ADHD FOUNDATION
The Neurodiversity Charity

Information on ADHD for ADHD Clinics, School Nurses and GP Primary Care Settings

Understanding and supporting your patients assessment and treatment

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Introduction

The emerging paradigm of integrated services across health, social care and education and integrated commissioning of services will inevitably impact service design and delivery for those professionals working with patients living with and requiring treatment for ADHD.

This booklet is designed to help GP's, Nurses, Psychologists and Counsellors, working in the assessment and treatment of childhood and adult ADHD in clinical settings and school and occupational settings. As new nurse led services feature in coproduced and redesigned pathways, planning for professional development, inter agency working and efficient and cost effective service delivery.

The NHS states ADHD affects approximately 5% of the population. In 2018 ADHD is underdiagnosed in the UK with less than 3% diagnosed and less than 1% of the childhood population receiving medication as part of their treatment plan. ADHD is now recognised as a lifespan condition with increasing numbers of patients still requiring medical support and treatment in adulthood.

Stigma and misunderstanding may have prevented many parents and adults seeking a diagnosis and support. Pathways and service models are variable across the UK and many experience serious delays in providing access to assessment, diagnosis and treatment.

Research suggests that undiagnosed, untreated ADHD increases the risk of mental health problems such as anxiety, depression, addiction, eating disorders, self- harm, attempted suicide and personality disorder.

The health outcomes and long term health care costs for undiagnosed and untreated ADHD are now better understood. Undiagnosed untreated ADHD is a public health issue; ADHD correlates with increased risk of eating disorders, obesity, diabetes, allergies, hypertension and increased risk of brain haemorrhage, early onset cardio vascular disease, lung cancer, injury through physical accidents as well as increased risk of mental health problems such as anxiety, depression, bipolar disorder and increased risk of self harm and suicide.

ADHD is costing the NHS substantial sums of money through hidden costs in other areas of health care – something that many clinicians in primary care and commissioners are not aware of. (Fararone et al 2020 International Consensus Statement World Federation for ADHD)

The early identification, intervention and assessment diagnosis is therefore a new priority in service design and delivery of ADHD in community paediatrics and CAMHS.

Scientific research on neurodevelopmental conditions and innovation in service design and delivery has created a growing need for a unique specialised nurse and GP workforce, requiring new knowledge of the causes, diagnostic protocols and lifespan treatment of ADHD.

GP Hubs and nurse led clinics now play a crucial role in safe, cost effective pre and post diagnostic pathways across the UK.

The 2018 updated NICE Guidelines state that patients with ADHD should have a comprehensive, holistic and shared treatment plan that addresses the psychological, educational, behaviour and occupational needs.

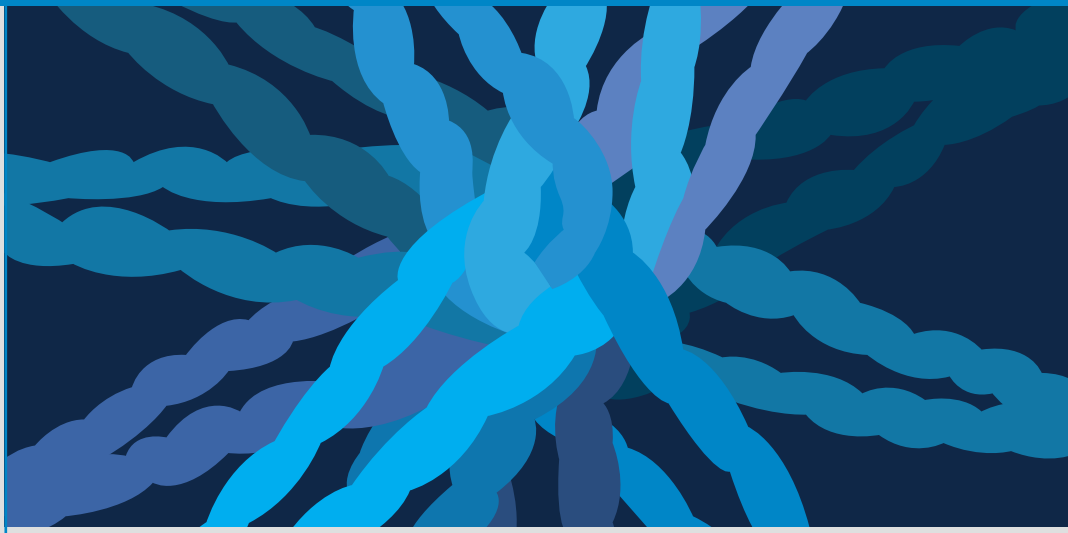
Therefore multidisciplinary teams of professionals are collaborating to ensure that growing numbers of patients are able to access assessment, diagnosis through efficient, responsive and cost effective pathways.

The UK is now seeing post titration models of health care devolving from secondary specialist care to primary care settings with GP Practices and nurse led services trained to provide medication reviews and support post diagnosis interventions and signposting.

This pamphlet is designed to inform GP Practice Nurses, GPs and Nurse Led ADHD and Neurodevelopmental Clinics, many of whom are responsible for service design and coproduction of pathways and professional development of those nursing professionals working in ADHD and Neurodevelopmental clinical services.

This pamphlet also aims to reduce the delays and the anxiety experienced by patients when seeking health care and guidance on how to live successfully with ADHD. Improving patient experience of health care that enables them to become actively engaged and responsible in self-care, achieve better outcomes and reduced health care costs.

Co-production and multi-agency collaboration in the design and implementation of lifespan ADHD services



In the UK, there is wide variation in multi agency collaboration and in some NHS Trusts and alternative health care providers; both CAMHS and Community Paediatric Services may be responsible for childhood ADHD services.

Many adult mental health services are now devolving care back to GPs after diagnosis with nurses and pharmacists actively involved in medication reviews and post diagnostic treatment planning.

NHS Guidelines state clearly that treatment should be multi modal, providing psycho educative approaches to empower patient self-care, psychological therapies, and parent skills training and peer group support.

Particular emphasis should be given to periods of transition – especially when transitioning from children's to adult services. Multi agency transition planning should start one full year before such a transition.

New models of care also offer the opportunity to provide more user friendly environments for young people to access adult ADHD services such as local GP surgeries and specialist hubs away from psychiatric hospital clinics and the opportunity to create lifespan services.

Research evidence suggests that transition from CAMHS to AMHS is a critical juncture affecting the health and life chances of young peoples aged 16. A lifespan service would ensure a seamless and appropriate pathway to meet the changing needs of the patient.

