Result. A statistically significant association is shown between participants who have had exposure to cannabis and participants who have not had any exposure in their lifetime. The differences across the prioritised brain regions of interest were robust, the association appearing more apparent and statistically significant in the total ($p = .00$) and temporal grey matter ($p = .00$) regions of the brain. This may suggest that cannabis exposure influences the [18F]DPA-714 VT in the significant regions of interest. However, a negative association is seen with current use, the quantity of use, and the frequency of use.
Conclusion. The initial findings for cannabis exposure show us a positive association with increased TSPO levels, however, limitations must be taken into account. Although we cannot readily establish that elevated TSPO levels in cannabis users can presently act as a risk factor marker for developing psychosis from this particular study, we can utilise this data to continue our research in disclosing a new system to predict the occurrence of psychosis.

The mental health of elite rugby players (a literature review)

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Aims. Players are Rugby's key asset, what recent research has been conducted into the Mental Health of rugby players/former players?
Method. Initially a Literature Search using HDAS, Ebsco, Researchgate and Googlescholar followed by a Literature Review of relevant articles.
Result. A significantly higher prevalence of anxiety and depressive symptoms in Professional rugby players (compared to the general population) is something that authors agree on. This review considers some of the rugby specific variables not limited to injuries (including concussion), retirement from the sport and finally alcohol abuse.

In 2014, Sullivan looked at the role of potential mediators between concussion and later life depression. Sullivan suggested that the effects of concussion on later life depression may be directly neurological.

Chronic Traumatic Encephalopathy (CTE) is a neurodegeneration which is only definitively diagnosed by post-mortem examination of brain tissue at this time. Today, Chronic Traumatic Encephalopathy is a very controversial subject, for every piece of research which claims to prove CTE, there is another piece of research apparently disproving it.

Alcohol Misuse - Whilst it is well known in general adult psychiatry that alcohol has a significant negative impact on depression and anxiety in the general population, this review summarises findings from research into alcohol misuse in elite rugby players.
Conclusion. In addition to personal variables (which include personality, perfectionism, ability to cope with stress, optimism, pessimism, ability to utilise mental skills, burnout and career satisfaction) there are rugby specific variables which are not limited to injuries, retirement from the sport and finally alcohol abuse.As mentioned in the paragraph on depression and anxiety, numerous recently published authors agree that a significantly higher prevalence of anxiety and depressive symptoms are seen in Professional rugby players (compared to the general population).

As alcohol misuse has already been researched, there would seem to be an opportunity for future research into the extent of illicit drug use by elite rugby players and potentially the effect of illicit drug use on depressive symptoms and anxiety. As mentioned in the paragraph on depression and anxiety, numerous recently published authors agree that a significantly higher prevalence of anxiety and depressive symptoms are seen in Professional rugby players (compared to the general population).

Finally, given the limited recent published literature on suicide in elite rugby players and former elite rugby players, a significant research gap exists in this particular field.

Using electronic clinical records to investigate service use and in-patient care of adults with intellectual disability and/or autism spectrum disorder

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Aims. To describe characteristics of adults with intellectual disability (ID) and/or autism spectrum disorder (ASD) accessing care in one mental health Trust.

To explore factors associated with in-patient admission/risk of re-admission within 12 months of discharge.
Background. There is concern that adults with intellectual disability and those with autism spectrum disorder are frequently admitted to mental health hospitals. The evidence from NHS datasets suggests that this remains a significant issue and is associated with personal, social and economic costs.
Method. Adults ($\geq$ 18 years) with ICD-10 diagnosis of "mental retardation" and/or autism who had accessed care in the Camden and Islington Foundation Trust were identified using the Clinical Record Interactive Search (CRIS). The identification process was validated through cross checking of free text in the electronic clinical notes. We compared demographic and clinical characteristics and service use, including length of admission, of 315 individuals with ASD and 339 with ID (with or without ASD). Logistic regression was used to explore factors associated with in-patient admission and re-admission within 12 months of discharge.
Result. A greater proportion of adults with ID (with or without ASD) had a diagnosis of psychosis, substance misuse, or dementia whereas diagnosis of anxiety disorder was greater in those with ASD. Antipsychotics and other psychotropics were twice as likely to be prescribed for the ID ± group. Admission to psychiatric in-patient care was greater in those with ID ± ASD (adjusted OR 4.00, 95% confidence interval (CI) 2.41-6.63), men (aOR 2.28, 95%CI 1.39-3.75), younger adults (aOR 0.98, 95%CI 0.97-1.00), and in those with a diagnosis of schizophrenia spectrum disorder (aOR 5.08, 95%CI 3.00-8.61), affective disorder (aOR 2.23, 95%CI 1.29-3.83), personality disorder (aOR 1.94, 95%CI 1.02-3.68), and record of previous inpatient admission (aOR 2.18, 95%CI 1.17-4.05). Having ASD alone was associated with a greater risk of re-admission within one year of discharge, although this difference was not statistically significant (aOR 0.70, 95% CI 0.32-1.52). Comorbid diagnoses of affective disorder or personality disorder were the only significant associations with re-admission (aOR 3.11, 95%CI 1.34-7.23 and aOR 8.28, 95%CI 2.85-24.04, respectively).
Conclusion. These findings provide the first longitudinal investigation into the acute care pathway for adults with ID and/or ASD in the NHS. Replication in other trusts is now needed to inform "at risk of admission" registers and guide targeted interventions to prevent admission.

