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Medical Newsletter

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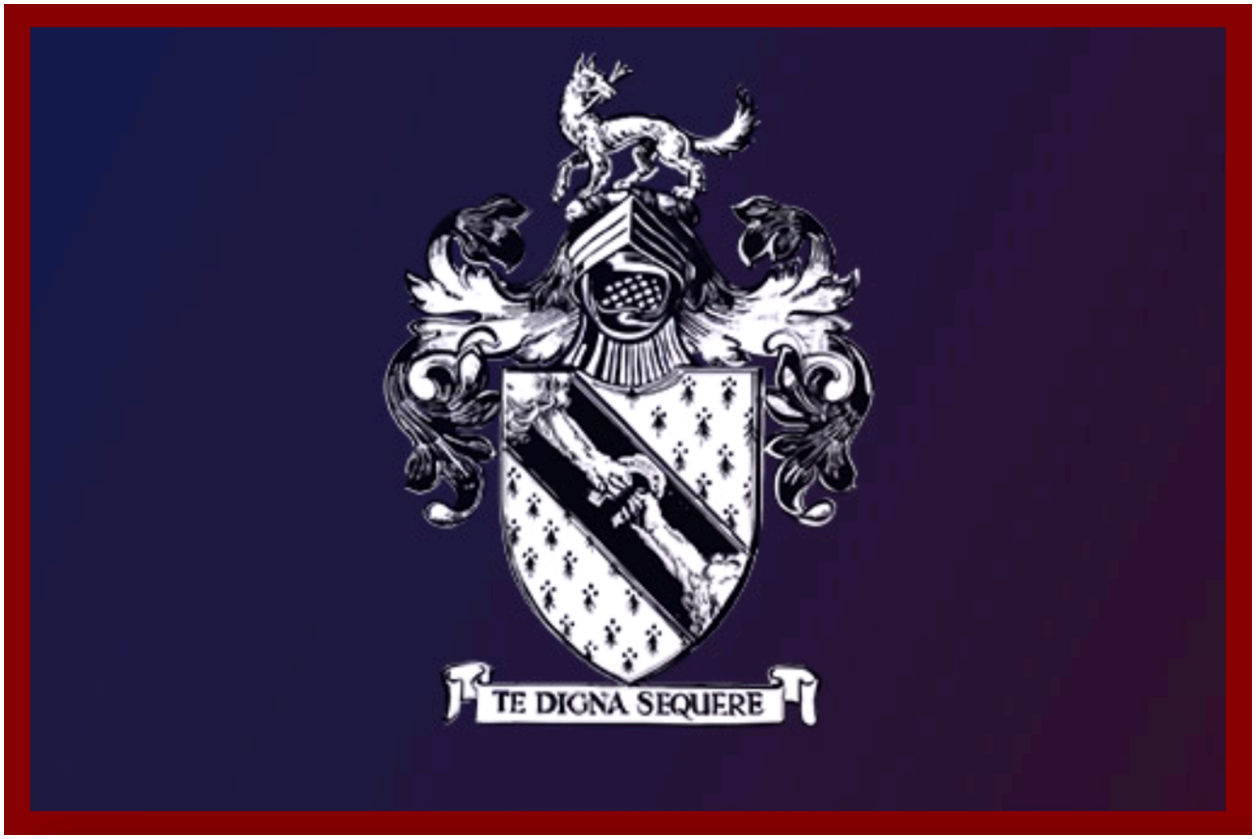

Introducing Borlase's First Medical Newsletter.

Kent Meningitis Outbreak: Public Health Crisis in Focus.

By Siddarth Sridhar

Meningitis, as many of you will have noticed through the news, has re-entered the spotlight, and for good reason. The county of Kent has become the focal point of a health scare that has been unfolding at an alarming rate, captivating schools, universities, and households across the country. What began as a normal night out at Canterbury's Club Chemistry has now been pinpointed as the epicenter of this growing health crisis, with several early cases linked back to that crowded dance floor, what was first thought to be a series of sudden, severe, illnesses has now grown into a series of confirmed cases, prompting public health responses, busy vaccination clinics, and long, nervous queues of students and locals seeking antibiotics and vaccines. In this newsletter, we will explain what meningitis is, why this health crisis has captured the country's attention, what the latest figures reveal, and what you, your friends, and your family need to know.

