Report of the independent ADHD Taskforce: Part 2

November 2025

Contents

Abbreviated summary

Attention deficit hyperactivity disorder (ADHD), when unsupported, is a potent route into educational failure, long-term unemployment, crime, substance misuse, suicide, mental and physical illness[1–5]. Economic costs of at least £17 billion[6] are avoidable as, when appropriately supported, individuals with ADHD can thrive.

This brief summary of the Part 2 recommendations needs to be read with Part 1 of the ADHD Taskforce report.

1. Transformation for ADHD requires **systemic changes** at national, regional and local level. This includes government departments, health, education, employment and the criminal justice system. Co-design and co-production of transformation should include people with ADHD and their families/carers.

2. A **combination** of (a) upstream, preventative and early support strategies, (b) cross-sector changes and (c) downstream changes to ADHD service commissioning and provision is required.

3. **Early years support** needs to encompass family outreach and evidence-based parenting interventions appropriate for ADHD/neurodivergence.

4. **School interventions must be expanded to include ADHD/neurodivergence** to improve ADHD outcomes delivered via mental health support teams (MHSTs) and Partnerships for Inclusion of Neurodiversity in Schools (PINS) programmes. School and education policies and practice need to enable children with ADHD to thrive. Schools require direct links with ADHD health service providers.

5. **Adolescents and young adults** (ages 11–24 years) have been shown to be an especially high-risk group. Needs-led, cross-sector **integrated youth services** for this age group have been effective in other countries.

6. Expand **existing workforce skills** in health, education, relevant sectors of employment and the criminal justice system to better recognise and support people with ADHD based on their needs without waiting for a diagnosis.

7. Introduce more **transparent and clear regulation** of ADHD service providers as well as auditable quality control for commissioners. There is an urgent need for NHS England/DHSC to collaborate with NICE to explicitly define what is meant by an appropriately ADHD qualified healthcare professional. Ensure access to clinical services is **equitable**, including for marginalised sectors of the population and those in the criminal justice system. ADHD care should be seamless.

8. Urgently **reduce ADHD wait times and require the same standards for these wait times as those for physical health** given the costs and risks of ADHD as well as for reasons of equity. Different models of care need to be introduced urgently. The implementation of the 10 Year Health Plan for England needs to ensure ADHD is a priority given its costs, impacts and historical neglect despite the availability of effective treatments. This includes digitisation and embedding ADHD assessment and care within neighbourhood health centres with expanded roles for practitioners within primary care.

Executive summary

The independent ADHD Taskforce was commissioned by NHS England in 2024. It was tasked with (1) considering how services and support across health, education, justice and the whole of society need to be transformed to ensure those with ADHD are able to access timely, appropriate, effective and high-quality support beyond health alone and live to their full potential, as well as (2) making recommendations on a whole system approach to managing ADHD. The taskforce does not have the power to implement solutions. It is for government, cross-sector partner organisations and public sector bodies to consider them for implementation and to monitor progress.

We submitted Part 1 of our report at the start of April 2025 (published in June 2025) to be considered ahead of the 2025 government Spending Review and the 10 Year Health Plan for England.

Summary of Part 1 of the ADHD Taskforce Report

Impacts and avoidable costs of ADHD: In Part 1, we highlighted that ADHD is associated with higher risks of educational failure, not being in education, employment or training (NEET), long-term unemployment, welfare costs, early entry into the criminal justice system, family breakdown, chronic mental health problems, self-harm, suicide, substance misuse, obesity, physical ill-health and premature mortality[7,8]. We also noted the many vulnerabilities associated with ADHD, such as higher rates of victimisation and exploitation, including criminal and sexual exploitation[9,10]. However, it is important to recognise that ADHD is highly variable in its presentation and impacts; that some people experience ADHD as both a strength as well as challenge, depending on context[11], and that with timely support, people with ADHD can thrive. Currently the estimated cost to the UK economy of not treating ADHD is around £17 billion[6] (e.g. fewer tax contributions, in receipt of more state benefits, more likely to be not in education, employment or training (NEET) or long-term unemployed, and higher costs for health, social care and criminal justice). We recommended an ‘invest to save’ approach.

ADHD diagnosis rates: We showed that in England, there is consistent evidence that ADHD is under-recognised, under-diagnosed and under-treated (including with medication).

Stigma: We noted people with lived experience report challenges and injustice around ADHD because of stigma, misinformation and misunderstanding, including among some professionals. There also are concerns about the accuracy of information on ADHD provided by some sectors of social media and traditional media. Children and adults highlighted the impacts of negative attitudes around ADHD on them. We noted additional stigmatisation for those from marginalised communities.

Quotes from those with lived experience

“Getting it wrong in those early years can lead to so many secondary issues that shouldn’t have to be part of ADHD. Is it only the ADHD which is causing people so many problems, or the years of compounding trauma and exclusion?”

“The hardest part being a parent of a child with ADHD is the fighting. So much money, time, emotional resource goes into trying to get effective support for your child when you are already emotionally and financially incredibly vulnerable.”

“Good would look like a supportive media that doesn’t use ADHD as clickbait – stop talking about ‘ADHD drugs’ rather than ‘ADHD medication’. That is a deliberate choice of words, chosen to stigmatise and shame.”

“Social media is wonderful in many ways, but we are running the risk that ADHD is being perceived as an 'identity choice' and therefore easier to dismiss.”

Recommendations in Part 1:

We considered the wide-ranging impacts and costs of ADHD across systems and the urgency of dealing with ADHD wait times, and made a series of recommendations focusing on the need for a multi-system approach, prevention, shifting to the community and digitisation in line with the now published 10 Year Health Plan for England[12]. These highlighted that ADHD is not the remit of health alone; that support for ADHD and neurodivergence should begin early, be needs-led and not rely on or need to wait for a diagnosis by a clinician (prevention/early intervention); that a super-specialist, single diagnosis service model is not sustainable or evidence-informed (shift to community); and that ADHD services need to be digitised and informed by better data (digitisation).

Part 2 of the ADHD Taskforce Report

In Part 2, we consider how the recommendations in Part 1 could be implemented and briefly consider the involvement of wider sectors than health, including education, employment and the criminal justice. These sectors will be considered in detail by the Department for Education (DfE) Taskforce on Neurodivergence and Department for Work and Pensions (DWP) Expert Panel on Neurodivergence.

We include a glossary of terms (Annex 1), some illustrative case reports (Annex 2) and an updated evidence report from our experts in evidence group (Annex 3; June 2025).

Implementation: models of care

Where possible we have selected models of care that are evidence-based. Other suggestions (e.g. stepped care) have not been formally evaluated. Thus, we recommend that data collection and evaluation are built in at the outset to ensure new systems are effective and do not result in unintended consequences. All ADHD support and service models should involve co-design and co-production with local parents, children, young people, adults with ADHD/neurodivergence, their carers or families and include marginalised groups.

1. Support for ADHD and neurodivergence should be holistic and begin early

Early years: Childhood ADHD can lead to early behavioural and parent–child relationship challenges[13,14] that warrant intervention to reduce multiple, later adverse outcomes (e.g. increased risks of mental health challenges, severe mental illness, physical ill-health, self-harm, suicide, substance misuse, educational failure, not in education, employment and training (NEET), long-term unemployment, early engagement in the criminal justice system and premature mortality)[1,7,8].

Parenting interventions, when evidence-based and delivered systematically (see NICE guidance[15]), are highly effective in improving behavioural challenges (e.g. oppositional defiant disorder, conduct disorder) and parent–child relationships[16]. Preschool parenting interventions that are specifically ADHD-focused (e.g. New Forest Parenting Programme[17]) have been shown to be cost-effective for ADHD when compared to a parenting programme initially designed for behavioural problems[17].

Early family support, community outreach and parenting interventions in England were previously provided by locally delivered Sure Start in disadvantaged areas. However, Sure Start was later phased out across England. Recently, the government has announced that it is rolling out best start family hubs, building on the previous Sure Start Programme in every local authority. It is important that these hubs include family support and early interventions for neurodivergence.

Contemporary evidence has revealed positive, longer-term impacts of the original early investment: on reduced NHS use, better educational outcomes and reduced likelihood of a special educational needs and disabilities (SEND) recording, with benefits observed even for those living in Sure Start areas who did not directly engage with the initiative[18,19]. The greatest impacts and cost–benefit ratios were for children from the poorest backgrounds and ethnic minority families[19]. Adherence to evidence-based parenting programmes also made a positive difference[20]. Costs (in 2024) and savings from historical programmes, such as Sure Start and the New Forest Parenting Programme, are available[19]. In the future, some components of early intervention could be delivered digitally[21].

ADHD is genetically influenced; parents and siblings of a child with ADHD are themselves more likely to have ADHD as well as other types of neurodevelopmental or mental health challenges[5]. Thus, parent mental health and neurodivergence also need to be recognised and addressed early, as parent health can affect engagement with early years support[22]. Access to support is especially important for parents from marginalised groups, Another important and often neglected group is looked-after children who show much higher rates of ADHD, other types of neurodivergence and poorer health and educational outcomes[23].

What is needed

Ensure that the provision of early years parent and family support includes evidence-based, structured parenting interventions as well as ADHD-focused interventions. Providers need to be trained to recognise and support neurodivergence as well as mental health challenges in the parents and/or the child. Early years support also needs to include looked after children.

2. Early support in schools should be needs-led, its provision uncoupled from diagnosis: the whole school approach and targeted interventions

Mental health support teams and school-based support: Children with ADHD are at higher risk of academic failure, being bullied, school exclusion and school drop out[5,24]. They also show high rates of early-onset mental health problems of the type associated with academic stresses. In Part 1 of our report, we highlighted the need for completing rollout of mental health support teams (MHSTs) in schools and extending the role to include neurodivergence. The overlap between mental health and neurodivergence is substantial and thus school support should not be siloed by presumed diagnoses. The MHSTs teams were originally tasked:

- to deliver evidence-based interventions for mild-to-moderate mental health issues
- to support the senior mental health lead (where established) in each school or college to introduce or develop a whole school or college approach
- to give timely advice to school and college staff and liaise with the external specialist service to help children and young people get the right support and stay in education

“Whole school approach”: This involves all school staff, including leadership, pupils and partnership with parents, working together to improve mental health and wellbeing for everyone. It also encompasses the NHS, other services and the wider community. This approach includes co-creating an inclusive, supportive school culture that is free from stigma and discrimination; an emphasis on relationships including peer relationships; training to recognise early challenges and provision of appropriate intervention.

The ‘whole school approach’ intervention impacts positively on social, emotional and behavioural outcomes[25]. There is less research on the impact of whole school approaches on neurodivergent children[26] and on what types of support in educational settings are most effective[27]. Many highlight the importance of focusing on strengths not just challenges and recognising that every child with ADHD is different.

Partnerships for Inclusion of Neurodiversity in Schools (PINS): This is a programme that focuses on providing whole school support for neurodivergent children in primary schools (including ADHD) and is currently being embedded, evaluated and extended in approximately 2,800 primary schools across 40 integrated care boards in England. The programme offers 5 days of specialist support to each participating school (e.g. speech and language therapists, occupational therapists, educational psychologists). It also works with parent and carer forums to facilitate co-production at every level of delivery[28]. This programme needs to be rolled out across England but care is needed to integrate this with MHSTs to avoid duplication and silos or exclusions based on presumed diagnosis.

However, all school-based intervention programmes require investment in schools, staff training and integration across different programmes, to be effective in delivering early support. Also, **direct link up with ADHD service providers** is needed so that children with likely ADHD and persistent, severe impairments are assessed promptly.

What is needed

Expand evidence-based, universal and targeted **school-based programmes** that provide early, needs- rather than diagnosis-based support for ADHD and neurodivergence as well as mental health. These should include a whole school approach and integrate with neurodevelopmental and child and adolescent mental health services. These could be delivered and evaluated via existing MHSTs and the PINS programme. However, these programmes need to be jointly co-ordinated. They also need to avoid excluding children based on presumed diagnosis or reliance on diagnostic silos (e.g. ADHD/neurodivergence versus mental health), given that co-morbidity and overlaps are so common.

