

ADHD From Adolescence to Adulthood: Closing the Gap in the Continuum of Care



A Critical Period in ADHD: The Transition From Adolescence to Adulthood

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Implementing an Effective Transition to Adult Management of ADHD

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Learning Objectives

- Recognise the challenges and risks associated with transitioning from adolescence to adulthood for patients with attention deficit hyperactivity disorder (ADHD)
- Differentiate childhood and adult ADHD with regards to symptom presentation and clinical management strategies
- Apply patient-centred strategies to manage ADHD through the transitional phase from adolescence to adulthood, based on current guidelines

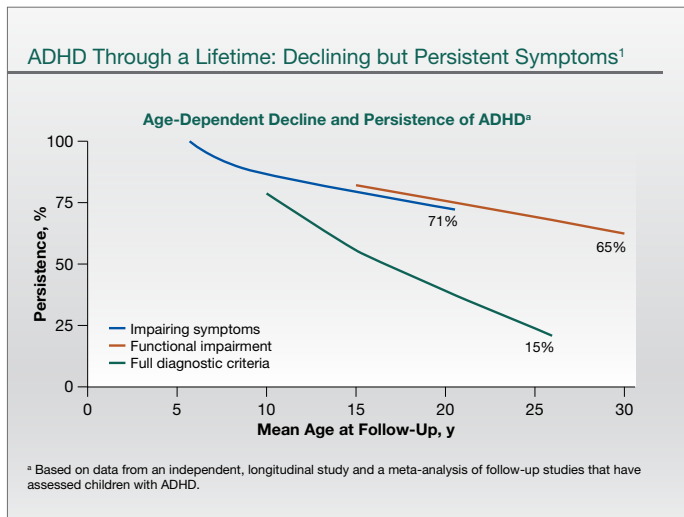
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A Critical Period in ADHD: The Transition From Adolescence to Adulthood



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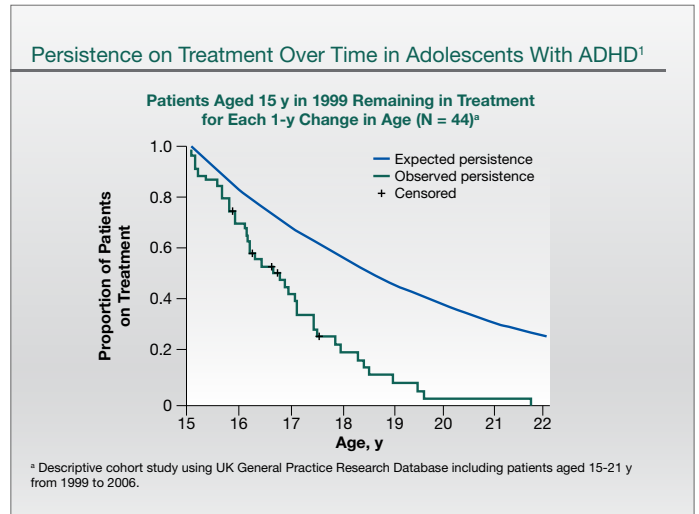
Prof. Coghill: Today, we're going to talk about the need to improve the transition from child-centred services to adult services for patients with ADHD. We have to remember that late adolescence/early adulthood is a time of great change in the lives of young people as they move from formal education at school into higher education or on to work. It's a time when many young adults become more independent. However, it's also a time when many people get lost, as far as their care goes. So the need to have a good transition is really important and should be a priority for all of us.



Abbreviation(s): ADHD: attention deficit hyperactivity disorder.