What exactly is meningitis?

Meningitis, rather than being just a headache, can be envisioned as an infection that causes inflammation of the thin protective covering over the spinal cord and the brain. This happens when bacteria or viruses, and sometimes fungi, enter the body through the nose or throat, pass through the bloodstream, and eventually cause severe swelling of the nerves in the brain and spinal cord. Viral meningitis is the more common variant, and less severe, though it can still cause people to become severely ill. Bacterial meningitis, caused by the bacteria Neisseria meningitidis. is generally the most aggressive form and can be fatal or cause long-term complications within hours if it is not treated promptly. Unfortunately for the residents of Kent, it's this aggressive bacterial form of meningitis that is now affecting local communities. The severe swelling that may occur at any time requires immediate medical care, which involves hospitalization, immediate antibiotics if it is suspected to be bacterial meningitis, and vaccines to prevent the spread of the illness to people who are close to the patient.

The outbreak

The story takes a turn to the health crisis that has taken the country by surprise. Kent is currently in the grip of the UK's fastest-spreading meningitis B outbreak in recent years, with approximately 34 cases being directly associated with this outbreak, and at least 23 have already been confirmed. The health authorities suspect that the outbreak could have resulted from the sharing of vapes, drinks, and cigarettes in the crowded night spots in Canterbury, which spread the meningococcal bacteria through respiratory droplets in close proximity. The cases are affecting young adults , including university students and sixth-formers. Two students have unfortunately died from this outbreak, resulting in a rare national health alert. The majority

of the confirmed cases have been meningococcal group B, which has the potential to progress rapidly from flu-like symptoms to life-threatening meningitis and septicaemia in a matter of hours.

Naturally, this has caused a lot of alarm and concern, but impressively it's also led to one of the fastest responses to an illness in recent history. At universities, colleges, and family clinics, medical professionals are quickly identifying those infected, tracing their contacts, and administering targeted vaccinations to those most at risk, especially teens and young adults who are most likely to be in crowded social situations. In just a few short weeks, Kent County has already distributed over 7,000 vaccinations and over 11,000 antibiotic treatments in just a matter of days. National health organizations are also utilizing data from Kent to track the spread of the disease in order to provide new recommendations to physicians, schools, and parents. The key takeaway is: be aware of symptoms such as sudden onset of high fever, severe headaches, stiffness of the neck and difficulty waking up. If in doubt, or someone seems "just not right," trust your instincts and seek immediate medical help for you and your loved ones rather than waiting to see if symptoms improve. However, remain calm in the knowledge that preventative antibiotics are successful in roughly 90% of cases and that GOV.UK states that transmission of MenB requires close and prolonged contact- so not nearly as contagious nor dangerous as COVID-19.

Why the media frenzy?

You must be wondering, "Why has this specific outbreak caused so much stir in the media?" Well, the answer lies in how unusually close to home it feels, especially considering the recent history of the COVID pandemic, We saw how this 'invisible' danger spread rapidly into our schools, our colleges, and our homes, turning our normal social gatherings into danger zones and overwhelming our medical facilities as our healthy friends suddenly find themselves fighting for their lives. So while the meningitis outbreak feels eerily familiar, rest assured that it is very much not.

Revolutionising Endometriosis Diagnosis: The Promise of Blood-Based Testing.

By Nikita D'Souza

What is endometriosis?

