

ADHD care in the East Midlands

Co-produced by



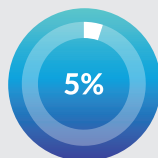
NIHR CLAHRC East Midlands
Collaboration for Leadership in
Applied Health Research and Care

THE PURPOSE

This document has been co-produced by the NIHR CLAHRC East Midlands and the East Midlands Academic Health Science Network (EMAHSN) to share recent findings from the AQUA randomised controlled trial and the Transforming Attention Deficit Hyperactivity Disorder (ADHD) demonstrator project. The intention is to encourage the adoption of the QbTest to benefit patients through reduced delay to diagnosis, whilst saving NHS time and money.

THE CHALLENGE

ADHD is characterised by a persistent pattern of inattention and/or hyperactivity and impulsivity and is a significant challenge for patients and the NHS. It can lead to poor educational progress, breakdown of relationships, low self-esteem, accidents, poor employability and a range of social issues, all of which affect 'everyday functioning' and can lead to a reliance on health and social care. Left unmanaged, two thirds of children with ADHD continue to experience symptoms through to adulthood.



ADHD AFFECTS **5%** OF
SCHOOL AGED CHILDREN,
OR **1:20** CHILDREN IN
EVERY SCHOOL CLASS



ANNUAL COSTS FOR
ADHD TO THE NHS ARE
£670 MILLION



IN THE EAST MIDLANDS,
OVER **76,000** YOUNG
PEOPLE ARE KNOWN TO
HAVE ADHD



HEALTHCARE COSTS FOR
EACH CHILD WITH ADHD
ARE ESTIMATED TO BE
OVER **£102,000**

Early diagnosis and timely interventions reduce such risks, yet in the UK the average delay from first clinic visit to diagnosis is 18 months, the worst in Europe. There is no current gold-standard, standardised diagnosis method or treatment for ADHD. Diagnosis relies on subjective reports (which may be contradictory or hard to obtain) and clinical observation. Each child requires resource intensive, clinician time to rule in or rule out ADHD.

WHAT IS QbTest?

The CLAHRC's "AQUA" randomised control trial explored the clinical use of an objective measurement test (a commercial product called the "QbTest")¹ for ADHD diagnosis alongside standard practice in Child and Adolescent Mental Health Services (CAMHS) and community paediatric services. The EMAHSN Transforming ADHD Care Project deployed the QbTest diagnostic tool across three counties to prove the impact on patient experience, efficiency and time to diagnosis.

The QbTest is a digital intervention that provides objective data that can be used in the diagnostic process. It combines motion-tracking analysis with a uniquely designed Quantitative Behavioural measurement system.

Patients are asked to respond as quickly and accurately as possible to certain geometric shapes appearing on a computer screen by pressing a responder button. As the patient performs the task, a camera located above the computer records movement from a reflector located on the patient's forehead.



WHAT DID WE FIND?

Results from the NIHR CLAHRC East Midlands' funded 10 site, 18-month long RCT and the 12-month 7 site EMAHSN Demonstrator Project are impressive:

- **Shortens the assessment cycle**
 - Patients whose clinicians have access to the QbTest report are **44% more likely to receive a diagnostic decision within 6 months²**
 - The likelihood of **correctly excluding ADHD** in the first 6 months is **doubled²**
 - Reduces time from first appointment to diagnosis by **an average of between 146 and 201 days³** depending on the model of implementation used
- **85% of patients surveyed suggests that the test helped them to better understand their symptoms**
- Releases between 20% and 33% in clinical workforce time
- EMAHSN demonstrator projects saw **cost reductions** of between 9 and 39%, depending on the model of implementation used and a **return on investment** of between £14,300 and £93,000 when the QbTest was used in the assessment process³
- **Maintains clinical accuracy** despite speeding up diagnosis². Enables clinicians to feel more clinically confident in making an ADHD diagnosis or excluding ADHD
- **Is acceptable and feasible for implementation**
 - clinicians and families like it³



I would move to the diagnosis more confidently and more quickly having evidence that something was wrong, you know objective evidence. ...reduced the amount of the anxiety of uncertainty"

HEALTH CARE PROFESSIONAL, AQUA TRIAL

WHAT DO THESE FINDINGS MEAN FOR YOU?



PATIENTS: quicker diagnosis, so faster access to appropriate treatment or an alternative care pathway. Improved understanding of symptoms and communication with teachers/ schools.



STAFF: clinical satisfaction and confidence in decision-making. Reduction in time to diagnosis, thus savings in consultation minutes and patients moved off case load quicker, earlier treatment decisions.



PROVIDERS: reduced costs, staff efficiency and client (family) satisfaction. Reduction in numbers of patients being allocated to the wrong treatment pathway or mis-prescribed medication.



CCGS / HEALTH & WELLBEING BOARDS: reduced costs through agreed tariff enables NHS England targets outlined in “Future in Mind” and the “Five Year Forward View for Mental Health” to be achieved. Currently used in the East Midlands prior to referral to CAMHS services, enabling quicker identification of ADHD as a possible cause of educational disruption.



ADDITIONAL (unintended benefits) include quicker diagnosis resulting in faster SENCO / appropriate education support to prevent educational failure linked to ADHD.

ALIGNMENT WITH STP PRIORITIES

- Helps to meet the “Five Year Forward View for Mental Health”
- Helps to meet “Future in Mind” which requires children at risk of educational failure due to inattention to be screened quickly for ADHD and then treated or for the person to be signposted to CAMHS or community paediatric services for further assessment
- **Supports the delivery of the NICE recommended ADHD pathway for Children & Young People.**
- Produces service productivity and efficiency savings: reduction of waiting times and quicker throughput of patients
- Removes unnecessary outpatient appointments from the system

EXPERIENCE AND COST

The test is being used as part of routine practice across England in more than 80 sites, including CLAHRC and EMAHSN test sites, at United Lincolnshire Hospitals NHS Trust, Derbyshire Healthcare NHS Foundation Trust, Leicester Partnership NHS Foundation Trust, Alder Hey Children’s NHS Foundation Trust, Sussex Partnership NHS Foundation Trust, Central Manchester University Hospitals NHS Foundation Trust, North East London NHS Foundation Trust and Medway NHS Foundation Trust.

The average annual cost for a service completing 21 tests per month is £11.5K excl. VAT (total monthly cost approximately £1K), including all hardware, software, IT support, installation and training from a clinical psychologist who also provides telephone advice for interpretation.

NEXT STEPS / QUESTIONS

To explore the use of the AQUA intervention in your organisation, please contact the commercial owners of the tool and enquire about the “QbTest”. Email: tony.doyle@qbtech.com.

To find out more about the EMAHSN evaluation of the QbTest, please contact Dara Coppel, Head of Innovation Programme Delivery, Dara.Coppel@nottingham.ac.uk or visit the EMAHSN website:

 www.emahsn.org.uk/mental-health/adhd-objective-testing

REFERENCES

1. There are alternative products commercially available.
2. Hollis C. 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. *Journal of Child Psychology and Psychiatry*, <https://doi.org/10.1111/jcpp.12921>
3. Data from evaluation carried out by the East Midlands' Academic Health Sciences Network
http://emahsn.org.uk/images/Final_Overall_Evaluation_Report_31May18.pdf
4. <https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf>
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