



BRITISH SOCIETY OF
GASTROENTEROLOGY

NewWave

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**The Official e-Newsletter of the
Association of GI Physiologists**

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July 2023

Welcome

Welcome to the **July 2023** edition of NewWave!
If you have any relevant articles or papers that you would like
to be included in future editions, please email
elisabeth.kirton@nhs.net

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Are you interested in becoming a UKAS Independent Technical/Peer Assessor for the IQIPS scheme?

Accreditation for Physiology services is rapidly expanding and UKAS urgently need practising physiologists or consultants within Gastrointestinal Physiology to become assessors for the scheme. Participation will contribute towards your CPD portfolio.

The IQIPS standard has been developed by the Accreditation Clinical Advisory Group (ACAG) originally in partnership with The Royal College of Physicians as a patient focussed, nationally recognised measurement of quality for physiology services. It gives confidence to patients, purchasers, staff and managers about safety, effectiveness and sustainability of your physiology service. Physiological Science accreditation is recognised by the Care Quality Commission (CQC) as a valuable source of information to support its regulatory function.

We, the United Kingdom Accreditation Service (UKAS) have been appointed by government under a memorandum of understanding to manage and deliver the scheme and is looking to increase our assessment capacity in line with growing demand.

Qualifications and experience

Ideally you should have at least four years practical experience, preferably at a senior level, in your specific physiology discipline.



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You will receive in depth training to prepare you for completing assessments. It also provides valuable insight into the accreditation process should your service be preparing for accreditation or is accredited. Training is funded and provided by UKAS.

Assessments

Each assessment consists of a 1-2 day(s) assessment either on site or remotely accompanied by 0.5- 1 day reviewing evidence and formulating a report annually.

UKAS contracts independent technical assessors on a day rate basis, either as self-employed contractors or through their current employer. The level of work is dependent on the needs of our customers and therefore UKAS cannot guarantee specific levels of work. Some travel in the UK and overnight stays may be required. And reasonable expenses are reimbursed.

Further information:

If you would like to discuss the role further, please contact Laura Booth, UKAS Senior Assessment Manager on [01784 429000](tel:01784429000)





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Upcoming Events: 2023/2024

September 2023	<p>South West GI Physiology Group Meeting (Page 9) (Bristol) For further details, please contact Samantha Scott (samantha.scott2@uhbw.nhs.uk) 8th September 2023</p>
September 2023	<p>Laborie Advanced HRM and Impedance/pH Study Day (London) Laborie Study Day 21st September 2023</p>
September 2023	<p>Northern GI Physiology Working Group Meeting (Page 10) (Manchester) For further details, please contact Jordan Haworth (jordan@functionalgutdiagnostics.com) 22nd September 2023</p>
October 2023	<p>UEG Week 2023 (Copenhagen + Virtual) Week UEG - United European Gastroenterology 14th—17th October 2023</p>
November 2023	<p>Pelvic Floor Society 14th Annual Conference Belfast The Pelvic Floor Society 15th—17th November 2023</p>
May 2024	<p>Digestive Disease Week (Washington D.C. + Virtual) Digestive Disease Week 18th—21st May 2024</p>

From the Editor

Welcome to the July 2023 issue of NewWave! I hope you're all enjoying the summer season.

In this issue, Emma Jones has written a lovely farewell piece to Dr Steve Perring on his retirement ([Page 5](#)). Steve has contributed a great deal to the profession over the years, and will be missed by his GI Physiology friends and colleagues. It sounds like Steve will have plenty to keep him busy — happy retirement Steve, and enjoy the adventures!



The AGIP Council IQIPs representative Samantha Scott recently had the exciting opportunity to attend the House of Lords, for an event hosted by UKAS in honour of World Accreditation Day. Sam has provided a short article about her visit and new role in the Accreditation Clinical Advisory Group ([Page 8](#)). Well done Sam!

