom have undertaken additional training in infant and child mental health. They then provide a focus for child mental health within the practice and community. This seems to be more efficient and realistic than expecting all general practitioners to be experts in child mental health.

216 Paediatricians current see most of the children with ADHD and autism and many children with other mental health problems. Whilst this is positive, and probably necessary considering the lack of child psychiatrists and psychologists, there is very little in the way of mental health training offered or available to them, particularly in relation to the 12 and under age group.

217 All paediatricians are expected to do six months training either in mental health usually within a CYMHS service, or developmental paediatrics. However, most cases seen in a CYMHS service are adolescents and most developmental paediatric services are not set

up to deliver mental health training. The idea of integrating these paediatric services into a multidisciplinary hub whereby paediatricians, most of whom work independently at the present time, can work in multidisciplinary setting with increased access to non-pharmacological treatments would be a big step forward. However there also needs to be consideration of greater mental health training for those paediatricians who choose to work in the mental health space

Improving integration and coordinate between mental health and other social services

218 The Infant and Child Mental Health Hubs, as described above, would improve integration and coordination between mental health and other social services. This could clearly have multiagency inputs.

219 Coordination would also happen through the teams focussing on prevention and early intervention.

Best practice in Australia and globally in providing infant and child mental health services

220 It must be acknowledged that the issues around delivering high quality infant and child mental health services are global and not restricted to either Victoria or Australia. There is evidence, however, that countries where there are high levels of private healthcare have been much slower to adopt evidence base care approaches. The USA would be a key example where, despite there being excellent research, most infant and child mental health care is delivered by independent private practitioners working in relative isolation and with little incentive to follow evidence-based guidelines.

221 Orygen have demonstrated that it is possible to deliver high quality evidence-based care for specific disorders in a youth mental health setting. They also have demonstrated how specialist mental health services focused on complex patients can integrate well with services for the less severe cases (headspace).

222 At the RCH, we have developed a multidisciplinary Mental Health Neurodevelopmental Disorders Team (**NDT**) based on the model of care developed in the UK by myself and my colleague Dr Sarah Seth (who runs the RCH NDT). The team uses standardised evidence-based care pathways and a measurement-based care approach to manage neurodevelopmental disorders. The aim was to bridge the gap that was apparent between developmental paediatrics and mental health and facilitate a mental health perspective for cases where paediatricians have identified unmet mental health needs. Clinical outcomes have been very positive and feedback from referrers have been very positive both in terms of support and professional development.

223 Our service in Dundee demonstrated very clearly the benefits of standardised approaches to assessment, treatment initiation and monitoring, multidisciplinary working

(psychiatry, paediatrics, clinical and neuropsychology, nursing, family therapy and occupational therapy), with nurses taking on an enhanced role within the team. It also clearly demonstrated the benefits of a solution focused and flexible approach to strategic and operation development of the care pathway and of integrating a research culture into day to day practice.[6] Outcomes from the Dundee team were significantly improved over time to a level whereby they matched those from high quality research interventions and the team was also able to show improved outcomes that lasted for longer than the research interventions. This model of care has been influential internationally.

224 At RCH, I was also able to demonstrate the benefits of embedding psychiatry expertise into two services (Refugee Health and the Gatehouse post abuse service) that previously had difficulty accessing mental health expertise. The feedback from these services has been very positive.

225 In the UK the development of multiple NICE guidelines for child mental health problems and the adoption of these as mandatory by the NHS has stimulated evidence-based practice within CAMHS services. Practice can now be audited against the guidelines and this accountability has been taken seriously. Standards have improved and services have been encouraged to self-reflect and acknowledge where there are difficulties delivering optimal care.

226 In contrast, Australia does not yet have any evidence-based guidelines for child mental health. With the Australian ADHD Professionals Association, I am developing Australian guidelines for ADHD using the ADAPT process that allows adaptation of existing high quality guidelines. This can provide a template for the development of further guidelines and from these the development of evidence–based pathways that can be implemented in day to day care.

227 International centres of excellence such as the Institute of Psychiatry, Psychology and Neuroscience at King's College London, Central Institute for Mental Health in Germany, the Donders Institute in Nijmegen, Netherlands and Toronto Sick Kids Hospital in Canada have well developed academic models linked in with high quality clinical services and would be able to provide useful support if we were to develop a Collaborative Centre for Infant and Child Mental Health in Victoria.

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6 **Coghill D**., Seth S. Effective management of attention-deficit/hyperactivity disorder (ADHD) through structured re-assessment: the Dundee ADHD Clinical Care Pathway. 2015. Child and adolescent psychiatry and mental health 9 (1), 1-14

Ensuring community–based mental health services are responsive to the needs of diverse families

228 There needs to be a better inclusion and integration when developing and designing services. Co-design needs to be the norm and not an afterthought. Again, Orygen youth health have done a good job in this respect. It is less easy to involve very young consumers in these discussions but there are effective ways to gather their opinions and integrate these alongside those of their parents and from graduates of child mental health services.

229 The inclusion of a Collaborative Centre for Infant and Child Mental Health in the Commissions outcomes would provide a great vehicle for improved responsivity which could them be filtered through the mental health Infant and Child Mental Health Hubs. Diverse voices need to be part of a Collaborative Centre – such a Centre needs to be driven by and with diverse groups.

230 The previously mentioned mental health experience within the RCH Refugee Health clinic and Gatehouse would be helpful in this respect as would the experience of the RCH Gender Service.

Current models of assessment and care in Victoria for children presenting with both mental illness and neurodevelopmental disorders

Assessment

231 There are multiple models of assessment currently used across Victoria.

232 There is a historical model of assessment within Victorian CAMHS of 'the 4 session assessment'. It is not clear to me as a recent incomer where, when or by whom this was developed but it is not based on an internationally recognised standard approach to assessment. It suggests that a 'full assessment' should be conducted over 4 sessions with each session having a specific focus. My understanding is that whilst this is still regarded as an accepted 'standard' it is rarely practiced as services feel under too much pressure.

233 The Royal Children's Hospital Mental Health Service has a standardised template for recording the mental health assessment and another for recording the risk assessment. The template is reasonably comprehensive but misses out a very important screen for symptoms across disorders which is a key part of a comprehensive assessment. Without this screen an assessment can very easily become over focussed on the presenting problem and miss other key clinical signs and symptoms. My understanding that the RCH MH approach is fairly typical of the assessment conducted by most CAMHS/CYMHS services across Victoria.

234 In order to address this gap, we have just started to implement a trial at the RCH where families complete a standardised valid and reliable diagnostic interview — the Developmental and Wellbeing Assessment (**DAWBA**). The DAWBA is conducted via a telephone interview prior to the first face to face assessment appointment. The information from the DAWBA will be available to guide the clinician conducting the assessment and help to ensure that all appropriate clinical information is gathered.

235 There are two current models of assessment used by services in Victoria that I do not recommend:

(a) Some services also have implemented a 'Single Session Intervention' or 'Pathways Session' for most non-urgent referrals. This is not an assessment per se but it a structured 2-hour face to face session at which the main problems are identified and solutions offered. The patient is then contacted after a period of time to ask if things have improved and it is assessed whether they require further contact. As the bar is set so high for entry to CAMHS services, I am not clear why it is thought that this level of complexity/severity can be managed in a single session.

(b) Other services have adopted the Choice and Partnership Approach (CAPA). This is an approach developed in the UK in order to manage increased demand and long waiting times. The initial patient visit is again not an assessment per se but designed to identify 'the main problems'. The patient is then allocated to a 'partnership' through which these problems can be tackled. Whilst this approach has reduced initial waiting times it has often resulted in secondary waiting lists (for treatment) that mean actual time from referral to treatment has not been shortened. There is also criticism about the lack of a full assessment meaning that if the patient or their family do not identify a problem it is unlikely to be addressed.

236 The RCH neurodevelopmental disorders team works primarily with those who have complex presentations. They have implemented a standardised approach to assessment building on the Dundee assessment protocols. This has the advantage of screening all cases for a full range of mental health and neurodevelopmental disorders as well as educational and learning difficulties and cognitive problems. More detailed and focussed assessments are conducted if the individual screens positive for a possible problem during the initial assessment.

237 Autism assessments across Victoria are generally based on structured and standardised approaches including a standardised interview and a structured assessment usually using the ADOS. This is considered a 'gold standard' approach to assessment. In contrast to the more general mental health assessments described above which would

benefit from more structure, many autism experts would question the need for such a full and comprehensive assessment in all cases. They would argue that for some the diagnosis is very clear without the complete package of assessments and that in this case a shorter assessment is acceptable. However, the recently published Australian guidelines on autism assessment seem to back the more comprehensive assessment. This may be linked to the requirements of the National Disability Insurance Scheme.

238 Whilst autism assessments are comprehensive with regards to autism, they are very much focussed on autism and often fail to pick up other mental health comorbidities. This can be a real problem for families as most are discharged without further appointments following the diagnosis being confirmed. This means that those families have to seek a further referral to another service, if, as is very often the case, there is a coexisting mental health problem.

239 Paediatricians are the main clinicians involved in the assessment of ADHD. It is my understanding that questionnaires and unstructured interview rather than structured interviews are the mainstay for most ADHD assessments and that the assessment is relatively brief (45 minutes) due to time and reimbursement constraints. Evidence-based guidelines would suggest that a longer and more comprehensive assessment is usually required. This is clearly important as the outcome of a positive diagnosis is usually a trial of stimulant medication. This is an appropriate outcome but must be based on a solid diagnosis. It is also essential that all patients assessed for ADHD are further assessed for other mental health problems. This also takes time and requires training. In my experience it is not uncommon for these mental health comorbidities to be missed or wrongly labelled. An example would be where emotional lability, a very common coexisting symptom in ADHD is mistaken for anxiety and treated with antidepressants.

240 Of equal importance child and adolescent mental health professionals are poorly equipped and trained in recognising and diagnosing ADHD which results in missed opportunities for treatment and unnecessary treatments

Care

241 As noted previously in Victoria, and most of Australia, neurodevelopmental disorders and mental health problems are regarded as separable and treated separately. Neurodevelopmental disorders by paediatricians and mental health by CYMHS. This is not, as explained below at paragraphs 243 to 254 below, the optimal model of care.

242 It is also very different from much of the rest of the world where it is acknowledged that both paediatricians and child psychiatrists should be involved in the care of ADHD and work together to manage comorbidities and complexities.

Best practice models of care for children with both mental illness and neurodevelopmental disorders

243 As mentioned previously I believe that it is not generally helpful to put mental health disorders and neurodevelopmental disorders into different baskets as often happens in Australia. The Australian position is probably a response to a combination of workforce and workload issues rather than a clinical reality.

244 This is particularly true for ADHD which meets all of the criteria for a mental health disorder as described, for example, by the Productivity Commission in that it is "a health problem that significantly affects how a person feels, thinks, behaves and interacts with other people" with symptoms that arise from a combination of "diminished cognitive, emotional, behavioural and social abilities".

245 This is not to say that those with ADHD should only be seen within a mental health setting but more that mental health services should not see ADHD as someone else's problem and deny them entry to the mental health system.

246 The current situation for those children with ADHD is anomalous to that seen in the rest of the world where ADHD, even when not comorbid with other mental health problems, is recognised as an important mental health problem for which responsibility is shared between mental health and paediatrics. In a strange anomaly it is accepted in Australia, as in the rest of the world, that mental health services are the appropriate treating services for adults with ADHD although services for adults are very few and difficult to access.

247 Autism also meets these same criteria and similar arguments can be made for including autism as an appropriate disorder for mental health as well as paediatric services. I do however acknowledge that there is also a strong lobby from some of those with lived experience of autism that they would rather they were not identified as having a 'problem' yet alone a mental health problem. There is probably more involvement of mental health services in autism than there is for ADHD. But there is still a need to much greater integration between paediatrics and mental health in the autism space. In particular many people with autism have coexisting mental health problems that are currently not recognised or appropriately treated.

248 Another difference between Australia and many other countries is the lack of a specific service for the mental health needs of those with intellectual disability. The RANZP does not yet recognise intellectual disability as a separate speciality across the life span and there are no specialists in the psychiatry of intellectual disability for children and adolescents. There are however moves by the RANZCP to explore the possibility of creating such a training post and this should be supported. Paediatrics is very involved

with this group but as with more mainstream mental health training in the psychiatry of intellectual disability is not strong within the paediatric curriculum.