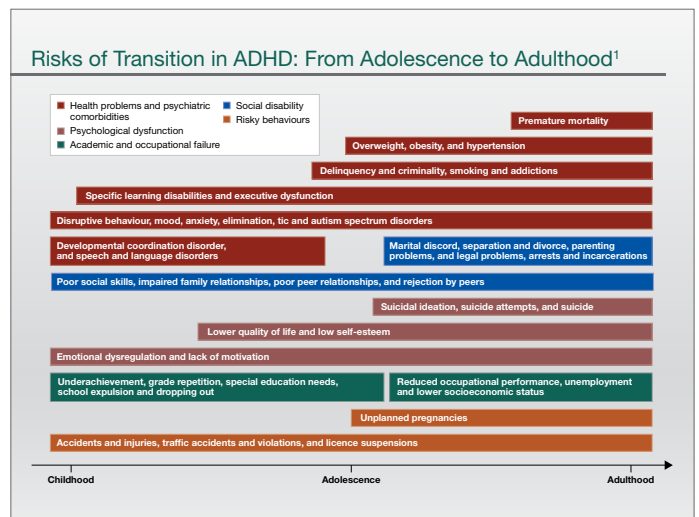
Reference(s): 1. Faraone SV et al. *Nat Rev Dis Primers*. 2015;1:15020. doi:10.1038/nrdp.2015.20.

ADHD is now very clearly accepted as a lifelong disorder. It's interesting that when we look at the rates of ADHD from adolescence into adulthood, we see that whilst perhaps only 15% of those with ADHD in childhood continue to meet the full diagnostic criteria for ADHD in adulthood, around two-thirds will continue to have very significant functional impairments related to their ADHD.



Reference(s): 1. McCarthy S et al. *Br J Psychiatry*. 2009;194:273-277.

Despite the fact that we know that ADHD persists into adulthood, the evidence that we have suggests that many patients who were treated as children drop out of treatment at some point during adolescence and don't get the benefits of a good quality transition.



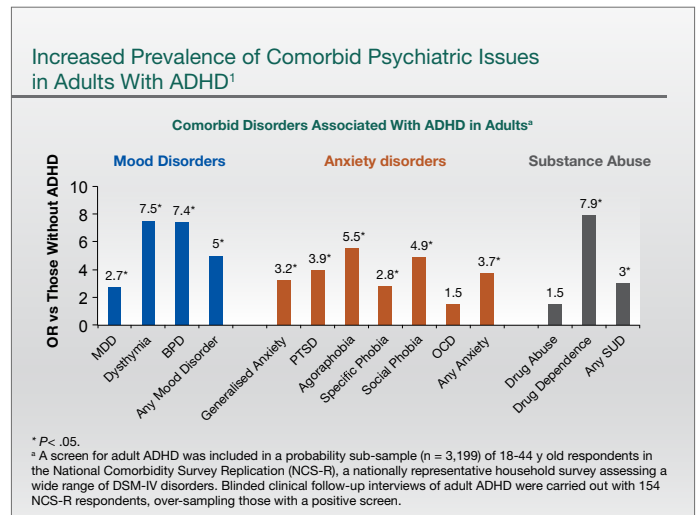
Reference(s): 1. Faraone SV et al. *Nat Rev Dis Primers*. 2015;1:15020. doi:10.1038/nrdp.2015.20.

So why is a good transition of care so important?

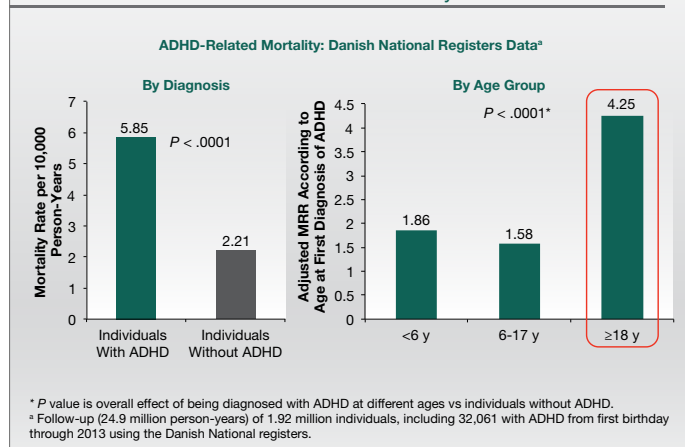
Well ADHD actually impacts a whole range of different aspects in a person's life. While some of these issues start early and continue to affect people throughout their lives, others will arise as life goes on. Because of this, the kind of support and care that we need to give children, young people, and adults with ADHD changes over time.