3. There should be a single, accessible front door. Support needs to be timely, of graded intensity depending on needs, focused on the whole-person and work across systems

Adolescence and young adulthood (ages 11 to 24 years): This age group encompasses an especially high-risk period. It is when nearly all (63–75%) mental health problems first onset (e.g. depression, psychosis, substance misuse)[29,30], and when those with ADHD (that onsets earlier) show high rates of mental health challenges, suicide, substance misuse, educational disengagement, criminality and unemployment. Key transitions include primary to secondary school and to its less structured sixth form, further education institutions, employment, training or higher education; from living at home to expectations of independence; child to adult services; and becoming a parent, among others. Many of those already diagnosed with ADHD are lost to follow-up at the age 18 service transition[31] and may then present in other sectors with additional or new difficulties, e.g. self-harm in urgent and emergency care (UEC) settings and repeated contact with primary care or the criminal justice system. Others with ADHD may have missed diagnosis; those diagnosed later with

ADHD, who are more often female, show much higher use of different NHS services (e.g. primary care, UEC) than those with a timely, early diagnosis[32].

Currently, most ADHD, autism and mental health pathways and services in England are separated, such that even though co-occurrence is very common, diagnoses, services and budgets are siloed, as discussed in Part 1 of our report. This is neither evidence-based nor person-centred and can lead to clinical risk, inefficiencies and duplication of work for those who set budgets, service managers, patients, clinicians and policy-makers.

To address the overlapping neurodevelopmental and mental health needs of adolescents and young adults, a number of countries have implemented walk-in, holistic, integrated youth services[33]. We focus on Canada because there are some similarities in provision with the UK (e.g. central role of primary care). Also, integrated youth services have been evaluated there[34] and costs are available along with service model specifications[35].

Integrated youth services (youth wellness hubs)

These provide a one-stop shop for young people with neurodevelopmental, mental health and substance misuse challenges. They are co-designed with young people from the locality, needs-based and person centred and involve whole systems. They avoid diagnostic silos and provide measurement- and evidence-based care[33].

Integrated youth services include primary and secondary mental health, physical health including sexual health, education, employment and vocational services, social services, peer support and the voluntary sector.

A recent randomised controlled trial in Canada compared integrated collaborative care treatment (ICCT) to ‘treatment as usual’ in traditional outpatient mental health services (35% of the participants met criteria for ADHD)[34]. Both groups improved on the primary outcome measure of youth-reported functioning with no clinical difference between the groups. However, young people who received ICCT accessed services sooner and used fewer psychiatric resources than the treatment as usual group. Costs per size of population (Canadian states) are available[35]. In England, many of the components of integrated youth services are already funded but fragmented (e.g. NHS, local authority, education, criminal justice system, voluntary sector). For a geographically mobile population, care needs to follow the individual regardless of geographical location.

What is needed

Integrated youth services (youth wellness hubs) provide a single front door to an accessible, needs-led, stepped-care approach for adolescents and young adults. They may speed up access to services, improve efficiencies by working across diagnostic boundaries and sectors, and prioritise psychiatry for those who most need this specialist resource. Some components are already in place and could be brought together with the neighbourhood health hubs proposed in the 10 Year Health Plan.

4a. Urgently address escalating NHS ADHD waiting times: breakdown diagnostic and service silos, expand existing workforce skills and improve accessibility

Inadequate service capacity for all ages. In Part 1 of our report, we highlighted that without action, wait times will continue to increase. Research shows that delayed[32] or missed diagnosis[36,37] carries a multitude of costly risks to the person and the state (e.g. prison, emergency department and primary care demands, suicide, substance misuse, educational failure, unemployment, incorrect diagnosis and ineffective treatment such as antidepressant medication when ADHD is misdiagnosed as depression or anxiety). A missed ADHD diagnosis or misdiagnosis is more common in certain groups, e.g. females and those belonging to socially disadvantaged or minority groups. Currently, in England the demand for ADHD services, even if we narrowly define ADHD diagnosis, greatly exceeds service capacity. Thus, service capacity must increase and transform to reduce wait times, alongside system-wide transformations. The implementation of the 10 Year Health Plan commitments in relation to workforce, particularly the mental health workforce, needs to ensure appropriate provision of care for ADHD.

Diagnostic silos and exclusion from services: ADHD (and autism) assessment has become increasingly specialised and siloed over the last few decades, which further reduces service capacity and skills of the workforce. This may have been incentivised by separate budgets in the context of growing demand, e.g. in some areas, a secondary care child and adolescent mental health services (CAMHS) or general adult psychiatrist is not allowed to diagnose and treat ADHD. Another challenge is that adult mental health services have traditionally focused on severe mental illness (e.g. psychosis). Thus, their workforce may not be equipped or trained to assess and manage ADHD or positioned only to offer medication without the option for non-pharmacological, e.g. psycho-education, and good quality post-diagnostic support.

Lived experience (see Annex 2): Those with lived experience, including children, reported the negative impacts of having to repeat their story and assessment (e.g. because the ADHD diagnosis provided by one service was not recognised by another, failure to transfer information between services, a different clinician at each clinic visit). Many reported service accessibility challenges (e.g. requirement to complete multiple written forms and questionnaires, problems in obtaining their prescription locally, need to navigate different systems to access support for their child or themselves, difficulties around shared care arrangements). Some clinicians suggested that a health passport could help avoid duplication of work and people having to repeat their history. This could easily become part of the NHS App proposed in the 10 Year Health Plan.

What is needed

There is an urgent need to integrate budgets, service planning and delivery across mental health and neurodevelopmental services and upskill the existing workforce. This is needed to improve efficiencies around assessing and treating ADHD, which is common and frequently shows co-morbidity.

Assessing and treating ADHD need to be core competencies for **all** psychiatrists, psychologists, community paediatricians and specialist mental health nurses.

Mental health professionals across all disciplines, including wellbeing practitioners and social workers, require core competencies in recognising and supporting ADHD.

Some aspects of ADHD care, e.g. post-diagnostic support and psychoeducation, can be delivered in partnership with other sectors, e.g. voluntary, community and social enterprise (VCSE) and local authorities, depending on local expertise and availability, as stated in Part 1 of our report. Providers will require some form of regulation. Other support could be provided via the proposed NHS App.

ADHD care needs to be more accessible and the transfer of information and care across services must improve. A single patient record on the NHS App is a priority for ADHD care (see Annex 2), as are other proposals in the 10 Year Health Plan for managing a long-term condition (e.g. My Care, My Health, My Companion) and government proposals to provide patients with greater choice. These improvements need to be ADHD accessible and include co-development with the ADHD community.

4b. Urgently address escalating NHS ADHD waiting times: expand NHS service provision, test models of task shifting and digitise routine administrative tasks

The failure of ADHD healthcare provision in England has been highlighted extensively by clinicians, academics, independent reports and those with lived experience[38–40]. First-line non-pharmacological support for ADHD, as recommended by NICE, does not always necessitate an immediate, accurate, specialist diagnosis or always have to be delivered by the NHS. For example, unless impairment is severe or there is complexity, initial support to people with ADHD and their families or carers could be delivered via schools, local authorities or the voluntary sector, depending on age, context and what works best for each locality. This already takes place in some areas of England.

There is evidence from some parts of England and other nations that supervised task sharing/shifting, expanding the non-medical workforce and embracing technology in ways that are evidence-based and safe (e.g. routine administrative tasks that could be included in the proposed NHS App), can expand capacity in a cost-effective way that meets quality standards. With appropriate training, support and supervision, initial ADHD assessments that meet quality standards can be conducted by nurses and junior healthcare staff[41]. For defining ADHD diagnosis in scientific research[e.g.42], it is common for graduate psychologists/psychology assistants, who are supervised and monitored by senior clinicians, and rigorously trained to conduct semi-structured psychiatric/neurodevelopmental diagnostic interviews. This generates information for senior clinicians to confirm a diagnosis and co-morbidities. There is a need for local and national evaluations (e.g. quality initiatives, audit as well as research) to identify what types of task-shifting work best and safely in different care settings.

Also, post-diagnostic clinical management and support, prescribing and follow-up (including physical health) for many, as is the case for other chronic common conditions, can be provided by specialist nurses and pharmacists (for prescribing) as well as other primary care staff (see primary care section). This would allow more expensive senior, secondary care medical staff to focus more on those with the highest complexities and supervision.

NICE guidance highlights that ADHD should only be diagnosed by a specialist psychiatrist, paediatrician or “other appropriately qualified healthcare professional with training and expertise in diagnosing ADHD”. However, it is unclear what constitutes an appropriately qualified healthcare professional or appropriate training, with enormous variation reported across the NHS and independent sector in how this guidance has been interpreted.

What is needed

There is an urgent need for NHS England/DHSC to collaborate with NICE to explicitly define what is meant by an appropriately ADHD qualified healthcare professional and clarify what qualifications are needed for different aspects of ADHD care.

Due to escalating wait times for ADHD in England, there is an urgent need to expand the existing workforce and require the same standards for wait times as those for physical health, given the costs and risks of ADHD as well as for reasons of equity.

Testing what types of task-sharing and shifting work best and safely is a priority, so that senior medical expertise is used for supervision, support and the most complex cases.

The implementation of the 10 Year Health Plan needs to ensure ADHD is a priority (given its costs, impacts and historical neglect) in terms of transformation including digitisation and modern service frameworks.

5. Improve support to those on waiting lists

Long wait times carry high risks for those with ADHD. These include deterioration of mental health, suicide, entry into the criminal justice system, substance misuse and enormous costs. Also, uncomplicated ADHD is easier to support and treat (at its outset in childhood) than once ADHD adverse impacts have emerged (e.g. school drop out, mental illness, substance misuse).

There is no robust research evidence on what is most helpful for those on ADHD waiting lists including triage methods[43,44], although some approaches look promising[43]. Any single approach on its own is considered insufficient (see Annex 3). Those with lived experience (ADHD Taskforce priorities: a deliberative public engagement) have highlighted there should be greater transparency with clear communication about waiting times, regular updates while on a waiting list and signposting to local support (e.g. peer support groups) including the voluntary sector.

ADHD rating scales can be useful for monitoring symptom change after treatment but should not be used on their own for triage to exclude people from services due to their limitations. Also, there is growing interest in using measures of functioning and impact much more in clinical practice and research (see Annex 1 for details). A recent ADHD assessment quality assurance standard[45] recommended that rating scales should not be used to exclude children and adolescents from services. If used for triage, they should be supplemented by qualitative descriptions and specific examples of difficulties and impairments associated with ADHD symptoms[45]. For adults, a positive screen on rating scales will often not indicate ADHD (rates of screen positive are much higher than the diagnosis rate)[46]. Thus, screening positive on rating scales alone is not an indication for referral for a diagnostic assessment. Other information is required before referral, including qualitative information on the nature and severity of ADHD symptoms and impairment, consideration of alternative diagnoses, co-morbidities and risks, e.g. suicidal[47]. Based on research evidence, one would expect risks of delay are highest for those with the most persistent, severe symptoms and impairment, those with co-morbidities, limited internal and external resources or scaffolding or those at crisis point (e.g. risk of family breakdown, school exclusion, threatened job loss).

What is needed

There is a need to support those on ADHD waiting lists, informed by emerging evidence, and to locally and nationally evaluate optimum ways of triage and best prioritisation or stratification of those who need to be seen earliest, while adhering to published quality standards.

6. Move to a generalist model

For other common chronic health conditions (e.g. diabetes, depression), GPs, supported by nurses and mental health practitioners, have taken on a central role in diagnosis and management including prescribing. Shared care protocols for ADHD have been available for many years but these have become more problematic in recent years with many arrangements no longer in place. Although overall there are greater efficiencies for the NHS in primary versus secondary care and those with ADHD often state a preference for GP care, primary care does not currently play a major role in ADHD care.

Barriers include insufficient time to meet quality standards, a lack of relevant training on ADHD (although brief digital ADHD training for primary care does appear to be effective[48]), lack of capacity and remuneration, concerns about the quality of ADHD diagnosis from some providers, and a lack of direct support and link up with specialist psychiatry services. Another concern for some is that the most effective prescription medication for ADHD is a controlled drug (ADHD non-stimulant medications are also effective but not first line because effect sizes are not as large as those for prescription stimulants). Also, there may be limited access to non-pharmacological interventions in primary care.

However, there are GPs who are keen to take on a greater role in ADHD assessment and treatment or to engage in follow-up. Irrespective of this enhanced specialist role, GPs need to be able to recognise ADHD as part of a range of presentations commonly seen in the general practice setting and the various differential diagnoses that need to be considered. GPs also need to ensure that any referral they make for an ADHD assessment is clinically appropriate, and to be equipped with the skills and knowledge to perform an initial screening consultation, as they would for any other health condition. Standardised referral templates could help GPs here and could be included in the proposed NHS App.