249 Mental health problems are very common in those with neurodevelopmental disorder.

250 For ADHD, around 60% have oppositional defiant disorder and 20% conduct disorder, 20-25% an anxiety disorder, 15-20% depression, around 14% meet criteria for autism and up to 30% have a tic disorder, 15% will develop a substance use disorder. Other neurodevelopmental disorders are also common with around 13% having intellectual disability, almost 50% developmental coordination disorder, 30-35% having significant language problems and 15-25% specific learning difficulties with impairments in reading, writing and mathematics.

251 Although the reported rates of mental health problems and other neurodevelopmental disorders in children with autism vary considerably they are also raised with at least 60% children with autism having at least one additional diagnosable mental health disorder. Reported rates of ADHD are around 50% with similar rates for anxiety disorders. Obsessive compulsive disorder is also common (20-50% depending on the sample), rates of depression (which also appear to be very dependent on the sample) are between 10-30%. Rates of ODD and CD are not generally increased compared to the general population.

252 This extensive comorbidity means that many of the children who present to specialist mental health services will have autism and/or ADHD alongside their presenting mental health problems. Currently, because the CYMHS workforce is not experienced in managing ADHD, many cases, particularly of ADHD, are not picked up and for those where it is recognised treatment is not integrated but deferred to a paediatrician. Most ADHD is currently seen in paediatrics by clinicians who have had limited training in assessing and managing mental health problems. As a consequence, many mental health comorbidities are either not detected or are mislabelled. For example, emotional lability being mislabelled as anxiety. This means that treatment opportunities are missed or medication treatments are offered when psychological treatments would be preferable.

253 For optimal management it is therefore essential clinicians in mental health services can recognise and manage children with ADHD and autism and that paediatric services can either manage ADHD and autism with comorbid mental health problems or have the skills to identify these mental health problems and have good access to treating services. For this to happen there needs to be increased cooperation between mental health and developmental paediatrics.

254 Colocation of mental health and paediatrics and mental health within an Infant and Child Mental Health Hubs would be an excellent way to start to address these issues in a constructive way.

Specialist service responses to the needs of children living with both mental illness and a neurodevelopment disorder

255 The current siloes that separate neurodevelopmental and mental health disorders need to be dismantled and mental health services that incorporate services for those with neurodevelopmental disorders should be much more strongly integrated. This would allow access for children with these problems access to the truly multi-disciplinary, multi professional (and multi-agency) care that in mental health is a prerequisite for optimal care.

256 We have worked extensively developing a model of care for ADHD that has demonstrated high quality outcomes. This model has been published and has subsequently been discussed extensively in the literature.[7] The basis of the Dundee ADHD Care Pathway was structured, protocol driven evidence-based assessment, treatment initiation and continuing care that included the management of comorbid disorders and other important broader determinants of health (e.g. education, family functioning, welfare and justice). Whilst this care pathway was situated within a CAMHS service this was less important than the inclusion of psychiatry, paediatrics, psychology, nursing, allied health and social workers within the team.

257 One important lesson was that whilst ADHD is in some senses easy to treat it is difficult to treat well. A measurement-based approach to management was an essential component of optimising treatment outcomes. Unfortunately, this is not yet common practice for those managing ADHD and this is likely to be one important reason for the poor outcomes currently reported from routine care.

258 Another important lesson was that optimal care for those with ADHD required the flexibility to move from 'generic' care to 'specialist' care and back as circumstances demanded. It is therefore important for the specialist and generic services to have strong links with each other. This is the model adopted by the RCH neurodevelopmental disorders team who, although administratively located within mental health attend weekly meetings with developmental paediatricians and have collocated their clinic sessions to run in parallel to the developmental paediatric clinics.

259 Although this model was developed around the care of those with ADHD the model itself and the lessons learned are transferable to the broader infant and child mental health

[7] **Coghill D**., Seth S. Effective management of attention-deficit/hyperactivity disorder (ADHD) through structured re-assessment: the Dundee ADHD Clinical Care Pathway. 2015. Child and adolescent psychiatry and mental health 9 (1), 1-14.

setting. Indeed, aspects of the model were successfully adopted by the emotional disorders branch of the Dundee service. It has also been demonstrated that partial adoption of only certain aspects of the model e.g. structured assessments or measurement-based care can lead to some improvements in outcome.

STREAMING AND SPECIALISATION

Examples of services or systems that do not use age-based streaming

260 I am not aware of any services that completely abandoned age-based streaming. As stated above there are issues for those that work 0-25 where the 0-12 get left out.

261 There is one all age ADHD service in the Netherlands but this is very specialist and impact is limited as the team can't manage the demand that would come if it was going to manage all ADHD in the community.

Separate service entities and models of care

262 The models of care vary by presenting disorder rather than age but that when you stratify by problem you de facto also stratify to a significant degree by age. However, there are always exceptions and staff need to be skilled across the age range and prepared to work in this way.

263 For example:

(a) working with maternal/child mental health problems and attachment difficulties in this context will often mean working with infants and young children;

(b) working with neurodevelopmental disorders and the coexisting mental health problems will often start in childhood but continue into adolescents and youth;

(c) working with anxiety disorders will also start early and often continue but with different profiles and patterns as get older, similar with OCD and trauma-based problems all which will require more psychology input than psychiatry;

(d) depression is more likely to start at or after puberty and continue; and

(e) bipolar disorders, psychosis and personality disorders will also be more common in adolescence and youth but can often in retrospect be seen earlier in development.

264 This does not mean that we need specialist services for each group but that we need to think carefully about how these requirements can be best met and grouped. As described above at paragraph 108, in Tayside we split our 0 – 18 years CAMHS service into two functional units broadly defined as emotional disorders and neurodevelopmental

disorders and then these teams subdivided in the ways that they found best served the patients referred.

RESEARCH

Mental health research priorities

265 As in all areas of health there are multiple priorities for research that stretch from basic to clinical science and beyond to translational and implementation research.

266 Although there is much work needing to be done to understand the causes of mental health problems and this needs to be supported by national funders such as NHMRC, I think that the priorities for Victoria are the development and validation of new approaches to identification assessment, measurement and treatment of mental health problems in infants and children.

267 Measurement has been identified as a research priority for neuroscience and mental health in Victoria. This includes the use of mobile and digital technologies combined with artificial intelligence to provide accurate and more objective outcome measures that can be used both in assessment and in the optimisation and monitoring of care. These need to be integrated into measurement-based care approaches within evidence-based care pathways for which effectiveness and practical applicability must be demonstrated through randomised controlled trials and implementation science approaches.

268 There is also considerable opportunity to develop and assess new therapeutic approaches. The use of digital technologies to deliver these, particularly to more rural and remote locations is another related opportunity.

269 We are entering a phase where transdiagnostic research that looks at similarities and differences between groups is being increasingly highlighted. This has particular application to the development of more personalised decision making through the identification of new ways to stratify clinical samples that cut across the existing classification systems. In particular, the use of machine learning approaches to stratify clinical and population samples in ways that increase our abilities to predict treatment response of clinical course and outcome is a growth area in mental health

270 Similarly, big data driven research that harnesses the strengths of the electronic medical record and data linkage across registries will present increased opportunity in coming years.

Supporting research into the side effects of drugs used in mental health, and new emerging therapies

271 Research into the side effects of drugs used in mental health is an area that I have worked in for the last 15 years. Although there are many approaches to studying the adverse effects of medication all of which contribute to knowledge at different levels the most powerful approach currently is the work from myself and my collaborators in Hong Kong and researchers from across Scandinavia. These studies are using powerful new approaches and designs that explore date from very large linked national registries. This allows us to test hypotheses using methods like self-controlled case series where we look at within individual effects of medication (positive and negative) by comparing the subject with themselves during periods on and off medication. This work is growing and we have recently set up a large international consortium linking Australia with Hong Kong, Taiwan, Korea, the US and the UK. The limitation of this work in Australia comes from a lack of linked data that can look at broad health and social/educational outcomes and link them (through PBS data) to medication use.

272 We have also pioneered the use of innovative designs to assess long term adverse effects in a more controlled way[8] and to integrate sophisticated cognitive measures into long term follow up to assess potential neurocognitive impact of medications on the developing brain.[9]

273 The electronic medical record has a potential importance here also however money needs to be invested to optimise these systems for research.

The role of government in this research

274 The government hold the key to generating linked data sets and of course funding and supporting this work. We are ready to implement similar protocols to those already used in Hong Kong and Scandinavia once data linkage is established. The University of Melbourne and the Melbourne Children's campus has set data science including data linkage and big data studies as a priority.

[8] Inglis, et al, Prospective observational study protocol to investigate long-term adverse effects of methylphenidate in children and adolescents with ADHD: the Attention Deficit Hyperactivity Disorder Drugs Use Chronic Effects (ADDUCE) study. 2016. BMJ Open, 6(4), e010433.

[9] Coghill et al Cognitive Function of Children and Adolescents with Attention-Deficit/Hyperactivity Disorder in a 2-Year Open-Label Study of Lisdexamfetamine Dimesylate. CNS drugs. 2018;32(1):85-95.

Examples from other healthcare settings

275 As noted above, our work in Hong Kong,[10,11,12] and that in Scandinavia goes beyond medication issues to look at real world outcomes and consequences.

276 Another area of importance for Australia is to evaluate the long-term real-world impacts of infant and child mental health problems on individuals. This can also be established most effectively through data linkage.

277 For example, we are currently looking at educational and forensic outcome for ADHD. We have identified that, for education, NAPLAN scores are a sensitive measure of ADHD. We now need to establish whether optimised treatment impacts on these outcomes. We are still in the process of identifying offending outcomes that can play a similar role in demonstrating the benefits of optimised treatment but know this will be more complex due to a lack of standardisation in the way police, courts and prisons collect data.

The role of translational research

278 Translational research, as described above, is hugely important to establishing an evidence–based approach to mental health in Victoria.

279 The benefits are the development not just of evidence-based approaches but the translation and implementation of these into routine care with real life 'complex' patients. There are still a significant proportion of clinicians in specialist mental health settings and developmental paediatrics who refute the relevance of the evidence base to their own practice as they believe that their patients are just too complex for this to work.

280 In order to succeed we need research ready healthcare systems willing to self-reflect and acknowledge where improvement is required. Then need to harness this understanding and generate enthusiasm for change.

281 As mentioned several times already, our Dundee service was able to incorporate measurement-based care as an expected part of day to day work. The nurses implementing the protocols began to recognise the importance of research and actively support research from within the clinic. Several made the decision to become involved directly in research and were successful at implementing projects within the service.

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10 Raman et al 2018. Trends in attention-deficit hyperactivity disorder medication use: a retrospective observational study using population-based databases. Lancet Psychiatry, 5, 824-835.

11 Man et al. Association of Risk of Suicide Attempts with Methylphenidate Treatment. JAMA psychiatry. 2017.

12 Man KKC, Chan EW, Ip P, Coghill D, Simonoff E, Chan PKL, et al. Prenatal antidepressant use and risk of attention-deficit/hyperactivity disorder in offspring: population based cohort study. BMJ. 2017;357:j2350.

282 It is, however, important for these efforts to be supported by management and senior clinical staff. Staff soon tire of feeling that they are always pushing ball up a hill, so funding and capacity comes in to it.

283 It is also essential that we start to build effective large-scale research networks and alliances. In this respect there is a need to move from competition to collaboration and work in an inclusive way. There are several in existence however none are currently fully functioning, and most are unidisciplinary. Neurodevelopment Australia (**NA**) is a recently established group that includes researchers, clinicians, service users along with a range of other stakeholders. NA is committed to delivering improvements in health and wellbeing outcomes for those living with neurodevelopmental conditions, through cutting-edge research which informs innovative consumer programs, health policy and service delivery decisions. Although focussing on neurodevelopmental disorders there is a clear recognition that mental health is an important consideration. NA provides a template for true research integration and would be an important ally for the Collaborating Centre.

284 As demonstrated by NA it is essential that we include service users and carers to generate research ideas and develop protocols. The aim should be to generate an expectation that all will be involved in research much as has been done in cancer services. Partnerships with industry can also be key in developing these ideas into practice.

285 A Collaborative Centre for Infant and Child Mental Health would have as a main priority developing research and research capability with the infant and child space.

RESEARCH TRANSLATION

Embedding continuous learning and improvement in professional practice

286 Continuous learning and improvement needs to have time and importance given to it. It needs to be developed using modern approaches to learning and be based on clear evidence-based principles and implementable within the workplace.