Liam McKay has kindly provided an insightful review of 2023's Digestive Disease Week, which he was able to attend virtually in May ([Page 11](#)). This September, two regional GI Physiology meetings are also being organised (the newly established Northern GI Physiology Working Group and the South West GI Physiology Group, hosted in Manchester and Bristol respectively). Both will be great opportunities for GI Physiology practitioners to convene and share experiences. Further details of both meetings, including contact details, can be found on [Page 9](#) and [Page 10](#).

Along with a couple of my colleagues, in June I took a flying visit to Liverpool to attend [BSG LIVE \(2023\)](#). It was my first time visiting the city, and hopefully not the last - I was very impressed! This year, AGIP's 'Margaret Marples' bursary was awarded to 8 AGIP members, to contribute towards attendance costs. The AGIP bursary holders have written a series of engaging reviews covering some highlights from the conference. The presentations and posters reviewed cover a range of interesting topics, including mean nocturnal baseline impedance ([Page 15](#)), surgical management of GORD ([Page 21](#)), an update on the NHS Diagnostic Transformation Programme ([Page 33](#)) and home breath testing kits ([Page 37](#)). Ismail Miah has also kindly shared his interesting presented research abstract, "Assessing oesophageal transit during multichannel impedance-pH monitoring" ([Page 13](#)).

It was a pleasure reading all of the articles when putting together this issue of NewWave, and it's fantastic that so many are willing to share their learning and experiences. For those who registered for the conference, the [On Demand Content Library](#) (including recordings of the presentations) is also available until **2nd October 2023**.

As always, please do get in touch (elisabeth.kirton@nhs.net) with any ideas for articles, or information you would like to share with the GI Physiology community via NewWave!

Elisabeth Kirton

Retirement: Farewell to Dr Steve Perring after 35 years in the NHS

Emma Jones – Principal Clinical Scientist / GI Physiology Manager
University Hospital Southampton NHS Foundation Trust

“Husband, Father, Clinical Scientist with delusions of adequacy at surfing and singing” (From Twitter Bio)

I've been mulling over the many years I spent working with Steve in Poole, remembering the good old days; those of you who know Steve will agree, he's quite a character. I remember some wise words Steve once said to me, when I was complaining about spending almost every weekend of my late 20's at a wedding or a hen weekend: *“Enjoy it Jonesy - at first it's all weddings, then it's divorces, and before you know it's funerals!”*



I'm therefore very pleased that I was asked to write this to celebrate Steve's retirement after 35 years in the NHS! I've known Steve since he was in his late 30's. Apart from the various (and sometimes questionable) hairstyles, he hasn't changed a bit. Steve is one of life's good eggs. He's an understated genius, with a quiet intelligence and hilarious wit. A good all-rounder and gentle soul, involved in charity work and the church. He's a musician, surfer, artist, footballer – and, of course, a Clinical Scientist in the NHS at Poole Hospital (now University Hospital Dorset). I had the privilege to work alongside Steve for 16 years and he is a fantastic friend, colleague and mentor. I think it is fair to say that we worked hard but laughed a lot!

Steve studied Natural Science at Pembroke College, Cambridge specialising in Material Science. He worked briefly for Harwell UK as a Material Scientist, then went on to Roehampton Institute and gained a Post Graduate Certificate in Education specialising in Higher Education. Steve lectured at Farnborough College of Higher Education for several years. In 1988, Steve started his healthcare science career working in Medical Physics at

Southampton Hospital, after responding to an advertisement in the 'New Scientist' magazine. Steve gained a doctorate in the 'Clinical Application of the Three-Dimensional Analysis and Visualisation of Medical Slice Images' from the University of Southampton.

Since 1991, Steve has spent many happy years working and living in Poole. I can remember Steve telling me that this was a career decision underpinned by the fact he could skateboard to work and surf before work (I can attest to the mornings he arrived still covered in sand!). Steve introduced lower and upper GI measurements to the hospital, and quickly became established as the hospital's GI Physiology expert. He became registered as a member of AGIP and an accredited practitioner in 2009. Since then, he has been heavily involved with AGIP; Steve was a member of the AGIP Council from 2015 to 2021, dedicating himself to stopping other people from doing what he did and setting up a service without any formal training!