Endometriosis is a chronic and progressive condition where tissue similar to the lining of the uterus grows outside the uterus, often onto pelvic organs. While it acts like uterine tissue, thickening and bleeding during the menstrual cycle, it has no route out of the body. This often causes chronic inflammation, severe pain, extensive scar tissue formation and can cause infertility as well as the formation of cysts. The precise cause remains elusive although it is thought to be a mix of genetic and immune factors. The disease affects 1.5 million women in the UK alone and yet diagnosis is still slow and has its challenges

Endometriosis is predominantly diagnosed via laparoscopy- a safe but invasive surgical procedure where a tissue sample can be taken (biopsy) and the surgeon observes the extent of the growth of the tissue. It is also worth noting this is a surgery not readily accessible to all patients. Which is a key factor as to why it takes an average of 7-10 years after first seeking medical advice for women to be diagnosed. However, recent research provides hope with a clinical blood test to diagnose patients.

Blood based testing

Over the last decade, more research and experimentation into diagnosing endometriosis clinically has taken place. The most promising development is a non-invasive blood test which aims to detect endometriosis earlier and more accurately. A team of Yale professors accurately matched the differences in biomarkers in the blood of patients with and without the disease to their surgical findings. MicroRNAs are found in all tissue and circulate within blood. The combination of serum let-7b, 7d, and 7f microRNA levels were found to be significantly lower in women with endometriosis during the proliferative phase of the menstrual cycle. This could serve as a potential diagnostic marker alongside protein biomarkers such as CA125 which is elevated in patients with the disease. However, CA125 is also elevated in conditions such as ovarian cancer & pelvic inflammatory disease, hence why combinational biomarker models may be a better fit. One study in particular, focusing on a large cohort of 805 participants, shows the success of a combination of 10 plasma protein biomarkers to diagnose endometriosis. Another study consisted of 298 women, of which 40 were controls. The blood test accurately identified 80% of cases and definitively ruled out the disease in 97.5% of individuals without it.

Finally on the 23rd of March, 2026 the European Medical Journal published how a similar blood test identified and confirmed over 60% of endometriosis cases that were missed by imaging

(MRIs and ultrasounds), highlighting not only the success rate of clinical tests but also the productivity of such research and the difference it makes.
Whilst the blood test is still in the clinical testing phase, the aim is for it to be released within a couple years. This will majorly decrease the time taken from first seeking medical advice to the date of diagnosis as well as providing a more accessible service.

Limitations
Promising though all this research may seem, it is unfortunate that there are still limitations that must be taken into account. Firstly, the lack of a single biomarker, while the use of multiple markers are being researched thoroughly, these blood tests are increasingly more difficult to validate and roll out. Next, the seemingly obvious restriction is accuracy. Despite hopeful statistics, the 90-95% success rate of a blood test is not as gold standard as the 100% accuracy of laparoscopy, additionally the minority of women resulting in a false negative would still suffer not just physically from the pain but also mentally in the lack of validation of their disease. It should also be recognised that biomarkers can be influenced by external and physiological variables such as the phase of the menstrual cycle, hormonal treatments & pre-existing conditions alongside endometriosis. Overall, there is still not a universally accepted blood test, the authorization of this still requires large-scale testing and regulatory approval.

Why is this only just coming to light?
So why has a disease that affects 1 in 10 women flown under the radar for so long? Women's menstrual cycle pain is normalized, symptoms are dismissed and people all over the world are unaware. We need to educate ourselves to make up for the gender health gap that has formed over decades of leaving women out of clinical trials simply because our system took men to be the default patient. Finally, ladies, remember to advocate for yourself and pay a visit to your gynecologist if anything feels strangely abnormal.

Are psychedelics truly the future of psychiatry?

By Sofia Young

In the last few years psychedelic drugs have garnered significant interest as potential treatments for various psychiatric conditions including anxiety disorders, depression, PTSD and substance misuse. However, while psychedelics appear to offer a new frontier in psychiatric treatment can they truly revolutionise the way we treat mental disorders?

What are psychedelic drugs?