And you can see in this slide that ADHD is associated with a range of health problems, including physical and psychiatric comorbidities, psychological dysfunction, social disability, academic and occupational failure, and a whole range of risky behaviours. Specific examples include unplanned pregnancies, trouble at work, increase in suicidal ideation and attempts, and marital discord. Many of these arise mainly in that phase between adolescence and adulthood.

And that increase in mortality can be due to a range of factors, including other psychiatric problems, substance use disorders, and other risky behaviours.



Link Between ADHD and Increased Mortality Risk¹



Abbreviation(s): MRR: mortality rate ratio.

Reference(s): 1. Dalsgaard S et al. *Lancet*. 2015;385:2190-2196.

Perhaps the most striking and serious repercussion of ADHD is a marked increase in mortality. As shown here in real-world registry data from Denmark, you see that rates of mortality are over twice as high in those with ADHD versus those without.

But perhaps what's even more important is to see how that increase in mortality changes over time. Whilst in the child and adolescent population, the increase is about one and a half times. When you look at those over 18 years of age with ADHD, the increase in mortality can be up to four times higher versus those without ADHD, which is really very high, very significant.

Abbreviation(s): BPD: bipolar disorder; DSM-IV: Diagnostic and Statistical Manual of Mental Disorders (4th edition); MDD: major depressive disorder; OCD: obsessive-compulsive disorder; OR: odds ratio; PTSD: post-traumatic stress disorder; SUD: substance use disorder.

Reference(s): 1. Kessler RC et al. *Am J Psychiatry*. 2006;163:716-723.

Co-occurring psychiatric problems are common in these patients. In fact, it's really uncommon to find an adult with ADHD who only has ADHD and doesn't have other problems. There are very significant increases in mood disorders, anxiety disorders, and substance abuse; drug dependence is one of the most common factors associated with ADHD in adults. And we see it not just with illegal substances, but also with legal substances, like nicotine and alcohol. Nicotine dependence is twice as high in adults with ADHD as those without ADHD.

And it's interesting to think about why we see these associations. And similar to the mortality risk, this is likely to be due to a range of different things, including higher levels of novelty-seeking behaviour and impulsivity, impaired social or academic functioning, and even self-treatment to make themselves feel calmer.

So, of course, this is something that's much more likely to happen when the ADHD itself isn't well treated.

Other Potential Negative Consequences of Untreated Adult ADHD

Adolescents and adults with ADHD are more likely to...¹⁻⁶

School-Related

- Have poor academic performance
- Have suspensions during high school
- Need academic tutoring
- Attend special education during high school
- Repeat one or more grades

Work-Related

- Have a high number of full time jobs
- Be fired from employment one or more times
- Take a lot of sick days
- Have lower annual income
- Have trouble paying bills

Social-Related

- Have trouble making friends
- Have first sexual intercourse at a young age
- Have a high number of sexual partners
- Move more frequently
- Have driving offences or accidents

Referral to Adult Services: Best Practices for Transitioning¹

Area of Focus	Clinician Goal
Patient-clinician relationship	Plan for early transition and maintain continuity of care throughout the transition process by listening to patient needs and communicating clearly
Care team responsibilities	Identify the care team members – paediatric and adult providers, the patient, and family/carers – and define expectations of roles and responsibilities during and after the transition process
Individualised care planning	Consider the nature and severity of ADHD symptoms when determining what services are required and identify appropriate resources for referral
Patient options and expectations	Set realistic expectations for both patients and their parents/carers and encourage the young adult to be as independent as possible

Reference(s): Based on: 1. Able SL et al. *Psychol Med.* 2007;37:97-107.
 2. Powers RL et al. *J Child Adolesc Psychopharmacol.* 2008;18:449-459.
 3. Hamed AM et al. *Front Psychiatry.* 2015;6:168.
 4. Monawar Hosain et al. *J Womens Health (Larchmt).* 2012;21:463-468.
 5. Groom MJ et al. *BMC Psychiatry.* 2015;15:175.
 6. Rief SF. *The ADHD Book of Lists: A Practical Guide for Helping Children and Teens With Attention Deficit Disorders.* Second Edition. San Francisco, CA, USA: Jossey-Bass; 2015.