287 At present, most training and learning is provided on an ad hoc basis with little strategic planning. The training given by mindful is excellent as far as it goes but is not comprehensive and does not cover lifelong learning.

288 This also requires active participation and clear relevance to practice.

The role of pre-service training providers

289 There is a very clear need for increased preservice training for all professionals involved in child mental health. Currently child and adolescent mental health training and education is given a very low priority and status in undergraduate medical, nursing and

allied health training. There is a strong argument that mental health should be given parity with physical health and as children and adolescents make up 20% of our population it is also important that child mental health should be given appropriate support and funding within mental health.

The role of professional and representative bodies

290 There are significant gaps in post graduate training opportunities for child mental health across the disciplines. Experience and training are very different and while there is considerable experience within the workforce the picture for training is very different. The professional and representative bodies could be doing much more to prioritise this need.

291 Currently much of the child mental health training in Victoria is delivered by mindful. This is of reasonable quality but still very limited in scope

292 A Collaborative Centre for infant and child mental health should work with mindful to further develop the potential for post graduate training in this area.

293 Whilst trainee psychologists do get exposure to child mental health during their professional training there is much less in the way of formal continuing professional training (in the way that there is for medical doctors in specialist training).

294 Paediatricians who want to work in the mental health space require considerably more training than is currently available to them.

295 Child psychiatry training posts are limited in number and doctors in training do not have good access to training in the 0–12 age group as services see relatively little in this age range with work more focussed on adolescents and youth.

296 There are very limited training opportunities for nurses who wish to work at a high level in specialist mental health settings

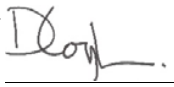
297 Similarly, opportunities for allied health professionals to receive professional training in child mental health are very limited.

The role of services and service leaders

298 Compared to the UK, the training of junior doctors in Australia is much more service driven which limits true opportunities for learning and training. In the UK, training grade doctors are centrally funded and their posts supernumerary to the clinical service which means that teams do not rely on the trainees and that they are able to spend time actually learning (which of course does involve delivering services).

299 Service leaders need to prioritise training and workforce development and ensure that their staff are able to deliver evidence-based assessments and treatments.

300 Again, a Collaborative Centre for infant and child mental health should work with services and service leaders to develop priorities for workforce training and alongside training providers implement these across the workforce.

sign here ► 

print name DAVID COGHILL

date 1st May 2020

Royal Commission into
Victoria's Mental Health System

ATTACHMENT DRC-1

This is the attachment marked 'DRC-1' referred to in the witness statement of Professor David Rockwell Coghill dated 1st May 2020.

CURRICULUM VITAE

Dr David Rockwell Coghill

Melbourne, 28th March 2020

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2006 -2010	**University of Dundee** Division of Medical Sciences, Centre for Neuroscience (Supervisor Keith Matthews MD., PhD) **MD Awarded 2010.** **Thesis Topic:** *Heterogeneity in Hyperkinetic Disorder*

2. Professional Career:

Feb 2016 - present	Financial Markets Foundation Chair of Developmental Mental Health, Department of Paediatrics, University of Melbourne
July 2016 – Sept 2017	Director Mental Health, Royal Children's Hospital Melbourne
Feb 2016 - present	Professor of Developmental Mental Health, Royal Children's Hospital Melbourne
Feb 2016 - present	Honorary Research Fellow, Murdoch Children's Research Institute, Melbou
Feb 2016 - present	Honorary Professor of Child and Adolescent Psychiatry, University of Dundee
Oct 2014 – Jan 2016	Professor of Child and Adolescent Psychiatry, University of Dundee
Nov 2013 - Present	Visiting Professor of Child and Adolescent Psychiatry, Ningbo University, China
May 2011 – Oct 2014	Reader in Child and Adolescent Psychiatry, University of Dundee
Mar 1997 – May 2011	Senior Lecturer in Child and Adolescent Psychiatry, University of Dundee
Mar1997 - Jan 2016	Honorary Consultant Child and Adolescent Psychiatrist, NHS Tayside
Sep 2010 - Present	Visiting Professor of Child and Adolescent Psychiatry, Central Institute of Mental Health, Mannheim, Germany
Sep 1994 – Mar 1997	Consultant Child and Adolescent Psychiatrist: Fife Healthcare NHS Trust
Aug 1991 – Sep 1994	Senior Registrar in Child and Adolescent Psychiatry: Lothian Child and Adolescent Psychiatry Higher Training Scheme
Aug 1989 – Aug 1991	Registrar in Psychiatry: The Royal London Hospital, London & Goodmayes Hospital, Essex
Aug 1988 – Aug 1989	SHO in Psychiatry: Goodmayes Hospital, Essex (1988-1989)
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Aug 1986 – Aug 1988	SHO/SHO in Community Child Health: City and Hackney Health Authority, London & St. Bartholomew's Hospital, London
Feb 1986 – Aug 1986	SHO in General and Emergency Paediatrics: Queen Elizabeth Children's Hospital, London
Aug 1985 – Feb 1986	SHO in Care of the Elderly: The London Hospital, Mile End, London
Feb 1985 – Aug 1985	SHO in Casualty: St Mary's Hospital, London & St. Charles Hospital, London
Aug 1984 – Feb 1985	Senior House Officer in Genitourinary Medicine: Praed St. Clinic, St. Mary's Hospital, London
Feb 1984 – July 1984	House Officer in Medicine: Western General Hospital, Edinburgh and the Northern General Hospital, Edinburgh
Aug 1983 – Feb 1984	House Officer in Surgery: Royal Infirmary of Edinburgh and the Princess Margaret Rose Orthopaedic Hospital, Edinburgh

3. Other Qualifications:

1991	Membership of the Royal College of Psychiatrists (by examination)
2010	Fellowship of the Royal College of Psychiatrists
2017	Fellowship of the Royal Australian and New Zealand College of Psychiatrists

4. ADMINISTRATIVE AND MANAGEMENT RESPONSIBILITIES

Melbourne (2016-present)

A. University of Melbourne
- 2018 – Present Deputy Head Department of Paediatrics
- 2017- Present Chair of Examiners for RHD
- 2017 – Present Member of the Melbourne Children's Graduate Research Training Committee
- 2017 – Present Member of the Academic Board
- 2016 – Present Chair of Department of Paediatrics HEAG

B. Royal Children's Hospital
- 2016 – 2017 Director RCH Mental Health
- 2016 – Present RCH Mental Health Senior Management Group

C. Department of Health and Human Services
- Member of the DHHS 10 year Mental Health Plan - Innovation reference group

D. Australian ADHD Professionals Association
- Director and Vice Chair

E. Victorian MRFF Neuroscience Grand Challenge working group
- Member

F. Australian Child and Youth Mental Health Clinical Trials Network
- Co-Chair of Steering Group

Current Administrative and Management Responsibilities With International Organizations

A. European Network on Hyperkinetic Disorders (EUNETHYDIS)
- Member of Executive steering group (2002-present)

B. EUNETHYDIS International Conferences
- Founder and Chair (2010 – present)

C. European ADHD Guidelines Group
- Executive Member of the steering group (2003-present)

D. ECNP Child and Adolescent Network and Clinical Trials Network
- Member of the Steering Group (2009 – present)

E. World Psychiatric Association ADHD section
- Member of Executive Committee (2005-present)

University of Dundee (1997 - 2016)

- 2006 – 2016: Course organiser BMSc in Medical Psychology responsible for overall course organization and development, liaison with Department of Psychology, selection of students, and organization of assessments.
- 2007 – 2016: Course leader Child and Family System for undergraduate medicine course
- 1997 – 2007: System Convenor Behaviour and Psychiatry System
- 1997 – 2007: University Undergraduate Medical Education Committee
- 1997 – 2007: Faculty of Medicine Exam Committee
  Major Achievements:
  I designed and led a complete restructuring of the "Behaviour and Psychiatry" undergraduate teaching programme by disaggregating the original systems and re-integrating these with more general medical aspects of the curriculum (Child Health, Old Age Medicine and Neurology) and within a life course framework. This has resulted in a much more integrated curriculum and significantly improved feedback from students. I have developed the BMSc Medical Psychology course which has always been fully subscribed with all students achieving either first class or upper second degrees)

B. NHS (clinical)

i. Local

i. Strategic lead for the development of CAMHS assessment pathways 2014
ii. Strategic Clinical lead for Autism Assessment Pathway Development 2010 – 2012
iii. Management of the ADHD Waiting List Initiative 2007 - present
iv. Chair of the Tayside Division of Child and Adolescent Psychiatry 2000-2003

v. Vice Chair Tayside Psychiatry Speciality Advisory Committee 2002 – 2005
vi. Chair Child and Adolescent Psychiatry Clinical Governance Committee 2002 – 2005
vii. Child and Family Psychiatry Training Committee 1999 – 2008
viii. NHS Tayside Drugs and Therapeutic Committee, Mental Health Sub Group. 2003 – 2008
ix. NHS Tayside New Medicines Implementation Panel 2003 – 2005
x. Member Tayside Local Negotiating Committee 1999 – 2002

Major Achievements:

As Chair of the Tayside Division of Child and Adolescent Psychiatry I designed and implemented a major redesign of the structure and delivery of clinical Child and Adolescent Mental Health Services in Tayside (approx. 150 staff). This redesign ensured services were being provided by appropriately trained staff and equality of service delivery across Tayside. The model was novel and evidence based and has been used as a template by other services across the UK and internationally.

Development of specialist care pathways for children with developmental disorders (attention deficit hyperactivity disorder, autism, learning difficulties). I have developed and led an internationally recognised highly structured evidence-based multidisciplinary clinical pathway for children with ADHD that emphasises the collection of routine outcome measures and includes a unique and innovative nurse led assessment, titration and continuing care clinics that maximise clinical efficiency whilst ensuring high clinical standards.

Development of a remote pre assessment protocol to facilitate online information gathering using the DAWBA, reduce waiting times and improve access to services for those living in more remote circumstances.

Development and implementation of evidence based medication protocols for child and adolescent mental health.

Development clinical governance practice across the service

Reduction of ADHD waiting times from 18 – 24 months to < 18 weeks whilst maintaining clinical standards

ii. National (NHS and Governmental)

i. **Member of the psychiatric expert panel of the Medicines and Healthcare Products Regulatory Agency (MHRA)** providing expert advice on specific regulatory questions regarding psychiatric medications (2014 – present)

NHS Quality Improvement Scotland (QIS)/Health Improvement Scotland (HIS)

2011 - 2; Member HIS ADHD Review Group

2010 – 2011; Chair NHS QIS ADHD Implementation project group.

2009 – 2011; Member NHS QIS ADHD Audit and Review group

2005 – 2008; Member of the NHS Quality Improvement Scotland ADHD Audit development and implementation group

- 2005 – 2008; Member Quality Improvement Scotland parents and users ADHD review

As part of these QIS groups I have played a central role in developing and executing both the 2008 and 2012 QIS/HIS audits of SIGN guidelines and ADHD Services over Scotland and the QIS evaluation of patient and parent views on ADHD treatment in Scotland. This involved developing and implementing the audit tools across all NHS Scotland Health Boards and preparing and publishing the findings. As chair of the implementation group I assembled a high quality multidisciplinary team to develop strategies for implementing and assessing novel identification strategies into practice.

ii. Multi-agency UK ADHD Criminal Justice Research Group (Chair Dr Suzy Young)

2010 – 2013 Member of Steering Group Committee. This Department of Health (E&W) funded group has been asked to coordinate a program of research to evaluate the potential benefits of improving the recognition and treatment of ADHD in the context of the criminal justice system.

UK Adult ADHD Network (Chair Prof. Phillip Asherson)

- 2011- 2015 Member of Steering Group Committee.

iv. **Chief Scientists Office mental health research portfolio steering group**

- 2003 – 2011

Scottish Executive Youth Justice Advisory Group

- 2001 - 2006 This very active group advised the Scottish Government on the development of programmes for tackling youth offending.