What is needed

Given how common ADHD is, there is an urgent need for all GPs (e.g. via the Royal College of General Practitioners curriculum, continuous professional development, national GP contract) to develop and use core competencies in recognising and supporting ADHD (and other neurodevelopmental conditions).

GPs who take on some aspects of ADHD care including shared care (e.g. follow-up care and prescribing, NICE recommended health checks) should receive additional funding through locally commissioned services and, as with other common chronic conditions, have access to secondary services for specialist advice and support when needed in a timely manner.

Interested GPs should have the opportunity to train as specialist GP ADHD practitioners (e.g. GPs with Extended Roles). These shifts could be implemented within the neighbourhood health model proposed in the 10 Year Health Plan.

7. Stepped care models (providing support of different intensities): what this might look like

In Part 1 of our report, we recommended that the National Institute for Health Research (NIHR) should fund formal evaluation of stepped care models for ADHD. Meanwhile, services should adopt a test-and-learn approach to providing support of different intensities for those with possible ADHD and clinically diagnosed ADHD and this should be co-developed with the ADHD community.

Children and young people: Initial lower intensity support, psycho-education, lifestyle and sleep management, and post-diagnostic support for ADHD in children, adolescents, young adults and their families could be provided through (a) best start family hubs, (b) extended MHSTs and/or PINS and (c) integrated youth systems. These could involve the voluntary and community care sector (e.g. peer and carer support) depending on local needs and skills. Post-diagnostic support is increasingly scarce, although in some areas of England such support is provided by commissioned VCSEs.

Adults: Initial and post-diagnostic support (self-management of symptoms, lifestyle and sleep, environmental adjustments) could be delivered via expanding the roles of a broader range of professionals, e.g. psychological wellbeing practitioners, including those delivering NHS talking therapies, counselling services and the voluntary sector, where suitable, provided this provision is regulated. This is especially important as the 10 Year Health Plan proposes that patients can self-refer to talking therapies (My Specialist tool). This should include specific mechanisms for those in the criminal justice system to access early support.

Across ages, all early and post-diagnostic support providers need to be linked up with ADHD clinicians to enable consultation and faster access when diagnosis with or without medication is required.

As highlighted in Part 1 of our report, there is under-treatment of ADHD in England despite medication being a highly effective and relatively inexpensive treatment for ADHD[1]. Thus, medication should be part of stepped care for those who meet the criteria for ADHD (in line with NICE ADHD guidance and international guidelines), together with other types of support and interventions.

What is needed

Stepped care models require evaluation by NIHR but, initially, each area needs to identify which sector could be trained and is best placed to safely and effectively deliver early needs-based support and non-pharmacological interventions as well as post-diagnostic support. The model of stepped care can be incorporated into the newly proposed neighbourhood health centres, provided primary care is a core component, and where appropriate also involve the proposed NHS App (e.g. single record, managing prescriptions, NICE approved digital support and interventions as they emerge).

Medication should not be the only option available to people with ADHD but should be offered when needed.

A fast track to ADHD diagnostic assessment and treatment is also important when needed.

Quality assurance and inequalities

8. There is a need to implement quality standards across all ADHD service commissioners and providers

The need for high quality data: In Part 1 of our report, we highlighted that the population prevalence of ADHD has not risen. A recent paper commissioned by NHS England is consistent with this finding[49]. It is referrals that have increased in the context of under-recognition and under-treatment of ADHD in England. We highlighted that in England, unlike some parts of the world, ADHD is under-recognised and under-supported. New data released from NHS England in spring 2025 concurs with published research studies highlighting under-recognition, under-diagnosis and under-treatment of ADHD in England. In Part 1 of our report, we emphasised that high-quality data is crucial for planning and improving services and its collection needs to be mandated for all providers. Data quality has recently been highlighted as critical for understanding, improving and planning adult ADHD services[50].

Medication: As is the case for all common chronic conditions (e.g. asthma, diabetes), ADHD is highly variable in its severity and impacts. Some people with ADHD can successfully self-manage symptoms and adjust their environments and lifestyle so the impacts of ADHD are minimised; others only require medication in specific contexts (e.g. when in education or the workplace); others are severely affected and need life-long, regular medication together with non-pharmacological strategies.

As reported in Part 1, for those who meet the full ADHD diagnostic criteria (e.g. ICD or DSM criteria), medication (stimulant and non-stimulant) can be highly effective in reducing ADHD symptoms[51,52] (stimulants have larger effect sizes than antihypertensive medications and statins[53]; 70–89% show symptom reduction) and improving quality of life[54]. They also appear to reduce risks (e.g. criminality[55], unemployment[56], suicide[57], substance misuse[58]) (see Annex 3). As is the case for any prescribed medication, both risks and benefits need to be considered before prescribing. Risks include medication side effects and, in the case of stimulant medication, diversion (the transfer of prescribed medication to an individual who does not have the prescription), which has become a concern in some parts of the USA.

Quality of services: Although overall rates of ADHD diagnosis in England are lower than expected, there are anecdotal reports of low-quality ADHD assessment and inaccurate diagnosis provided by some ADHD services. This mistrust about the quality of diagnosis poses further challenges for people with ADHD. These include disbelief from others about the authenticity of their ADHD diagnosis and having to seek additional assessments when they move geographical areas, change provider or require GP shared care. It is thus essential that:

- there are nationally accepted commissioning standards for ADHD
- assessment for diagnosis, especially for the purpose of prescribing, meets current accepted quality standards[45,46]
- adherence to NICE guidance on ADHD treatment is transparent[59]

- data should be auditable
- service providers for every aspect of ADHD support and care meet quality standards and are regulated

These steps are also important for addressing ADHD stigma and perceptions of some about the lack of rigour of ADHD diagnoses and low quality of providers.

While many providers continue to achieve high standards, there are several challenges for ADHD service providers. Very long NHS waiting times for ADHD services, increasing referral rates as highlighted in Part 1 and the growth in independent providers could potentially incentivise departures from quality and safety (to clear waiting lists or for financial reasons). The very long waiting times in the NHS also create a two-tier system, as previously highlighted, where the most disadvantaged groups (highest risk, poorest households, those who have been in the criminal justice system) are the least likely to be able to afford private assessments and treatment.

Those with ADHD also encounter challenges when a provider diagnosis of ADHD is not recognised or accepted or when they move geographical area: duplication of work and difficulties navigating and negotiating different systems. An ADHD passport or equivalent within the proposed NHS App would help address some of these difficulties.

What is needed

There is a need for nationally agreed minimum contracting standards that all commissioners must follow when commissioning both NHS and independent sector organisations to ensure no service gaps, including when patient choice is applied.

All providers need to demonstrate that they are adhering to published quality standards for ADHD assessment and treatment to protect people with suspected or confirmed ADHD.

Data on rates of ADHD diagnosis and treatment along with other data needs to be monitored nationally and locally across England to reassure those with ADHD, the public, commissioners, providers and government about the quality and safety of services.

9. Inequalities

All the impacts of ADHD (e.g. premature mortality, suicide, poor physical and mental health) are also influenced by the wider social determinants of health (e.g. poverty, housing, unemployment, discrimination, among many others). The enormous adverse impacts of socio-economic inequalities on health are well documented[60,61].

For all individuals with ADHD, there are inequities because NHS ADHD waiting times are very long (years) and increasing across England (see Part 1 of our report). Those with ADHD/neurodivergence from lower income, care experienced, minority and marginalised groups as well as females have even less or more delayed access to ADHD support.

Inequality in access to services and support is also a salient issue in the criminal justice system where ADHD and neurodivergence are hugely over-represented.

What is needed

There is an urgent need to address service gaps and ensure equality of access for all sectors of the community including those from marginalised or under-served groups.

Data is needed to assess and monitor how effective services are in reaching marginalised groups to reduce inequalities in ADHD support and timely access to early support, diagnosis and effective treatment.

Education, employment and the criminal justice system

In Part 1 of our report, we emphasised that in sectors that do not engage in clinical decision making, support should focus on needs and not rely on or wait for a diagnosis. These sectors include education, employment and criminal justice system. We have worked closely with the DfE Neurodivergence Task and Finish Group and liaised with the DWP Academic Panel on Neurodivergence. Findings and discussions across the groups have been remarkably convergent.

Education

As described in Part 1, it is important to uncouple early ADHD support from diagnosis so that school support is needs-based. There is a perception, among some, that schools and education may be major drivers of demand for diagnosis and some evidence for this from the USA. As repeatedly highlighted, currently in the UK there is under-recognition and under-treatment of ADHD. However, the Taskforce recognises that in some regions of the world (e.g. some states in the USA), the rate of clinically diagnosed and treated ADHD is higher than the population prevalence. This fuels concern that the same issues could arise in England and the UK in the future. Research in the USA suggests that education and school policies may explain some of this variation in the USA, especially for low-income children. Accountability reforms in schools in states where ADHD diagnosis rates rose led to more referrals and diagnoses; whereas state psychotropic medication laws that prohibited schools from recommending or requiring medication use were associated with fewer ADHD diagnoses[62]. This suggests that education and school policies are important influences on the impacts of ADHD.

In England, as outlined in Part 1 of our report, children with ADHD are much more likely to be absent from school, excluded from school[24], unable to engage in school, under-perform educationally as well as fail to transition into work or higher education[3,63]. Children with ADHD and teachers report inadequate training, resources and staffing to support the needs of children with ADHD (e.g. support teachers in the classroom, non-teaching staff with supervisory roles, unsuitable physical environment including outdoor space); a lack of flexibility in the classroom (e.g. children with ADHD may require more frequent breaks due to challenges with attention and hyperactivity); an over-emphasis on repeated testing and memorising; limited flexibility around the curriculum to leverage strengths and interests; and a lack of awareness and understanding around ADHD among teachers and school staff[64].

Other issues raised by those with lived experience included: concerns regarding the reliance on teacher reports during the diagnostic process, when the teacher is unfamiliar with the child or where symptoms are masked in school; negative school attitudes and unhelpful stereotypes around ADHD; and a failure to ask children themselves to help identify what adjustments would enable them to flourish in school, because every child with ADHD is different.

Education is considered fully by the DfE Neurodivergence Task and Finish Group that has cross-representation with the ADHD Taskforce. We welcome the recommendations from this group.

What is needed

There is a need for transformation across education and schools (mainstream and special) in terms of policy, training and practice.

The aim should be to remove barriers for children with ADHD/neurodivergence by increasing their acceptance in school and enabling their access to the same opportunities as other children, so that they can thrive and transition successfully to adult life including higher education, training and employment.

Employment

As explained in Part 1 of our report, employment is another important sector because young people with ADHD are more likely not to be in education, training or employment (NEET)[3,63] and experience chronic unemployment[56], which further exacerbates poverty and poor mental and physical health, and more often fail to transition successfully to employment or remain in employment. Feedback from consultation for this Taskforce also highlighted challenges at key transition points. These include from school to further education and into employment. Although England does have a number of support mechanisms for neurodivergent young people (e.g. Access to Work; careers support in schools and higher education), they are not always joined up or linked to ADHD/neurodivergence and mental health services. Support for work and careers needs to be good quality, early stage and needs- rather than diagnosis-led. There is a need to better utilise and join up existing systems (see integrated youth care system earlier).

Consultation also highlighted the need for careers conversations to go beyond traditional options, and for careers advisors and the workplace to consider strengths, the value of difference, different ways of working and how to better harness technology and facilitate suitable adjustments at various stages across employment (e.g. application, interview, progression). Some highlighted the need to provide opportunities for paid work experience for neurodivergent young people and the importance of rewarding intersectional, neuro-inclusive training for human resources teams.

A full set of recommendations on employment is provided by the DWP Neurodivergence Academic Panel.

What is needed

There is a need to address inequalities for those with ADHD and other types of neurodivergence in accessing work and across the entire employee journey.

Criminal justice

It is deeply concerning that ADHD as well as other types of neurodivergence are over-represented in the youth and adult criminal justice systems and it is unclear why that is the case. Children with ADHD are especially vulnerable to exploitation. Around 17% of children in the youth criminal justice system and 25% of those in prison are reported to have ADHD[65,66]. Contact with the criminal justice system also starts at a younger age and there is a higher risk of reoffending[67]. It has been reported that the focus of many existing criminal justice mental health services is acute episodic illness, not neurodevelopmental conditions like ADHD. This means that ADHD may well go unrecognised or, if recognised, untreated as well as misdiagnosed.

The criminal justice systems for adults and children need to be considered separately because of changing developmental needs. It is important to adopt the evidence-based Child First Framework[68] in youth justice services. Current challenges include a lack of criminal justice system and healthcare staff awareness and training around ADHD, and the inequality of access to ADHD specialist mental health staff, ADHD medication and non-pharmacological interventions for people in the criminal justice system.

