

# The Beacon Conference: Breaking Ground 2023

**2023 Conference Program** 

Consider avoiding printing for environmental reasons

#### Welcome!

We are privileged and proud to be welcoming you to the first (of what we hope are yearly) conferences. This conference has been designed to celebrate students from under-represented backgrounds and identify best-practice around how to provide support to these students whilst training in clinical academia.

This conference is a respectful, safe space for all. We ask that people remain mindful of accessibility requirements, pronouns, and that for some, this may be their first conference or first time in academia. If you have any concerns at the conference, please escalate them directly to the team from The Beacon Academy and we'll do our best to support you.

## Our Story

In 2021, Dr Thomas Dale MacLaine and Dr Charlotte Simms designed and co-ordinated four internships, protected for those from under-represented backgrounds. The aim was to create opportunities to upskill 'under-represented' communities in clinical research, through mentored internships in healthcare technologies and healthcare innovation. By the summer of 2022, the first round of successful internships was completed – more about this success can be seen in our 2022 annual report.

With such resounding positivity and interest from students and staff alike, the founders (Dr Thomas Dale MacLaine and Dr Charlotte Simms, pictured below) and core team (Prof. Kirstie Haywood, Chloe Berg and Lauren Ketteridge) designed The Beacon Academy. We have since expanded and welcomed Grace Fisher and Oscar Phillips as Internship Coordinators.

We at the Beacon Academy provide academic skills training, internship program support with mentoring, and conferences where best practice is shared, and interns can safely practice scientific communications.



## **Guest Speakers**

We are so lucky to have Dr Mary Doherty and Dr Vassili Crispi joining us to deliver two keynote talks.

#### **Dr Mary Doherty**

Dr Mary Doherty is an autistic consultant anaesthetist, a parent of two neurodivergent young people and founder of Autistic Doctors International - an organisation dedicated to peer support, advocacy, research, and training. With academic interests including healthcare for autistic people alongside the experiences of autistic doctors and medical students, she provides evidence-based autism and neurodiversity training for healthcare professionals.



## Dr Vassili Crispi

Vassili is a Brain Tumour Junior Research Fellow at Leeds Teaching Hospitals, having recently completed his academic (specialised) foundation training in West Yorkshire. He is originally from Italy, has trained at Hull York and is an aspiring academic neurosurgeon. He has an interest in leadership.

As an LGBTQ+ doctor, he is passionate about equality and inclusion within the profession, and especially in surgery. He is also a trade unionist, having achieved significant changes at undergraduate and postgraduate levels, enhancing student representation, developing UKMLA policy, calling for changes to UKFP recruitment, and fighting for better pay, safe rotas and working conditions.

He currently holds a number of positions, including Member of BMA UK Council, BMA Board of Science and BMA Yorkshire Junior Doctors Committee Executive, and Cohort Director at the Healthcare Leadership Academy.



#BeaconConf
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## Getting to us

This conference is being held at The Slate, which is at the University of Warwick.

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#### By car

The postcode for all our venues is CV4 7SH and we are located within the University of Warwick campus. For The Slate follow signs for Lakeside Village, you'll then find signposts for the venues. Central Campus Venues are located on central campus, which is signposted off Gibbet Hill Road. Free car Parking is available at The Slate for attendees.

#### By train

Coventry is on the West Coast Mainline and serviced by regular trains, 7 days a week and is the most convenient train station for most visitors. It is served by trains from London Euston, Birmingham (New Street and International) and Leicester. From Coventry station, it's easy to get a taxi or bus to us. Canley and Tile Hill train stations are both served by trains from London, Milton Keynes, Birmingham, Coventry, Rugby and Northampton. Neither station has a taxi rank, so if you don't want to walk, book a taxi in advance. Leamington Spa is served by trains from Birmingham, Coventry, Oxford, Reading and London Marylebone. You can get a bus to us from close to the station.

#### By bus

There are regular buses from Coventry city centre, Coventry rail station and Leamington Spa. Taxis are easily available from these locations. From Coventry, the 11 and 12 bus routes both serve Warwick Conferences. Both buses call at the Rail Station Bridge SD stop on Warwick Road; a one-minute walk from Coventry station - view on Google maps. From Leamington Spa, the U1 and U2 buses serve Warwick Conferences. Both services stop at Parish Church Stand B; a seven-minute walk from Leamington Spa station - view on Google maps.