Scottish Intercollegiate Guidelines Network

- 1999 – 2001 and 2008 -2009 Advisor to the Scottish Intercollegiate Guidelines Network ADHD guidelines development group

vii. National Institute for Health and Care Excellence (NICE)

2013. Expert advisor for the Technology assessment of aripiprazole in the treatment of child and adolescent bipolar disorder

- 2006. Contributor to Consensus Conference: Diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) in children, young people and adults
- 2004. Contributor to Consensus Conference: Diagnosis of bipolar disorder in children and adolescents

viii. **Ministerial Working Group on the Treatment of Sex Offenders**

- 2003-2006. I was invited onto this group by the deputy Justice Minister. This group advised the Justice department on the provision of treatment for sex offenders both in custody and in the community.
- 2002 Scottish advisory committee on drug misuse: Psychostimulant Working Group, contributed to the writing of report "Scottish Advisory Committee on Drug Misuse: Psychostimulant Working Group Report".

ii. Royal College of Psychiatrists

i. 1999 – 2003 Elected member of the UK Executive Faculty of Child and Adolescent Psychiatry Royal College of Psychiatrists. As a member of the Executive I played an active part in the business of the Faculty and sat on several UK Working Groups.

- Chair of the Child and Adolescent Faculty Standing Group on Psychopharmacology 2000-2003.
- College on-line CPD Development Group 2000-2003. The Young Defendants Working Group. Young People Legislation and Rights Sub Group 2000-2003.
- The recovered memory working party 2003-2005.

ii. Child Psychiatry Representative for the Scottish Division Research Advisory Group (2000-2008).

iii. National Panellist for Child and Adolescent Psychiatry (1998-2009).

iii. Previous Administrative and Management Responsibilities With Other International Organizations

i. Member of the Coordinating group for the European Network of Paediatric Research at the European Medicines Agency (ENPR – EMA) (2010 – 2017)

ii. Member of the psychiatric expert panel of the European Medicines Agency providing expert advice to the EMA on specific regulatory questions regarding psychiatric medications (2014 – 2017)

iii. The National Attention Deficit Disorder Information and Support Service (ADDISS) member of professional board (2004 – 2017)

iv. Member of the Global ADHD consensus development group (2003-2009)

v. Member of the ADHD Neuroscience Network (2005-2009)

vi. Member of the International ADHD Genetics Collaboration (2007 – present)

4. Teaching Activity:

University of Melbourne (2016-present)
My teaching responsibilities in Melbourne are still being developed although I regularly teach junior medical staff from psychiatry and paediatrics and clinical psychologists.

- Redesigning the child and adolescent component of the UoM MD course with colleagues in Paediatrics, Psychiatry and General Practice
- Development of 2 modules for Department of Psychiatry Online Masters of Psychiatry course
- Delivery of teaching to the online and face to face Masters of psychiatry course (Awarded the 2017 Master of Psychiatry Teaching award by Department of Psychiatry for teaching on this course)
- Regular teaching to RCH psychiatry registrars and fellows, RCH paediatric fellows, RCH clinical and neuropsychologists, Victorian child and adolescent psychiatry speciality trainees and Victoria CAMHS staff on the Mindful developmental psychiatry course

University of Dundee (1997-2016)
Undergraduate

a. MB ChB

- 1997 – 2007: System Convenor Behaviour and Psychiatry System (all years)
- 1997 – 2016: Setting, standard setting, marking and conducting examinations for students at 3rd, 4th and 5th MB ChB exams (includes regular participation in written/online exams, Objective Structured Clinical Examinations (OSCEs) and portfolios)

b. 3rd MB ChB

- 1997 – 2016: Course Organizer Child and Family System (36 hours a year contact – includes lectures, small and large group work, interactive workshops)
  Designed and deliver an innovative, highly structured, but very interactive block of teaching, designed to equip the students with a set of systematic tools for assessing, children, their families and parent child interactions in a structured manner. This block is consistently rated highly by staff and students alike.

c. 4th MB ChB

- *1997 – 2016: Organize and deliver weekly clinical teaching in child psychiatry (6 hours/week).*
- *1997 – 2016: Organize and supervise 4th year projects in Child and Adolescent Mental Health. An average of 4 students a year conduct one of these projects (contact time 20 hours per student)*

d. 5th MB ChB

- *1997 – 2016: Organize and deliver Special Study Modules/Student Selected Components in clinical child and adolescent psychiatry. These comprise a 4 week clinical attachment to CAMHS. On average of 4 students per year select this SSC.*

e. Honours BMSc Medical Psychology

- 2006 – *2016*: Course Leader. *Between 6 and 9 (numbers rising) students take a BMSc in medical psychology a year. I have overall responsibility for the course and meet with the students on a monthly basis to ensure they are progressing well. In addition I am responsible for organizing and conducting the Viva exam and evaluating the final grade with the external examiner. In addition I regularly supervise both clinical and research components of the course (40 hours per student per project). Over the past 3 years several BMSc students have won prizes at National and International conferences for their work. For the last 2 years students under my supervision have been awarded Royal College of Physicians Wolfson Intercalated Awards to support their BMSc research.*

f. Hons BSc Pharmacology/Hons BMSc Pharmacology

- *Lectures (3 hours contact time)*
- *Exam setting and marking (8- 10 hours)*

Postgraduate

a. Postgraduate research training and supervision

- 2008-2016 Neurosciences PhD/MD monitoring committee
- 2010 – 2014 PhD Supervisor Blair Johnston (Thesis Title: *Development of a Hybrid Voxel Based Morphometry (VBM), Feature Based Morphometry (FBM), Support Vector Machine (SVM) Image Analysis Technique – Prediction of Treatment Non-Response using Individual Subject Neuroanatomical Scans in Attention Deficit Hyperactivity Disorder (ADHD)*) PhD awarded 2014
- 2010 - 2013 –MD Supervisor Dr Helen Smith: (*The Neuropsychology of Conduct Disorder*) MD awarded 2014
- 2005 – 2010: Co-supervision of 2 MD students (Clinical lecturers)
    - Dr Sarah Seth (Thesis title: *Understanding Neuropsychological Heterogeneity in ADHD*)
    - Dr John Graham (Thesis title: *The Functional Pharmacogenetics of Carboxylesterase*)
- 1997 – *2016*: Research training and supervision of ST 4-6 trainees in child and adolescent psychiatry. Responsible for organizing and providing basic research training for all higher specialist trainees in child and adolescent psychiatry (3 – 4 at any one time – 1 hour/week). All trainees to date have presented their research findings at a national or international research meeting (poster and/or oral presentation). One clinical trainee moved straight into a Clinical Senior Lecturer post.

b. Scottish National Academic Training Programme for higher trainees in child and adolescent psychiatry

1997 – *2016*: Lectures, workshops and tutorials on various topics including; ADHD, Anxiety disorders, Child Sexual Abuse, Psychopharmacology, Developmental Psychology (contact time 10 hours/year)

c. Tayside Child and Adolescent Psychiatry Higher Specialist Training Scheme

1997 – *2016*: Clinical and educational supervision of ST 4-6 trainees in child and adolescent psychiatry (2 hours/week)
1997 – 2009: Facilitation of journal clubs and grand rounds for ST 4-6 trainees in child and adolescent psychiatry (2 hours/month)

d. NHS Tayside General Psychiatry Training Scheme

1997 – present: Child Psychiatry and Developmental Psychology teaching for ST 1-3 trainees on the NHS Tayside general psychiatry training scheme (Lectures, small group teaching, workshops – contact time 12 hours)
1997 – *2016*: Educational and clinical supervision of ST 1-3 psychiatric trainees and ST2 GP trainees in child and adolescent psychiatry (2 hours/week)

e. Other NHS Tayside Training Schemes

2005 – *2016*: Supervision of ST 4-6 forensic psychiatry trainees in child and adolescent psychiatry.
2006 –*2016*: Supervision of ST 4-6 general adult psychiatry trainees in child and adolescent psychiatry.
2007– *2016*: Supervision of ST 4-6 psychiatry of learning disability trainees in child and adolescent psychiatry.
2009 – *2016*: Supervision of ST 4-6 paediatric neurology trainees in child and adolescent psychiatry.

f. International trainees

Over the past 10 years I have hosted a broad range of international postgraduate psychiatrists who are seeking exposure to high quality clinical experience and/or to experience working in an academic setting. Visitors stay for between 1 month and 12 months and have come from several European countries, China and the Middle East.

g. Royal college of Psychiatrists

2003 - 2006: Royal College of Psychiatrists working group on online Continuing Professional Development. Development and produced the College's first online CPD package (Pharmacological Management of ADHD).

h. British Association for Psychopharmacology (BAP)

- 2012 – present : Scientific Editor for the C&A Module for the BAP Online CPD Resource
- 2012 – 2016: Lead the development of BAP guidance on the use of pharmacological treatment in autism
- 2004 – 2016: Child and Adolescent Psychiatry Training Module:

- Lecture: The drug treatment of mood and anxiety disorders, 2004 - 2012
- Lecture: The drug treatment of ADHD 2013, 2014, 2015, 2016
- Workshop: Complex cases complex pharmacology, Drug Treatment of ADHD, 2004 - 2016

i. European College of Neuropsychopharmacology (ECNP)

Child and Adolescent Psychopharmacology Residential School Co-organizer and lecturer (2012 - present)

j. European Network for Hyperkinetic Disorders International Conferences (EUNETHYDIS International Conferences): I am the Chair of this educational charity that runs a biannual 4 day international conference on ADHD and related disorders for upwards of 1500 delegates from around the globe.

Public Education

a. Netdoctor.co.uk

- 2005 – Present: Edit and review online content related to ADHD for medical information website. This information is aimed at raising public awareness and increasing of medical conditions.

b. ADHD Information and Support Service (ADDISS)

- 2002 – Present: Edit and review online content, patient information and other educational materials developed by this national ADHD charity. This material is aimed primarily at primary care, education, social work and the general public.

6. PROFESSIONAL ACTIVITIES:

1. Editor, Journal Child Psychology and Psychiatry, 2009 - 2016
2. Editor, European Child and Adolescent Psychiatry, 2009 - 2013
3. Editorial Board, CNS Drugs. 2012 – present
4. Editorial Board, Journal of Attention Disorders, 2007 - present
5. Editorial Board, Child and Adolescent Psychiatry and Mental Health, 2007 - present
6. Editorial Board Journal, of ADHD and Related Disorders, 2009 - 2012
7. Editorial Board, Mind & Brain, The Journal of Psychiatry, 2010 - present
8. Section Editor Scandinavian Journal of Child and Adolescent Psychiatry and Psychology, 2013 - present
9. Member of the Royal College of Psychiatrists since 1991
   Fellow of the Royal College of Psychiatrists since 2010
   a. Member of the National Executive of the Royal College of Psychiatrists Child and Adolescent Psychiatry Section, 1999 – 2005
   b. Member of the Executive of the Scottish Child and Adolescent Psychiatry Section of the Royal College of Psychiatrists, 1995 – 2005
   c. Academic secretary of the Executive of the Scottish Child and Adolescent Psychiatry Section of the Royal College of Psychiatrists, 2003 – 2005
10. Member of the American Academy of Child and Adolescent Psychiatry since 1999
11. Member of the Association for Child and Adolescent Mental Health, 1991 – present
12. Member of the British Association of Psychopharmacology (BAP), 1997 – present
    - Scientific Editor for the C&A Module for the BAP Online CPD Resource
    - Member of BAP guidelines development groups for;

- ADHD in adolescents and adults,
- The treatment of depression
- Bipolar disorders.

13. Member of the European College of Neuropsychopharmacology, 2009 – present
    - Member of the ECNP Child and Adolescent Network Steering Group, 2009 - present

14. Member of the European Network for Hyperkinetic Disorders (EUNETHYDIS), 2002 – present
    - Executive Member of EUNETHYDIS, 2005-present
    - EUNETHYDIS Conference Program Committee, 2005 - present
    - Chair EUNETHYDIS International Conferences, 2010 – present

15. Inaugural Vice President of the Australian ADHD Professional's Association

16. Member of the British Medical Association, 1984 – 2016

17. Executive Member of the European ADHD guidelines group (EAGG), 2003-present

18. Member of the Global ADHD consensus development group, 2003 - 2008

19. Member of the ADHD Neuroscience Network, 2005-present

20. Member of World Psychiatric Association Child and Adolescent section committee, 2005-present

21. Member of the International ADHD Genetics Collaboration, 2007 – present

22. The Attention Deficit Disorder Information and Support Service (ADDISS) – the National ADHD Charity, member of professional board. 2004 – present

23. Referee for numerous journals including: Lancet, American Journal of Psychiatry, JAMA, Journal of Child Psychology and Psychiatry, Child and Adolescent Psychiatry and Mental Health, BMJ, Archives of diseases in childhood, European Child and Adolescent Psychiatry, Behavioural and Brain functions, Biological Psychiatry, British Journal of Psychiatry, Neuroscience and Biobehavioural reviews, Neuropharmacology, American Journal of Medical Genetics, Child Care and Health, Psychological Medicine, Child Psychiatry and Mental Health, Journal of Attention disorders, Experimental Gerontology, Clinical Evidence, Drug Safety, Drugs, CNS Drugs, Drugs and Therapeutic Bulletin, Health and Quality of Life Outcomes, Human mutation, Journal of child and Adolescent Psychopharmacology, Neuroscience Letters, Journal of the Royal Society of Medicine, European Archives of Psychiatry and Clinical Neuroscience, Human Psychopharmacology, Expert opinion on Pharmacotherapy, Expert opinion on Neurotherapeutics, Neurotoxicology and Teratology, Nicotine.