A further challenge that emerged in the gathering of evidence for the purpose of this Taskforce is the lack of a system-wide understanding and co-ordination of response to ADHD and neurodivergence.

What is needed

There is an urgent need to transform the criminal justice system to better recognise and support ADHD and to develop systems that enable this. There is a need to address inequalities for those with ADHD and other types of neurodivergence in accessing care while in the criminal justice system and after leaving this system, and the evidence gaps.

Part 2 Taskforce Report Recommendations

Our overarching conclusions are that: inaction is not an option for economic as well as ethical reasons; no single solution will suffice; a multi-faceted, multi-level transformation across systems is needed as well as the will to address current inequities experienced by people with ADHD. This need is compounded by historical neglect of ADHD and exclusion of ADHD from mental health funding streams, policies, budgets and services in some instances. However, that can now be addressed given robust scientific evidence around ADHD to inform change. The implementation of the 10 Year Health Plan and spending review outcomes brings timely opportunities to consider and implement our recommendations and redress historical neglect.

Transformation will require:

- cross-government working and policy changes
- incentives for different sectors and agencies to work together on transformation for ADHD at a national, regional and local systems level
- a combination of upstream, preventative, early support strategies and cross-sector changes
- downstream increase in the capacity and efficiency of NHS services that deal with ADHD and cross diagnostic boundaries
- improved regulation of ADHD service commissioning and provision and quality control measures, as the need for clinical intervention will remain

NHS service providers are currently unable to meet demand even if we take the narrowest definition of ADHD.

We made 12 recommendations in Part 1 of the ADHD Taskforce Report. We now make 15 additional recommendations, some of which expand our Part 1 recommendations. The Part 2 recommendations need to be read alongside Part 1 of the ADHD Taskforce Report.

Early years support: models of care

1. **Expand and modernise early years support using evidence-informed strategies via early years hubs.** We welcome the introduction of the best start hubs. These should provide training for staff in recognising ADHD/neurodivergence in children and parents, family and parent support and ADHD-focused preschool parenting interventions (see Annex 3) as well as standard parenting packages. Support should be prioritised for those from the most disadvantaged groups (poorest households/areas

and minority groups) and children with behavioural challenges or where children or parents present with ADHD features.

2. **DfE and NHS England/DHSC should extend, integrate and evaluate school-based programmes to include ADHD/neurodivergence (MHSTs, whole school approach and PINS). They should ensure school and education training and policies improve inclusion and reduce the negative impacts of ADHD.** It is crucial to ensure co-ordination between different programmes, to avoid duplication or lack of clarity about roles. Evaluation and collaboration between education and health need to be built in so that schools have support and direct links with integrated children's neurodivergence services and CAMHS.

3. **Government (cross-department) should consider implementing, testing and evaluating integrated youth services (youth wellness hubs) in England.** This could build on integrating and further developing the existing services across different sectors that are fragmented, within neighbourhood health centres as part of the 10 Year Health Plan.

Expanding skills of the workforce and support for people with ADHD across ages and sectors

4. **The Royal Colleges of Psychiatrists, of General Practitioners and of Paediatrics and Child Health, NHS England/DHSC as well as professional bodies relevant to mental health nursing and psychology** should immediately identify and co-develop core competencies and training (curricula for training and CPD) in recognising and supporting ADHD. Assessing and treating ADHD need to be core competencies for all psychiatrists, community paediatricians, psychologists and specialist mental health nurses. **DHSC** needs to fund training programmes (that can include digital programmes) across health including primary care.

5. **Government departments (DfE, DWP, MoJ, DHSC) need to consider delivery of training on ADHD and neurodivergence to sectors and organisations that engage with people with ADHD.** This includes all the workforce (not just specialists) in education, job centres and career advisors, NHS staff (e.g. emergency departments), criminal justice system, social work and HR staff, by updating curricula for professional training and providing CPD. The aims should be to recognise ADHD/neurodivergence early; identify systems and processes that act as barriers rather than enablers and increase risks of worse ADHD outcomes and impacts; provide early needs-based support; and create partnership with ADHD service providers at a local level.

6. **DHSC should incentivise GP practices to take on aspects of ADHD care and also develop a greater leadership role around ADHD.** The new GP contract should include funding for training and enable the GP and primary care workforce to undertake routine generalist work such as post-diagnostic support and NICE recommended health

checks. Interested GPs and other practitioners in primary care roles (e.g. pharmacists for prescribing, mental health trained nurse practitioners) should have the opportunity to train in more specialist aspects of ADHD care such as assessment, treatment and prescribing, with the same quality control measures as for other providers. This could be achieved by providing ring-fenced funding for ADHD to support locally commissioned services or through the new neighbourhood provider contracts. This should enable better links with secondary care so that stepped care pathways are established in the same way as for other common chronic conditions (e.g. diabetes).

Regulate and quality assure ADHD services

7. **NHS England/DHSC need to** collaborate with **NICE** to explicitly define what is meant by an appropriately ADHD qualified healthcare professional and clarify what qualifications are needed for different aspects of ADHD care. This collaboration needs to involve liaison with appropriate professional groups including **primary care, and secondary care providers.** Also, we recommend that **NHS-England/DHSC with NICE**, collaborate with **appropriate professional groups** to identify key data needed for audits, QI (quality improvement initiatives) and research, and either produce or endorse already published quality standards[45,46] for assessment, diagnosis and post-diagnostic support that are achievable and cost-effective.

8. **NHS England/DHSC need to ensure regulation and accountability of all ADHD commissioning and ADHD providers across England. This will require a quality standards framework for ADHD.** This framework (for example, a modern service framework) should comply with accepted UK quality standards such as NICE and recently published ADHD quality frameworks[45,46]. There should be a requirement and built-in funding to undertake regular QI and audit on ADHD, harnessing technology and ongoing data capture to simplify and speed up these processes. The Care Quality Commission should have oversight of all ADHD service providers.

9. **NHS England/DHSC need to ensure equity by having the same waiting time standards for ADHD as for other health conditions and monitor data on ADHD wait times, rates of ADHD diagnosis and treatment across England in 'real time',** adopting mechanisms that already work for monitoring other common chronic and potentially high-risk conditions. Commissioners and providers need to provide data on wait times, rates of diagnosis and prescribing.

Expand service capacity

10. **NIHR and other research funders** need to consider evaluation of how best to support, triage and prioritise those on waiting lists and safely task shift given the lack of evidence on optimum approaches. Meantime, **integrated care boards, ADHD commissioners and providers** should address wait times immediately and evaluate

strategies used through ongoing audit and QI programmes. Triage and prioritisation should not rely on questionnaire screening alone but include collecting additional data and supervision by an experienced clinical team member (e.g. nurse-led).

11. **NHS England/DHSC and ADHD service commissioners need to enable and incentivise ADHD service providers** to co-develop with those with lived experience and expand holistic support that crosses diagnostic silos and agencies and offers a range of support and interventions of different intensities (stepped care).

12. **NHS England/DHSC, ADHD service commissioners and ADHD service providers together with clinicians** need to co-develop with the ADHD community ways of identifying acceptable, safe and monitored approaches to task sharing (or shifting) and increasing the capacity of current services by expanding the skills of the current workforce as well as training additional new staff.

Education, employment and the criminal justice system

13. **DHSC/NHS England, DfE and DWP** need to jointly implement the recommendations of the ADHD Taskforce, DfE Neurodivergence Task and Finish Group and DWP Expert Panel on Neurodivergence to transform systems and address inequalities in access to support, and engage with the **MoJ and Ministry of Housing, Community and Local Government (MHCLG)** so that implementation works across all systems.

14. We recommend that **MOJ** builds on existing support (as set out in A Response to the Criminal Justice Joint Evidence Review: Neurodiversity in the Criminal Justice System action plan - GOV.UK) and works with **DSHC/NHS-E** and its partners such as the **Home Office** to create a taskforce or panel. This is to consider how best to further transform ADHD and neurodivergence support within the whole criminal justice system. There is a striking lack of equity in terms of access to support and treatment for those in the criminal justice system. There is also limited research evidence to inform best practice on what works in the criminal justice system for people with ADHD, and an understanding of how unrecognised and unsupported/untreated ADHD increases vulnerability to crimes such as child sexual exploitation and sexual violence.

15. **Legacy of Taskforce: we recommend that NHS England and DHSC** identify an explicit and transparent mechanism to oversee, monitor and review the implementation of the recommendations of the ADHD Taskforce.

Sources of data for Part 2 of the ADHD Taskforce report

These included: consultation with the children's advisory group of the Children's Commissioner for England (co-run with the Chair of the ADHD Taskforce, June 2025); written and oral information (via the chairs) from the experts by experience group, experts in evidence group, clinical reference group and academics nationally and internationally; peer-reviewed scientific publications; relevant UK reports; employers and other relevant UK networks.

Taskforce members: Anita Thapar (Chair), Char Bailey (lived experience expert Taskforce Report Part 1), Jawad Choudhury (lived experience expert, youth member), Lucy Clement (GP, lived experience expert), Tamsin Crook (parent, lived experience expert), Keith Fraser (Chair of Youth Justice Board), Karen Guldberg (Chair of DfE Neurodivergence Task and Finish Group), Dan Harris (employment, lived experience expert), Adrian James (Medical Director – Mental Health and Neurodiversity, NHS England), Rachel D'Souza (Children's Commissioner for England), Louise Ansari (Chief Executive of Healthwatch), Thea Stein (Chief Executive of Nuffield Trust).

References

Assembled by Chair and Dr Joanna Martin

1. Asherson P (2024). ADHD across the lifespan. Medicine 52: 512–7
2. Young S, Moss D, Sedgwick O, Fridman M, Hodgkins P (2015). A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations. Psychol Med 45(2): 247–58. doi: 10.1017/S0033291714000762
3. Riglin L, Todd A, Blakey R, et al (2023). Young-adult social outcomes of attention-deficit/hyperactivity disorder. J Clin Psychiatry 84(2): 22m14379. doi:10.4088/JCP.22M14379
4. Helgesson M, Björkenstam E, Rahman S, et al (2023). Labour market marginalisation in young adults diagnosed with attention-deficit hyperactivity disorder (ADHD): A population-based longitudinal cohort study in Sweden. Psychol Med 53(4): 1224–32. doi: 10.1017/S0033291721002701
5. Thapar A, Cooper M (2016). Attention deficit hyperactivity disorder. Lancet 387(10024): 1240–50

6. Daley D, Jacobsen RH, Lange AM, Sørensen A, Walldorf J (2019). The economic burden of adult attention deficit hyperactivity disorder: A sibling comparison cost analysis. Eur Psychiatry 61: 41–8. doi: 10.1016/j.eurpsy.2019.06.011

7. French B, Nalbant G, Wright H, et al (2024). The impacts associated with having ADHD: an umbrella review. Front Psychiatry 15: 1343314. doi: 10.3389/fpsyt.2024.1343314

8 Dalsgaard S, Ostergaard SD, Leckman JF, Mortensen PB, Pedersen MG (2015). Mortality in children, adolescents, and adults with attention deficit hyperactivity disorder: A nationwide cohort study. Lancet 385(9983): 2190–6. doi: 10.1016/S0140-6736(14)61684-6

9. Wymbs BT, Gidycz CA (2021). Examining link between childhood ADHD and sexual assault victimization. J Atten Disord 25(11): 1612–22. doi: 10.1177/1087054720923750

10. Wymbs BT, Dawson AE, Egan TE, Sacchetti GM (2019). Rates of Intimate partner violence perpetration and victimization among adults with ADHD. J Atten Disord 23(9): 949–58. doi: 10.1177/1087054716653215

11. Nordby ES, Guribye F, Nordgreen T, Lundervold AJ (2023). Silver linings of ADHD: A thematic analysis of adults' positive experiences with living with ADHD. BMJ Open 13(10): e072052. doi: 10.1136/bmjopen-2023-072052

12. 10 Year Health Plan for England: fit for the future

13. Schachar R, Taylor E, Wieselberg M, Thorley G, Rutter M (1987). Changes in family function and relationships in children who respond to methylphenidate. J Am Acad Child Adolesc Psychiatry 26(5): 728–32. doi: 10.1097/00004583-198709000-00019

14. Lifford KJ, Harold GT, Thapar A (2009). Parent-child hostility and child ADHD symptoms: A genetically sensitive and longitudinal analysis. J Child Psychol Psychiatry Allied Discip 50(12): 1468–76. doi: 10.1111/j.1469-7610.2009.02107.x