Aside from his clinical work, Steve has been the chair of the Clinical Measurement Special Interests Group for the Institute of Physics and Engineering in Medicine (IPEM), a member of the Motility Working Group for The British Society of Paediatric Gastroenterology, Hepatology and Nutrition (BSPGHaN) and a member of the Professional Conduct Committee for IPEM. He has worked for the National School of Healthcare Science (NSHCS) and founded the South West GI Physiology group (which now has a membership from far and wide, including Australia!). His aim was to share best practice and common problems, and the philosophy of the group is best expressed by the adage: "Every problem looks better shared with others over a free lunch".

Speaking of food... Food is another one of Steve's passions, and there is nothing Steve likes more than making sure there is somewhere good to go for lunch. I had the pleasure of going to Digestive Disease Week in New Orleans with Steve; although we worked hard, we made sure we sampled the finest creole cuisine at every opportunity!



Steve has worked on innovative research, and has been involved in some of the more bizarre and exciting projects over the years. He even made it into the newspapers and on TV! Helping others is one of Steve's core values, and he has been to Africa several times on short-term missions with a church group to help modernise community buildings. During the COVID-19 pandemic, Steve went to London to work in the Nightingale Hospital, which he found challenging and rewarding in equal measure.

Steve is never happier than when he's on the open road in his camper van, with his surfboards and a guitar in hand. He's also an avid fan of the steam era, and I know he will have many steam train journeys planned in his retirement. In September he's walking the 450-mile Portuguese Camino, from Lisbon to Santiago with his wife Jude and friends.

On behalf of his many colleagues, I'd like to take this opportunity to thank Steve for his years of work in the NHS, his contribution to IPeM, the NSHCS and AGIP and wider healthcare science communities, and the care and compassion he has shown towards the thousands of patients he has seen over the years. He has played a huge part in my professional development, for which I will always be grateful, and he has supported many trainees and colleagues over the years to become qualified.

Steve will be sorely missed by all who work with him, but I know he will go on to have many exciting adventures in his retirement and will enjoy spending time with Jude, Amy, Kathleen, Connor and his grandchildren Reggie and Wilfred. It just falls to me to say: "It's been emotional Old Bean!"

"I would like to say thank you to all the dedicated practitioners of GI physiology that I have met and worked with over the years. I have really enjoyed my time involved in GI and feel privileged to have been working through a period when it has really come of age. I am looking forward to retirement (we have a nice big camper van!) but hope to maintain some minor involvement in the field, likely in training"

Steve Perring

The AGIP Council would all like to express their best wishes to Steve on his retirement, and thank him for his outstanding contributions to the field of GI Physiology over the years.

Happy retirement Steve, you will be missed!

World Accreditation Day: A Visit to The House of Lords

Samantha Scott – Lead Clinical GI Scientist

University Hospitals Bristol and Weston NHS Foundation Trust

I would like to express my gratitude to UKAS for organising an outstanding event at the House of Lords on 6th June 2023 to honour World Accreditation Day, a significant occasion celebrated globally.

Accreditation holds immense importance in various industries, including healthcare, and I take pride in my involvement with the IQIPS scheme. As the chair for ACAG and a technical assessor, I contribute to ensuring that physiological sciences receive the necessary accreditation.

As a member of the National Council for our governing body, the Association of GI Physiologists (AGIP), I represent both GI Physiology accreditation and IQIPS accreditation, the latter runs parallel to JAG. One of my responsibilities is to attend a bi-annual meeting under UKAS as a member of the Accreditation Clinical Advisory Group (ACAG), where one representative from each discipline under Physiological Sciences (including audiology, vascular, vision sciences, etc.) is present.