Reference(s): 1. Young S et al. *BMC Psychiatry.* 2016;16:301.

In addition to the health-related concerns, there's a really broad range of other potential negative consequences of untreated adult ADHD. ADHD is associated with a lot of educational failure; likewise, people with ADHD have a difficulty getting and holding down jobs. As a consequence they likely have money problems, which is an added stressor. And finally, there are also a lot of associated social problems, including fewer stable relationships and inability to form new relationships.

Now, let's discuss the challenges that we as psychiatrists have, in helping people with ADHD transition from child-focused to adult-focused healthcare services. I think some of the most important are: a lack of adequate services, not just health services, but also other support and specialty services that are needed at these critical stages in a young person's life. Also, knowing how to best engage young adults and their families and keep them in treatment over this period can be a challenge.

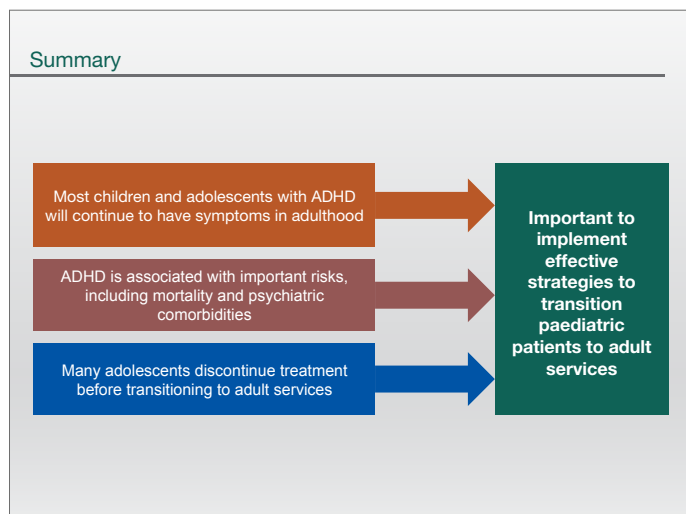
So I think there are four main areas of focus that we should consider to help us address these challenges. One is patient clinician relationship: We want to consider earlier transition and ensure a continuity of care to help people through the transition process.

We have to think about the clinician's responsibilities in care management, and paediatric clinicians should involve the patient and the family or carers in decision-making, as well as the adult mental health providers who will be treating the patient. We need to document current and previous responses to treatment very clearly so that the new clinicians can take over without too much of a gap.

We need to think about how the nature and severity of problems will impact on what services are required. So, we need to identify appropriate resources to refer on to; and if you're making those referrals, not every patient will be a good match for the same provider, and hopefully you have been able to identify a few options for referral. Whilst it can be more of

a challenge for paediatric providers to identify adult mental health services, it is certainly helpful to try and pull together a list. Sometimes patient support groups can actually be very helpful in this respect or to attend joint educational events and networking there.

Then we need to think about expectations: Expectations from the patients themselves and from their families. It's often difficult for parents who have been very involved in providing support for a young person throughout their lives to accept that they've got to take a step back and encourage independence. It's very important to discuss options openly with the patient and the family to prepare them for how a new service will be different and focus more on the patient, and less on the family—and get them to think about how they're going to manage this.



So in summary, I think we can say that most children and adolescents with ADHD will continue to have significant and serious problems with their ADHD that persist into adulthood. We also know that ADHD is associated with significant risks, including increase in mortality and psychiatric comorbidities. Currently, many adolescents drop out of treatment before making the transition into adult services. Therefore, it's essential for child, youth, and adult services, all to find ways to support each other and work together in laying the groundwork for transition with paediatric patients—and then managing transitions for those with ADHD. And we need to think about how we'll support young adults and make it easier for them to continue or return to treatment when they decide to, as many of them will.