#### By plane

The closest airport is Birmingham International AirportLink opens in a new window. A taxi to us from the airport will take approximately 20 minutes. Alternatively, you can take a direct train to Coventry from Birmingham International station which is located at the airport. London Heathrow, Gatwick and Luton airports are all connected to Coventry by National ExpressLink opens in a new window coach services. Alternatively, you can take the train to Coventry, with a change in central London.

## Schedule

## Saturday 21st October 2023

Abstracts for all talks and posters can be found at the end of the conference program.

Time	Main Room	Poster Room
09.30 - 10.00	Registration	
10.00 – 10.15	Welcome	
10.15 – 10.45	Keynote Speaker: Dr Mary Doherty	
10.45 – 11.00	Questions	
11.00 – 11.30		Refreshments
11.30 – 12.00	Dr Helen Nolan	
12.00 – 12.30	Kelly Coles	
12.30 -13.45	Mentor cafe	Lunch
		Poster session
		Networking
		Stalls
13.45 – 14.15	Keynote Speaker: Dr Vassili Crispi	
14.15 – 14.45	Becky Evans & Emily Garrett	
14.45 – 15.15	Lydia Renardson	
15.15 – 15.30		Refreshments
15.30 – 16.00	National Goal Setting Panel	
16.00 - 16.30	Closing remarks	

### Additional Information

- Mentor Cafe: Drop-in session in Breakout Room 2. Attendees can meet with mentors and discuss participating in clinical academia from under-represented backgrounds.
   Opportunities to join the mentorship scheme will also be provided.
- **Lunch and Networking:** Informal networking time with stalls and posters available for viewing around the venue.
- National Goal Setting Panel: Guided by facilitators, with an open-ended discussion focused on best practices for supporting under-represented students in clinical academia. Outcomes will be documented and shared with attendees after the conference.
- **Posters:** Posters will be judged for clarity of content, appeal, and impact of work. A prize will be awarded (details to be determined).
- **Q&A:** There will be an informal Q&A at the end of each session, facilitated by session facilitators.
- **Feedback and Follow-up:** A feedback form will be sent to attendees via email, reviewing how engaging the conference was, its usefulness, and gathering any additional suggestions for supporting under-represented students.
- **Post-Conference Engagement:** Attendees are encouraged to sign up for the conference mailing list. There will also be recorded e-workshops, internship guides, and training plan templates accessible on the website in our new members' area.

We look forward to your participation and engagement at The Beacon Conference - Breaking Ground 2023. For further updates, please visit our <u>conference website</u> regularly.

With thanks to our sponsors at The MDU, and the Enhancing Research Culture grant, providing funding for this conference.







# Oral Presentation Abstracts

Author Names	Title of talk	Abstract
Tom Shah, Stanimir Stoilov, Dr Helen Nolan	Developing Student Quality Reviewers – a collaborative approach to promoting representation and developing leadership skills in medical students.	Leadership and advocacy skills are expected amongst medical graduates. However, students are rarely represented in leadership activities in clinical settings, limiting opportunities to develop leadership skills in undergraduate education. As part of quality assurance of undergraduate medical education, Warwick Medical School (WMS) undertakes quality review visits to NHS education partners. Student participation here has traditionally been limited to sharing feedback on placements. Noting a gap in student representation and participation, we developed and piloted the role of student quality reviewers (SQRs) in quality review visits. Here we explore the utility of incorporating SQRs to advocate for diverse peer views, and potential for developing leadership skills in authentic settings.  Students were recruited from clinical years via Moodle. Bespoke training was developed and delivered for SQRs prior to participation in a review visit. Since inception, four students have participated as SQRs across two visits. Formal evaluation was undertaken with students participating in semi-structured qualitative interviews exploring their perspectives and experiences of the training and visit process.  SQRs described the experience as a novel opportunity to develop professional communication and teamwork skills, and improved understanding of healthcare education management and quality assurance. SQRs guided discussions around lived experiences of placement learning. SQRs valued opportunities to develop networks. Training was essential to enable meaningful participation.  SQRs can offer mutual benefits to organisations undertaking reviews and ensure representation of student perspectives. Roles offer valuable learning opportunities to develop leadership competencies. Future research should consider wider benefits to relationship between medical students and faculty.
Kelly Coles		