Best practice models of assessment and diagnosis

Identify children at risk

Born prematurely, perinatal trauma, family history of neurodevelopmental conditions, epilepsy, substance misuse or brain injury

Use QbCheck

This is an online school-based cognitive functioning test (which is FDA approved and 83% accurate)

Observational rating scales

Use observational rating scales (such as the SNAP or Vanderbilt), to measure the severity of ADHD traits

Specialist referral

If the aforementioned are positive for an ADHD profile, refer to a specialist clinician and undertake a **QbTest**

Diagnosis and treatment

Use the information from the **QbTest**, the completed rating scales and the clinical interview to discern treatment: choice of medication, titration and non-pharmacological interventions

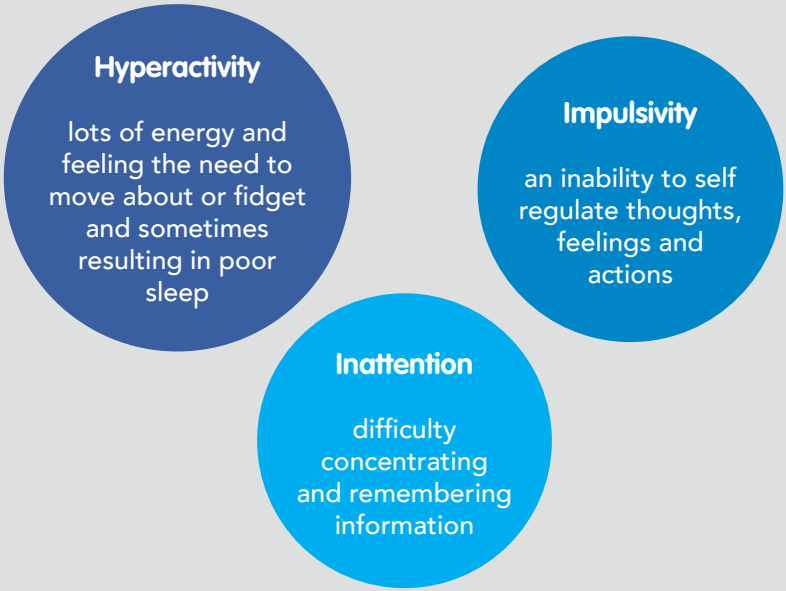
What is ADHD?

ADHD is a thoroughly researched condition recognised by the NHS in the UK, and across the world by the World Health Organisation, who state that ADHD occurs in 5.26% of the population. Guidelines are available on the diagnosis and treatment of ADHD from the National Institute of Health Care Excellence. In Scotland, this appears in the Scottish Intercollegiate Guidelines Network.

You can access the Patient's Guide on NHS NICE Guidelines via this link: https://www.adhdfoundation.org.uk/wp-content/uploads/2019/02/ADHD-NICE-Guidelines-Patient-Booklet.pdf

1 in 20 children have ADHD and can present in a mild, moderate or severe form. ADHD is a lifespan condition, by adulthood, many people have learned to live happy, healthy and successful lives using a range of interventions and strategies that include medication, daily exercise, healthy nutrition, stress management strategies and what are known as executive functioning skills to help them plan and organise their lives, especially in school and in the workplace.

There are three main characteristics of ADHD:

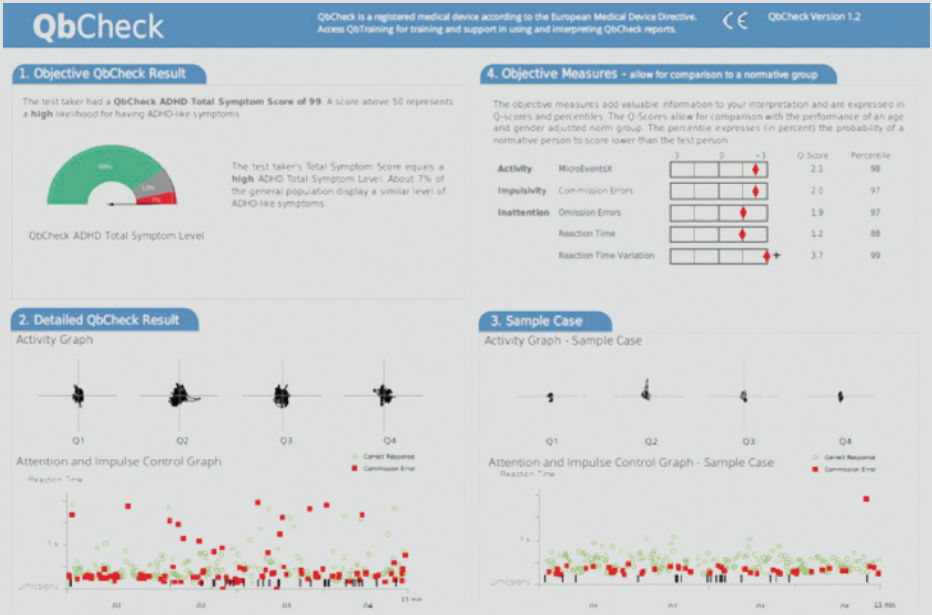


These are evident in all children, but present in a more extreme form in children with ADHD.

Children and adults with ADHD will have varying degrees of these difficulties and will not all present the same symptomology. Some express sub types with two of the three core characteristics.

The reclassification of ADHD from a behavioural disorder to a neurodevelopmental disorder reflects the evidence that not all children or adults with ADHD display inappropriate or distressed behaviours.

The three core characteristics of ADHD are evident in all young children. A childhood assessment for ADHD is necessary when the characteristics are severe and above what is considered normative, - measured using a variety of rating scales.



Increasingly objective computer based cognitive functioning tests such as **QbTest** and **QbCheck** is employed across the NHS to distinguish between cognitive functioning and observed behaviours.

In adulthood, a detailed history of the patient that includes their experiences in childhood is an essential part of any ADHD diagnostic assessment.

What is ADHD?

Childhood ADHD is a neurodevelopmental condition affecting 1 in 20 children – one in every classroom.

In 2013, the DSM5 reclassified ADHD as a neurodevelopmental condition as distinct from a behavioural disorder, reflecting both the developmental delay typical of ADHD and recognising that children with ADHD do not always display distressing behaviours.