- Referee for grant awarding bodies including: National Health and Medical research Council (NHMRC), The Welcome Trust, The Medical Research Council, National Institute of Health Research (UK), The Chief Scientists' Office, HTA, Action Medical Research, The Kings Development Fund, ZonMW (Netherlands)

7. RESEARCH ACTIVITY
Melbourne (2016-present)

This role is still developing however I have already established several lines of research.

- I am currently CI on one NHMRC funded research project investigating variability in mental health care for children and adolescents in Australia (CIA H Hiscock).
- Two further project grants are under review for the 2018 NHMRC funding round.
- With Christos Pantelis (Department of Psychiatry) and neuropsychology colleagues at RCH and MCRI I am conduction analyses of our combined neuropsychological data using the CANTAB battery on health subjects in order to investigate cognitive development across childhood as an indicator of brain development. Whilst this data is of interest in its own right we are using it as pilot data for an ARC discovery project grant which will be submitted through the Department of Psychiatry.
- I am leading two pilot projects focused on irritability. This is a relatively new and rapidly developing line of research internationally in which we are able to collaborate with other leading international groups at NIMH in the US and Porto Alegre in Brazil. One study focuses on developing a better understanding of the relationships between the cognitive and behavioural in children presenting with irritability and the other is a pilot for an RCT of Collaborative Problem Solving therapy for children with irritability.
- Developing a programme of research investigating the utility of objective measures and wearable devices to measure outcomes in ADHD. This involves collaboration with the newly formed Complex Human Data Hub in the School of Psychological Sciences and with two medical technology companies QbTech from Sweden and Neurotech from Israel.
- I am involved in an exciting interdisciplinary neuropsychological study into the effects of cognitive enhancers in complex problem solving with colleagues in the Brain, Minds and Markets Laboratory at the Faculty of Business and Economics, University of Melbourne. I am also working on the development of several other research proposals with the same group and with groups at the University of Bonn.
- I am working of several secondary analyses of longitudinal datasets from MCRI. These analyses, several of which have resulted in manuscripts ready for submission, are focused on testing hypotheses about the complex relationships between symptoms, cognition and impairment that were generated from my studies in ADHD conducted at university of Dundee. Results so far support the hypothesis with further analyses ongoing. I supervise Melissa Mulraney who has a DECRA application under review to further analyse data from the Lifecourse studies at MCRI.
- I continue to collaborate with colleagues in Europe and across the world.
    - Data from the EU funded ADDUCE project for which I am the coordinator in currently under analysis and will be submitted for publication in 2018
    - I am continuing to collaborate with colleagues in Sardinia and across Europe on a neuropsychopharmacological project into aggression which forms part of the EU funded MATRICS programme
    - Data from the EU funded STOP project, which focuses on suicide prevention, is in preparation and under submission with high level journals
    - With colleagues from UCL and Hong Kong University I am continuing to analyse pharmacoepidemiological and pharmacovigalence data from large integrated databases. We have recently agreed to extend these studies to look at the application of machine learning and AI approaches to these data with a focus on predictors of both efficacy/effectiveness and safety/acceptability
    - I am the academic lead for several primary and secondary analyses of data from pharma sponsored trials of ADHD medications.
    - Network meta-analyses on medication treatments for ADHD and pharmacological and non-pharmacological treatments for depression are under submission and a metabolomics analysis of adolescent depression have recently been published. Further NMA are being conducted. All studies conducted with international collaborators.
    - Evidence synthesis work with the European ADHD Guidelines Group continues with papers under review and in development.

Dundee (1997 – 2016)
A. Research Supervision:
The Dundee Developmental Research Group comprised;

University of Dundee

- Prof David Coghill (Lead)
- Prof Keith Matthews
- Prof Douglas Steele
- 1 Postgraduate Research Student (PhD)
- 1 Clinical Research Fellow (MD)
- 1 Clinical Trials Manager
- 1 Post-Doctoral Research Assistant
- 2 Research Technician
- 3 Research Nurses

University of Dundee Collaborators

- Dr Jonathon Berg (Senior Lecturer in Clinical Genetics)
- Prof Tom MacDonald (Professor of Clinical Pharmacology)

Data visualization group

- Prof Gair Dunlop (Professor of Film Making)
- Dr Alastair Geddes (Senior Lecturer in Geography)
- Dr Nicolas Hines (Lecturer in Computing)
- Dr Chris Lim (Lecturer in Product Design)
- Dr Lilia Gomez (Graphic Design)
- Dr Shone Matthew (Research Physicist)

NHS Tayside

- 2 Clinical Research Fellows (MD)
- 4 Consultant Psychiatrists
- 2 Higher Specialist Trainees
- 1 Research Nurse

University of Strathclyde

- Dr Sinead Rhodes (Senior Lecturer in Psychology)

The group had strong research collaborations with a wide range of other groups across The UK, Europe, North America and Asia.

- Numerous visiting PhD students, post docs and clinical researchers have spent between 1 and 12 months in my research group from several countries e.g. China, Italy, Germany, Portugal, Saudi Arabia, Palestine, Oman

- Successfully supervised the research work of numerous of BMSc students, MBChB students, junior and senior clinical trainees, often resulting in publications in peer-reviewed journals and presentations at national and international conferences several of which have been awarded prizes.

B. Conferences and Meetings Organized:

1. Joint organizer, Australian ADHD Professional Association Annual Meetings, Melbourne 2017, Sydney 2018
2. Joint organizer, European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Residential Research Meetings, Valencia Oct 2005, Bruges Oct 2006, Sardinia Oct 2007, Manheim Oct 2008, Winchester Oct 2009
3. Chairman and Organizer European Network on Hyperkinetic Disorders EUNETHYDIS International ADHD Conferences; VU University Amsterdam, May 2010; International conference Centre, Barcelona, May 2012, Istanbul, May 2014, Berlin 2016, Edinburgh 2018.
4. Joint Organizer European College of Neuropsychopharmacology Residential School for Child and Adolescent Psychopharmacology, Venice, 2012, 2014, 2015, 2016
5. Chair and organizer ADHD master classes, Bieerse, Belgium April and October 2002, March 2003
6. UK Adult ADHD Network, London June 2012, Expert workshop and conference on transition issues for ADHD

7. Chair and organizer whole day CPD workshop on child and adolescent psychopharmacology, Royal College of Psychiatrists Annual Residential Meeting, Cardiff, 2002
8. Chair and organizer, Psychopharmacology update, Child and Adolescent Annual Residential Meeting, 2001, 2002, 2003, 2004
9. Chair and Organizer British Association of Psychopharmacology National Conference on child and Adolescent Psychopharmacology, London 2002
10. Chairman and Organizer European ADHD clinical research meeting, Edinburgh June 2008

C. Invited Lectures at International and National Meetings:

I have made more than 300 invited presentations at National and International Meetings over the past 7 years. The feedback from these presentations has been very positive and I have gained a reputation for being able to make a complex message easy to understand and to be able to shift from high science to clinical practice with ease.

Selected Keynotes and Invited Presentations since 2001

1. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting Oslo 2001, *Broadening the Neuropsychological Deficit in ADHD*
2. Royal College of Psychiatrists, Psychopharmacology update, Child and Adolescent Annual Residential Meeting, Presentations, York 2001, *Using Risperidone in Child Psychiatric practice*
3. BAP national conference depression, Edinburgh, February 2001 *Managing depression in children and adolescents*.
4. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Sardinia 2002, *Methylphenidate Restore Visual Memory in ADHD*
5. Royal College of Psychiatrists, Psychopharmacology update, Royal College of Psychiatrists Child and Adolescent Annual Residential, York 2002, *Stimulants*
6. CPD workshop on child and adolescent psychopharmacology, Royal College of Psychiatrists Annual Residential Meeting, Cardiff, 2002, *ADHD treatments*
7. 5th ADDISS International Conference, London November 2002, *Understanding NICE*
8. BAP national conference on Child and Adolescent Psycho-pharmacology, November 2002, London *Chair and Recent Advances in ADHD*.
9. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Santorini 2003 *Whither causal models in ADHD*
10. Royal College of Psychiatrists, Psychopharmacology update, Royal College of Psychiatrists Child and Adolescent Annual Residential Meeting, York 2003, *Antidepressants*
11. Royal Society of Medicine annual child psychiatry conference, London May 2003, *Drug treatments for ADHD*
12. Royal Society of Medicine annual child psychiatry conference, London May 2003, *ADHD and Bipolar Disorder*
13. Royal Society of Medicine Annual Child Psychiatry Conference, London May 2003, *ADHD and substance misuse*
14. Association for Child Psychiatry and Psychology Annual Conference, London March 2004, *Making the most of scant resources*
15. Royal College of Psychiatrists, Psychopharmacology update, Child and Adolescent Annual Residential Meeting, York 2004, *Managing ADHD*
16. British National Formulary Prescribing Excellence conference, London, May 2004, Debate: *Not enough medicines are being used for children with behaviour problems*

17. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Oslo 2004, Neuropsychological predictors of medication response.

18. 6th ADDISS International Conference, Liverpool October 2004, *Compliance matters*

19. Paediatric CNS Educational Symposium, Vienna, Austria February 2005, *Transition of Methylphenidate (MPH) to OROS MPH*

20. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Valencia 2005, *Causal inference in ADHD*

21. American Academy of Child and Adolescent Psychiatry, Toronto October 2005 Chair and presenter *ADHD Observational Research in Europe (ADORE), Introduction and Study design*

22. American Academy of Child and Adolescent Psychiatry, Toronto October 2005 Chair and presenter *ADHD Observational Research in Europe (ADORE), Growth in ADHD*

23. 7th ADDISS International Conference, London November 2005, *Intelligent Prescribing*

24. European ADHD Symposium, Barcelona February 2006*, The impact of ADHD on the developing child*

25. Middle East Child and Adolescent Psychiatry Societies Conference, Cairo, Egypt, March 2006, *The treatment of ADHD, practical solutions*

26. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Bruges 2006, *Getting guidelines into clinical practice*

27. Regional Medical Meetings Weimar, Gottingen and Hannover, Germany, June 2006, *The ADORE Study* and *The European Guidelines on the use of Long Acting Medications For ADHD*

28. Royal College of Paediatrics and Child Health, York, June 2006, *Growth in ADHD – cause or effect*

29. British Medical Journal Paediatric Masterclasses, London, September 2006, *Attention Deficit Hyperactivity Disorder (ADHD). Recent Advances and Controversies*

30. European ADHD Conference, Bruges, Belgium October 2006, *ADHD European Guidelines: Addendum on Long Acting Preparations (Results of the recent European Expert Working Group)*

31. National Institute for Clinical Excellence ADHD Consensus Conference, London October 2006, *The value and limitations of the concepts of ADHD and hyperkinetic disorder in guiding treatment decisions*

32. American Academy of Child and Adolescent Psychiatry, San Diego October 2006 The Development of the *European Guidelines for the use of long acting medication in ADHD*

33. Middle East Child Psychiatry Masterclass, Cairo, Egypt, November 2006, *European Guidelines For The Treatment of ADHD*

34. British Medical Journal Paediatric Masterclasses, Manchester, November 2006, *Attention Deficit Hyperactivity Disorder (ADHD). Recent Advances and Controversies*

35. Læknadagar 2007, Icelandic annual medical conference, Reykjavík, Iceland, January 2007, *Early diagnosis and treatment of emotional and behavioural disorders in children and adolescents*

36. 9th World Congress on Innovations in Psychiatry, London March 2007, *The management of complexity in ADHD*

37. 8th ADDISS International Conference, London March 2007, *Intelligent prescribing*

38. German society for Child and Adolescent Psychiatry, Berlin, Germany, May 2007, *European ADHD Guidelines*

39. British Association for Psychopharmacology, Bipolar Disorder Guidelines Consensus Group Meeting, London, May 2007, *Child and Adolescent Bipolar Disorder*