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Lydia Renardson	Investigation of pharmacological neuroprotective therapies in global vs focal ischaemia using HIE and stroke models: a systematic review	NMDA receptor antagonism is a potential neuroprotective treatment for acquired brain injuries. While the efficacy of NMDA receptor antagonists has been widely investigated preclinically, subsequent clinical trials revealed neutral results at best. Moreover, it is unknown whether NMDA receptor antagonists perform differently in focal versus global cerebral ischaemia. Here, we aim to compare NMDA antagonists in focal (ischaemic stroke) and global (HIE) models of ischaemia.  After conducting a systematic review of Medline (Ovid) and Embase databases according to the PRISMA guidelines a title-based and abstract-based screen was performed using Rayyan. A full-text review of potentially relevant studies was subsequently performed against the inclusion and exclusion criteria. Dependent values were extracted from the control and treatment groups, using a web-based data extraction tool where
	and meta-analysis	necessary. We then carried out a pairwise, stratified meta-analysis. Heterogeneity was assessed using subgroup analysis.
		A total of 78 studies were identified, 57 for focal cerebral ischaemia (stroke) and 21 for global cerebral ischaemia (hypoxic-ischaemic encephalopathy, HIE), including various models of cerebral ischaemia. NMDA receptor antagonists proved significantly neuroprotective (P<0.001) in both stroke and HIE. The overall effect size in HIE models was 2.9 (95% CI 1.45 – 4.5), and for the ischaemic stroke model 1.86 (95% CI 1.42-2.3). The NMDA receptor antagonists exerted significantly stronger neuroprotective effects in HIE models of ischaemia (p<0.01), which included significant improvement in functional outcomes.
		These findings may provide preliminary evidence to support further investigation of NMDA receptor antagonists in HIE. However, the reason for the larger therapeutic effect size in HIE models requires additional preclinical evaluation. These findings support the ongoing research in translational medicine and the development of neuroprotectants alongside recanalization therapy.
Rebecca Evans and Emily Garrett	WMS Leadership Programme - Diversifying the Future Leaders of the NHS	The Outcomes for Graduates Frameworks 2018 states leadership, management and teamwork are essential skills expected from doctors in the NHS. Yet, this important element of medical training often remains a subtle aspect within medical education. The WMS Leadership Programme is a student-led, extracurricular course designed to reflect Warwick Medical Schools accredited curriculum with an emphasis on developing student's leadership skills early in their medical carrier.
		The programme runs in several different aspects:
		1. Professional Mentorship
		2. Leadership Skill Workshops

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3. Personal Development Projects

Graduate entry medicine is an exceptionally demanding university course for mature students, who often work, have caring responsibilities or are in financial hardship, meaning many students struggle to justify time spent on extracurriculars. Therefore, we wanted to make it as accessible as possible; only 12 hours of commitment over 6 months, with workshops being at least a month apart with refreshments included and a free and simple application process.

Having run our first year of workshops, we have had a great deal of positive feedback with a plethora of avenues to build upon the programme, including peer mentorship, running our own conference and working alongside WHAM – the WMS Widening Participation Society.

A 2020 report found that, of NHS chairs, only 5% are of BME backgrounds and women hold only 44% of the roles despite being 77% of the workforce (Sealy, 2020). By encouraging and providing a platform for WP students to consider themselves in leadership roles, the WMS Leadership Programme seeks to help equalise this discrepancy.