Implementing an Effective Transition to Adult Management of ADHD

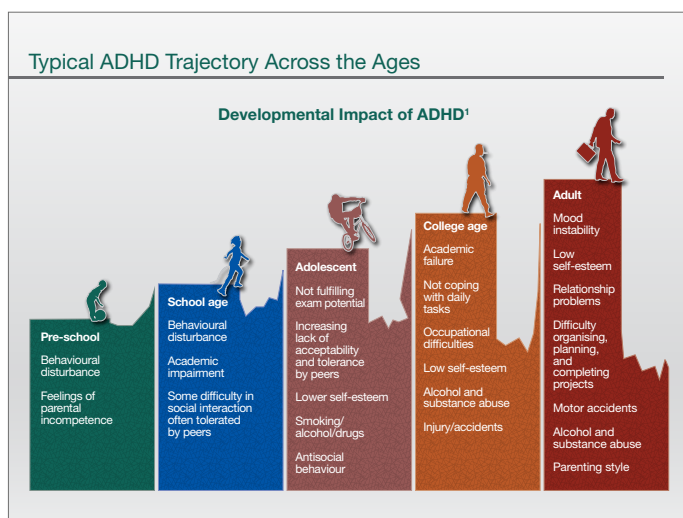


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Prof. Asherson: Hello, this is Philip Asherson from King's College London in the UK. Today I'm going to talk about how to overcome the challenges of transitioning adolescent patients with ADHD from child to adult services.

There's a wide variation in how ADHD presents, and also how it changes during the shift from adolescence to adulthood. At the same time, they may be transitioning from adolescent to adult mental health services, and they need appropriate assessment and support. In order to improve outcomes and have a successful transition, there are a number of things that we need to consider. In particular, we need to make sure that we have completed an updated assessment of the patient's level of ADHD symptoms, any comorbidities, and their current functioning in their daily lives. We need to ensure they have a good understanding of their own condition and support them in taking more responsibility for managing the disorder for themselves. We need to understand how to effectively engage with the patient and understand the barriers that might arise during the transition. These are the topics that I will address today in this presentation.

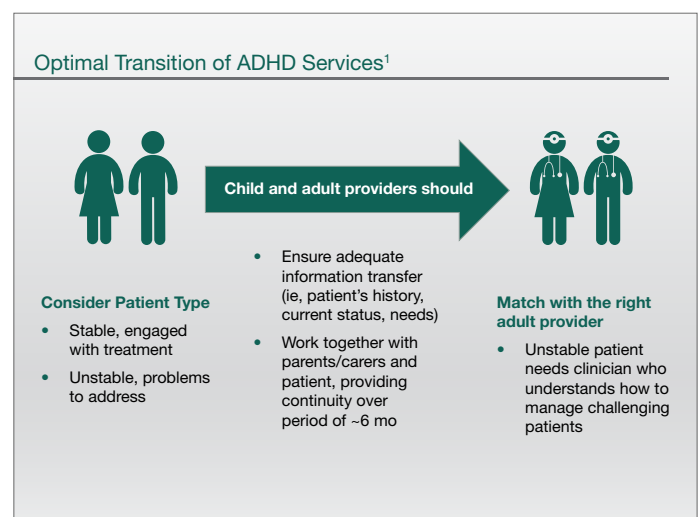


Abbreviation(s): ADHD: Attention deficit hyperactivity disorder.

Reference(s): 1. Based on: UK Adult ADHD Network (UKAAN). Handbook for Attention Deficit Hyperactivity Disorder in Adults. London, UK: Springer Healthcare Ltd; 2013.