40. Mexican National congress for Paediatric Neurologists, Acapulco, Mexico, May 2007, *European Approaches to ADHD – putting evidence into practice*

41. Royal College of Physicians, London, June 2007, *Managing Comorbidity in developmental disorders*

42. 39th International Danube Symposium for Neurological Sciences, Wurzburg, June 2007, *The ADORE Study, Design and baseline findings*

43. 39th International Danube Symposium for Neurological Sciences, Wurzburg, June 2007, *ADHD European Guidelines*

44. 39th International Danube Symposium for Neurological Sciences, Wurzburg, June 2007, *ADHD Pharmacological Pathways and treatments*

45. Japanese National Mental Health Forum, Tokyo, July 2007*, Medication Treatments for ADHD The transition from methylphenidate to OROS*

46. Japanese National Mental Health Forum, Tokyo, July 2007, *Developing Treatment Pathways in ADHD*

47. Japanese National Mental Health Forum, Tokyo, July 2007, *Understanding the MTA Study*

48. European Society for Child and Adolescent Psychiatry, Florence, August 2007, Research Symposium "The ADORE Study – A pan European Observational Study of ADHD Treatment"

49. European Society for Child and Adolescent Psychiatry, Florence, August 2007, *Recent research from Europe on psychopharmacological interventions for ADHD*

50. European Society for Child and Adolescent Psychiatry, Florence, August 2007, *Bipolar Disorder and ADHD*

51. European Society for Child and Adolescent Psychiatry, Florence, August 2007, *ADHD – New Opportunities with Medicines*

52. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Sardinia 2007, *Implementing guidelines into clinical practice – overcoming the barriers*

53. Danish Society for ADHD annual meeting, Nyberg, Denmark, September 2007, Keynote; *ADHD across Europe* and workshops, *Intelligent prescribing*

54. International ADGD Genetics Meeting, December 2007, Sanibel, Florida, *The Pharmacogenetics of ADHD*

55. International Association for Child and Adolescent Psychiatry and Psychology, Istanbul, April 2008, *Understanding the impact of ADHD*

56. Paediatric Neurology and Developmental Association of Southern Africa and South African Paediatric Association Annual Residential Conference, Sun City, July 2008, *Deconstructing the Neuropsychology of ADHD*

57. Paediatric Neurology and Developmental Association of Southern Africa and South African Paediatric Association Annual Residential Conference, Sun City, July 2008*, Understanding Impairment in ADHD*

58. Australian and Pacific Rim ADHD Network, Seoul, September 2008, *Understanding the Biological Basis of ADHD*

59. European College of Neuropsychopharmacology, Annual Conference, Targeted experts Meeting, Barcelona, August 2008, *Measuring quality of Life in Child and Adolescent Mental Health*

60. European Network for Hyperkinetic Disorders (EUNETHYDIS) Mannheim, October 2008, *Cognitive energetic and brain dynamics*

61. British Psychological Society, Division of Neuropsychology and the Royal College of Psychiatrists Section of Neuropsychiatry, London, November 2008*, Managing Transition in ADHD*

62. Swiss Annual CNS Academy, Zurich, Feb 2009, *The impact of ADHD on the family and on quality of life*

63. Associcao de Saude infantile de Coimbra, Coimbra, Portugal, March 2009, *Deconstructing the Neuropsychology of ADHD & Understanding the Impact of ADHD*

64. Chinese Mental Health Association, Shanghai, April 2009, *The biological roots of ADHD*

65. Hong Kong Association for Child and Adolescent Mental Health, Hong Kong, April 2009, *What causes ADHD?*

66. Japanese Society for ADHD Research, Tokyo and Nagoya, April 2009, Understanding the Impact of ADHD

67. 2nd International ADHD Conference, Vienna, May 2009, *New Pharmacostrategies for treating ADHD*

68. 2nd International ADHD Conference, Vienna, May 2009, *Treating Comorbidity in ADHD*

69. Spanish Society for Child and Adolescent Psychiatry Annual Residential Meeting, Pamplona, June 2010, *Treatment pathways in ADHD*

70. European College of Neuropsychopharmacology, Annual Conference, Istanbul, September 2009, *Quality of Life in Child and Adolescent Mental Health*

71. European Network on Hyperkinetic Disorders (EUNETHYDIS) Annual Meeting, Winchester 2009, *Is variability the key to understanding ADHD?*

72. 9th ADDISS International Conference, London October 2009, *Intelligent Prescribing*

73. German Association for Child and Adolescent Psychiatry, Hannover, November 2009, *Quality of life in ADHD*

74. European Network for Hyperkinetic Disorders (EUNETHYDIS), Amsterdam, May 2010, *The (backwards) psychopharmacology of ADHD*

75. Greek Association for Child and Adolescent Psychiatry Annual meeting, Athens, May 2010, *Neuroimaging In ADHD*

76. Greek Association for Child and Adolescent Psychiatry Annual meeting, Athens, May 2010, *Pharmacotherapy for ADHD*

77. Chinese Mental Health Association. Beijing, June 2010. *Neuropsychology of ADHD and Treatment decisions in ADHD*

78. International Association for Child and Adolescent Psychiatry, Beijing, June 2010, *Treatment decisions in ADHD*

79. European College of Neuropsychopharmacology, Annual Conference, Targeted Experts meeting, Amsterdam, September 2010, *Child and Adolescent Neuropsychopharmacology*

80. CEREB International ADHD week, Stockholm, Janurary 2011, *Assessment of ADHD, Single, dual or multiple pathways to ADHD and Assessing broader outcomes in ADHD*

81. European Society for Child and Adolescent Psychiatry, Helsinki, July 2011, Neurobiology of ADHD

82. Royal College of Psychiatrists Faculty of Child and Adolescent Psychiatry Annual Residential Meeting, Cambridge, September 2011, *Psychopharmacology workshop* (with Paramala Santosh)

83. Iranian Society for Child and Adolescent Psychiatry, Mashad, Iran, September 2011, *Evidence based treatments for ADHD, Neurobiology of ADHD*

84. Dutch society for child and adolescent psychiatry, Utrecht, January 2012 *Quality of life in ADHD and individually tailoring pharmacotherapy in children and adolescents with ADHD for optimal results*

85. Italian Society for Child and Adolescent Psychiatry, Cagliari, March 2012, *How to organize an effective and eficient ADHD Clinical Pathway*

86. Swedish ADHD Society, Upsalla, April 2012, *Optimizing individually tailored pharmacotherapy in children and adolescents and Working towards a good life with ADHD*

87. American Psychiatric Association, Philadelphia, May 2012, Lisdexamfetamine – European Data

88. EUNETHYDIS International Meeting, Barcelona, May 2012, Are their neuropsychological subtypes of ADHD?

89. International Association for Child and Adolescent Psychiatry, Paris, July 2012, Debate on paediatric bipolar disorder

90. British Psychological Society – Developmental Section Annual Meeting, Glasgow, September 2012, Keynote, The Neuropsychology of ADHD
91. Catalan Child and Adolescent Psychiatry Society, Vic, October 2012, Will DSM5 be helpful in diagnosing psychiatric disorders in children and adolescents? Easy answers to a complex question
92. Royal College of Psychiatrists – General Adult Faculty Annual Meeting, October 2012, London, Debate on Adults with ADHD
93. European Neutraceutical Association, Munich, October 2012, Nutraceutical Intervention in Children with ADHD
94. Fundacion Educacion Activa, 10th Annual ADHD Conference, Madrid December 2012, Managing ADHD and comorbidity, Managing ADHD in Transition
95. Scottish Mental Health Research Network Annual Scientific Meeting, Glasgow, December 2012, What makes Philip fidgety?
96. National Child Development Meeting, Kuwait, March 2013, The causes of ADHD, Pharmacological and non-pharmacological treatments of ADHD, The future of ADHD
97. European Psychiatric Association, Nice, April 2013, Lisdexamfetamine: European data.
98. Brazilian national ADHD Meeting, Sao Paolo, April 2013, ADHD: challenges and management of the disease and its treatment
99. 4th World congress on ADHD, Milan, June 2013, Debate: ADHD is a valid diagnosis
100. European Society for Child and Adolescent Psychiatry, Dublin, July 2013, ESCAP Guidelines workshop on ADHD
101. European Society for Child and Adolescent Psychiatry, Dublin, July 2013, Stimulant treatment in ADHD: functional, health-related quality of life and health utility outcome measures
102. Australian Society for Developmental Paediatrics, Melbourne, August 2013, Assessing and treating ADHD
103. American Academy of Child and Adolescent Psychiatry, Orlando, October 2013, Managing Adverse Events with ADHD medications.
104. University of Ning Bo, Inaugural Lecture, Ning Bo China, November 2013, What makes Philip so fidgety (and can we do anything to help him)?
105. European Psychiatric Association, Munich, March 2014, The impact of ADHD on quality of life and functional impairment
106. Congreso de la Asociación Española de Psiquiatría del Niño y el Adolescente (AEPNyA), Santander Spain, May 2014, Management of ADHD with Lisdexamfetamine
107. Sociedad Española de Neurología Pediatrica (SENEP), Palma, June 2014, European studies of Lisdexamfetamine
108. Spanish Society for Dual Diagnosis, Valencia, June 2014, Efficacy of Lisdexamfetamine in ADHD
109. Pisa Days of Psychiatry and Clinical Psychoparmacology - Psychiatry: Time For Change, Pisa, June 2014, Resilience and developmental psychiatric disorders
110. World Psychiatric Association, Madrid, September 2014, Symptoms and functional impairments associated with attention-deficit/hyperactivity disorder in children and adolescents
111. European Psychiatric Association, Vienna, March 2015, ADHD in Adults
112. University of Coimbra, 5th symposium on ADHD, Coimbra, April 2015, Cognition in ADHD
113. 5th World Congress on ADHD, Glasgow, May 2015, Do prenatal environmental factors contribute to the risk for ADHD?
114. Meeting of Minds VII, Stockholm, June 2015, ADHD & comorbidities in **children**

115. European Society for Child and Adolescent Psychiatry, Madrid, June 2015, Long-term treatment with ADHD medications: open-label studies

116. Slovenian Child and Adolescent Association Annual Conference , Slovenia, April 2016, three presentations: ADHD across the lifespan; current treatments in ADHD; Recent advances in understanding of ADHD

117. Israel International Conference on ADHD, Tel Aviv, April 2016, Why is Phillip so fidgety and Johnny such an airhead?

118. Meeting of Minds VIII, Vienna, June 2016, Psychopharmacology: Different modes of action in ADHD pharmacological treatments

119. RANZCP Queensland annual meeting, July 2016, gold coast, Two talks: ADHD treatment: what works?, What causes ADHD.

120. Alice barber Lecture, Melbourne, August 2016, Fidgety Phil and Head In The Air Johnny: What is ADHD and why is it still so controversial

121. RANZCP Faculty of Child and Adolescent Psychiatry annual meeting, Hobart, September 2016. Keynote - Neurodevelopmental Disorders: The Interaction between Neuroscience and the Clinic; Workshop ADHD: Translating the evidence into clinical practice.

122. XXVII Congresso Nazionale SINPIA, Alghero, October 2016, Managing ADHD psychopathology: translating evidence into clinical practice (With Tobias Banaschewski)

123. 6th World Congress on ADHD, Vancouver, April 2017, Keynote Debate: long term effects of ADHD medications.

124. 6th World Congress on ADHD, Vancouver, April 2017, Symposium; Optimizing outcomes for ADHD

125. 6th World Congress on ADHD, Vancouver, April 2017, Symposium; Curiouser and curiouser: Unravelling the relationships between cognition and symptoms in ADHD

126. European Society for Child and Adolescent Psychiatry Conference, Geneva, July 2017, Symposium – Long Term Adverse Effects of Methylphenidate: findings from the ADDUCE study.

127. European Society for Child and Adolescent Psychiatry Conference, Geneva, July 2017, Delivering evidence-based, long-term ADHD care – the Dundee ADHD Clinical Care Pathway and beyond

128. RANZCP 2017 NZ Conference, Tauranga, September 2017, Two keynote presentations; What causes ADHD? Exploring the Interaction between Neuroscience and the Clinic and Effective treatments for ADHD: Putting enhanced care into the real world and the debate Coffee before Ritalin?