# Poster Presentation Abstracts

Author	Title of poster	Abstract
Author Names Aisia Lea	Student-Led Approaches to Mental Health and Wellbeing Amongst Medical Students	The Welfare Hub (WH), a student-led project, was developed at the University of Nottingham. We aimed to promote student well-being and reduce mental health stigma. Evidence suggested medical students experience elevated levels of anxiety, depression, and suicidal ideation compared to students from other courses but are less likely to seek help for these issues due to mental health stigma. We established an Instagram account (@welfarehub.nottsmed) that created posts, devised by medical students, on typical issues that medical students encounter, shared positive affirmations to students prior to examinations, and distributed educational posts regarding mental health conditions. This project aimed to identify best-performing Instagram posts, utilising Instagram analytical data (Instagram likes and accounts reached) from October 2022 to January 2023. Data was supported by an Instagram poll of followers in December 2022 to gauge perceptions of the WH and the content produced. Each committee member was also asked to complete a reflection of their experience within the WH. An inductive thematic analysis explored these responses.  Research revealed that the most popular Instagram posts showed support to students before the commencement of stressful events, such as examinations and results day. This reinforced the fact that followers' favourite posts included the 'Let's Talk About Med School Series' which shared and empathised with student experiences. However, poll data showed that despite the popularity of particular posts, followers most closely associated the WH with mental health awareness.
Jenna Le	Fatigue and mood	This emphasised the importance of aligning educational content with follower perception of the Welfare Hub's values.  Axial spondyloarthritis (axSpA) is a chronic inflammatory disease of the axial skeleton and peripheral
Brun Powell	disturbance in axSpA: identifying distinct patient clusters from a UK dataset.	joints, leading to back pain, disrupted sleep and widespread pain and stiffness. This life-long, progressively disabling condition has substantial impact on quality of life through disease severity, associated fatigue, functional impairment and declining mental wellbeing. Delineation of specific patient profiles and symptom patterns is necessary for enhanced therapeutic targeting. This study aimed to investigate heterogeneity of an axSpA patient population through cluster analysis, to determine the existence of any distinct patient clusters, and ascertain their features and differences in the prevalence of psychological impairment and/or fatigue impact.



		A secondary analysis of a cross-sectional dataset of demographics and patient-reported outcome measures from a UK axSpA patient cohort (n=372) was performed to explore the presence of distinct patient clusters. Univariate statistics determined the clustering variables significantly associated with fatigue, energy, disease-related disability and mood disturbance. Hierarchical cluster analysis and k-means clustering were utilised to identify and finalise discreet patient clusters.  Four distinct clusters were identified, reflecting varying degrees of disease control and impact of fatigue and mood disturbance on lived patient experience. Notably, one cluster indicates a patient cohort with unmet psychological needs, experiencing high impact, despite well-controlled disease activity. Identification of distinct patient clusters, including those with unmet psychological needs, will inform future strategies for successful management of axSpA. An expansion of the multidisciplinary team to include psychological services will provide a more holistic approach to axSpA patient care and improve outcomes.
Shivaay- Ganesh Joshi	Comparison of the different oxygen delivery and ventilatory support methods for treating patients with COVID-19 induced type 1 hypoxemic respiratory failure.	Having claimed the lives of over 5 million people in the span of 2 years, SARS-COV-2 has caused a global health crisis and caused a debate between clinicians on the best approach to take when treating hospitalised patients with methods of respiratory support. This paper aims to evaluate the different methods of respiratory support at a clinician's disposal when treating COVID-19 induced type 1 hypoxemic respiratory failure.  Data was acquired by running a literature search on MEDLINE and Web of Science using terms such as "COVID-19", "Mortality", "CPAP", "Outcomes". Out of 355 papers found in the literature search, 11 are included in this paper.  The studies used have shown both CPAP and HFNO are effective interventions in treating mild hypoxemia in COVID-19 patients, however if they fail, then the chances of patient survival are slim, even if a patient is subsequently mechanically ventilated. The literature has shown that mechanical ventilation has a slightly higher survival rate than both CPAP and HFNO when used as a primary treatment and patients who are escalated to mechanical ventilation have a slim chance of survival.  Considering the findings, it is crucial that clinicians consider factors such as a patient's initial PaO2/FiO2 as well as age when making decisions on whether a patient should be ventilated as their primary treatment or treated with CPAP or HFNO.
Liam Morgillo	Widening participation to	The importance of a diverse medical workforce for healthcare outcomes is increasingly recognised. The underrepresentation of certain groups within the UK medical profession is well-documented, however
	academic medicine: a scoping review	less attention has been paid to representation within academic medicine. This scoping review aims to identify what is known about the representation of people from widening participation (WP) backgrounds in academic medicine.  We searched MEDLINE, EMBASE, World of Science, Education Research Complete to identify peer-