We know that over half of adolescents with ADHD go on to have continued symptoms and impairments in adulthood. We also know that the disorder has different effects on people at different ages and that young people grow out of the disorder to varying degrees. For example, a typical trajectory would be that a young child with ADHD presents with mainly hyperactive and impulsive symptoms, but as they grow older into their school-age years, it's often the inattention, disorganisation, and forgetfulness that start to have more of an impact. So very often, by the time they are adults, the hyperactivity and impulsivity have declined, but they still have problems with inattention—and these are the main problems affecting their ability to function in everyday life. Other symptoms may also emerge, such as emotional instability, low self-esteem, and sleep problems, as well as other psychiatric symptoms and disorders, which can increase the problems in education, work, and relationships.

Of course, ADHD is a very heterogeneous condition. Some children will continue to show high levels of hyperactivity and impulsivity into adulthood and these can then translate into adult patients—with a lot of mood instability, alcohol and drug abuse, and antisocial behaviour.

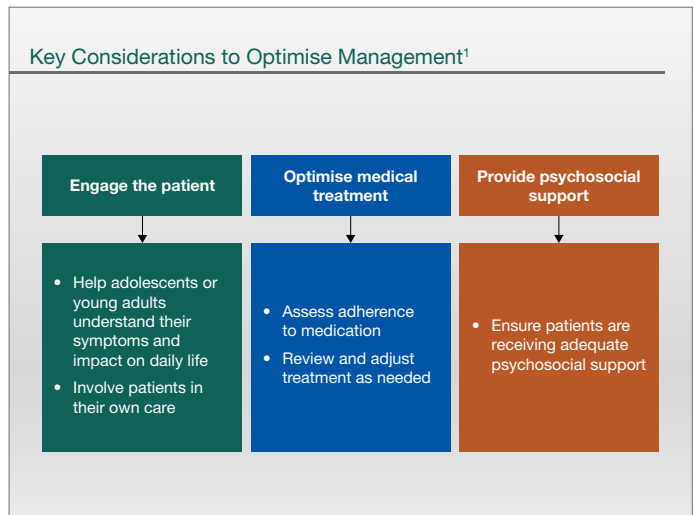
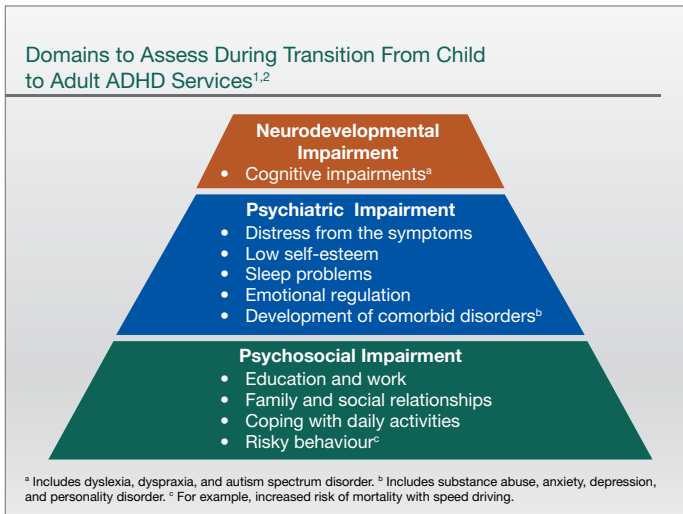


Reference(s): 1. Young S et al. *BMC Psychiatry*. 2016;16:301. doi: 10.1186/s12888-016-1013-4.

So given the wide range of clinical presentations in ADHD during the adolescent years, a structured transition plan is critical. The transition plan should involve both the child and adult services, the patient him or herself, as well as the parents or carers. The child service should ensure continuity of care by establishing a transition plan that lasts for approximately 6 months, depending on the needs of the patient.

meet the criteria for comorbid disorders such as anxiety or depression, the effects of alcohol or drug abuse, or the development of a personality disorder.

ADHD is also often accompanied by a range of neurodevelopmental impairments, and these should also be evaluated. So you often see specific and general learning difficulties such as dyslexia, dyspraxia, or low general cognitive ability. And co-occurring autism spectrum disorders are also prevalent. All of these neurodevelopmental problems can interfere with functioning and add to the day-to-day challenges of young adults with ADHD.