129. Meeting of Minds IX, The Hague, September 2017: Sustaining optimal management in ADHD

130. European Network for Hyperkinetic disorders 2017 meeting; Cologne, October 2017, Debate (with Jim Swanson): Long term medications for ADHD The benefits outweigh the risks

131. RANZCP Faculty of Child and Adolescent Psychiatry annual meeting, Adelaide, October 2017, Teaching Child and Adolescent Mental Health in Australia.

132. Shen Zhen Hospitals, December 2017, CBT for Children and Adolescents (4 day training)

133. Shen Zhen Hospitals, December 2017, Managing ADHD, live masterclass and supervision

134. World Psychiatric Association regional meeting, Melbourne, February 2018, Age of Onset of ADHD.

135. Hong Kong Hospital Authority Central commissioned Training in Psychiatry, Hong Kong, March 2018, Management of ADHD (2 day training)

136. New Zealand General Paediatric Forum, Auckland, March 2018, (2 talks and 1 workshop), What works for ADHD?, Causes of ADHD and ADHD management workshop

137. The International ADHD Congress, Tel Aviv, March 2018, six invited talks: Cross cultural issues in ADHD; Long term adverse effects of methylphenidate; Debate – Can ADHD be an advantage?; German Guidelines for ADHD; Objective vs Subjective ratings in ADHD; Getting it right balancing opportunity and risk.

138. Meeting of Minds X, Madrid, April 2018, Psychopharmacology of ADHD

139. Pharmacotherapy of ADHD within a multimodal treatment approach, Berlin, April 2018, Debate Do ADHD Medications Have a Long Term Effect?

140. Australian ADHD Professionals' Association Annual Meeting, Sydney, July 2018, Keynote Lecture ADHD Guidelines for Australia: Why, how, what, who and when?

141. Australian ADHD Professionals' Association Annual Meeting, Sydney, July 2018, Invited talks; Non-stimulant medications for ADHD; Do you really need a second medication for that?

142. Australian ADHD Professionals' Association Meeting for Consumers, Sydney, July 2018, ADHD Guidelines for Australia

D. Invited Seminars Outside The University:

1. ADHD master class, April 2002, Janssen Research Institute, Bieerse, Belgium, *Assessing and diagnosing ADHD*

2. Chair and presenter ADHD master class, October 2002, Janssen Research Institute, Bieerse, Belgium *Using Long acting medications in the management of ADHD*

3. Chair and presenter ADHD master class, March 2003, Janssen Research Institute, Bieerse, Belgium *Managing complex cases*

4. Institute of Psychiatry, Masterclass on Paediatric Psychopharmacology, London May 2003, *The Neurobiology of Anxiety Disorders,*

5. Janssen Clinical Practice Symposium, Beirut, Lebanon, March 2005, *Advances in ADHD practice*

6. Janssen Clinical Practice Symposium, Amman, Jordan, March 2005, *Advances in ADHD practice*

7. Middle East and North African Medical Symposium, Cairo May 2005, *Recent advances in the treatment of ADHD*

8. ADHD National Masterclass Edinburgh & London, June 2006, *ADHD: The full day, the full picture*

9. ADHD Masterclass, Oslo Norway, September 2006, *ADHD medications – implementing NICE and the European Guidelines*

10. Boerhaave Committee for postgraduate education in medicine, postgraduate course child and adolescent psychiatry Leiden Netherlands, November 2006, *Recent advances in the treatment of ADHD*

11. Eli Lilly ADHD Masterclasses, London and Manchester, July 2007, *ADHD Guidelines a European Perspective*

12. Lecture tour Australia, University of Melbourne, University of Sydney, University of New South Wales September 2008, *Understanding the Biological Basis of ADHD*

13. European ADHD Masterclass, Copenhagen, October 2008, *From treatment guidelines to the individual patient & Putting guidelines into your everyday practice*

14. Royal College of General Practice, North of Scotland group, Inverurie, May 2009, *ADHD and the interface with primary care*

15. University of Aalborg Summer School, Aalborg, September 2009, *The use of antidepressants in children*

16. Lecture Tour of the Middle East, Lebanon, Kuwait, Egypt and Abu Dhabi, Feb 2010, *Understanding quality of life in ADHD*

17. Institute of Psychiatry, Maudsley Annual Reviews of Psychiatry, , London, April 2010, *Long acting medications in ADHD*

18. Jiao Tong University, Shanghai, June 2010, *Evidence based management of ADHD*

19. University of Aalborg Summer School, Aalborg, September 2010, *The use of antidepressants in children*
20. Medice Masterclass, Berlin, April 2012, *ADHD, ODD and Conduct Disorder*
21. Lecture Tour Asia (Thailand, Malasia and Hong Kong), June 2012, ADHD Treatment Master classes
22. Lecture Tour Asia (Singapore, Taiwan and Hong Kong), August 2012, ADHD Assessment and Treatment Master classes
23. 2nd Brazilian National ADHD Congress, Campinas, April, 2013, ADHD: challenges and management of the disease and its treatment
24. Lecture Tour Australia (Brisbane, Sydney, Melbourne, Perth), august 2013. Evidence based assessment and management of ADHD
25. Lecture Tour Yunan Province China, November 2013, Assessment and management of ADHD
26. Meeting of Minds, London, March 2014, Expert workshop - Assessment and management of ADHD
27. Conversations on ADHD, Frankfurt, June 2014, Family Effects - The importance of treating ADHD across generations
28. Lecture Tour Australia (Brisbane, Sydney, Melbourne, Adelaide), august 2014. The Implications of Social Dysfunction in ADHD and the Importance of All Day Therapy
29. Department of Psychology, University of Sheffield, October 2014, Cognitive models of ADHD

E. Research Grants and Contracts Awarded

1997* TENOVUS *The neuropsychology of adolescent depression*, £9,229 over 1 year

1998* TENOVUS *Hyperkinetic (Attention Deficit Hyperactivity) Disorder and executive dysfunction in children: the neuropsychological effects of the psychostimulant drug methylphenidate*, £94,234, over 3 years

2003* The Chief Scientists Office *Does long term treatment with methylphenidate lead to tolerance or sensitivity?* £15,000, over 1 year

2003* Janssen-Cilag *Validation of the ADHD Impact Module questionnaire* £5,000, over 1 year

2003* Eli –Lilly *ADHD Observational Research European Study (ADORE)*, £20,000 over 2 years

2004* Janssen-Cilag *The Development of an electronic ADHD patient tracking tool* £5,000, over 1 year

2004* Eli-Lilly LYBX clinical trial of Atomoxetine in ADHD with Oppositional Defiant Disorder, £80,000, over 2 years

2004* Eli-Lilly *Neuropsychopharmacological addendum to the LYBX clinical trial* £6,000, over 1 year

2005 National Institute of Health Research, Health Technology Assessment (HTA) *CADDY; An investigation into the discontinuation of ADHD treatment in Adolescence* £114,681, over 2 years

2006* Economic and Social Research Council (ESRC) *An investigation of working memory deficits in ADHD* £100,000 over 2 years

2008* Shire *Increasing the awareness of ADHD in C*hina, £250,000, over 5 years

2008* Shire *Randomised, Double-Blind, Multicentre, Parallel-Group, Placebo- and Active-Controlled, Dose-Optimisation Safety and Efficacy Study of Lisdexamfetamine Dimesylate in Children and Adolescents ADHD*, undisclosed over 3 years

2008* Shire *Open-Label, Extension, Multicentre, Safety Study of Lisdexamfetamine Dimesylate in Children and Adolescents with ADHD* undisclosed over 4 years

2009* Shire *An investigation of QoL in ADHD, diabetes and healthy children*, £30,000, over 2 years

2009* Shire Randomised, Double-Blind, Multicentre, Parallel-Group, Controlled, Dose-Optimisation Safety and Efficacy Study of Lisdexamfetamine Dimesylate and Atomoxetine in Children and Adolescents ADHD

2009* National Institute of Health Research *A systematic review into the causes of ADHD*, £50,995 over 1 year

2009 National Institute of Health Research, programme grant (CI Prof Sonuga-Barke, Southampton) Principal Investigator Dundee site, *The development of an integrated early detection and intervention model for Attention Deficit Hyperactive Disorder*, £1,999,790 2009

2009* European Union (FP7) (CI Prof Jan Buitelaar, Netherlands) Paediatric European Risperidone Studies (PERS), 5,600,000 Euro over 4 years

2010* European Union (FP7) (CI and Coordinator Dr David Coghill) ADHD Drug Use Chronic Effects (ADDUCE), 3,000,000 Euro over 5 years

2010 European Union (FP7) (CI Dr Paramala Santosh, London) Suicidality: Treatment Occurring in Paediatrics (STOP), 3,000,000 Euro, over 3 years

2011 Vifor (CI Prof. David Balfour, Dundee) Do omega 3 fatty acids improve attention and reduce impulsivity in the rat? £54,000

2011* Shire, *The effects of variability of the CES1A gene, on the efficacy and tolerability of methylphenidate,* £180,000

2012 TENOVUS (CI Douglas Steele, Dundee) *Development of a Multi-Voxel Pattern Analysis (MVPA) Method of Processing Magnetic Resonance Imaging (MRI) Brain Scans to Predict Clinical Response and Tolerability of Methylphenidate in Children with Attention Deficit Hyperactivity Disorder (ADHD)* , £97,625

2013 European Union (FP7) (CI and Coordinator Barbara Franke, Nijmegen) *Aggression subtyping for improved insight and treatment innovation in psychiatric disorders (Aggressotype)*, 5,000,000 Euro over 5 years, Dundee Budget 45,000 Euro

2013 European Union (FP7) (CI and Coordinator Jeffery Glennon, Nijmegen) Multidisciplinary Approaches to Translational Research In Conduct Syndromes (MATRICS), WP 6 leader (Clinical neuropsychopharmacological studies), 3,800,00 Euro over 5 years, Dundee budget 240,000 euro

2013 WHO (CI Sven Bolte, Karolinska) Development of ICF Core Sets to Standardize Assessment of Functioning and Impairment in ADHD and Autism, undisclosed funding

2014* Shire, *The effects of variability of the CES1A gene, on the efficacy and tolerability of methylphenidate,* additional support, £88,426

2014* University of Dundee, Data visualization, £10,000 – Awarded as a prize

2016 NHMRC (CIA Harriet Hiscock) Towards an evidence-based and equitable mental health system for children in Australia, $706,059

2017* MCRI theme funding (Clinical Sciences): Understanding severe irritability: Describing the clinical and cognitive profiles of children with Disruptive Mood Dysregulation Disorder ($20,000)

2017* MCRI theme funding: Can a psychosocial intervention improve mood regulation and reduce irritability in children? Pilot for large-scale RCT ($30,000)

2017 Royal Children's Hospital Foundation: Trans20: A longitudinal cohort study to improve outcomes for transgender youth ($187,752)

2018 MCRI theme funding: Objective measures of ADHD: Can they improve clinical decision making? ($30,000)

2018 Royal Children's Hospital Foundation: Trans20: A longitudinal cohort study to improve outcomes for transgender youth ($768,440)

2019 Australian ADHD Professionals Association: Developing outcomes measures for ADHD in forensic and educational settings ($110000)

2019 NHMRC Centres for Research Excellence (CIA, Dinah Redihough) Australian Centre for Health, Independence, Economic Participation and Value Enhanced care for adolescents and young adults with cerebral palsy (CP-Achieve) ($2,461,529.80)

2019 Centre for Future Health, University of York, UK: Personalising Mental Health Treatments for Young People Using Machine Intelligence (ProMetheUs) ($76,592)

2019* U21 Health Sciences Research Development Fund (CIA, AMY Chan, University of Auckland): Trends in high-risk medication use across four countries: Hong Kong, New Zealand, United Kingdom and Australia ($19,753.26)

2019* Hong Kong Collaborative Research Fund (CIA Ian Wong, University of Hong Kong): International Big Data Network for ADHD: Development and Application of Data Platform ($438,931.35)

* Indicates Grants on which I am/was Principal Investigator/Joint PI/Country PI/ Project Coordinator.