Psychedelic drugs are a loosely grouped class of drugs that are able to induce altered thoughts and sensory perceptions. They affect processes in the brain which can allow people to feel and think differently about themselves, their experiences and the world around them. These properties have allowed them to facilitate therapeutic change which may have not been possible through more conventional current treatments. Some examples of psychedelic drugs being tested in psychiatry include psilocybin which is the active ingredient in magic mushrooms currently used in trials for depression and anxiety and MDMA commonly known as ecstasy (3,4-Methylenedioxymethamphetamine) being used to facilitate fear extinction in PTSD treatment.

The treatment gap.

Recently there has been a global rise in mental health disorders such as anxiety and depression being diagnosed with recent data released by the World Health Organization (WHO) stating that more than 1 billion people are living with mental health disorders worldwide. However, despite cases and awareness rising, medicine development for mental health has remained stagnant with there being very few major advances in the pharmaceutical treatment of mental illness for decades. The medicines prescribed are all decades old and though newer and safer versions have been developed there has been little if any improvement in the efficacy with many people not responding at all to treatment. Statistics such as that half of those taking antidepressants experience no benefits highlight the magnitude of the issue and offer an explanation to the great allure of psychedelics as a possible new treatment that could offer rapid and long lasting relief where traditional antidepressants often fall short.

Stigmas to science

Over the past twenty years there has been a resurgence in interest in psychedelics despite previous stigma. Early research in the 1950s and 60s into psychiatric uses of psychedelic drugs hinted at possible therapeutic benefits, however, cultural backlash and legal restrictions halted studies. The harsh restrictions imposed on these drugs in the 1960s exaggerated their dangers and dependence potential while also actively denying their clinical value despite there being

much literature available from that era that demonstrates their utility and success in clinical practice. Nevertheless one of the main drivers now for the renewed interest in psychedelic is the recognition that the extreme levels of control these drugs are subject to are disproportionate to their harms and greatly limit possible new groundbreaking treatments. Today the combination of rigorous clinical trials, rising mental health needs, and changing public perception has allowed psychedelics to be reconsidered as legitimate medical tools.

Recent successful clinical trials have generated significant hype for psychedelics in psychiatry by demonstrating rapid-acting, long-lasting, and often profound therapeutic effects for conditions that conventional treatments fail to manage. For example, recent clinical trials have shown that psilocybin may significantly reduce symptoms of depression, sometimes after just one or two doses. A 2021 study in the New England Journal of Medicine showed that patients with moderate to severe major depressive disorder who received two doses of psilocybin did just as well, if not better, at six weeks than patients who received daily dosages of escitalopram (an antidepressant medication). Furthermore, a major systematic review published in the *BMJ* in February of this year found that psilocybin produced a measurable improvement in depression scores compared to placebo. In the study they compared people who had received the intervention of psilocybin as a standalone treatment to others who received the control of non psychedelic treatments such as placebo, niacin and micro doses of psychedelics. Overall, the psilocybin treatment showed a significant improvement in depression scores compared with comparators with there being even greater effectiveness among patients with secondary depression, those who have used psychedelics in the past, and with higher doses.

Nonetheless, the use of psychedelic drugs as treatment is fundamentally different to that of regular medication as psychedelic assisted therapy combines drug administration with structured psychological support. Unlike traditional medications taken daily, these therapies involve a few guided sessions where patients take a psychedelic substance under supervision and then integrate their experience in therapy. According to Dr Ayla Selamoglu, a Trinity postgraduate studying the effects of psychedelic drugs in psychiatry, the great differential between psychedelic therapy sessions and regular traditional medication is the potential for the process to be more than just a symptom relief system but instead directly deal with the source of the pain rather than just temporarily numbing it as typical antidepressants tend to do. Different to regular medication they also do not create dependency with for some patients even one to two sessions being enough to have a profound long-lasting impact with patients reporting benefits ranging from an increased sense of empathy and connection to positive lifestyle changes such as even quitting previously addictive and harmful habits like smoking or alcohol.