Distressing behaviours in children are now seen as a stress response to environmental stimuli that can overwhelm a child. Challenging behaviours are distinct learned behaviours that can be stress response behaviours, or contextually and situational inappropriate behaviour, or the direct result of poor socialisation.

ADHD presentation in children must be evident across at least two domains – home and school. There can sometimes be conflicting views between home and school due to misconceptions of what ADHD is and is not.

Subjective opinion obtained from observations should be investigated further if there is divergence of presentation across domains.

What causes ADHD?

While genetic in origin, research suggests that environmental factors such as parenting, education, traumatic experiences, brain injury, epilepsy, and comorbid cognitive impairments such as dyslexia, autism, dyspraxia, dyscalculia and Irlen's syndrome, will ultimately determine the severity of ADHD across the lifespan.

Genetics factors are at the root of ADHD; however environmental factors invariably determine outcomes across a range of life chances and health.

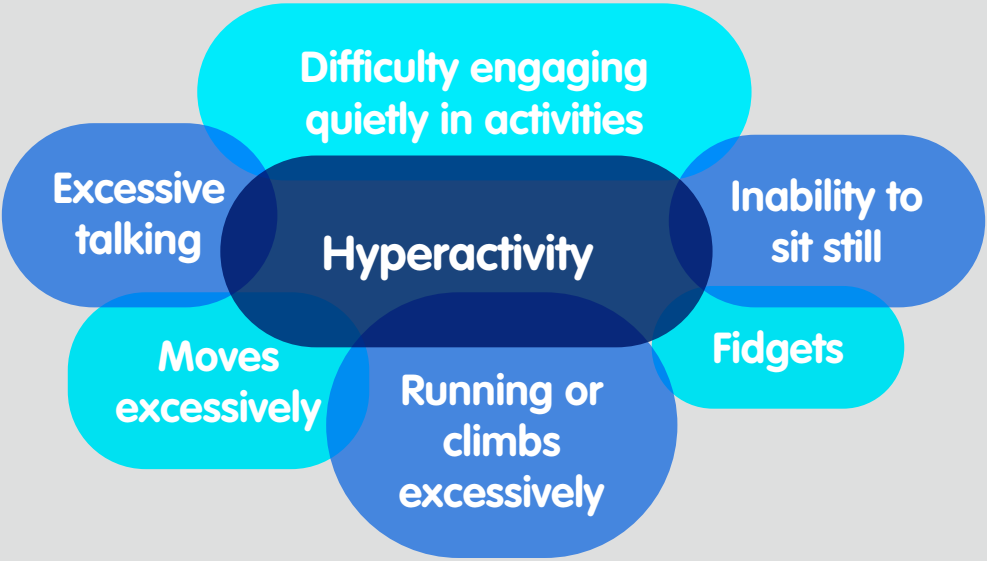
The complex interplay between environment and genetics is the major factor in a range of outcomes. Lifestyle choices, parents who are given the knowledge and skills to understand their child's needs are essential and psychoeducative interventions such as parental training are cited in NICE Guidelines as a necessary part of health care with ADHD.

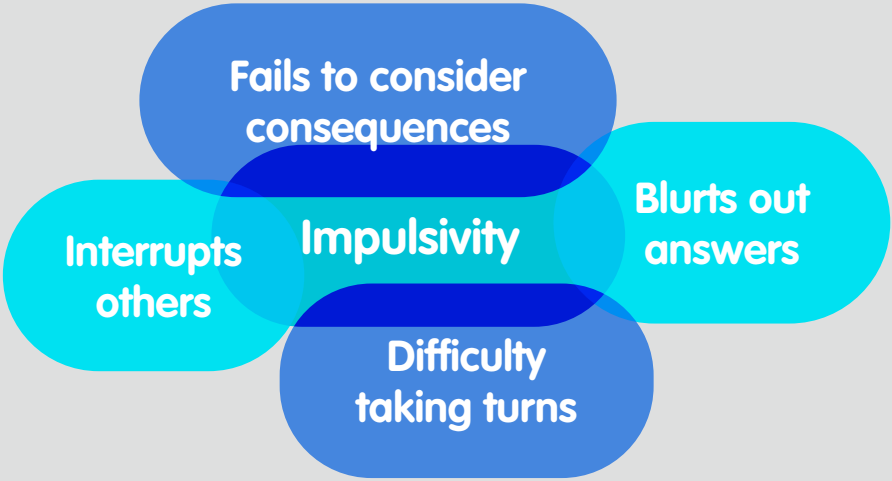
Also schools that ensures all staff are trained to identify children with neurodevelopmental conditions, and adapt teaching to meet those needs, not only ensures better educational achievement – but also reduces the pervasive learner anxiety in childhood that creates an epigenetic risk of mental health problems in adulthood.

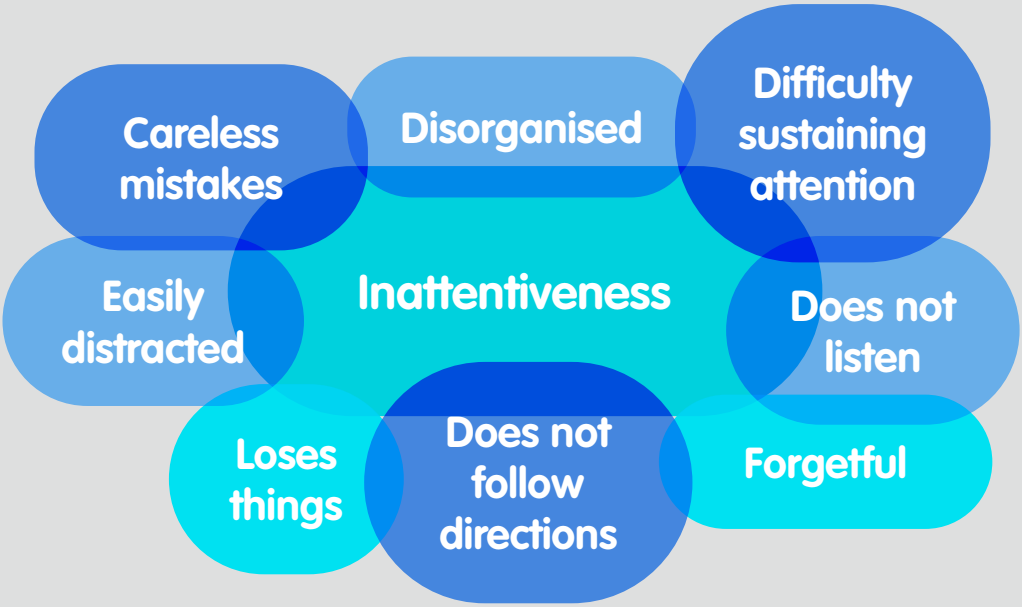
The prevalence of comorbidity is such that many clinicians choose treatment options that factor in comorbid characteristics of other neurodevelopmental conditions even when they are sub threshold for a secondary diagnosis.