15. NICE (2017). Antisocial behaviour and conduct disorders in children and young people: recognition and management. Clinical guideline CG158

16. Groenman AP, Hornstra R, Hoekstra PJ, et al (2022). An individual participant data meta-analysis: behavioral treatments for children and adolescents with attention-deficit/hyperactivity disorder. J Am Acad Child Adolesc Psychiatry 61(2): 144–58. doi: 10.1016/j.jaac.2021.02.024

17. Sonuga-Barke EJS, Barton J, Daley D, et al (2018). A comparison of the clinical effectiveness and cost of specialised individually delivered parent training for preschool attention-deficit/hyperactivity disorder and a generic, group-based programme: a multi-centre, randomised controlled trial of the New Forest Parenting Programme versus Incredible Years. Eur Child Adolesc Psychiatry 27: 797–809. doi: 10.1007/s00787-017-1054-3

18. Hayre J, Pearce H, Khera R, Lunn AD, Ford JA (2025). Health impacts of the Sure Start programme on disadvantaged children in the UK: a systematic review. BMJ Open

15(2): e089983. doi: 10.1136/bmjopen-2024-089983

19. Carneiro P, Cattan S, Ridpath N (2024). The short- and medium-term impacts of Sure Start on educational outcomes. Institute for Fiscal Studies. doi:10.1920/RE.IFS.2024.0307
20. Bywater T, Hutchings J, Daley D, et al (2009). Long-term effectiveness of a parenting intervention for children at risk of developing conduct disorder. Br J Psychiatry 195(4): 318–24. doi: 10.1192/bjp.bp.108.056531
21. Döpfner M, Görtz-Dorten A, Häge A, et al (2025). Efficacy of a mobile-based self-directed parent management training for parents of children with attention-deficit/hyperactivity disorder with or without oppositional defiant disorder- a randomized controlled trial. Eur Child Adolesc Psychiatry; published online June 27. doi: 10.1007/s00787-025-02799-2
22. Al Sager A, Goodman SH, Jeong J, Bain PA, Ahun MN (2024). Effects of multi-component parenting and parental mental health interventions on early childhood development and parent outcomes: a systematic review and meta-analysis. Lancet Child Adolesc Health 8(9): 656–69. doi: 10.1016/S2352-4642(24)00134-2
23. Fleming M, McLay JS, Clark D, et al (2021). Educational and health outcomes of schoolchildren in local authority care in Scotland: A retrospective record linkage study. PLoS Med 18(11): e1003832. doi: 10.1371/journal.pmed.1003832
24. John A, Friedmann Y, DelPozo-Banos M, Frizzati A, Ford T, Thapar A (2022). Association of school absence and exclusion with recorded neurodevelopmental disorders, mental disorders, or self-harm: a nationwide, retrospective, electronic cohort study of children and young people in Wales, UK. Lancet Psychiatry 9(1): 23–34. doi: 10.1016/S2215-0366(21)00367-9
25. Goldberg JM, Sklad M, Elfrink TR, Schreurs KMG, Bohlmeijer ET, Clarke AM (2019). Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: a meta-analysis. Eur J Psychol Educ 34: 755–82. doi.org/10.1007/s10212-018-0406-9
26. Cavanagh M, McDowell C, Connor Bones UO, Taggart L, Mulhall P (2024). The theoretical and evidence-based components of whole school approaches: An international scoping review. Rev Educ 12(2): e3485. doi.org/10.1002/rev3.3485
27. Support for children and young people with attention deficit hyperactivity disorder (ADHD) in educational settings. 2019
28. Department for Education (2025). Partnerships for inclusion of neurodiversity in schools (PINS) programme
29. Solmi M, Radua J, Olivola M, et al (2022). Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. Mol Psychiatry 27(1): 281–95. doi: 10.1038/s41380-021-01161-7
30. Editorial (2024). Prioritising young people. Lancet Psychiatry 11(9): 665

31. Eke H, Ford T, Newlove-Delgado T, et al (2020). Transition between child and adult services for young people with attention-deficit hyperactivity disorder (ADHD): Findings from a British national surveillance study. Br J Psychiatry 217(5): 616–22. doi: 10.1192/bjp.2019.131

32. Martin J, Rouquette OY, Langley K, et al (2025). Antecedents and outcomes of a late attention deficit hyperactivity disorder (ADHD) diagnosis in females. MedRxiv

33. Henderson JBS (2025). Children and youth mental health services in community health care settings. In: Thapar A, Pine DS, Cortese S, Cresswell C, Ford TJ, Leckman jf (eds) Rutter's Child and Adolescent Psychiatry and Psychology, 7th edn. Wiley-Blackwell

34. Henderson J, Szatmari P, Cleverley K, et al (2025). Integrated collaborative care for youths with mental health and substance use challenges: a randomized clinical trial. JAMA Netw Open 8: e259565–e259565. doi: 10.1001/jamanetworkopen.2025.9565

35. Henderson JL, de Oliveira C, Mathias S (2025). The implementation of integrated youth services in Canada: planning and costing of a pan-Canadian model. Can J Psychiatry 70(5): 414–22. doi: 10.1177/07067437241301008

36. Powell V, Agha SS, Jones RB, et al (2021). ADHD in adults with recurrent depression. J Affect Disord 295: 1153–60. doi: 10.1016/j.jad.2021.09.010

37. French B, Daley D, Groom M, Cassidy S (2023). Risks associated with undiagnosed adhd and/or autism: a mixed-method systematic review. J Atten Disord 27(12): 1393–410. doi: 10.1177/10870547231176862

38. Young S, Asherson P, Lloyd T, et al (2021). Failure of healthcare provision for attention-deficit/hyperactivity disorder in the United Kingdom: A consensus statement. Front Psychiatry 12: 649399. doi: 10.3389/fpsyt.2021.649399

39. Children's Commissioner for England (2024). Waiting times for assessment and support for autism, ADHD and other neurodevelopmental conditions

40. Healthwatch News (2025). ADHD diagnosis life-changing but long waits on the NHS need urgent action

41. Coghill D, Seth S (2015). Effective management of attention-deficit/hyperactivity disorder (ADHD) through structured re-assessment: The Dundee ADHD Clinical Care Pathway. Child Adolesc Psychiatry Mental Health 9: 52. doi: 10.1186/s13034-015-0083-2

42. Langley K, Fowler T, Ford T, et al (2010). Adolescent clinical outcomes for young people with attention-deficit hyperactivity disorder. Br J Psychiatry 196(3): 235–40. doi: 10.1192/bjp.bp.109.066274

43. Valentine AZ, Hall SS, Sayal K, Hall CL (2024). Waiting-list interventions for children and young people using child and adolescent mental health services: a systematic review. BMJ Mental Health 27(1): 1–6. doi: 10.1136/bmjment-2023-300844

44. Eichstedt JA, Turcotte K, Golden G, et al (2024). Waitlist management in child and adolescent mental health care: A scoping review. Child Youth Serv Rev 160: 107529
45. Young S, Absoud M, Al-Attar Z, et al (2024). The ADHD assessment quality assurance standard for children and teenagers (CAAQAS). Neuropsychiatr Dis Treat 20: 2603–28. doi: 10.2147/NDT.S472923
46. Adamou M, Arif M, Asherson P, et al (2024). The adult ADHD assessment quality assurance standard. Front Psychiatry 15: 1380410. doi: 10.3389/fpsyt.2024.1380410
47. Chamberlain SR, Cortese S, Grant JE (2021). Screening for adult ADHD using brief rating tools: What can we conclude from a positive screen? Some caveats. Compr Psychiatry 106: 152224. doi: 10.1016/j.comppsych.2021.15222
48. French B, Hall C, Vallejos EP, Sayal K, Daley D (2021). Evaluation of a web-based ADHD awareness training in primary care: Pilot randomized controlled trial with nested interviews. JMIR Med Educ 6(2): e19871. doi: 10.2196/19871
49. Martin AF, Rubin GJ, Rogers MB, et al (2025). The changing prevalence of ADHD? A systematic review. J Affect Disord 388: 119427. doi: 10.1016/j.jad.2025.119427
50. Fenny D, Blythe N (2025). Adult ADHD assessments and diagnosis: data and service provision. The King's Fund
51. Cortese S, Adamo N, Del Giovane C, et al (2018). Comparative efficacy and tolerability of medications for attention-deficit hyperactivity disorder in children, adolescents, and adults: a systematic review and network meta-analysis. Lancet Psychiatry 5(9): 727–38. doi: 10.1016/S2215-0366(18)30269-4
52. Ostinelli EG, Schulze M, Zangani C, et al (2025). Comparative efficacy and acceptability of pharmacological, psychological, and neurostimulatory interventions for ADHD in adults: a systematic review and component network meta-analysis. Lancet Psychiatry 12(1): 32–43
53. Leucht S, Hierl S, Kissling W, Dold M, Davis JM (2012). Putting the efficacy of psychiatric and general medicine medication into perspective: Review of meta-analyses. Br J Psychiatry 200(2): 97–106. doi: 10.1192/bjp.bp.111.096594
54. Bellato A, Perrott NJ, Marzulli L, Parlatini V, Coghill D, Cortese S (2024). Systematic review and meta-analysis: effects of pharmacological treatment for attention-deficit/hyperactivity disorder on quality of life. J Am Acad Child Adolesc Psychiatry 64(3): 346–61 . doi:10.1016/j.jaac.2024.05.023
55. Lichtenstein P, Halldner L, Zetterqvist J, et al (2012). Medication for attention deficit–hyperactivity disorder and criminality. N Engl J Med 367(21): 2006–14. doi: 10.1056/NEJMoa1203241
56. Li L, Chang Z, Sun J, et al (2022). Association between pharmacological treatment of attention-deficit/hyperactivity disorder and long-term unemployment among working-age individuals in Sweden. JAMA Netw Open 5: E226815. doi: 10.1001/jamanetworkopen.2022.6815

57. Chang Z, Quinn PD, O'Reilly L, et al (2020). Medication for attention-deficit/hyperactivity disorder and risk for suicide attempts. Biol Psychiatry 88(6): 452–8. doi: 10.1016/j.biopsych.2019.12.003

58. Quinn PD, Chang Z, Hur K, et al (2017). ADHD medication and substance-related problems. Am J Psychiatry 174(9): 877–85. doi: 10.1176/appi.ajp.2017.16060686

59. National Institute for Health and Clinical Excellence (2019). Attention deficit disorder.

60. Kirkbride JB, Anglin DM, Colman I, et al (2024). The social determinants of mental health and disorder: evidence, prevention and recommendations. World Psychiatry 23: 58–90

61. Local Government Association (2010). Marmot Review report – Fair Society, Healthy Lives

62. Fulton BD, Scheffler RM, Hinshaw SP (2015). State variation in increased ADHD prevalence: Links to NCLB school accountability and state medication laws. Psychiatr Serv 66(10): 1074–82. doi: 10.1176/appi.ps.201400145

63. Agnew-Blais JC, Polanczyk GV, Danese A, Wertz J, Moffitt TE, Arseneault L (2018). Young adult mental health and functional outcomes among individuals with remitted, persistent and late-onset ADHD. Br J Psychiatry 213: 526–34. doi: 10.1192/bjp.2018.97

64. Russell AE, Benham-Clarke S, Ford T, et al (2023). Educational experiences of young people with ADHD in the UK: Secondary analysis of qualitative data from the CATCh-uS mixed-methods study. Br J Educ Psychol 93(4): 941–59. doi: 10.1111/bjep.12613

65. Young S, Gudjonsson G, Chitsabesan P, et al (2018). Identification and treatment of offenders with attention-deficit/hyperactivity disorder in the prison population: A practical approach based upon expert consensus. BMC Psychiatry 18(1): 281. doi: 10.1186/s12888-018-1858-9

66. Young S, Cocallis K (2021). ADHD and offending. J Neural Transm 128(7): 1009–19. doi: 10.1007/s00702-021-02308-0

67. Young S, Cocallis KM (2019). Attention deficit hyperactivity disorder (ADHD) in the prison system. Curr Psychiatry Rep 21(6): 41. doi:10.1007/s11920-019-1022-3

68. Crest and the Youth Justice Board (2025). Applying the child first framework in youth justice services

Annex 1: Glossary

Attention deficit hyperactivity disorder (ADHD), neurodevelopmental disorders: The term ‘disorder’ is not one that the Taskforce necessarily endorses but it is used in current diagnostic classification systems. Some with lived experience prefer the term neurodivergence, others prefer the term condition. However, ADHD and neurodevelopmental disorder are clinical diagnostic terms used by current international diagnostic classification systems, which is why they are included. These classification systems are used by clinicians in the health sector for clinical decision making and scientists undertaking health-related research.