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		reviewed studies that focussed on the representation of WP characteristics—gender, race ethnicity, disability, LGBTQ+ status, first generation in university, low-income or socioeconomic status—within academic medicine. Studies focusing solely on gender representation were excluded.  124 papers were included in our final review, which were categorised into five themes: research activity, leadership positions, academic position, experience of academic medicine, and career intentions. 95% of
		the studies took place in the United States, with only three conducted in the UK. Most studies
		considered gender and/or racial representation, with a handful investigating LGBTQ+ status and disability. There were no studies investigating representation of low-income or first-in-family students.
		In general individuals from WP backgrounds were underrepresented in academic medicine and reported
		negative experiences of clinical academia.
		There is scarce UK research on the representation of people from WP backgrounds within academic
		medicine. Outside of gender and race/ethnicity, the representation and experience of clinical academics
		from other WP backgrounds is largely unknown. Further research is needed to address this gap and
		identify target areas for increasing access into academic medicine.
Hannah	Career intentions	The working intentions of UK junior doctors and prospective medical students have been well
Layton-	of medical	documented. Understanding current medical students' career intentions is key to future workforce
Joyce	students at	planning, which is particularly pertinent in light of the recent industrial action taken by junior doctors.
	Warwick Medical	This sub-analysis is drawn from the AIMS (Ascertaining the career Intentions of UK Medical Students)
	School: Sub-	study; a national cross-sectional study of medical students from all medical schools in the UK. As an
	analysis of a national cross-	exclusively graduate-entry medical school, Warwick presents a unique population to investigate this question.
	sectional study	A cross-sectional survey of medical students at Warwick Medical School (WMS). The national AIMS
	(AIMS Study)	study, from which this data is extracted, was conducted via an online questionnaire. The objective of
		which was to understand the future career intentions of current UK medical students. Specific questions
		inquired about what students' intention was post-graduation and post-foundation programme, if they
		chose to complete it. Demographic information was collected for further analysis. Whilst qualitative data
		was also collected, only quantitative methods have been used in this sub-analysis.
		203 responses were collected from medical students across WMS (n=203). 82.3% of students planned to
		complete both Foundation Year 1 (FY1) and Foundation Year 2 (FY2) after graduation, with less than half
		of these students (37.72%) intending to pursue specialty training thereafter. Sub-analysis of career
		intentions after completion of FY2 by current year of study revealed a sizeable decrease in the
		proportion of students intending to enter specialty training as they progressed in their medical studies.
		42.4% of WMS students intend to emigrate to practise medicine, with 46.51% of those students having no plans to return to the UK. However, conversely the number of students intending to emigrate
		no plans to return to the OK. nowever, conversely the number of students intending to emigrate



		reduced as they progressed through WMS, from 45.3% in Phase 1 to 35.7% in Phase 4. Overall, 27.5% of students intend to take up a UK non-training clinical role after FP, with this number increasing steadily as students progress through WMS peaking at 42.9% in Phase 4. Another stepwise increase was seen in regards to students intending to quit medicine all together after FP training – a 3.2% increase between Phase 1 and 4 students. 44.33% of WMS students intend to leave the NHS within 2 years of graduating, with 1.48% of students intending to leave the profession altogether before completing FP training in the UK.  The results of the AIMS study shed light on the career intentions and views of medical students in the UK. The findings suggest that a concerning proportion of WMS students are considering alternative career paths or intending to emigrate to practise medicine elsewhere after graduation, with a 44.3% of students intending to leave the NHS within 2 years of graduating. This trend may have implications for the future of the medical profession within the UK
Amisha Patel	Women's experiences of surgical treatment for anal incontinence from any cause. A systematic review.	Anal incontinence is the inability to control the excretion of bowel movements, faeces, liquid and gas, from the anus. There are many causes for anal incontinence but women are particularly at risk because of childbirth injuries which may lead to anal incontinence. There are a number of surgical options for anal incontinence, the main one being sphincteroplasty where the anal sphincter – one part of the mechanism that maintains continence – is sutured in a tighter position. Dealing with anal incontinence can be hard not just physically, but also socially and psychologically. This systematic review explores the feelings and experiences of women regarding their surgical intervention for anal incontinence.  A systematic review of literature was conducted to research female perspectives on their experience of surgical treatment for anal incontinence. A search strategy was applied in MEDLINE, Embase and Web of Science. Data was extracted on three outcomes – experiences, quality of life and satisfaction. A narrative technique was used.  Six studies met the eligibility criteria and were included in the review. Two studies examined patients' quality of life before and after surgical treatment. Level of satisfaction after surgical treatment was reported in three studies. There was a statistically significant increase in quality of life scores from the baseline before surgery. Most women felt satisfied with their surgical treatment. The final, and only qualitative study, narrated women's' experiences when having undergone surgical treatment for their anal incontinence. Females reported the difficulties they faced when undergoing surgery, including not being aware of their obstetric injury, initial surgical treatment failing and being left with unexpected outcomes after surgery such as ileostomy bags.  Although there was improvement in quality of life and satisfaction scores, narrative perspectives presented a conflicting picture. Qualitative and quantitative studies reporting women's perspectives on this matter are curre