Reference(s): 1. Attention deficit hyperactivity disorder: diagnosis and management. <https://www.nice.org.uk/guidance/cg72/resources/attention-deficit-hyperactivity-disorder-diagnosis-and-management-975625063621>. Accessed October 10, 2016.

2. Asherson P. *Expert Rev Neurother.* 2005;5:525-539.

Reference(s): 1. Based on: Young S et al. *BMC Psychiatry.* 2016;16:301. doi: 10.1186/s12888-016-1013-4.

As part of the transition plan, the adult service provider should perform a number of assessments to evaluate the severity and impact of ADHD.

So aside from completing patient assessments, there are a few other things that the adult services need to consider. One is how to evaluate how much the young adults are currently engaged in their treatment.

First is psychosocial impairment: How well are the patients functioning in their social life, in education and occupational settings? What is the quality of these functions? And how are mental health symptoms impacting on their daily function? Are their relationships suffering? Are risky behaviours such as drug abuse or antisocial behaviour becoming an issue?

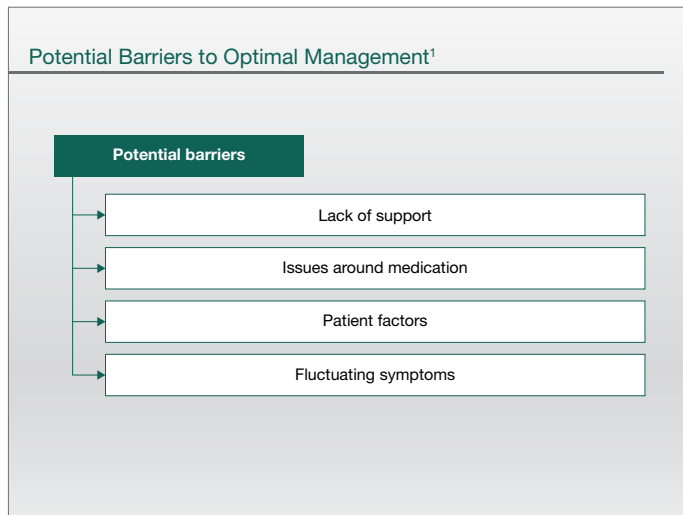
Adolescents or young adults often underestimate their symptoms or they may not realise the impact these are having on their everyday lives. So this is something we need to be aware of and help them to better understand. Forming a good relationship with the patient from the start is essential to this process.

Next we need to assess the level of psychiatric impairment: What emotional and mood symptoms are present? Are the patients distressed by the symptoms they're experiencing? And are they mentally or physically restless? How is their sleep? Do they feel anxious or overwhelmed? And how much mental effort do they need to make to keep her focused on things they're doing?

Another very important issue is optimising medical treatment. We need to check that they are taking the medication. Are they using it in an appropriate way? And are they motivated to continue? How good is the control of ADHD symptoms? Is the medication at the correct dose? Particularly with stimulants that have short-acting effects, we need to make sure the patients are getting ample coverage from their medication as their daily activities change and often extend as they get older. This is one of the reasons for considering sustained-release medications.

Patients presenting with mental health symptoms should be carefully evaluated to determine if these reflect poorly controlled ADHD, stress related to poor coping skills, or the other consequences of ADHD. On the other hand, they may

Finally, we need to consider if they are getting the right level of psychosocial support that they need, or whether these services should be adjusted or intensified.