8. PUBLICATIONS:

Citation Analysis (Jan 2019) – Google Scholar		
	All	Since 2013
Total Number of Citations:	10279	6959
h-index:	53	44
i10-index	118	105

A. Refereed Journal Papers:

1. R.C.Strange, J.D.Johnstone, **D.R.Coghill**, R.Hume. (1980) A comparison of erythrocyte glutathione S-transferase activity from human adult and foetal red blood cells. Biochem Journal. 188, 475-479.
2. I.A.Nimmo, **D.R.Coghill**, J.D.Hughes, R.C.Strange. (1981) A comparison of the subcellular distribution, subunit composition and bile acid binding activity of glutathione S-transferase from trout and rat liver. Journal of Comp Biochem and Phisiol. 68B, 579-584.
3. C.A.Ison, K.McLean, J.Gedrey, P.Munday, **D.Coghill**, R.Smith, J.R.Harris, C.S.Easmon. (1985) Evaluation of a direct immunofluorescence test for diagnosing gonorrhoea. Journal of Clin Path. 38 (10), 1142-5.
4. A.Douglas, **D Coghill,** D, Will. (1996) A survey of the first five years work of a child sexual abuse team. Child Abuse Review. 5, 227 – 238.
5. **Coghill D** (2003) Youth offending and CAMHS: The link between mental health disorders and antisocial behaviour. *Child and Adolescent Mental Health in Primary Care*. 1:1 9-14
6. Rhodes, S. M., **Coghill, D. R.,** & Matthews, K. (2004), "Methylphenidate restores visual memory, but not working memory function in attention deficit-hyperkinetic disorder", *Psychopharmacology (Berl), 175, 319-330*
7. Taylor, E., Dopfner, M., Sergeant, J., Asherson, P., Banaschewski, T., Buitelaar, J., Coghill, D., Danckaerts, M., Rothenberger, A., Sonuga-Barke, E., Steinhausen, H. C., & Zuddas, A. (2004), "European clinical guidelines for hyperkinetic disorder -- first upgrade", *Eur.Child Adolesc.Psychiatry*, vol. 13 Suppl 1, pp. I7-30.
8. Sonuga-Barke, E. J., Swanson, J. M., **Coghill, D**., DeCory, H. H., & Hatch, S. J. (2004) "Efficacy of two once-daily methylphenidate formulations compared across dose levels at different times of the day: Preliminary indications from a secondary analysis of the COMACS study data", *BMC.Psychiatry*, vol. 4, no. 1, p. 28.
9. Remschmidt,H., Banaag, C., Bange,F., Bouvard,M. Castellanos,F.X., **Coghill,D.R.,** Gomez-Plascencia,J., Greenhill,L., Huss,M.;, Rohde,L., Santosh,P., Schmidt,M., ShinY.-J., Taylor,E., Whiting,K. 2005, Global consensus on ADHD/HKD Eur.Child Adolesc.Psychiatry Vol. 14 Issue 3, pp127-137
10. Rhodes, S. M., **Coghill, D. R.,** & Matthews, K. Neuropsychological Performance in Drug Naïve Boys with ADHD, (2005) Psychological Medicine, 35, 1109–1120.
11. **Coghill, D. (**2005) Delay of reinforcement gradients and Attention Deficit/Hyperactivity Disorder (ADHD): The challenges of moving from causal theories to causal models. Behavioural and Brain Sciences, 28, 428- 429
12. **Coghill, D**., Nigg, J. T., Rothenberger, A., Sonuga-Barke, E. J., & Tannock, R. (2005) Whither causal models in the neurobiology of ADHD. Developmental Science, 8, 105–114.
13. **Coghill, D.,** Spiel, G., Baldursson, G., Dopfner, M., Lorenzo, M. J., Ralston, S. J., & Rothenberger, A. 2006, "Which factors impact on clinician-rated impairment in children with ADHD?", Eur.Child Adolesc.Psychiatry, vol. 15 Suppl 1, p. i30-i37.
14. Dopfner, M., Steinhausen, H. C., **Coghill, D.**, Dalsgaard, S., Poole, L., Ralston, S. J., & Rothenberger, A. 2006, "Cross-cultural reliability and validity of ADHD assessed by the ADHD Rating Scale in a pan-European study", Eur.Child Adolesc.Psychiatry, vol. 15 Suppl 1, p. i46-i55.

15. Preuss, U., Ralston, S. J., Baldursson, G., Falissard, B., Lorenzo, M. J., Rodrigues, P. R., Vlasveld, L., & **Coghill, D.** 2006, "Study design, baseline patient characteristics and intervention in a cross-cultural framework: results from the ADORE study", Eur.Child Adolesc.Psychiatry, vol. 15 Suppl 1, p. i4-i14.

16. Riley, A. W., **Coghill, D.,** Forrest, C. B., Lorenzo, M. J., Ralston, S. J., & Spiel, G. 2006a, "Validity of the health-related quality of life assessment in the ADORE study: Parent Report Form of the CHIP-Child Edition", Eur.Child Adolesc.Psychiatry, vol. 15 Suppl 1, p. i63-i71.

17. Riley, A. W., Lyman, L., Spiel, G., Dopfner, MLorenzo, M. J., Ralston, S.J. & The ADORE Study Group, "The Family Strain Index (FSI). Reliability, validity, and factor structure of a brief questionnaire for families of children with ADHD." Eur Child Adolesc Psychiatry Volume: 15 Suppl 1 Pages: i72-i178.

18. Riley, A. W., Spiel, G., **Coghill, D.,** Dopfner, M., Falissard, B., Lorenzo, M. J., Preuss, U., & Ralston, S. J. 2006b, "Factors related to Health-Related Quality of Life (HRQoL) among children with ADHD in Europe at entry into treatment", Eur.Child Adolesc.Psychiatry, vol. 15 Suppl 1, p. i38-i45.

19. Rothenberger, A., **Coghill, D.,** Dopfner, M., Falissard, B., & Steinhausen, H. C. 2006, "Naturalistic-observational studies in the framework of ADHD health care", Eur.Child Adolesc.Psychiatry, vol. 15 Suppl 1, p. i1-i3.

20. Wilson, H. K., Cox, D. J., Merkel, R. L., Moore, M., & **Coghill, D.** 2006, "Effect of extended release stimulant-based medications on neuropsychological functioning among adolescents with Attention-Deficit/Hyperactivity Disorder", Arch.Clin.Neuropsychol., vol. 21, no. 8, pp. 797-807.

21. **Coghill D**., Seth S. 2006 Osmotic, controlled-release methylphenidate for the treatment of ADHD. Expert Opin. Pharmacother. 7 (15) 2119 – 2138

22. Rhodes, S. M., **Coghill, D. R.,** & Matthews, K. Acute neuropsychological effects of methylphenidate in stimulant drug-naive boys with ADHD II – broader executive and non-executive domains. 2006 Journal of Child Psychology and Psychiatry 47:11 (2006), pp 1184–1194

23. Banaschewski, T., **Coghill, D.,** Santosh, P., Zuddas, A., Asherson, P., Buitelaar, J., Danckaerts, M., Dopfner, M., Faraone, S. V., Rothenberger, A., Sergeant, J., Steinhausen, H. C., Sonuga-Barke, E. J., & Taylor, E. 2006, "Long-acting medications for the hyperkinetic disorders. A systematic review and European treatment guideline", *Eur.Child Adolesc.Psychiatry*, vol. 15, no. 8, pp. 476-495.

24. **Coghill, D. R.,** Rhodes, S. M, & Matthews, K., The neuropsychological effects of chronic methylphenidate on drug-naïve boys with Attention-Deficit/Hyperactivity Disorder (2007) Biological Psychiatry vol. 62, no. 9, pp. 954-962.

25. Sonuga-Barke, E. J**., Coghill, D.**, Markowitz, J. S., Swanson, J. M., Vandenberghe, M., & Hatch, S. J. 2007, "Sex Differences in the Response of Children With ADHD to Once-Daily Formulations of Methylphenidate", J.Am.Acad.Child Adolesc.Psychiatry, vol. 46, no. 6, pp. 701-710.

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9. CLINICAL RESPONSIBILITIES

Current Post

I have a 3 session appointment with Royal Children's Hospital Melbourne within the Department of Mental Health. Since august 2016 I have been working as director of RCH Mental Health with a brief to develop evidence based practice within the Department and to provide leadership for the development of a Centre of Excellence in Infant, Child and Adolescent Mental Health.

My clinical role within the team is focused on providing consultations for complex patients seen by Child Psychiatrists and Paediatricans.

Previous post (1997-2016)

Honorary Consultant Child and Adolescent Psychiatrist, NHS Tayside. Job Plan; 5 Clinical PA's, 1 Clinical EPA

Contributions to overall service planning and development alongside consultant colleagues and other senior staff.

Providing assessment and treatment services for children and young people with mental health problems across Tayside

Joint responsibility with 2 consultant colleagues for the Dundee Out Patient service. This multidisciplinary clinical team is responsible for the care of all children in Dundee City (pop 400,000) with mental health problems that require a specialist CAMH service. Whilst I am involved with a full spectrum of clinical problems I have particular responsibility for those with developmental neuropsychiatric conditions including ADHD, autism spectrum disorders, Tourette's and those with learning disabilities and for complex psychopharmacology.

Responsible with one WTE consultant colleague for ongoing clinical care of all children and young people in Tayside diagnosed with ADHD. As of July the figures for ADHD in Tayside are;

- 894 children and young people with a diagnosis of ADHD
- 156 children and young people undergoing assessment for ADHD
- 67 children and young people on waiting for ADHD assessment.

Strategic management role for the clinical aspects of the development of the Autism Assessment Pathway and the development of ADHD services.

Major Achievements;

I have a very strong track record for translational clinical practice and the development of innovative evidence based clinical pathways.

- Development of systematic reviews and evidence based clinical guidelines in child and adolescent psychiatry. I have a leadership role in the development of European ADHD clinical guidelines e.g. assessment & management ADHD, management of adverse effects, nonpharmacological treatments, quality of life measures in child mental health.
- Senior editor of Oxford Specialist Handbook of Child and Adolescent Psychiatry a standard textbook on child and adolescent psychiatry, now commissioned for a second edition
- Redesign of Child and Adolescent Mental Health Services (CAMHS) in Tayside using a novel approach to services delivery and evidence based, disorder specific clinical care pathways to ensure that CAMH services are delivered efficiently and equitably across Tayside and that clinical staff are enabled to both contribute and perform to their potential. This model of service delivery has been subsequently used as a template to initiate service change across several other Services in the UK and Internationally
- Development of a comprehensive evidence based structured assessment and management pathway for children and young people suffering from ADHD which facilitates the rapid implementation of new research findings into routine care. The template for this care pathway has been published and has generated a very high degree of interest from many services across the UK

and internationally. The pathway includes innovative use of nurse led clinics for assessment, titration and continuing care thus ensuring that consultant medical staff are used efficiently and effectively.

- The Dundee ADHD clinical care pathway achieved the highest overall ratings in both the 2008 and 2012 NHS Scotland Quality Improvement Scotland – ADHD Services over Scotland review of ADHD Services. These reviews highlighted how closely the clinical care pathway matches the standards set by the SIGN guidelines for ADHD.
- Development of the Dundee Blood Pressure Charts. These charts, developed for research and clinical use, are specifically tailored for use in managing ADHD. They include UK based norms for both systolic and diastolic blood pressure across the age range and are the only scales to include the 95th centile as recommended by several guidelines.
- Development of the "Dundee Difficult Times of Day Scale" (D-DTODS) a clinical tool for tracking difficulties across the day. The D-DTODS has been widely adopted internationally translated into several languages and developed as an app for iPhone and iPad.
- Development of psychopharmacological expertise and practice in children and adolescents. This includes the production of various local, national and international guidelines and reference materials describing the appropriate use of psychotropic medication in children and extensive continuing professional development activity about the use of medications in children at a local, national and international level.
- Provision of 2nd opinions and expert opinions on the assessment and treatment of children and young people with ADHD and the pharmacological treatment of child and adolescent psychiatric disorders. This includes the provision of expert opinions to both colleagues and the legal system where cases are in dispute.
- Though not a formal responsibility, I have provided frequent forensic psychiatric assessments for the courts and the Scottish Executive on children and young people from Tayside and the surrounding regions charged with serious offences such as murder, rape, arson etc.

Previous Consultant Post

Consultant Child and Adolescent Psychiatrist Fife Healthcare NHS Trust (Full Time) 1994 - 1997
Job Plan; 0.5 WTE general child and adolescent psychiatry services, 0.5 WTE Centre for the Vulnerable Child

Major Achievements;

- Setting up the Centre for the Vulnerable Child, the first standalone child and adolescent mental health service in Scotland for children and adolescents with a history of sexual abuse either as victims or perpetrators.
- Provision of expert witness services to the Children's Hearing Systems for complex abuse cases in the courts.
- Development of evidence based assessment and treatment packages for the management of child and adolescent offenders
- Development of interagency working practices in child protection at a local and national level.