		this review.
Suaad Alasow	Barriers to breast self-examination in a young	Breast cancer is the most diagnosed cancer in the UK. However, current NICE guidelines do not support urgent referrals for young women with new breast symptoms. Cancer preventative behaviours such as regular breast self-examinations (BSE) are crucial for young women to ensure they are able to advocate
	population, a systematic	for their health. Thus, this systematic literature review sought to explore what barriers exist that may prevent young women from regularly keeping up with this practice.
	literature review.	A systematic search of electronic databases was run between October 24th – October 17th 2022. In order to reduce bias, a second screener was recruited to screen against the specified criteria. 12 studies were included in this systematic literature review. All studies were cross sectional studies that generated data using descriptive questionnaires.
		The analysis of data extracted brought out several common themes across the 12 studies included in this review. To summarise the 2 most common themes identified by this review were knowledge-based barriers to BSE and emotional barriers to BSE.
		The barriers identified are multi-factorial, and this author has recommended that a number of strategies be implemented in order to change underlying beliefs and encourage young individuals to engage with their health. Strategies suggested are increased use of social media platforms by National health services to promote health campaigns related to BSE to address knowledge based barriers to BSE. In addition, addressing lack of internet access in deprived communities to ensure access to health information. Furthermore, in order to tackle emotional barriers this author recommends involvement of community and faith leaders to foster community participation in matters relating to health. In terms of future research, it is recommended that cross-sectional studies be carried out in the UK for more accurate representation of barriers faced by young women in the UK.
Dr Fatma Shariff	Imaging congenital pyriform aperture stenosis: The potential diagnostic role of MRI	Congenital nasal pyriform aperture stenosis (CNPAS) is a rare but profoundly significant cause of nasal airway obstruction. With regards to investigation, CT has been exclusively utilised to accurately demonstrate CNPAS, which is naturally accompanied by the risks of exposure to ionising radiation. We present our experience regarding the correlation of CNPAS imaged on CT and MRI.  Seven patients with clinical and radiological findings consistent with CNPAS were imaged over a 42-month period. Their imaging was compared with 50 radiologically normal control subjects, all less than 24 months of age, identified using our radiology PACS system. Six patients were imaged with CT, (multiplanar reformats were with 0.6mm -1.25mm thick CT axial images). One patient was imaged with MRI (T1 weighted multi-planar reformats; axial dual echo, DWI, T1 STIR and SWI, together with coronal T2 and FLAIR). Pyriform aperture width was measured on axial images.



The average pyriform aperture width in patients with CNPAS was 5.4mm versus 14.3mm amongst the
control population. Three of the patients with CNPAS had abnormal dentition, two with solitary
megaincisor, one with posteriorly placed lateral incisors. All 7 of the patients with CNPAS had an
abnormal triangle-shaped palate and a prominent inferior palate ridge. The MRI image quality was
comparable to CT for accurate assessment of the pyriform aperture, and allowed accurate assessment of
the patient's dentition, palatal morphology and associated cranial midline anomalies.
CNPAS has classically been demonstrated by way of CT imaging, however we find that MRI provides
equivalent quality imaging with the added advantage of any associated central nervous system
anomalies. MRI avoids the need for exposure to ionising radiation, should be tolerated by infants by way
of a feed-and-wrap technique. There is evidence to suggest that current investigation and treatment
guidelines may benefit from being updating.
We propose that MRI could be a viable ionising-radiation-free alternative to CT for diagnosing CNPAS.
MRI has the additional advantage of allowing for concomitant assessment of intracranial association.