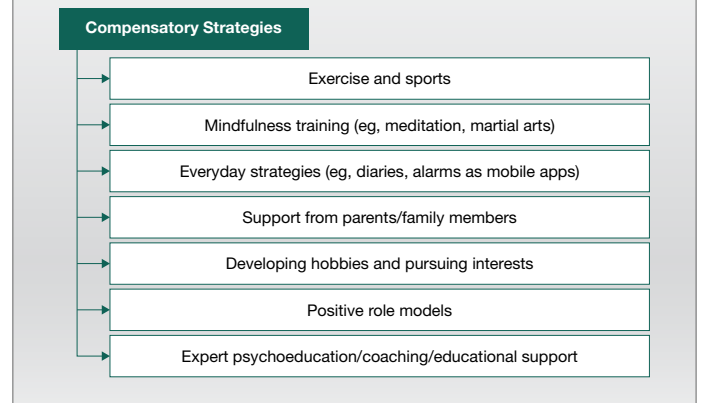


Reference(s): 1. P. Asherson, MD. Personal Communication.

Of course, even with a thorough transition plan in place, some barriers may interfere with the ideal management of patients. Patients may be disengaged or disinterested in the process. Family members may be critical or unsupportive. And young people themselves with ADHD may be influenced strongly by peer groups and could, for example, get drawn into risk-taking situations.

For some adolescents, there is also the problem of stigma about taking medication so they may stop treatment and actually start looking for alternatives, including drugs such as cannabis. Others may feel they do not wish to be dependent on a medication to function, or may be bothered by side effects. For some patients, the on/off effects of stimulant medication may also be bothersome, and this may be a good reason for using sustained-release medications with a gradual onset and offset of effects. Another very common problem in adolescents with ADHD is emotion dysregulation. So we have to help them understand that symptoms such as irritability, frustration, and anger are often part of ADHD and can also respond to treatment of ADHD.

Patient-Centred Strategies to Address Challenges and Increase Treatment Success in Adult ADHD¹⁻³



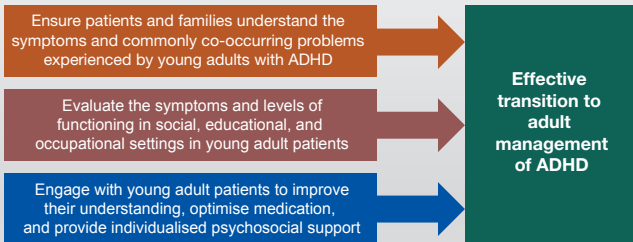
Reference(s): 1. Asherson P et al. *Lancet Psychiatry*. 2016;3:568-578.
2. Kooij SJ et al. *BMC Psychiatry*. 2010;10:67.
3. P. Asherson, MD. Personal Communication.

While there are a range of challenges for adolescents transitioning to adulthood with ADHD, there are also a number of compensatory strategies that we can discuss with our patients.

Exercise and sport may be particularly important for some patients. Mindfulness-based interventions, such as meditation or a more physical form such as martial arts, may also help some patients to focus their mind and reduce the mental clutter that is often going on in ADHD. Also, encouraging patients to identify hobbies that they enjoy can help.

Using simple, everyday strategies to get organised can also be very important: setting alarms or reminders on a mobile phone to help manage day-to-day tasks, for example, or asking for educational support or parental support to assist with planning and timekeeping. Experts in providing practical advice to adults with ADHD with strategies for dealing with problems such as restlessness, forgetfulness, and motivation can be invaluable. And lastly, helping young adults with ADHD to achieve their potential and understand that many people with ADHD can succeed in life. And, of course, there are many positive role models to look toward, and coping strategies that can be learned from others with ADHD.

Summary: Strategies for a Successful Transition in Adult ADHD¹



Reference(s): 1. Asherson P et al. *J Atten Disord.* 2012;16(suppl):20S-38S.

So in summary, it's important that the adult ADHD services and everyone involved in the transition from child to adult services has a very good understanding of the full range of symptoms and impairments experienced by young adults with ADHD. As part of this process, we need to be able to evaluate not only the symptoms of ADHD, but the impact these have on their daily lives. We need to work closely with young adults to help them to understand the disorder and to engage effectively with the treatment process and support the transfer of care from parents to the individual. Finally, we need to ensure that their treatment— both pharmacological and non-pharmacological —is optimised to meet their needs and preferences.

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