ADHD is a clinical diagnosis defined by a set of criteria. It is included in the grouping of neurodevelopmental disorders (in current international diagnostic classification systems). A clinical diagnosis of ADHD requires a full and thorough clinical assessment and cannot be defined on the basis of questionnaires alone. Diagnostic criteria are set using contemporary scientific evidence and by expert consensus. Thus, diagnostic criteria have changed and will continue to do so over time. For example, ADHD can now be diagnosed in those with autism as the strong co-occurrence is now recognised.

Two different diagnostic systems are used currently: (1) The American Psychiatric Association DSM-V, used by US clinical services and for much global research, and (2) the World Health Organization ICD-11 used more widely in Europe and the rest of the world. Both systems are used in England. While there are many similarities (e.g. a persistent pattern of hyperactive-impulsive and inattention symptoms, the types of symptoms, symptoms present across multiple settings, early onset and interference with functioning), the criteria are not identical. Both systems group ADHD as a neurodevelopmental disorder.

The grouping of neurodevelopmental diagnoses includes autism, communication disorders, specific learning disorders, motor disorders, intellectual disabilities and (for DSM-5) tic disorders and these are classed together because they originate early in development.

Neurodiversity: This term describes the population as a whole and recognises the diversity of different brains. Neurotypical describes most of the population, the majority group, who express themselves in ways that are seen as ‘neurotypical’ or what is considered to be the societal ‘norm’.

Neurodivergence: ADHD, like other neurodevelopmental diagnoses, can be viewed as differences rather than as purely a deficit, and the term neurodivergence is preferred by many with lived experience. However, some feel that this term is ‘othering’ and encourages people with ADHD to be treated and marked as different in stigmatising ways; they prefer the term **neurodiverse**.

We use the term neurodivergence in this report to align with the ongoing focus of the Department for Education Neurodivergence Task and Finish Group and when referring to ADHD outside clinical settings.

Unlike diagnosis, there is no nationally or internationally accepted definition of the term neurodivergence and the expression is not included in clinical diagnostic manuals. The definition is evolving and may vary by context.

Generally, it describes a group of people whose brain, or neurological development and function, or ways of processing information, behaving and experiencing the typical environment significantly differ from what is considered to be ‘typical’ of the majority.

It can encompass those who would meet diagnostic criteria for a neurodevelopmental diagnosis (and commonly is in clinical and research sectors) but the term neurodivergence is not restricted to specific diagnoses. Also, neurodivergent individuals may not reach the threshold for a diagnosis.

Some neurodivergent individuals may not present with overt differences because they consciously or unconsciously minimise or hide symptoms to fit in and appear neurotypical. ‘Masking’ of this type can delay or prevent recognition of diagnosis and is experienced as emotionally and physically exhausting.

Needs: The assessment and definition of needs depend on the context and sector involved (e.g. school, home, education, social care, workplace, healthcare), varies with development and is dynamic. The purpose is to identify strengths and challenges in that context and work out how best to support an individual to optimise their functioning and outcomes and reduce negative impacts. A needs-based assessment does not lead to or require a diagnosis.

Educational need: The individual requirements and support a learner needs to learn, participate and progress.

Functioning and impairment: In clinical settings for ADHD (and health as a whole), many clinicians and research studies, including those evaluating interventions, focus on broader measures than ADHD symptoms or diagnosis alone. These include functioning and impairment as outcomes.

Functioning refers to the ability of an individual to manage daily activities across different settings. Impairment refers to how ADHD affects functioning across a range of different domains and interferes with daily life (e.g. school exclusion, ability to work and maintain relationships).

In scientific research, there are good examples of measures of functioning relevant to ADHD including, for example, the World Health Organization International Classification of Functioning, Disability, and Health (ICF) core data for ADHD, the Weiss Functional Impairment Scale, Columbia Impairment scale, quality of life and wellbeing measures among others (Child Outcomes Research Consortium Directory of outcome measures).

American Psychiatric Association (2022). Diagnostic and statistical manual of mental disorders (5th ed, text rev)

World Health Organization (2019/2021). International Classification of Diseases, Eleventh Revision (ICD-11)

UK Parliament Post (2024). Support for neurodivergent children and young people

NHS England (2025). Foundation Trainee Pharmacist Programme

Bölte S, Alehagen L, Black MH, et al (2024). Assessment of functioning in ADHD according to World Health Organization standards: First revision of the International Classification of Functioning, Disability and Health Core Sets. Dev Med Child Neurol 66: 1201–14

van der Putten WJ, Mol AJJ, Groenman AP, et al (2024). Is camouflaging unique for autism? A comparison of camouflaging between adults with autism and ADHD. Autism Res 17(4): 812–23

Annex 2: ADHD persona case studies

We sincerely thank those who generously shared their lived experience with us. Your expertise-by-experience helped us identify critical challenges and your candid insights have been instrumental in driving meaningful, evidence-based recommendations. This collaboration has strengthened both the rigour and relevance of our work.

To respect the privacy of those who contributed their lived experience, we have created persona case studies to communicate some key insights that emerged from the real stories people shared with us, without detailing any single individual's complete experience.

Persona case studies are built from real people's experiences collected through interviews, written feedback and conversations. They highlight common experiences and challenges, without tracing the exact journey of any single individual. Instead, each persona blends multiple perspectives into one example.

The 3 case studies below describe many of the challenges and obstacles that people face when accessing assessment, support and care for ADHD and other neurodevelopmental conditions. They illustrate recurring themes but are not exhaustive. We recognise that they do not encompass the full range of experiences, contexts or every setting. However, we hope that the stories below are powerful reminders that the decisions organisations make have significant and wide-ranging consequences for individuals, their families and communities and wider society. They are also a vital reminder as stated by the Taskforce that "A joined-up approach across sectors is necessary as appropriate recommendations cannot be made by health focused work alone."

Case study 1: Julie, 48

Late diagnoses of autism and ADHD despite school difficulties. This has impacted on education qualifications, her earning potential, life chances and quality of life. A failure of shared care means she cannot access treatment despite a good response to ADHD medication.

Julie was diagnosed with autism at age 42. During perimenopause Julie's mental health symptoms became worse. After learning about the potential impact of hormonal changes on ADHD and undertaking some research, Julie approached her GP who agreed that Julie's symptoms were consistent with ADHD. She was referred for formal assessment. Julie feels frustrated that she was not offered dual assessment when first referred for an autism assessment.

Despite struggling at school, Julie went undiagnosed with any neurodevelopmental conditions as a child. She feels that she was labelled by teachers as a 'daydreamer' who wouldn't concentrate and lots of people referred to her as 'shy' – which made her feel more self-conscious and nervous about participating in activities. Julie struggled to organise her thoughts, found it difficult to get started with her schoolwork, and would get distracted when she was trying to complete homework and exam revision. Because she was easily overwhelmed when surrounded by lots of people and struggled to manage her attention and focus, she struggled with tests and exams and feels that her results did not represent how well she understood subjects. This had negative impacts on her qualifications and her confidence as a learner. At the time, she didn't feel able to pursue additional education because of the pressure of school and college environments.

Throughout her life, Julie has found it hard to get or maintain a job. She finds it hard to manage complicated job application processes and systems and when she has been shortlisted for interviews, she has struggled with intense anxiety associated with being asked questions and expected to answer on the spot. Julie's challenges with work have negatively impacted on her earning potential and she feels frustrated that she received her diagnoses so late in life, because she believes that, if she had better understood herself and had access to reasonable adjustments, she would have been able to perform much better in both interviews and work. Julie also feels that the lack of support has had a knock-on effect on things like her housing choices – she wishes she hadn't had to rely on council housing and financial support due to her low income.

Due to long waiting lists, Julie opted for ADHD assessment through an independent sector provider using the 'Right to Choose' pathway. Julie received an ADHD diagnosis and was offered medication titration services through the provider. Julie feels that she has had a fantastic response to medication and describes it as 'life changing'. Unfortunately, the GP practice has not agreed to shared care and this has resulted in long delays in Julie getting access to ADHD medication. She feels angry that she cannot access the ADHD medication that has already had a positive impact on her wellbeing and everyday functioning. Julie says, "Peer support has been a lifeline, but I feel let down by the healthcare system. There needs to be more support and a better recognition of how hard it is to have ADHD. GPs need better understanding – particularly for people struggling with peri-menopause symptoms at the same time."

Case study 2: John (19)

Diagnosed with ADHD in childhood. Initial positive experience but failure of service provision after age 18.

John was diagnosed with ADHD when he was 10 years old. The assessment and diagnosis were done through child and adolescent mental health services (CAMHS) and, although the waiting list was long, John and his family had a positive experience. He also received a lot of support throughout high school and 6th form college, and this gave John the confidence to apply to university. He was thrilled when he was accepted on his preferred course.

John moved to university away from his hometown. Unfortunately, the move to university was not as smooth as he had hoped and he is still having trouble accessing the support and care he requires, including medication.

Since CAMHS initiated the transition to adult services John has struggled to access specialist care and he found it difficult to have lost contact with the team of people who have supported him for several years. In addition, John has registered with a GP in his university town, using his term-time address, and this seems to have created additional difficulties because he has been told that his new GP cannot prescribe his medication. He feels like everyone he speaks to tells him to speak to another healthcare professional but, when he does, they don't seem able to help him either. John feels like he isn't always taken seriously because of his age and has asked his parents to help. When John's parents have sought advice, they have been told that John needs to contact services directly because he is an adult.

On his last trip home, because John is now registered at another GP practice near his term-time address, he can only be seen by his local practice as a temporary resident. They have said that they are only able to provide short-term care and cannot advise him on his long-term condition management or ADHD medication now.

John feels like his ADHD impacts him constantly and he thinks he will have to drop out of university if he is unable to get support soon. Without medication, John struggles to focus and concentrate consistently on his course work and he isn't performing to the standard he knows he is capable of. He now struggles to manage and prioritise his work for different modules. He recently missed two deadlines resulting in him having marks deducted from his results. He is struggling to sleep, and he feels tired during lectures, making it even harder to concentrate than normal.

John is also finding it difficult to deal with the busy university spaces – which his medication has always seemed to help with. He feels less in control of his emotions, and this has had negative impacts on his interactions with peers and his course leaders. When he tried to explain his struggles with concentration and managing his workload to module leaders, he felt that they didn't have any understanding of ADHD and he was told that "he just needs better systems to stay organised" and that it wouldn't be fair for him to get more time or support than other students just because he has ADHD. John felt that this was unfair and raised his voice with one of his lecturers and was told that he would be given a formal warning if it happened again. Although John apologised, he feels overwhelmed and ashamed that he can't cope like other people can. He feels lonely and unsupported.

John says, "I don't think coming to university was the right choice for me. I don't have enough energy to do any of the fun social activities and I'm not even doing well on my course, even though I'm trying really hard. I've tried everything to get my medication, but I can't get anyone to help me. I feel so low."

Case study 3: Ahmed, 12

Undiagnosed, awaiting ADHD assessment.

Ahmed is 12 and is in the second year of high school. He is struggling at school and finds it impossible to sit still and stay quiet in class. Teachers consistently ask him to leave the classroom because he’s being disruptive. He tries to explain that he can’t help it, but teachers tell him to stop “answering back” and he gets a behaviour log for rudeness and defiance. Because of this he gets a lot of after-school detentions and internal exclusions from lessons and therefore spends a lot of time in the isolation area. During a recent ‘positive behaviour meeting’, Ahmed was told that he needed to improve his behaviour because it’s not fair that he’s stopping other children learning. They also highlighted that his knowledge and skills are behind where they are expected. Ahmed’s parents suggested that he might be behind because he is removed from lessons so often and put into the isolation area, and that this is also affecting his relationships with peers, who are also starting to avoid him. Ahmed’s year manager said that they are following the school behaviour policy and that it was up to Ahmed to “make better choices”. Ahmed feels like he’s already trying as hard as he can, but no one sees the effort he’s putting in.

Ahmed has been on a waiting list for ADHD assessment for 2 years. Ahmed’s older brother has already been diagnosed with ADHD and is currently in a youth offenders institution. A couple of Ahmed’s teachers have said that if he keeps misbehaving at school he will “end up like his brother”. Comments like these make Ahmed angry, upset and worried.