Age-related changes in physiology in individuals with lifetime bipolar disorder

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Aims. Individuals with bipolar disorder have reduced life expectancy and may experience accelerated biological ageing. In individuals with lifetime bipolar disorder and healthy controls, we examined differences in age-related changes in physiology.
Method. The UK Biobank study recruited >500,000 participants, aged 37–73 years, between 2006–2010. Generalised additive models were used to examine associations between age and grip strength, cardiovascular function, body composition, lung function and bone mineral density. Analyses were conducted separately in males and females with bipolar disorder compared to healthy controls.
Result. Analytical samples included up to 272,462 adults (mean age = 56.04 years, SD = 8.15; 49.51% females). We found statistically significant differences between bipolar disorder cases and controls for grip strength, blood pressure, pulse rate and body composition, with standardised mean differences of up to -0.238 (95% CI -0.282 to -0.193). There was limited evidence of differences in lung function, heel bone mineral density or arterial stiffness. Case-control differences were most evident for age-related changes in cardiovascular function (in both sexes) and body composition (in females). These differences did not uniformly narrow or widen with age and differed by sex. For example, the difference in systolic blood pressure between male cases and controls was -1.3 mmHg at age 50 and widened to -4.7 mmHg at age 65. Diastolic blood pressure in female cases was 1.2 mmHg higher at age 40 and -1.2 mmHg lower at age 65.
Conclusion. Differences in ageing trajectories between bipolar disorder cases and healthy controls were most evident for cardiovascular and body composition measures and differed by sex.

The role of animal-assisted therapy in the management of people with dementia: a systematic literature review

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Aims. The aim of this systematic literature review was to determine the evidence-based effectiveness of animal assisted interventions and to look at the factors that limit implementation of this intervention.
Background. Dementia is a major health issue worldwide impacting not only on the people diagnosed with dementia, but also on their families and caregivers, and the healthcare professionals. The symptoms of dementia include cognitive impairment that can range from mild to severe, and behavioural and psychological symptoms which have debilitating effects on functional capacity and quality of life. A number of non-pharmacological interventions are being developed to help people with dementia. Animal assisted therapy is one of those interventions that has demonstrated positive effects on various aspects of dementia (Filan and Llewellyn-Jones, 2006). However, there are limitations to its use and feasibility of animal assisted therapy programmes is unclear.
Method. Only randomised-controlled trials (RCTs) were to be included to evaluate high quality evidence. A systematic literature search was carried out to find using the PubMed and Cochrane databases and a search of the NICE website. Literature was screened according to inclusion and exclusion criteria. Eight randomised-controlled trials were selected to be used in this systematic review to assess the effectiveness of animal-assisted therapy.
Result. The results regarding the effectiveness of animal assisted therapy were variable. There was some improvement demonstrated in symptoms of depression, agitation, behaviour and cognitive impairment. Quality of life and activities of daily living also demonstrated positive outcomes. There was a reduction in the risk of falls in people with dementia. However, the studies conducted demonstrated limited methodologies. The factors limiting the use of animal assisted therapy were found to be concerns around adverse events to animals, issues of animal welfare and economic feasibility of animal assisted therapy programmes.
Conclusion. Further research needs to be done using properly conducted randomised controlled trials with larger sample sizes to formally assess people's perceptions regarding therapy animals and develop clear guidelines and protocols for integrating these interventions in healthcare.

The effects of the first wave of the COVID-19 pandemic on the presentation of adolescents to acute mental health services in NHS Lanarkshire

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Aims. This project aimed to assess the effects of COVID-19 on the mental health of adolescents, reflected through their presentations to A&E departments in NHS Lanarkshire.
Method. The psychiatry liaison database was searched for referrals of 17 year olds and under from April until August 2020.

All referrals to all acute hospital sites in Lanarkshire received from any source were included. The only exclusion criteria applied were age over 17 and unavailable assessment information.

The sources searched for information were: patient's electronic notes, Mental Health Assessment forms, Mental Health Risk Assessment forms and electronic letters. The following information was gathered:

- patient's age
- date, source and reason for referral
- hospital site of assessment
- outcome of assessment

Result.

- Between April and August 2020, the number of CAMHS A&E referrals increased every month except in July.
- The age range of CAMHS patients presenting to A&E were 12-17 years, with 17 being the most common age seen.
- 87% of referrals were from A&E.
- The two most common reasons for referrals were drug overdose and suicidal ideation.
- The most common outcome of assessment was a CAMHS referral.
- COVID-19 was a trigger for an adolescent's presentation to A&E in 31% of cases, the most common cause being struggling with the lockdown/restrictions.