Therefore a comprehensive assessment by a trained clinician, psychiatrist or specialist paediatrician will be required to discern how ADHD is impacting on the patient's quality of life and daily functioning so the most appropriate treatment prescribed.

Characteristics of ADHD






Careless mistakes
Disorganised
Difficulty sustaining attention
Easily distracted
Inattentiveness
Does not listen
Loses things
Does not follow directions
Forgetful

The role of the school nurse in supporting assessment

School nurses play a valuable role in gathering information to support a diagnostic assessment. School nurses require training in understanding and identifying ADHD.

Poor behaviour is not always a sign of ADHD. Poor behaviour in school is often the result of children learning how to behave appropriately in a school context. Learning is a trial and error process involving family and school to socialise the child to support their healthy psychological, social and intellectual development.

When the child appears not to be responding to what is asked of them, we have to ask ourselves what is the child's behaviour communicating to us that they are not able to put into words?

Sometimes children with learning difficulties become very frustrated, and lack self esteem because they find the school work more difficult than their classmates. This is known as 'learner anxiety' and this is most often the cause of any inappropriate behaviour.

School nurses should discuss the following with the child's parents, teacher and ask for a meeting with the school Special Educational Needs and Disabilities Co-ordinator (SENDCo). This role could alternatively be called the school Additional Learning Needs Co-ordinator (ALNCo) and ask the following questions:

Is the child paying attention?

Is the child showing any delay in learning?

Is the child forgetting things?

Is the child appearing tired or daydreaming in class?

Is the child unable to be still when it is required?

Is the child appearing anxious about learning and homework?

Is the child unable to organise and plan their school work properly?

Is the child having difficulty with sleeping?

Does the child find it difficult making and keeping friends?

Have these difficulties been occurring for more than six months?

These characteristics and concerns must be evident in both the home and school.

The diagnostic criteria in the DSM V for ADHD

A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development:

- **For children, six or more of the symptoms have persisted for at least 6 months**
- **For adults (age 17 and older), five or more symptoms are required**
- **Several inattentive or hyperactive-impulsive symptoms present by age 12 years**
- **Several inattentive or hyperactive-impulsive symptoms present in two or more settings (e.g. at home, school or work; and in other activities)**
- **Clear evidence that the symptoms interfere with, or reduce the quality of, social, academic or occupational functioning**

NHS NICE National Institute for Health and Care Excellence

NICE Guidelines 2018 on the diagnostic criteria and treatment of ADHD in England and Wales https://www.nice.org.uk/guidance/ng87
Scotland SIGN Guidelines for ADHD https://www.sign.ac.uk/assets/sign112.pdf
http://adhd-institute.com/assessment-diagnosis/diagnosis/dsm-5/
https://www.icd10data.com/ICD10CM/Codes/F01-F99/F90-F98/F90-/F90.9

NICE GUIDELINES

Patients Guide to NICE Guidelines

The Following Guide is written by UK Patient Groups in an easy to read accessible guide explaining what patients should expect from the NHS and the treatments available. https://www.adhdfoundation.org.uk/wp-content/uploads/2019/02/ADHD-NICE-Guidelines-Patient-Booklet.pdf

Executive functioning

Some ADHD specialists refer to ADHD as a disorder of self-regulation. Self-regulation requires that a person have intact executive functions. Executive function refers to brain functions that activate, organise, integrate and manage other functions. It enables individuals to account for short and long term consequences of their actions and to plan for those results.

It also allows individuals to make real-time evaluations of their actions and make necessary adjustments if those actions are not achieving the desired result. This is hard to do when your working memory, your time management and organisation skills are affected by ADHD.

Here is a list of executive functioning skills:

1. Self awareness

Simply put, this is self-directed attention.

2. Inhibition

Also known as self-restraint – the ability to not speak or act, but to stop and think before speaking or acting.

3. Non-verbal working memory

The ability to hold things in your mind. Essentially, visual imagery — how well you can picture things mentally.

4. Verbal working memory

Self-speech, or internal speech. Most people think of this as their inner monologue.

5. Emotional self regulation

The ability to take the previous four executive functions and use them to manipulate your own emotional state. This means learning to use words, images, and your own self-awareness to process and alter how we feel about things.

6. Self motivation

How well you can motivate yourself to complete a task when there is no immediate external consequence.

7. Planning and problem solving

Experts sometimes like to think of this as self-play — how we play with information in our minds to come up with new ways of doing something. By taking things apart and recombining them in different ways, we're planning solutions to our problems.

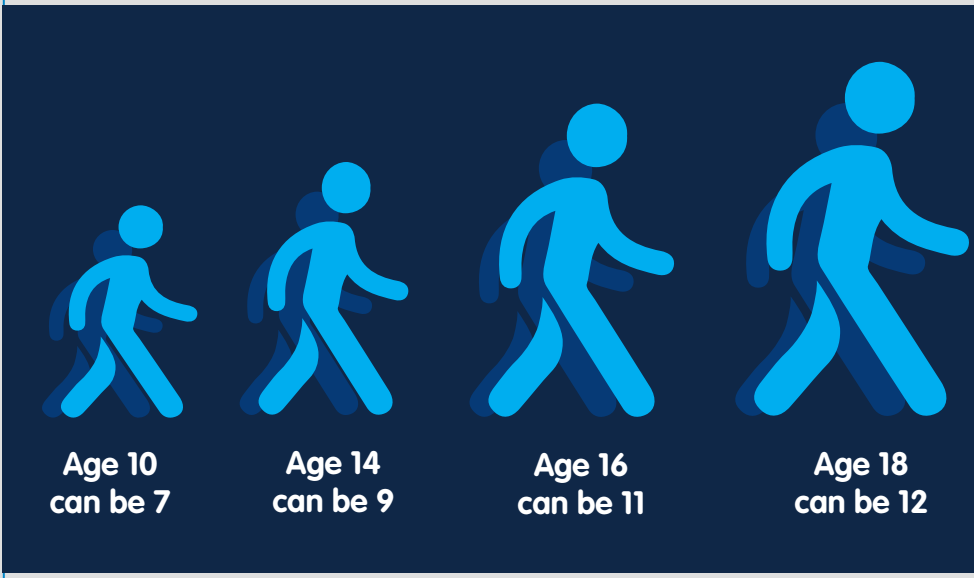
How might poor executive functioning present?