Despite Ahmed’s symptoms and family history of ADHD, the school says that until it has a clinical confirmation of ADHD, it cannot provide any further support or adjustments. Ahmed was referred to the mental health support team (MHST) in the school after a fight. However, they suggested that Ahmed would benefit from SEND support because his challenges are not due to a mental health issue. The SEND team have said that they cannot get involved because Ahmed doesn’t have a formal diagnosis.

Home life is also difficult for Ahmed. Ahmed’s dad has had to miss shifts at work to attend school for behaviour meetings. Ahmed’s dad has said that he can’t afford to keep missing work and that he might lose his job if he has to keep attending school meetings. Ahmed decided that it’s probably better if he just doesn’t attend school, because at least then he can’t get in trouble in lessons. He knows they are worried about him being permanently excluded but he doesn’t know what the best thing to do is – if he attends school, he gets in trouble and causes problems for his parents because of school meetings; if he doesn’t attend school, he gets in trouble, and this causes problems for his parents too. Sometimes Ahmed wonders if it would be better for everyone if he wasn’t around at all.

Annex 3: Evidence summary updated June 2025

Introduction

The evidence group was set up as a small core group of academics to support the taskforce with a review of the evidence base. Additional members have joined to assist with this work.

The evidence group was set a series of questions in December 2024 to inform the interim report. This paper shares a summary of the published, peer-reviewed evidence; the group also share their assessment of each paper based on (1) quality of evidence and (2) relevance to the UK context (both rated as high, medium or low).

Summary of evidence

1. What is the prevalence of ADHD and is it increasing?

In an English population sample of 2 to 19 year olds-olds the ADHD prevalence was 3% (MHCYP Survey Forbes et al 2018, low, high); there is no evidence that the prevalence has increased since 1999 (Sadler et al 2018, low high).

Meta-analysis of global studies suggests an ADHD prevalence in children of 3–5% (Polanczyk et al 2015, high, low). Geographical location does not influence prevalence significantly so these estimates can reasonably be applied to a UK population (Polanczyk et al 2014, high, moderate; Cortese et al 2023, medium, low). There is no evidence of an increase in the number of children in the population meeting criteria for ADHD diagnosis over time.

For adults, meta-analyses suggest a global population prevalence for ADHD of 2–3% (Chaulagain et al 2023, high, medium; Ayano 2024, high, medium; Simon et al 2009, high, medium), which could be reasonably applied to a UK population. In the recently published UK population survey of adults, 1.8% reported a professional diagnosis (Ridout et al., 2025; low, high).

2. What is the current level of access to clinical support and is there over or under-diagnosis of ADHD in England/UK?

Contact with services: In 2017, approximately one-quarter of those aged 5 to10 years and one-third of those aged 11 to 16 years who met criteria for ADHD in the population reported contact with a mental health specialist in the previous year. We do not know if their ADHD was recognised (Mathews 2024, medium, high).

While English health service records have shown increased recognition of ADHD in both children and adults from 2000 to 2018, the administrative prevalence is reported as 2.55% in boys and 0.67% in girls. In adults it was 0.74% in men and 0.20% in women. As the actual population prevalence in children is 3-5% and in adults is 2–3%, under-recognition of ADHD remains a problem in England (McKechnie et al 2023, medium, high). Reassuringly, only 0.5% of those screening negative for ADHD in the recent UK adult mental health survey reported a professional diagnosis, compared to 9.6% of those who screened positive (Ridout et al., 2025; low, high).

Medication rates: English health service records also show that prescription rates of medications to treat ADHD have risen from 2000 to 2018 (McKechnie et al 2023, medium, high). However, only 0.2% of the 7,655,931 individuals received ADHD medication prescriptions. Furthermore, the latest data from prescribing studies show that only 25% of children and 15% of adults with ADHD received pharmacological treatment, with regional rates across the UK varying up to 12-fold (French et al 2025c, medium, high). There were no reports of ADHD medication among adults screening negative for ADHD in the recent UK adult mental health survey, which was reported for only 2.6% of those who screened positive (Ridout et al., 2025; low, high). The evidence from randomised controlled trials is that 70–90% will benefit from drug treatment so we are under-prescribing ADHD medication in England.

Data suggest that support for GPs to prescribe ADHD medication is patchy (Gudka et al 2024, medium, high; Price et al 2024, medium, high). Evidence suggests that only 1 in 6 children transitioning to adult life successfully accessed adult services, although this might be improving with time (Jung et al in revision, medium, high).

Waiting times: There are no national reports on waiting times for adults. In a national survey of commissioners, primary care clinicians and people with lived experience, 40% reported waiting times of 2 years or more (BBC 2024; Price et al 2024, medium, high). Waiting lists are reported to have increased to 10–15 years in some areas of the UK (Communication and Engagement 2021, low, high; Children's Commissioners for England 2024, low, high).

3. What are the costs of not treating ADHD?

Using Danish patient registry data, a cost difference between adults with ADHD and their same-sex siblings was approximately £17,000 more per adult with ADHD per year. The UK cost estimate was **£17 billion** at a prevalence of 2.5%. This suggests there are extensive costs in adulthood of not identifying and treating ADHD in childhood (Daley et al 2019, high, medium).

In a Danish dataset, access to care for children with ADHD appears to reduce costs for both education and crime (French 2025a, high, high).

No published papers on the contemporary costs of untreated ADHD in the UK exist yet, but an evaluation of the costs of undiagnosed ADHD will report later in the year (French et al 2025b, high, medium).

4. How cost-effective are treatments for ADHD?

Pharmacological and non-pharmacological treatments have consistently been shown to be more cost-effective than no treatment in the UK (Dijk et al 2021, high, medium). Meta-analytic evidence from randomised controlled trials shows that stimulants for ADHD in children and young people have one of the highest effect sizes for efficacy, not only in psychiatry but across medications used in general medicine, at least in the short term (Leucht et al 2012, high, high; Cortese et al 2018, high, high). Effect sizes are generally lower in trials of stimulants in adults than those in children but still indicate a significant effect in terms of decreasing the severity of ADHD.

While it is challenging to assess effects in the longer-term via standard randomised trials, discontinuation trials show persistence of effects in the longer-term (summarised in Cortese et al 2020, medium, medium). Quasi-experimental designs of treatment using ADHD medication suggest that pharmacological treatment of ADHD is associated with lower risk of long-term unemployment in adults (Li et al 2022, medium, medium) and may be protective for future criminality (Lichtenstein et al 2012, medium, medium), substance misuse (Quinn et al 2017, medium, medium) and depression (Chang et al 2016, medium, medium). Similar quasi-experimental designs of treatment using ADHD medication suggest that pharmacological treatment of ADHD is associated with lower risk of long-term unemployment in adults (Li et al 2022, medium, medium), decreased risk of car accidents and injuries (Chang et al 2019, high, medium) and may be protective for future criminality (Lichtenstein et al 2012, medium, medium), substance misuse (Quinn et al 2017, medium, medium) and depression (Chang et al 2016, medium, medium).

Evidence from the emulated target trial approach also shows that stimulants, like some other medications in general medicine, decrease the risk of mortality (Li et al 2024, high, high).

Only one cost-effective analysis of a parent training intervention for pre-school children with ADHD has been conducted in the UK (Sonuga-Barke 2018, high, high). This found individual intervention (New Forest Parenting Programme) to be very slightly more cost-effective than group intervention.

We have been unable to find any cost-effectiveness studies of psychological treatments in adults.

5. What evidence-based strategies could we use for clearing waiting lists?

Interim support: Mental health difficulties may deteriorate while people are on waiting lists (Punton et al 2022, medium, medium); offering interim support while waiting can enhance clinical outcomes (Valentine 2024, medium, high).

Parenting support: App-based parenting support could be one low-cost solution; cost effectiveness evaluation of the UK STEPS (Structured E-Parenting Support) app will become available shortly (Kostyrka-Allchorne et al 2022, medium, high; Dopfner et al. 2025, medium, medium).

Supporting teachers: Enhancing teachers' understanding of ADHD and supporting them to better manage ADHD in the classroom could also reduce ADHD symptom expression and key impairments while waiting (Corkum et al 2019; medium, low).

Primary care: An increased workforce capable of supporting and making ADHD diagnoses (e.g. recognising 'ADHD specialists' in primary care and education who can conduct assessments) could be transformative. With enhanced training and support (French et al 2020, medium, high), ADHD could be diagnosed and managed at primary care level, with the more complex cases being passed up to other services for additional assessment and intervention.

Screening waiting lists: Early clinical screening using validated tools (different to profiling) may be helpful to ensure that patients are on the correct assessment pathway, are safe to wait or could be redirected to another assessment waiting list at the earliest time point (Adamou et al 2022, medium, high; Loh 2022, medium, medium).

Increasing the speed of the diagnostic process: The QbTest can increase the speed of ADHD diagnostic decision making in children and young people, by over 40% with no loss of diagnostic accuracy (Hollis et al 2018, high, high; see below This finding has yet to be explored in adults.

6. What types of digital technology could help improve outcomes or efficiency?

For clinicians: technology can improve system efficiency by:

- collecting ongoing information from service users or streamlining administrative tasks (Bond et al 2023, low, low)
- offering more efficient and objective measurement of outcomes, treatment response and adverse events (Denyer 2022, medium, high).

- speeding up assessment. Assessment and diagnosis of ADHD is a complex process taking around 2.5 hours of clinic time to reach a diagnosis (Hollis et al 2018, high, high). The QbTest, when applied with children and adolescents, can enhance clinician confidence, reduce the number of appointments needed to make a diagnosis and rule out ADHD at an earlier point in the assessment process (Hollis et al 2018, high, high). QbTest is NOT a freestanding diagnostic test – it is intended to be used to aid clinical diagnosis and management of ADHD and is NICE recommended to help diagnose ADHD in people aged 6 to 17 years (NICE 2024, high, high, Bellato et al 2023; high, high)

For those with ADHD:

- the uptake and adherence to digital health interventions (DHIs) tends is much higher with human support than with unsupported/self-help apps (Garrido et al 2019, high, medium).

- people with ADHD state a preference for DHI as an adjunct to usual care (Gudka et al 2024, medium, high), which could provide targeted health care transition information, self-management support and psychoeducational materials

- DHIs could be ‘prescribed’ by GPs or practitioners funded under the Additional Roles Reimbursement Scheme (ARRS) without additional training (e.g. social prescribers specialist nurses to support long-term condition management of ADHD). DHIs could also offer early intervention support for those awaiting assessment or with sub-threshold symptoms (Ford et al 2023, medium, high), thus helping patients to manage their condition while waiting for specialist care

- other interventions that could be digitalised include psychoeducation apps and therapeutic interventions. However, these solutions must be evidence based and cost-effective. Currently, the evidence-base for therapeutic DHIs for people with ADHD is limited (Hollis et al 2017, high, high).

7. How should we set standards for ADHD assessment?

Recommendations for setting minimal acceptable standards for ADHD assessment are supported by empirical evidence and clinical consensus and should be used for all providers (Chaulagain et al 2023, high, medium; Faraone et al 2021, high, medium; the ADHD Assessment Quality Assurance Standard for Children and Teenagers (CAAQAS), Young et al 2024, low, high; the Adult ADHD Assessment Quality Assurance Standard (AQAS), Adamou et al 2024, low, high).

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References

Adamou M, Jones SL, Marks L, Lowe D (2022). Efficacy of continuous performance testing in adult ADHD in a clinical sample using QbTest+. J Atten Disord 26(11): 1483–1491. doi: 10.1177/10870547221079798

Adamou M, Arif M, Asherson P, Cubbin S, Leaver L, Sedgwick-Müller J, et al (2024). The adult ADHD assessment quality assurance standard. Front Psychiatry 15: 1380410. doi: 10.3389/fpsyt.2024.1380410

Ayano G, Tsegay L, Gizachew Y, Necho M, Yohannes K, Demelash S, Alati R (2024). Prevalence of ADHD in adults: an umbrella review of international studies. Eur Psychiatry 67(S1): S343–S343. doi: 10.1016/j.psychres.2023.

BBC News (2024, April 3). NHS cannot meet autism or ADHD demand, report says.

Bellato A, Hall CL, Groom MJ, Simonoff E, Thapar A, Hollis C, Cortese S (2024). Practitioner review: clinical utility of the QbTest for the assessment and diagnosis of attention-deficit/hyperactivity disorder – a systematic review and meta-analysis. J Child Psychol Psychiatry 65(6): 845–861. doi: 10.1111/jcpp.13901

Bond RR, Mulvenna MD, Potts C, O'Neill S, Ennis E, Torous J (2023). Digital transformation of mental health services. NPJ Mental Health Res 2(1): 1–9.