In my new role, I will contribute to shaping the future of Physiological Sciences and work towards making accreditation mandatory for all UK departments, ensuring adherence to the highest standards for the benefit of patients, staff, and visitors.

As a member of ACAG, I was given the opportunity to attend the House of Lords as part of the World Accreditation Day on 6th June 2023. This was an exciting chance to meet other chairs in specialised areas, including healthcare and civil services.



Fig 1. Samantha Scott (centre) at The House of Lords in honour of World Accreditation Day



The Earl of Lindsay

On behalf of United Kingdom Accreditation Service
Requests the pleasure of the company of

Samantha Scott

For a Lunch Reception
In the Cholmondeley Room and Terrace, House of Lords
On Tuesday 6th June 2023 at 12:15
Address: Palace of Westminster, House of Lords, London SW1A 0PW



Dress code: Smart business Allow 30 minutes for search and screening Close: [14:30]
Please present this invitation with photographic ID at [Black Rod's Garden Entrance]
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Average queue time: 30 minutes | Monday, Tuesday, Wednesday afternoons: 45 minutes

Please note, if your event is taking place during Prime Minister's Questions (PMQs), visitors will be subject to a more thorough search by security at our entrances and we would strongly advise allowing for more time for security checks.



Venue Feedback
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Fig 2. Invitation to The House of Lords in honour of World Accreditation Day

South West GI Physiology Group Meeting: 8th September 2023

We are delighted to announce that the South West GI Physiology Group Meeting will be held on Friday 8th September 2023, at North Bristol Trust in collaboration with University Hospitals Bristol and Weston.

We would like to invite all interested members to join us for this exciting meeting. If you wish to present a talk or bring along a case study, please contact either Laura Thomas (laura.thomas2@nbt.nhs.uk) or Samantha Scott (samantha.scott2@uhbw.nhs.uk). We welcome your contributions to this event.



Please feel free to share this invitation with your colleagues and peers who may be interested in attending. This is a great opportunity to meet and network with other professionals in the field of GI Physiology and Urodynamics.

We look forward to seeing you on 8th September 2023 at the South West GI Physiology Group Meeting.

The Northern GI Physiology Working Group (NGIWG) Meeting: **22nd September 2023**

We are delighted to announce that the next meeting of the Northern GI Physiology Working Group will be held in Manchester (venue TBC) on **Friday 22nd September 2023**.

For further information, please get in touch with Jordan Haworth: jordan@functionalgutdiagnostics.com

The Northern GI Physiology working group was established earlier this year, and held its inaugural meeting in Sheffield in February 2023 (a review of the first meeting was published in the [April Issue](#) of NewWave).



Please feel free to share this invitation with your colleagues and peers who may be interested in attending. This is another exciting opportunity to meet and network with other professionals in the field of GI Physiology.

Are you attending a regional GI Physiology meeting?

As a small profession, regional GI Physiology meetings can be an excellent source of local support and networking. It's fantastic to see that two regional events are coming up this September, and I encourage anyone working in GI Physiology to join one!

NewWave is always looking for reviews of GI physiology events and meetings. If you plan on attending one of the regional GI Physiology meetings and would like to submit a review, please contact Elisabeth Kirton (elisabeth.kirton@nhs.net)

Feature Articles

Event Review: Virtual Digestive Disease Week (DDW) 2023 (6th—9th May 2023)

Liam McKay – Clinical Scientist
Aberdeen Royal Infirmary

The highly anticipated Digestive Disease Week (DDW) 2023 arrived in full swing and was held in Chicago, Illinois. The conference covered four days, commencing on May 6th and concluding on May 9th. The day to day agenda consisted of live presentations, e-poster presentations and workstations from various manufacturing companies. I was unable to attend the conference in person on this occasion, but had the opportunity to attend the conference virtually.