Limitations.
Despite these initially positive findings, the data should still be interpreted with relative caution as there are serious limitations to the studies conducted. Many studies in this field involve small sample sizes and participants who are aware they have received the drug due to its obvious psychological effects. The nature of psychedelics makes them nearly impossible to test using the established “placebo” effect, a cornerstone of reliable clinical trials, since the substance has too much of an effect that it becomes immediately obvious to test groups that they have taken a mind altering drug and not an inert control. This makes it challenging to demonstrate the efficacy of psychedelics in traditional clinical trials as perceived benefits can be attributed to expectation rather than the drug’s efficacy. Moreover, concerns have already been raised about methodological issues in major analyses, including potential errors that may have exaggerated the reported benefits with the overall effect size being modest rather than transformative.

Another key challenge is that psychedelic treatment is rarely just about the drug itself. Most trials combine drugs such as psilocybin with structured psychotherapy, including preparation and follow up sessions. This raises the question of whether these drastic improvements are due solely to the drug, the therapy, or the interaction between the two? Ethical considerations further complicate the picture as psychedelics induce altered states of consciousness which can cause patients to be in a particularly vulnerable state when under the influence of these substances. While this can allow patients to become more responsive to psychotherapy as their psychological defenses are lowered which can allow traumatic and unpredictable material to emerge it also creates susceptibility to influence. Therefore a safe and well regulated clinical environment must be established and the use of properly trained and supervised therapists is crucial in supporting patients through processing these thoughts and emotions that bubble to the surface.

In conclusion, while psychedelics do represent an exciting potential treatment for people with certain conditions such as depression and PTSD who are less responsive to other forms of care it is still an uncertain frontier in medicine. The study and use of psychedelics is a rapidly moving field with significant interest which poses a risk of claims jumping ahead of evidence. Psychedelics are far from a miracle cure but may prove to be a valuable tool which when combined with existing models of mental healthcare such as psychotherapy can prove effective for some patients. As research continues, the challenge will be to separate genuine medical potential from scientific hype.

The National Cancer Plan

By Nik Kolev

The need for improvement:
International data shows that UK cancer survival rates are lagging behind the rest of the world, with the UK placing 28th out of 33 comparable wealth countries for five year survival rates of stomach and lung cancer. On average, 16% of UK patients live for five years with cancer. This is compared to countries such as Australia, South Korea and Canada that consistently place at the top for highest cancer survival rates.

The Main Objectives:

1. Meet all waiting time standards by 2029: 85% of patients begin treatment within 62 days, 80% receive a diagnosis within 28 days
2. Become a global leader in cancer survival by 2035 - Aims for 3 in 4 people diagnosed in 2035 to be cancer free after 5 years
3. Make cancer care more holistic - improve mental health, employment, and overall wellbeing
4. Shift cancer care into the community - provide care at home or in local clinics, and educate people.

How it will improve cancer care:
The report is centered on the use of the five 'Big Bets' of healthcare: Use of data, AI, genomics, wearables and robotics. Ultimately these aim to transform cancer care by enabling earlier detection which essentially translates to earlier diagnosis.

Diagnostics
The government has invested £1.65 billion in Community Diagnostic Centres (CDCs) since 2021, with 170 CDC's running in order to provide an additional 9.5 million diagnostic tests per year, in order to detect cancer early, open 12 hours a day, 7 days a week. This only works in synchronisation with the increase in histopathological capacity to process and return results on diagnostic tests.

- 'Single Queue Diagnostics' systems will be rolled out, using technology to identify the earliest appointment across all providers nationally, increasing access to appointments. This is in addition to the compilation of Patient Records in the NHS App to aid multi-disciplinary team decisions.
- Use of AI to speed up lung cancer diagnosis will be rolled out to all NHS trusts by the end of parliament, with AI used in breast cancer diagnosis now only requiring one specialist rather than two.