- Forgetting the steps needed to complete a task
- Shutting down due to feeling overwhelmed by the amount of information
- Requiring somebody else to initiate and/or organise their tasks
- Not knowing how to start
- Expressing an emotion every single time it is felt
- Being unable to filter what's important and what's unimportant to focus on
- An inability to imagine how to get from start to end
- Getting distracted by other things
- Not knowing where to start
- Being unable to motivate themselves
- Being unable to do things well consistently

ADHD and emotional maturation

Children with ADHD appear to be developing more slowly than their peers. Some scientists estimate that this can be as much as one third of their chronological age.

Children with ADHD can be seen as poorly behaved because their brains are developing at a slower pace than those of other children their age, so they appear immature.



Children with ADHD can appear very sensitive and easily upset. They will often seek comfort and reassurance by seeking affection and closeness to parents. Some children with ADHD may seek friendships with slightly younger peers with whom they identify more than children their own age.

Children with ADHD often struggle making and maintaining friendships. They experience difficulty with taking turns and can be impatient and easily frustrated. Managing conflict or indeed understanding social cues and the rules and regulations of social groups may also be difficult for your child.

We recommend that children with ADHD are encouraged to participate in sporting groups and activity groups such as scouts, cadets and outdoor activity clubs. Such structured groups and activities will help your child learn how to develop friendship skills.

Frequently co-occurring difficulties associated with ADHD

ADHD can also be associated with other neurodevelopmental conditions as detailed below. This does not however, mean that if your child has a diagnosis of ADHD, they will also have all the other conditions, but conditions can co-exist.

29% of children with a primary diagnosis of ADHD also have ASD (Autistic Spectrum Disorder) and over 40% will also have dyslexia. Dysgraphia, dyscalculia, tics and Tourette's syndrome can also co-occur - or indeed your child may display traits of more than one other neurodevelopmental condition.

ADHD and co-morbidity

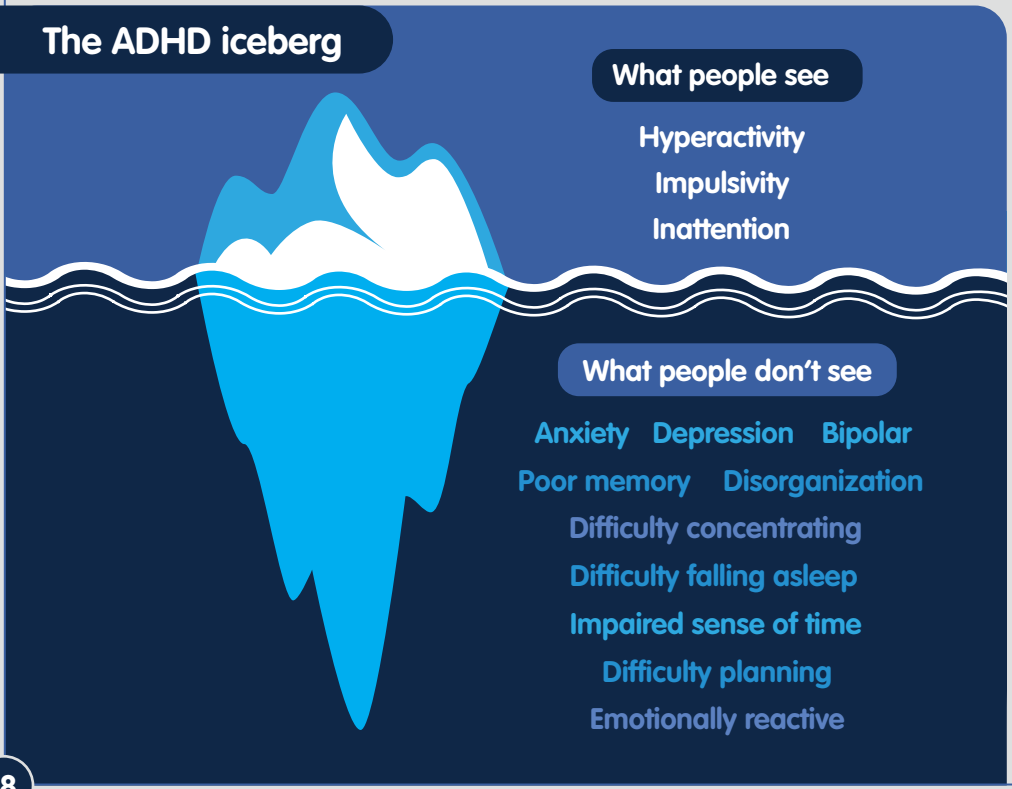
Research suggests that as many as 33% of those with ADHD will have at least one co-occurring neurodevelopmental condition and approximately 18% will have two co-occurring neurodevelopmental conditions.

Dyslexia is the most common at 40% but children and adults may display traits of other sub threshold characteristics of autism, dyspraxia, dyscalculia and speech and language difficulties.

Difficulty with sleep is very common in patients with ADHD which further impairs cognitive functioning and general physical health. Post pubescent children with ADHD often display oppositional behaviour which is a common occurrence in neurotypical teenagers in this stage of neurological maturation.

Children with ADHD have an increased risk of developing comorbid conduct disorder and oppositional defiant disorder. CD and ODD are distinct psychiatric diagnoses that can be mistaken by schools and parents for ADHD, trauma or age related social and emotional difficulties. Historic stigma and stereotypes pertaining to challenging behaviour, can result in many parents and referrers mistaking CD and ODD for ADHD.

The ADHD iceberg



Assessing children

Assessing, diagnosing and treating patients with both autism and ADHD can be complex and requires a greater level of expertise in choosing and trialling the most appropriate treatment for that individual patient.

Many services offer a combined neurodevelopmental pathway for diagnosis and treatment as a part of the diagnostic assessment for ADHD to discern and inform treatment and patient care.

The prevalence of mental health difficulties such as addiction, self-harm, anxiety, depression, attempted suicide and increased risk of adverse responses to life cycle events is higher in the ADHD population.

This increased risk should be factored into pathway design and treatment protocols to ensure that ADHD clinics can offer access to psychological therapies and multi agency interventions to ensure that we treat the person, not just the 'medical condition'.