In the week leading up to the start of the conference, virtual attendees were encouraged to create their own electronic diary by downloading the DDW 2023 mobile app, which I did. The

process for creating your own electronic timetable was quite straight forward; it involved selecting the presentations that you had an interest in attending, and the app would automatically create a timetable based on your selections. I had this all prepared with three days to spare until the conference kicked off. Despite having this all prepared, when it came to logging into DDW to attend my first lecture my timetable had not synced with the webpage. I reached out to technical support regarding this; unfortunately, an automatic reply was delivered stating you would need to wait 48 hours for technical support to be in touch (which is not ideal for a short conference event). Consequently, I utilised the search bar to find the presentations I wanted to attend. A function to alter time zone differences would also have been a beneficial asset to the virtual experience, as I had to be mindful throughout the conference of the different time zones. This was challenging when some presentations were adhering to central time zones, whereas other presentations utilised EST time zones.

Overall, I personally found the content for this conference more relevant for our medical and surgical colleagues as opposed to healthcare scientists. Nevertheless, as healthcare scientists I think it is very important that we dip into the current and future research into the treatment and management of patients that we routinely see. However, there was nothing new that I learnt from DDW 2023 that I did not already know in regards to GI Physiology investigations. I would probably encourage junior clinical scientists/trainees to attend this event as it would have been of more value to them. Certainly, I would advise senior clinical scientists to attend based on the purpose of expanding their knowledge



around current innovation on surgical and other treatment methods.

Over the three days that I had virtually tuned in, there were a number of key studies that did stand out to me. One of which, Kovacic *et al.*, proposed the need for normal values for paediatric population undergoing high-resolution oesophageal manometry (HRM). The study had shown that paediatric patients who presented with dysphagia symptoms had significantly lower distal contractile integral and longer transition zone than paediatric patients who were asymptomatic. Therefore, utilising adult normal values may be doing an injustice to these patients. My role involves undertaking GI Physiology testing on the paediatric population, and it does appear that diagnostic classifications are still based around adult normal values for all GI Physiology testing on paediatric patients. Since we have established the design of alternating pH impedance catheters for the paediatric population, we definitely ought to be thinking about giving these patients their own normal values. Another study I found interesting was by Singh *et al.*, who highlighted in their study the differential diagnosis based on performing HRM in the supine and upright positions. The study showed that there was a high diagnostic agreement between upright and supine HRM (65% of 252 studies), whilst there were discordant findings between upright and supine HRM (35% of 252 studies). The majority of the diagnostically agreed bi-positional studies were classified as normal motility compared to the majority of discordant bi-positional studies were classified as ineffective oesophageal motility in either upright or supine position. Studies like this support the importance of utilising the Chicago Classification v.4 protocol.

I thought that the e-poster presentations delivered contents of the most interest to a clinical scientist. There were plenty of posters focusing on the use of adjunctive testing in HRM investigations. This is still a topic of discussion within the GI Physiology community and some of the research that is currently on-going would definitely be meaningful to GI clinical scientists. However, this does allow the opportunity for our community to get involved in the next DDW, and put forward our practice and encourage representation of GI healthcare scientists at such a well renowned conference that is heavily showing representation and gratitude toward our medical colleagues (which is well deserved of course!).

Overall, I would say that DDW 2023 was a fantastic event for the Gastroenterology community, particularly for our consultants and surgeons. Attending this conference is a great opportunity for clinical scientists to see all the hard work and research that is presently ongoing within our field, especially through the e-posters. The virtual experience was interesting; however, I personally thought that UEGW had demonstrated a more sufficient and ease of navigation as a virtual conference compared to DDW. With some tweaks made by DDW, this would ultimately create a user friendly method for attendees across the globe.

Are you attending a conference / event?

NewWave is always looking for reviews of GI physiology events and meetings. If you have an event coming up and would like to submit a review, please contact Elisabeth Kirton (elisabeth.kirton@nhs.net)

BSG LIVE 2023 Articles

P286 Poster Presentation: “Assessing oesophageal transit during multichannel impedance-pH monitoring” (Mr Ismail Miah)



Correspondence: Ismail Miah, Clinical Scientist in GI Physiology, GI Medicine & Surgery, Guy's Campus, Guy's & St Thomas' NHS Trust, London, SE1 9RT

Email: ismail.miah@gstt.nhs.uk

ABSTRACT

Introduction

Multichannel impedance-pH (MII-pH) monitoring has series of impedance sensors that detect intraoesophageal antegrade bolus movements during swallows. We hypothesis this feature would permit oesophageal transit measurements.

