Conclusions Attention-deficit hyperactivity disorder (ADHD) is a common childhood-onset neurodevelopmental disorder characterized by inattention, impulsivity, and hyperactivity. ADHD exhibits substantial heritability, with rare monogenic variants contributing to its pathogenesis. ADHD prevalence in Qatar is considered significantly high, with almost 10% of the Qatari children suffering from ADHD. This could be linked to the fact that the rate of consanguinity amongst the Qatari population is particularly high reaching up to 54%.3

This study has found five de novo genetic mutations in five families of patients with ADHD, supporting the evidence of the genetic basis of ADHD. Identifying these mutations will contribute to the future of precision medicine, which will allow doctors around the world to tailor their management based on their patient’s unique genetic characteristics, for accurate diagnosis and optimum care.

REFERENCES

CLINICAL OUTCOMES FOR ADOLESCENTS LIVING WITH HEPATITIS B

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Objectives
1) To audit clinical outcomes for adolescents living with chronic hepatitis B (CHB)
2) To audit clinical outcomes following transition to adult care

Methods Retrospective case note analysis extracting a dataset of all patients seen in the paediatric CHB clinic between 2010 and 2022. Data collated: e-antigen (eAg) status; e-seroconversion; alanine aminotransaminase (ALT); coinfection with hepatitis D virus (HDV); hepatitis C virus (HCV) or HIV; liver inflammation and fibrosis by transient elastography and biopsy; and treatment status for hepatitis B (HBV).

Results 58 children, 36 (62%) male, presented to paediatric CHB care. The median age at presentation was 13 years (IQR 6, 15). Ethnicity: Asian 25 (43%), black African 15 (26%), White 8 (14%), Other 3 (5%), Unknown 5 (9%). Viral coinfection: HDV (1), HIV (1) and HCV (0). 21 (36%) transitioned to adult services at a median age 18 years (IQR 18, 19), median length of time in adult care 4.6 years (IQR 3.1, 5.5), with no loss to follow up.

At latest assessment; median age 18 years (IQR 12, 22); median ALT 38IU/L (IQR 24, 49) in paediatric care (n=37) and 44IU/L (IQR 29, 65) post-transition. 5 have ALT > twice upper limit of normal: 3 paediatrics; 2 adult care. 33/58 (57%) are eAg negative, 11 e-seroconverted during follow-up: in paediatrics (10) and post-transition (1). Median HBV DNA by HBeAg: positive 87,000,000IU/mL (IQR 20,996, 641,000,000); negative 235IU/mL (IQR 33, 1537). Latest transient elastography mean CAP 198dB/m (SD ±57), mean E score 5.1kPa (SD ±1.7) with 5 having evidence of mild or severe fibrosis (F2 E score 7.4–11.1).

19 (33%) ever received HBV therapy, median age 14 years (IQR 8.5, 15); 1 treated post-transition aged 22. The pre-treatment median ALT 47IU/L (IQR 28, 64); median HBV DNA 401,242IU/mL (IQR 635, 226,500,000). 15 received pegylated interferon alpha (PEG-IFNα); clinical trial (3), adult care (1). 3 stopped due to toxicity, including 1 post-transition. 4/15 (27%) e-seroconverted.

4/19 received tenofovir disoproxil fumarate: median age 14 years (IQR 14, 15); median HBV DNA 85,003,498IU/mL (IQR 6295, 579,700,000), with 2 achieving sustained viral suppression. 2/4 adolescents were eAg negative from treatment initiation.

11/58 underwent liver biopsy all pre-2018 in paediatric care. The modified Hepatic Activity Index (HAI) necroinflammatory scores median was 3/18 (range 1–8). The HAI fibrosis stage median 1/6 (range 1–3).

49/58 underwent transient elastography in paediatric services; mean CAP score 197dB/m (SD ±44), mean E score 5.4kPa (SD ±1.3). Three children had E scores >7.4kPa; all received treatment. Post-transition, 9/21 underwent transient elastography; mean CAP score 246dB/m (SD ±49). The mean E score was 5.9kPa (SD ±2.3) with two having E scores >7.4kPa; none has been treated.

Conclusions In this cohort of adolescents living with HBV rates of cirrhosis were reassuringly low. More than half had undergone e-seroconversion, all bars one prior to transition to adult care. One third e-seroconverted during follow up, the majority spontaneously. PEG-IFNα did not induce e-seroconversion in most cases when used.

THE CHALLENGES OF THE COVID-19 PANDEMIC ON YOUNG PEOPLE WITH EATING DISORDERS: OUR EXPERIENCE IN QATAR

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Objectives This study examined the impact of the COVID-19 pandemic on adolescents with eating disorders, mainly anorexia nervosa, and Bulimia nervosa, using data collection pre-pandemic and during the pandemic in the outpatient clinics in Sidra hospital, Qatar.