Research suggests that 67% of patients with ADHD will experience at least one comorbid cognitive impairment or mental health difficulty. Comorbidities should be factored into treatment plans.

Social prescribing emphasises the benefits of healthy lifestyle choices and the particular benefits of daily exercise, nutrition, good sleep and daily stress reduction strategies that support ADHD related dopaminergic and noradrenergic functioning.

Key steps:

- **Know the pathways in the area your clinic serves**
- **School nurses and teachers know what ADHD is and how to complete an accurate feedback assessment**
- **Parents are given guidance on how to accurately complete ADHD rating scales**
- **Identify risk factors - family history of neurodevelopmental conditions; pre term birth, perinatal trauma, epilepsy, sleep disorder, anxiety disorder, PTSD, behaviour disorders**

Assessing children

Children often lack the self-awareness or the vocabulary to communicate when they are experiencing mental distress or learning impairment. Children will communicate mental distress through behaviours such as avoidance, anger, tearfulness, sleeplessness, separation anxiety from primary carers such as mum and dad, problems with food and withdrawing from social interaction. School staff must to be trained and skilled to identify learning impairment or delay.

Schools and families must also be skilled in enabling children with ADHD related learning impairments and emotional dysregulation to learn 'how' to communicate their needs and develop emotional resilience. Many schools now offer parent skills programmes and parent peer support programmes to improve collaboration and care of children with additional needs.

It is an enduring myth that all children with ADHD have behavioural difficulties – what we now term as 'distressed behaviour'. The school workforce requires greater levels of training and expertise in the early identification of children experiencing mental distress to ensure that they are better able to identify, refer and place immediate interventions into place in the school setting while waiting for a diagnostic assessment.

Poor concentration, poor memory, impulsivity and hyperactivity and inappropriate behaviour are common in all children who are experiencing mental distress and are therefore often mistaken by schools as an indication of ADHD.

Unfortunately in the UK, the imperative for a referral for an ADHD assessment has more often been based on behaviour considered inappropriate to a school setting – rather than a cognitive impairment.

This results in many children with ADHD and related neurodevelopmental difficulties who are able to behave appropriately in a school setting, being overlooked and not referred for an ADHD assessment.

This delay increases the risk of late diagnosis, presenting later in adolescence with co morbid mental health difficulties that impact on learning, academic attainment and behaviour. This is particularly true of girls who are more frequently diagnosed later in adolescence.

Some UK ADHD clinics report that inappropriate referrals from schools can account for anything between 25% and 57% of referrals.

Significant costs therefore can be incurred if partner children's services are not trained to more accurately identify and understand the needs of children with cognitive impairments (such as ADHD), and therefore make appropriate and timely referrals for diagnostic assessments.

Is your clinical setting child friendly? Key to any successful pathway is creating the right environment for children with neurodevelopmental conditions.

Discuss and agree with colleagues and service users about whether your assessment and treatment rooms are child friendly and explore what can be done to improve the experience of children and families using your service.

Always allow time to share information with the family and offer patient information leaflets, and signpost to support agencies and reliable online resources.

Websites and online resources about ADHD

www.adhdfoundation.org.uk

www.additudemag.com

www.ukadhd.com/support-groups.htm

Support groups in the UK

Information on support groups across the UK can be found on:

https://www.adhdfoundation.org.uk/information/useful-contacts/

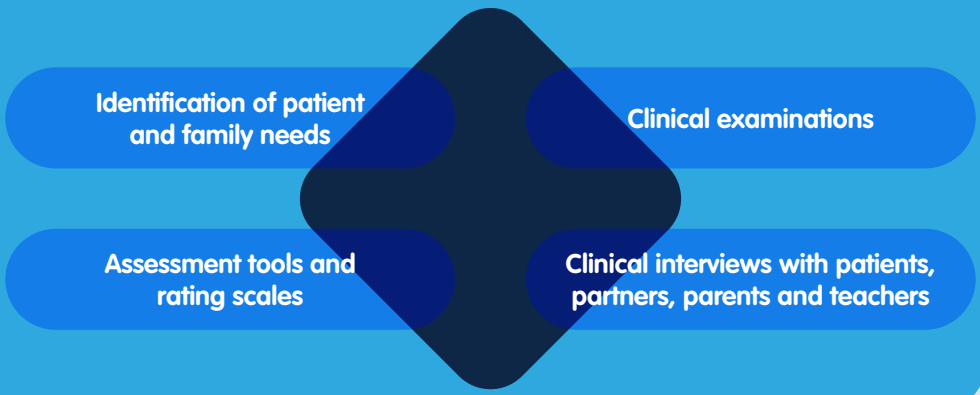
Support for clinicians

www.adhdfoundation.org.uk

www.ukadhd.com

www.ukaan.org

Assessment



Assessing the symptoms of ADHD in girls requires an understanding of the developmental differences in females. Many girls are often overlooked because hyperactivity—more frequent in boys is more noticeable and hyperactivity is interpreted as inappropriate in classroom settings—even though hyperactivity, fidgeting and constant movement are the brain's natural way of regulating dopamine.

This is one of the reasons physical exercise and structured movements in school lessons support learning. This stereotypical view of ADHD is the reason an estimated 50 to 75 % of cases of ADHD in girls are missed.

Diagnosis is frequently later in girls and only identified when they have presented with mental health difficulties such as anxiety, depression, eating disorders and self harm.

Additional ADHD indicators in girls

- **Talking all the time even when they have been instructed to stop**
- **Frequent crying and hypersensitivity / anxiety and low mood**
- **Persistent interrupting of others, daydreaming and mind wandering**
- **Predisposed to anxiety, depression, self harm and eating disorders.**

A single point of access and school based referral pathways can reduce waiting times with information shared with GPs.

Schools should be trained to better identify children with neurodevelopmental conditions and to use screening tools such as QB Check as an adjunct to behavioural observational scales such as SNAP, SWAN, ACE and Connors.

Smart phone applications such as **The Neurodiversity App** designed by **Do-IT Profiler** that offers broad, strength based cognitive profile that is easy to use and available as download for IOS and Android are also helping with early identification.

Training to enable teachers to modify teaching and learning strategies to reduce learner anxiety and enable children to acquire skills and strategies to support poor working memory and exam performance.

Training on understanding and supporting children who display distressed behaviour would benefit the school community; including educating all children about neurodiversity (invisible disabilities) and taking 'strength based approach' to neurodiversity that emphasises intelligence and ability in those with learning impairments. who underachieve in standardised exams and account for 7 out of 10 school exclusions in the UK.