- New Straight to Test (STT) pathways created so patients go straight to the most appropriate diagnostic test before seeing the specialist, cutting down on outpatient appointments
- The Lung Cancer screening programme rollout will be completed by 2030, meaning 76% are diagnosed at stage 1 compared to 30% without the programme, along with expanding bowel, cervical and breast screening

Treatment and Education
Cancer awareness and education will be rolled out to communities particularly affected by cancer, empowering cancer alliances to roll out schemes such as cancer bus tours and community clinicians having conversations with those less likely to get treatment.
Every cancer patient will have a named neighbourhood lead organising oncology drop-ins to be offered to those with symptoms, reducing A&E visits. Chemotherapy will start to be offered at home, helping those unable to access the hospital. At the end of treatment, every patient will receive an end of treatment summary referring them to further community support.

Prevention:
The UK will pass the Tobacco and Vapes Bill, meaning no one born after 2008 will be able to legally buy tobacco. HPV vaccinations will be rolled out with the aim of eliminating cervical cancer by 2040

Research:
A new cancer trials accelerator will make the NHS the first choice for cancer research as well as promoting trials to those in minority backgrounds and make it more accessible. The NHS will deliver 10,000 cancer immunotherapy vaccines by 2030 to start offering immunotherapy type treatments more widely available into the future.
The report mentions improvements to cancer care in children and young people, including the headline figure of £10 million per year to be offered to travel costs for treatment, as children often have to travel further to one of only thirteen Primary Treatment Centres.
Finally, the report concludes on improvements to rare cancer care, committing to increasing training of GPs to use AI support tools to identify symptoms and identify increased risk factors of rare cancers in patients more accurately, along with increasing funding to incentivise the inclusion of rare cancers in clinical research.

Overall, I believe the plan, if implemented fully, provides the basis of future effective cancer care, harnessing the power of technology to boost efficiency in diagnosis, treatment and research that will improve patient cancer outcomes.
The National Cancer Plan:
https://assets.publishing.service.gov.uk/media/699ec931532c9ad91ebbcc64/national-cancer-plan-for-england-delivering-world-class-cancer-care.pdf

What effect will the bill to prioritise UK medical graduates for NHS training have?

By Abby Milne

The bill to prioritise UK medical graduates for NHS training was passed in 2026 (due for Royal Assent on March 5th, 2026) which officially means that those who have completed medical school in the United Kingdom will be offered clinical training before those who have trained outside the United Kingdom, regardless of citizenship status. To be clear this bill does not simply mean that those who graduated internationally will not be prevented from progressing into NHS training posts, but does mean that those who attended medical school domestically will be prioritised.

The prioritisation of UK doctors

This was put in place to address a 'bottleneck' in training- where rising competition from international medical graduates (IMGs) have been leaving many UK-trained doctors struggling to secure places. In 2025, 15,723 UK-trained doctors applied to specialist training, compared to 25,257 IMGs applying for the same spaces. As a consequence, UK-trained doctors without a post may seek alternative medical employment abroad or in other related industries. This had led to a loss to the NHS (who quite often fund the last year of a medical student's studies) and also the general taxpayer- who's money goes towards the NHS's budget. Furthermore, studies have shown that UK-trained doctors are far more likely to work in the NHS long term and be better equipped to deliver healthcare tailored to the UK population (instead of those trained to treat another demographic). The bill would also reduce our reliance on international recruitment and ensure that the workforce is economically and socially sustainable. As NHS satisfaction continues to rise, why would the government want to risk further turmoil by employing doctors who do not have the appropriate, standardised training that domestically trained doctors have. This bill has been anticipated to provide more security to UK-trained applicants entering the medical field, increasing the reliability and retention of domestic labour supply and improving the overall workforce- perhaps even leading to improved NHS services as a result.

In short, the bill would mean more stable staffing in the future, leading to a better quality NHS and better return on taxpayer investment in medical education.

Studying abroad: A riskier path back to the NHS.

But what impact would this have on current medical applicants? Well, first and foremost, it would mean that those who did not successfully get into UK medical schools and chose to study abroad would not be able to come and work in the NHS (although this bill would not affect the private sector). So, where you study medicine now matters more than ever. Going abroad will

no longer be an ‘easy’ route into medicine and instead could force many to permanently work abroad. As a UK national, this could mean years away from home and family. This does not mean that going abroad makes an NHS career impossible but it does make it much riskier if your long-term goal is NHS postgraduate training.