Method

Patients rapidly drank 200ml of saline (or as much as possible) within 20 seconds during the start of their MII-pH study. The saline transit time was calculated in the proximal, mid and distal oesophageal regions from the impedance sensors located 12cm, 9cm and 3cm above the GOJ.¹ The proposed transit method was first assessed in group of patients with and without dysphagia symptoms (dysphagia was diagnosed based on Hospital Odynophagia Dysphagia Questionnaire (HODQ) scores >6.42). Secondary assessment was to compare the transit outcome in achalasia and non-achalasia patients who were concordantly diagnosed on both high-resolution manometry and barium swallow studies. Receiver operating characteristic (ROC) curve with Youden's index was used to find the distal oesophageal transit cut-off threshold to predict achalasia from the proposed method.

This is a prospective study that was approved by Guy's & St Thomas' NHS Trust Gastroenterology and GI Surgery Review Board. The transit assessment were performed in the MII-pH studies between 2020 and 2021.

Results

794 patients undertook HODQ screening and the transit assessment. 379 (47.7%) patients had clinical dysphagia based on positive HODQ scores and showed statistically prolonged transit time in the proximal oesophagus (4.3–8.0mins vs 0.35–0.71mins,

p<0.001), mid oesophagus (8.1–15.1mins vs 0.52–1.28mins, p<0.001) and in the distal oesophagus (10.6–18.4mins vs 1.1–3.2mins, p<0.001). The ROC analysis found greatest predictability for achalasia when the transit time from the distal oesophagus was >4 minutes (see Table 1).

Conclusion

MII-pH investigation permits transit monitoring that can be easily incorporated to obtain complementary transit assessment. The technique and interpretation of data is simple and the assessment does not pose additional risks or burden to patients.

Abstract P286 Table 1 Oesophageal transit cut-off thresholds for detecting and predicting achalasia (c-statistics 0.998)

Transit cut-off threshold (mins)	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)	LR+
>3.8	100	97.6	93.1	100	41.8
>3.9	100	98.1	94.4	100	52.0
>4.0	100	98.1	94.4	100	52.3
>4.2	100	98.1	94.3	100	52.3
>4.3	98.5	98.1	94.3	99.5	51.5
>5.0	98.5	98.6	95.7	99.5	68.6

Achalasia sample =70; Non-achalasia sample =209

PPV, Positive Predictive Value

NPV, Negative Predictive Value

LR+, Likelihood Ratio

“We welcome any questions, feedback and comments. Please feel free to contact the correspondence person for this research project”

The published abstract by Miah *et al.* (2023) is available online here:
[Gut \(bmj.com\)](https://gut.bmj.com)

Neurogastroenterology and Motility E-Poster P227
Review: “MNBI in the aid of GERD diagnosis. An attempt to set diagnostic cut off based on a real life cohort” (Dr Theodoros Voulgaris)