Training for schools on how to implement school-based parent skills training, to enable parents to understand the additional needs and learning difficulties experienced by their child, and the role the parent must play in supporting their child's education and emotional well-being.

School nurses can also signpost teachers to the ADHD Foundation website, and the OFSTED Guidelines on supporting neurodiverse pupils—children with dyslexia, dyspraxia, ADHD, autism, tourette's syndrome account for 1 in 5 children.

https://www.adhdfoundation.org.uk/wp-content/uploads/2020/04/OFSTED-GUIDELINES-Nick-Whittaker-Neurodiversity-Conference-January-2020.pdf

ADHD in adults

Referrals for ADHD assessment and treatment in adults are increasing in the UK as the condition become less stigmatised and better understood.

Undiagnosed and untreated ADHD also correlates with increased risk of eating disorders, diabetes related obesity, hypertension and increased risk of stroke, early onset cardio vascular disease. GP's now recognise that recurring mental health problems such as anxiety, depression, addiction can be indicators of ADHD in patients who also report childhood experiences that suggest an underlying lifespan cognitive impairment that was not identified or diagnosed in childhood.

The World Federation for ADHD have produced an extensive guidelines document for clinicians and commissioners https://www.adhdfoundation.org.uk/wp-content/uploads/2019/06/The-World-Fedaration-of-ADHD-Guide-2019.pdf

Another report that clinicians and commissioners may find useful is the 'Embracing Complexity in Diagnosis' a guide for clinicians produced by the Embracing Complexity Coalition, comprising of over 200 organisations in the UK who support those with neurodevelopmental conditions. This document describes the emerging trends in pathway design across the neurodevelopmental spectrum. https://www.adhdfoundation.org.uk/wp-content/uploads/2019/10/Embracing-Complexity-in-Diagnosis.pdf

Transition from CAMHS to adult services remains an area of concern as many patients do not identify as 'psychiatric' at age 16-18 and are disinclined to attend secondary care settings that provide care those with acute mental health problems. The need for collaboration between children's and adult services to support transition and a greater role for primary care for the treatment and monitoring of non complex ADHD is an emerging trend. https://www.adhdfoundation.org.uk/wp-content/uploads/2017/11/Bridging-the-gap-Optimising-Transition.pdf

As well as referrals via a family GP, referral pathways from substance misuse services and justice services such as custody suites and prisons should be introduced to address the gap in mental health care that increases the risk of substance misuse to self medicate, addiction, reoffending and the socio economic deprivation and correlating health inequalities outlined in the DEMOS report of 2018. https://www.adhdfoundation.org.uk/2018/02/22/the-social-and-economic-impact-of-adhd/

A variety of assessment tools can be used when making an initial referral for an adult assessment of ADHD. Effective screening tools will save both time and valuable resources. Much of the pre diagnostic assessment and screening can be undertaken by other professionals such as suitably trained Nurse Prescribers and Psychologists, thus reducing the time required by a psychiatrist to make a formal diagnosis.

Optimising treatment in adults

Patient voice is essential in optimising any treatment plan and ensuring compliance with clinician's guidance. Placing the patient at the centre of the plan encour-ages ownership and personal responsibility for self-care, lifestyle choices that sup-port the desired outcomes agreed with the patient.

General health care checks that measure response to treatment include checking weight gain or loss, blood pressure and heart rate can be undertaken by the local GP or in a clinical setting. Optimised medication and treatment leading to stabilisation has offered the opportunity for some services to undertake monitoring inter-views with a specialist clinician on line or by telephone.

Complex comorbidity requires a full multi-disciplinary team assessment, led by a senior clinician to ensure optimum treatment of ADHD and other mental health difficulties.

Multi modal approaches to treatment will offer the NHS the opportunity to provide evidence based psychological therapies as an alternative to or adjunct to medication or as alternative to changing medications which have previously been effective for the patient.

Many environmental and lifestyle factors may impact on the patients experience of efficacy of medication. Support groups and social care agencies may have a role to play in ensuring the individual remains engaged and confident in self care and living successfully with ADHD.

How to treat ADHD

There are a range of treatments and interventions for ADHD that include:

Psycho educative training for parents/carers, adults and children/young people (Information, Advice and Guidance)

Parent/carer training programmes that is specific to ADHD

Cognitive Behavioural Therapy

Systemic Family Therapy

Stress reduction strategies, such as progressive muscle relaxation, yoga and deep breathing

Medication

The NHS NICE Guidelines recommend a 'multi modal' approach that may at times require the use of a combination of treatment which you can discuss with your ADHD specialist doctor. Medication is the NICE / SIGN recommended first line of treatment with an effect size of 0.9.

Non pharmacological interventions have an affect size between 0.2 and 0.4 with sustained application. Combined use of medication and CBT is proven to be most successful.

Nutrition and diet

A healthy balanced diet is essential for everyone and can also play a key role in the successful management of ADHD. Hyperactivity can result in the body using up the energy obtained from food too quickly resulting in the body craving carbohydrates to restore its energy.

Over reliance on carbohydrates can affect mood and result in frequent bouts of tiredness. It can also be a cause of weight gain through over eating.

Regular meals, - and depending on your level of activity, regular snacks are needed to maintain energy levels. Tiredness makes the body need energy from food and cravings for carbohydrates can be frequent and can also exacerbate peaks and troughs in energy levels.

A balanced diet with proportionate levels of protein to ensure sustained release of energy are recommended.

Shared Care Protocols between primary and secondary care

Medical experts in secondary care increasingly devolve post diagnostic support to primary care settings to relieve the pressure on secondary care clinics and reduce costs.

The complexities involved in medication monitoring for growing children however, requires more frequent reviews by secondary care community paediatricians and child psychiatrists.

Training for primary care providers is key to the success of timely and cost effec-tive care for patients with ADHD. New mechanisms, structures and a new culture of commissioning and delivering integrated services now requires a move to implement shared care protocols between primary and secondary care and greater use of health technology for remote patient monitoring.

Multi agency collaboration and co-production of services

Mental health is everyone's business. A neurodiverse paradigm in education and health care, recognising the increased prevalence of mental health difficulties of the 20% of the UK population who are neurodiverse.

Children and adults with ADHD, Autism, and related neurodevelopmental conditions, presents a unique challenge for commissioners, health care providers, education providers and any social care agencies who work with neurodiverse families and individuals.