Chang Z, D'Onofrio BM, Quinn PD, Lichtenstein P, Larsson H (2016). Medication for attention-deficit/hyperactivity disorder and risk for depression: a nationwide longitudinal cohort study. Biol Psychiatry 80(12): 916–922. doi: 10.1016/j.biopsych.2016.02.018

Chang Z, Ghirardi L, Quinn PD, Asherson P, D'Onofrio BM, Larsson H (2019). Risks and benefits of attention-deficit/hyperactivity disorder medication on behavioral and neuropsychiatric outcomes: a qualitative review of pharmacoepidemiology studies using linked prescription databases. Biol Psychiatry 86(5): 335–343. doi: 10.1016/j.biopsych.2019.04.009

Chaulagain A, Lyhmann I, Halmøy A, Widding-Havneraas T, Nyttingnes O, Bjelland I, Mykletun A (2023). A systematic meta-review of systematic reviews on attention deficit hyperactivity disorder. Eur Psychiatry 66(1), e90. doi: 10.1192/j.eurpsy.2023.2451

Children's Commissioner for England (2024). Waiting times for assessment and support for autism, ADHD and other neurodevelopmental conditions | Children's Commissioner for England

Communication and Engagement (2021). Pandemic triggers rise in ADHD referrals. Monash Health.

Corkum P, Elik N, Blotnicky-Gallant PAC, McGonnell M, McGrath P (2019). Web-based intervention for teachers of elementary students with ADHD: randomized controlled trial. J Atten Disord 23(3): 257–269. doi: 10.1177/1087054715603198

Cortese S, Song M, Farhat LC, Yon DK, Lee SW, Kim MS, et al (2023). Incidence, prevalence, and global burden of ADHD from 1990 to 2019 across 204 countries: data, with critical re-analysis, from the Global Burden of Disease study. Mol Psychiatry 28(11): 4823–4830. doi: 10.1038/s41380-023-02228-3

Cortese S (2020). Pharmacologic treatment of attention deficit-hyperactivity disorder. N Engl J Med 383(11): 1050–1056

Cortese S, Adamo N, Del Giovane C, Mohr-Jensen C, Hayes AJ, Carucci S, et al (2018). Comparative efficacy and tolerability of medications for attention-deficit hyperactivity disorder in children, adolescents, and adults: a systematic review and network meta-analysis. Lancet Psychiatry 5(9): 727–738. doi: 10.1016/S2215-0366(18)30269-4

Daley D, Jacobsen RH, Lange AM, Sørensen A, Walldorf J (2019). The economic burden of adult attention deficit hyperactivity disorder: A sibling comparison cost analysis. Eur Psychiatry 61: 41–48. doi: 10.1016/j.eurpsy.2019.06.011

Denyer H, Ramos-Quiroga JA, Folarin A, et al (2022). ADHD remote technology study of cardiometabolic risk factors and medication adherence (ART-CARMA): a multi-centre prospective cohort study protocol. BMC Psychiatry 22(1): 813. doi: 10.1186/s12888-022-04429-6

Dijk HH, Wessels LM, Constanti M, Van Den Hoofdakker BJ, Hoekstra PJ, Groenman AP (2021). Cost-effectiveness and cost utility of treatment of attention-deficit/hyperactivity disorder: a systematic review. J Child Adolesc Psychopharmacol 31(9): 578–596. doi: 10.1089/cap.2021.0068

Döpfner M, Görtz-Dorten A, Häge A, Handermann F, Sulprizio L, Hellmich M, Vogel D, Ruhmann M, Althen H, Karus M, Banaschewski T. Efficacy of a mobile-based self-directed parent management training for parents of children with attention-deficit/hyperactivity disorder with or without oppositional defiant disorder- a randomized controlled trial. Eur Child Adolesc Psychiatry. 2025 Jun 27. doi: 10.1007/s00787-025-02799-2. Epub ahead of print. PMID: 40576800.Faraone SV, Banaschewski T, Coghill D, Zheng Y, Biederman J, Bellgrove MA, et al (2021). The World Federation of ADHD International Consensus Statement: 208

evidence-based conclusions about the disorder. Neurosci Biobehav Rev 128: 789–818. doi: 10.1016/j.neubiorev.2021.01.022

Forbes N, Pearce N, Vizard T, Sadler K, Ford T, Goodman A, et al (2018). The mental health of children and young people in England 2017: Hyperactivity disorders. London: Health and Social Care Information Centre.

Ford T, Mathews F, Newlove-Delgado T (2023). Mental health related service contacts in children with 'sub-threshold/sub-clinical' psychopathology in the Mental Health of Children and Young People in England national survey. Eur Psychiatry 66: S466–S466.

French B, Hall C, Perez Vallejos E, Sayal K, Daley D (2020). Assessing the efficacy of online ADHD awareness training in primary care: Pilot randomised control trial evaluation with nested qualitative interviews. JMIR Medical Education 6(2). doi: 10.2196/19871

French B, Smith L, Daley D (2025a). Danish cohort data on the cost-benefits of an ADHD diagnosis (in preparation).

French B, Daley D, Angell K, Cassidy S, Knapp M (2025b). The economic cost of untreated ADHD/autism (in preparation).

French B, Kirby A, Davies J, Williams C (2025c). UK ADHD treatment rates – a regional variation model. doi: 10.21203/rs.3.rs-5956482/v1

Garrido S, Millington C, Cheers D, Boydell K, Schubert E, Meade T, Nguyen QV (2019). What works and what doesn't? A systematic review of digital mental health interventions for depression and anxiety in young people. Front Psychiatry 10: 759.

Gudka R, Becker K, Ward J, Smith JR, Mughal F, Melendez-Torres GJ, et al (2024). Primary care provision for young people with ADHD: A multi-perspective qualitative study. Br J Gen Pract 74(743): e408–e416. doi: 10.3399/BJGP.2023.0626

Hollis C, Falconer CJ, Martin JL, Whittington C, Stockton S, Glazebrook C, Davies EB (2017). Annual research review: digital health interventions for children and young people with mental health problems – a systematic and meta-review. J Child Psychol Psychiatry 58(4): 474–503. doi: 10.1111/jcpp.12663

Hollis C, Hall CL, Guo B, James M, Boadu J, Groom MJ, et al (2018). The impact of a computerised test of attention and activity (QbTest) on diagnostic decision-making in children and young people with suspected attention deficit hyperactivity disorder: single-blind randomised controlled trial. J Child Psychol Psychiatry 59(12): 1298–1308. doi: 10.1111/jcpp.12921

Jung RS, Saunders C, White SR, Lewis, Cardinal RN, Ford TJ (in revision). Transition of care in young people with attention-deficit/hyperactivity disorder from child to adult services. J Mental Health.

Kostyrka-Allchorne K, Ballard C, Byford S, Cortese S, Daley D, Downs J, et al (2022). Online Parent Training for The Initial Management of ADHD referrals (OPTIMA): the protocol for a randomised controlled trial of a digital parenting intervention implemented to support parents and children on a treatment waitlist. Trials 23(1): 1003. doi: 10.1186/s13063-022006952-z.

Leucht S, Hierl S, Kissling W, Dold M, Davis JM (2012). Putting the efficacy of psychiatric and general medicine medication into perspective: review of meta-analyses. Br J Psychiatry 200(2): 97–106. doi: 10.1192/bjp.bp.111.096594

Li L, Chang Z, Sun J, et al (2022). Association between pharmacological treatment of attention-deficit/hyperactivity disorder and long-term unemployment among working-age individuals in Sweden. JAMA Netw Open 5(4):e226815. doi: 10.1001/jamanetworkopen.2022.6815

Li L, Zhu N, Zhang L, Kuja-Halkola R, D'Onofrio BM, Brikell I, et al (2024). ADHD pharmacotherapy and mortality in individuals with ADHD. JAMA 331(10): 850–860. doi: 10.1001/jama.2024.0851

Lichtenstein P, Halldner L, Zetterqvist J, Sjölander A, Serlachius E, Fazel S, et al (2012). Medication for attention deficit-hyperactivity disorder and criminality. N Engl J Med 367(21): 2006–2014.DOI: 10.1056/NEJMoa1203241

Loh HW, Ooi CP, Barua PD, Palmer EE, Molinari, Rajendra Acharya FU (2022). Automated detection of ADHD: Current trends and future perspective. Computers Biol Med 146: 105525. doi: 10.1016/j.compbiomed.2022.105525

Mathews F, Ford TJ, White S, Ukoumunne OC, Newlove-Delgado T (2024). Children and young people’s reported contact with professional services for mental health concerns: a secondary data analysis. Eur Child Adolesc Psychiatry 33(8): 2647–2655. doi: 10.1007/s00787-023-02328-z

McKechnie DGJ, O’Nions E, Dunsmuir S, Petersen I (2023). Attention-deficit hyperactivity disorder diagnoses and prescriptions in UK primary care, 2000–2018: population-based cohort study. BJPsych Open 9(4):121. doi: 10.1192/bjo.2023.512

National Institute for Health and Care Excellence (NICE) (2024). Digital technologies for assessing attention deficit hyperactivity disorder (ADHD). Diagnostics guidance DG60.

Polanczyk GV, Willcutt EG, Salum GA, Kieling C, Rohde LA (2014). ADHD prevalence estimates across three decades: an updated systematic review and meta-regression analysis. Int J Epidemiol 43(2): 434–442. doi: 10.1093/ije/dyt261

Polanczyk GV, Salum GA, Sugaya LS, Caye A, Rohde LA (2015). Annual research review: a meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. J Child Psychol Psychiatry 56(3): 345–365. doi: 10.1111/jcpp.12381

Price A, Becker K, Ward JH, Ukoumunne OC, Gudka R, Salimi A, et al (2024). Support for primary care prescribing for adult ADHD in England: national survey. Br J Gen Pract 74(748): e777–e783. doi: 10.3399/BJGP.2023.0595

Punton G, Dodd AL, McNeill A (2022). 'You're on the waiting list': an interpretive phenomenological analysis of young adults' experiences of waiting lists within mental health services in the UK. PLOS ONE 17(3): e0265542. doi: 10.1371/journal.pone.0265542

Quinn PD, Chang Z, Hur K, Gibbons RD, Lahey BB, Rickert ME, D'Onofrio BM (2017). ADHD medication and substance-related problems. Am J Psychiatry 174(9): 877–885. doi: 10.1176/appi.ajp.2017.16060686

Ridout, K., O'Shea, C., Morris, S., Brugha, T., Ford, T., McManus, S., Tromans, S., & Morgan, Z. (2025). Attention deficit hyperactivity disorder. In Morris, S., Hill, S., Brugha, T., McManus, S. (Eds.), *Adult Psychiatric Morbidity Survey: Survey of Mental Health and Wellbeing, England, 2023/4*. NHS England

Sadler K, Vizard T, Ford T, Goodman A, Goodman R, McManus S (2018). The mental health of children and young people in England 2017: Trends and characteristics. London: Health and Social Care Information Centre.

Simon V, Czobor P, Balint S, Meszaros A, Bitter I (2009). Prevalence and correlates of adult attention-deficit hyperactivity disorder: meta-analysis. Br J Psychiatry 194(3): 204–211. doi: 10.1192/bjp.bp.107.048827

Sonuga-Barke EJ, Barton J, Daley D, Hutchings J, Maishman T, Raftery J, Thompson MJ (2018). A comparison of the clinical effectiveness and cost of specialised individually delivered parent training for preschool attention-deficit/hyperactivity disorder and a generic, group-based programme: a multi-centre, randomised controlled trial of the New Forest Parenting Programme versus Incredible Years. Eur Child Adolesc Psychiatry 27: 797–809. doi: 10.1007/s00787-017-1054-3

Valentine AZ, Hall SS, Sayal K, Hall CL (2024). Waiting-list interventions for children and young people using child and adolescent mental health services: a systematic review. BMJ Mental Health 27(1): e300844.

Young S, Absoud M, Al-Attar Z, Ani C, Colley W, Cortese S, Crame J, Gudjonsson G, Hill P, Hollingdale J, Mukherjee RAS, Ozer S, Partridge G, Smith J, Woodhouse EL, Lewis A. (2024) The ADHD Assessment Quality Assurance Standard for Children and Teenagers (CAAQAS). Neuropsychiatr Dis Treat. 20:2603-2628. doi: 10.2147/NDT.S472923.