Methods Medical records of the patients with eating disorders were reviewed for the period between August 2017 and April 2022. Diagnosis of Anorexia Nervosa and Bulimia Nervosa was done using the DSM-V criteria. For the purpose of this study, August 2017 to March 2020 is considered ‘pre-pandemic’ and April 2020 to April 2022 is ‘post-pandemic’.

The clinical assessment in the pre-pandemic period was carried out face to face in the clinic, while a hybrid model of clinical care that uses telephone consultations and a limited number of patients’ physical appointments was adapted during the pandemic period. The number of clinical appointments increased gradually as the number of COVID-19 cases decreased in the country.

The study compared the numbers of diagnosed patients with eating disorders between the two mentioned periods and investigated their specific characteristics (including age, gender, and specific type of eating disorder) and associated comorbidities, like depression and anxiety.

Results In the pre-pandemic period, 58 adolescents aged between 8–18 years old were assessed and diagnosed with an eating disorder. Out of the 58 diagnosed with an eating disorder, 16 patients were diagnosed with co-morbid depression.
and 11 patients with anxiety. During the pandemic, 79 adolescents were diagnosed with an eating disorder and 37 out of the 53 were diagnosed with co-morbid depression. The majority of cases were adolescent females above 12 years of age. This study shows a 27% increase in the number of cases diagnosed with anorexia and bulimia nervosa during the pandemic. In addition, there’s a rise in the number of associated psychiatric comorbidities, including depression, anxiety, and other conditions like irritability and inattention.

**Conclusions** This study showed an increased rate of eating disorders and co-morbid mental health diseases in Qatar during the COVID-19 pandemic. The increase of young people with an eating disorder could be attributed to disruptions of their routines, quarantine, and interruptions of treatment. Our results agree with previous research suggesting that mental health disorders such as depression, anxiety, substance misuse, PTSD, and suicidal tendencies increase in times of economic instability and natural disasters. Long term impact must be further examined to prevent long term detrimental mental health effects on the young generation and the health care system in Qatar.

**REFERENCE**

**THE IMPORTANCE OF BELONGING: PATIENT CO-PRODUCTION OF A SERVICE LOGO DESIGN**

**Objectives** Patients with functional conditions often feel unheard, isolated and disillusioned in healthcare environments. Many patients who are referred to TRACCS (the Treatment & Rehabilitation of Adolescents with Complex Conditions Service) have had negative healthcare experiences, leaving them questioning their body and the capability of professionals to help them. At TRACCS we pride ourselves in ensuring the patient voice and experience is at the heart of all we do.

**Project aim**: to co-produce with young people a service logo that engenders a positive healthcare experience.

**Methods** We commissioned a graphic design company and explained project requirements. Shortly afterwards we approached six young people who were using/had graduated from our service, asking them if they would like to be part of a focus group. Four agreed, meeting the design team via zoom sessions facilitated by the Clinical Nurse Specialist (CNS) and Clinical Fellow. The initial consultation established initial ideas, concepts and priorities. The second enabled the focus group to provide feedback on ideas that had been produced. Following this further focus group input was provided via email.

Once four final options were agreed opinions were sought from patients and staff. Over a 1-month period we canvassed the opinion of ward patients and those seen in clinic. Additionally, the CNS utilised an email bank of 300 patients asking them feedback on the designs. We also sought the opinion of our TRACCS multi-disciplinary team via service development meetings, email and face-to-face contact.

**Results**
1. **Initial consultation process**
   It was important for the design team to better understand what TRACCS means to the young people it serves. Patient recollections of how they felt at the start of their journey through TRACCS were particularly powerful. Words used included:
   - collaboration
   - make invisible, visible
   - positive
   - kind
   - professional
   - lifesaving
   - hidden illness
   - approachable
   - caring
   - quality
   - journey
   - welcoming
   - what we feel is real
   - uplifting
   - explain unexplained

   Additionally, preferences regarding typography, brand identity and visual language were sought. When design options were revised the focus group saw logos in a range of contexts such as letterheads, clothing, stationary and posters.

2. **Canvassing opinions**

   Patients felt design 2 had connotations of health and well-being, and was the most professional.

**Conclusions**
- Patient participation and engagement is key when designing services for young people. It is important our service is welcoming to the young people we treat from the outset.
- Patients and staff had different preferences. We chose the logo that patients preferred.
- Our patients were instrumental in the design and final selection process, thus ensuring they feel heard and that they matter.
- The logo will now be used on all TRACCS correspondence and on our website. In time, it is hoped staff will be able to wear badges, or wear clothing with the logo on it, and there will be merchandise for young people to purchase.

**ALIGNING NATIONAL AND LOCAL DATA TO PREDICT CLINIC NON-ATTENDANCE IN ADOLESCENT AND YOUNG ADULT RHEUMATOLOGY USING MACHINE LEARNING MODEL**


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