The move toward unitary integrated service design and delivery across health, education and social care will offer an opportunity to address long standing health inequalities and identify the hidden costs to the NHS and statutory services as a direct result of undiagnosed and unmanaged ADHD.

Successful primary care led clinics and multidisciplinary teams can map local support and collaborate effectively with other agencies across all sectors to ensure optimum co produced lifespan services to meet the needs of the local ADHD population.

How to treat ADHD

ADHD medication

There are a number of different medicines for ADHD. Medicines for ADHD that are licensed in the UK are:

- **Methylphenidate (stimulant medication)**
- **Lisdexamphetamine (stimulant medication)**
- **Dexamphetamine (stimulant medication)**
- **Atomoxetine (non stimulant medication)**
- **Guanfacine (non stimulant medication)**

Non stimulant medications can take up to several weeks before there is a noticeable benefit. Stimulant medications become active within an hour of ingestion. There are some types of stimulant medication which last for only a short time – four hours or so; others are longer lasting and can continue to be active for eight to 12 hours.

There is no standard dose and prescribing clinicians titrate medication until everyone is agreed that the medication is working effectively. Treatment with medication can improve symptoms of ADHD quite dramatically. Medication is not a cure for ADHD. Outcomes for medication are best when used in conjunction with multi modal approaches to managing ADHD successfully.

Side affects of medications vary from individual to individual. Some patients report an upset stomach for the first few weeks of taking ADHD medications. For most people, these side effects disappear after a short time. It is important that patients make an informed and educated choice about treatment.

Concerns about medication and possible side affects should be taken seriously and time taken to explain the benefits and clarify any misconceptions or stigma related to medication.

Patients on existing medications for other health concerns must receive expert guidance on combining pharmacological treatment. Any adverse reactions must be reported immediately. Blood pressure, ECG and weight must also be monitored at regular medication reviews annually after titration.

Research suggests that as many as 33% of those with ADHD will have at least one co-occurring neurodevelopmental condition and approximately 18% will have two co-occurring neurodevelopmental conditions. Dyslexia is the most common at 40% but children and adults may display traits of other sub threshold characteristics of autism, dyspraxia, dyscalculia and speech and language difficulties.

Difficulty with sleep is very common in patients with ADHD which further impairs cognitive functioning and general physical health. Post pubescent children with ADHD often display oppositional behaviour which is a common occurrence in neurotypical teenagers in this stage of neurological maturation.

Check list

Identify children at risk

Born prematurely, perinatal trauma, family history of neurodevelopmental conditions, epilepsy, substance misuse or brain injury

Use QbCheck

This is an online school-based cognitive functioning test (which is FDA approved and 83% accurate)

Observational rating scales

Use observational rating scales (such as the SNAP or Vanderbilt), to measure the severity of ADHD traits

Specialist referral

If the aforementioned are positive for an ADHD profile, refer to a specialist clinician and undertake a **QbTest**

Diagnosis and treatment

Use the information from the **QbTest**, the completed rating scales and the clinical interview to discern treatment: choice of medication, titration and non-pharmacological interventions

ADHD affects 1 in 20 members of the public and can be seriously life impairing and impact on mental and physical health.

ADHD is a public health concern that has been misunderstood and neglected across health services.

ADHD is life span neurodevelopmental condition and resource planning for transition from child to adult services is crucial as some patients will need treatment throughout adulthood.

Undiagnosed untreated ADHD correlates with, eating disorders, obesity and diabetes.

Unmanaged ADHD correlates with increased risk of hypertension, stroke and early onset cardio vascular disease.

Unmanaged ADHD correlates with increased risk of anxiety, depression and other mental health problems.

ADHD correlates with increased risk of migraine, allergies and increased risk of accidents.

It is illegal to refuse psychological therapies for those who meet the threshold for psychological therapies, (self harm, eating disorders, attempted suicide) on the premise they have ADHD. Some research suggest attempted suicide by those with ADHD may be as high as 18%.

Undiagnosed and untreated ADHD significantly affects the physical and mental health of your patient - and will result in unnecessary additional costs to the NHS in other areas of health care.

"There is a continuous need for education and training for patients, their families, mental health professionals and commissioners, to eradicate the misconception that, in the majority of the cases, ADHD remits during adolescence and to support the devolvement of appropriate services for the evidence-based management of adult ADHD across the UK."

Dr Samuel Cortese - Royal College of Psychiatrists 2020

ADHD FOUNDATION
The Neurodiversity Charity

The ADHD Foundation Neurodiversity Charity is an integrated health and education service supporting families with unique lifespan service.

The Foundation is the National UK ADHD Charity and the leading user led ADHD charity in Europe, supporting over 6000 parents annually in the UK and training over 15000 education and health professionals annually.

The Foundation takes a strength based approach to neurodiversity and maintains that if 1 in 5 human beings are neurodiverse – have either dyslexia, ADHD, dyspraxia, dyscalculia or autism that they are not 'disordered' or errors of genetics, but that this differences are part of the natural and diverse nature of human neurology, The Foundation showcases how many successful neurodiverse individuals lead happy, healthy and successful lives and can be found in every career and profession. These differences can be very varied and affect different individuals in different ways. There are some who experience severe and distressing lifelong impairment to their lives and health and this is why and when the term 'disorder' is appropriate and access to lifespan expert care is needed.

We live in a neurotypical world which means that for the 20% of human beings who are neurodiverse, the world can be more challenging at times and that awareness, understanding, and appropriate accommodations and support are needed by many neurodiverse individuals – especially in childhood so they can achieve their potential, thrive and succeed in education where they are often excluded because of our outdated educational paradigm and concept of intelligence. Fortunately this traditional misconception of intelligence, ability and employability is changing as many 21st century organisations actively recruit neurodiverse employees, recognising their unique way of thinking. Schools are also recognising that such learning differences do not indicate a lack of ability or intelligence. Schools and Universities are now exploring how we can more accurately measure learning and academic progress instead of relying on standardised exams for the 1 in 5 learners who do not have 'standardised' neurotypical brains.

The Foundation working in partnership with NHS, Department for Education, health, education and social care providers and the business sector, work to create better life chances for the 1 in 5 of the population who are neurodiverse. You can access further information from **www.adhdfoundation.org.uk** contacts us via email: **info@adhdfoundation.org.uk** and follow information, articles and news daily via Facebook '**ADHD Foundation**' and on Twitter **@ADHDFoundation**.

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Disclaimer

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