The ongoing competition.

Although this bill aims to fix the ‘bottleneck’ problem, there are still far more applicants for training places as tens of thousands of people are still competing for 12-13k posts. The impact of this bill may be limited unless more training posts are created which would improve the influx of medical professionals into the NHS. Competition would still remain high, and not every UK graduate will necessarily get their preferred speciality or location. The NHS has long relied on international doctors for years, leaving this policy continually controversial- however as previously mentioned the government wants to reduce the country’s dependence on IMGs.

So, would this bill be beneficial for UK medical applicants? Overall, yes- especially if they plan to study and work in the UK permanently. It would improve fairness for UK-trained graduates and their long-term retention. However it does not solve the NHS’s fundamental problems of oversubscription, competition ratios, rota gaps or wider NHS staffing pressures.

Rising ADHD Diagnoses and the Medication Crisis

By Ini Orolugbagbe

Attention Deficit Hyperactivity Disorder (ADHD)
Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental condition where the brain works differently to most people. Individuals with ADHD have difficulty paying attention to things, have high energy levels (making them hyperactive) and struggle to control their impulses.

In the UK, ADHD affects over 2.5 million people, yet 2 million remain undiagnosed. The crisis is combined with the lack of access to care with only 11.5% of the affected population currently using prescribed medicine.

The Global Supply Chain: Why are the shelves empty?
In the Autumn of 2023, the Government announced that there were national supply issues affecting medications for the treatment of Attention Deficit Hyperactivity Disorder. The shortage of these products was caused by a combination of manufacturing issues and an increase in global demand.

Unlike standard medications, many ADHD treatments are classified as controlled substances, meaning their production is strictly regulated. Whilst these controls are in place to prevent misuse it was and is a contributing factor as to why it is difficult for the supply to be adjusted when the demand makes a sudden increase.

Key medications affected include:

- **Methylphenidate** (also known as Concerta)- is the primary treatment for children and teenagers,
- **Lisdexamfetamine** (also known as Vyvanse)- is a prescription stimulant used to treat ADHD in adults
- **Guanfacine** - which is often used when first line treatments for ADHD (stimulants) are not suitable.

The medical danger here is important as when a patient is forced to stop taking treatment like Vyvanse, they lose focus and experience ‘rebound symptoms’, extreme fatigue and a serious decline in mental health.

The Surge in Diagnosis:

With the increasing number of ADHD diagnoses comes the common misconceptions and stereotypes. For many years, ADHD was categorised as a ‘pediatric behavioural disorder’ primarily affecting hyperactive young boys. However, modern research has shown that ADHD is different across individuals,particularly in females who are more likely to be underdiagnosed.

One primary reason for this surge is the roles of social media. Platforms like Tiktok and Instagram have become a centre for neurodivergent creators to share their experiences. While some clinicians worry about ‘self-diagnosis’ this digital movement has helped increase awareness of ADHD. This is partially due to conversations around mental health becoming more open, and patients feeling more comfortable to seek help which in turn increased the rate of adult diagnoses. While this could be viewed as overdiagnosis, experts believe it to be indicative of overdue recognition for a once underdiagnosed condition.

Additionally, The COVID-19 pandemic acted as a massive stress test for the UK’s mental health. Before 2020 many undiagnosed patients were left to mask their symptoms within structured routines. However lockdown & remote working disrupted daily lives and took away from the coping mechanism of normality, hence forcing symptoms to light.

The ADHD Taskforce

Formed in March 2015, the NHS has established a dedicated ADHD taskforce brought together as an approach to improve urgent inequalities or specific areas like ADHD.

Over 200,000 people have given their views to the taskforce which not only highlights the outstanding level of feedback, but clearly demonstrates that people are passionate about improving mental health care and support across the NHS. This level of engagement reveals the urgent need for change in the NHS to better support individuals with ADHD.