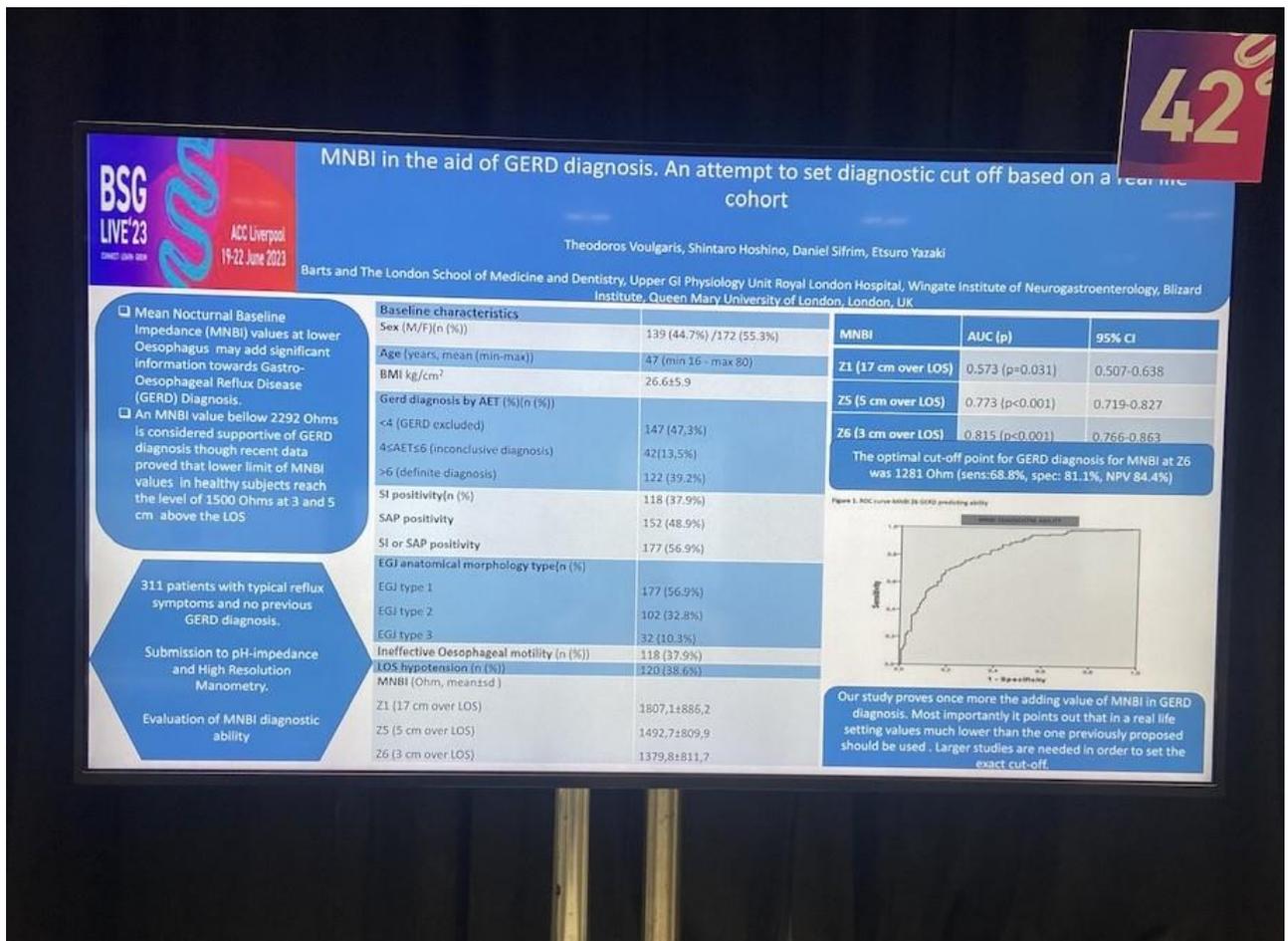
Poster Review by...
Warren Jackson, Principal Clinical Scientist / GI Physiology Manager
Hull University Teaching
Hospitals NHS Trust

As part of the wider BSG focus on sustainability, the BSG worked with the venue, suppliers and stakeholders to reduce the environmental footprint of the Liverpool event. The ACC Liverpool is 100% energy renewable certified, and sends zero waste to landfill. To help achieve this, the BSG has also minimised paper waste by stepping away from traditional printed posters and introducing digital “e-posters” (started at last year’s BSG LIVE 2022 in Birmingham):



E-Posters at the BSG (photo by Warren Jackson)

Prof Daniel Sifrim and Dr Etsuro Yazaki need no introduction to the GI Physiology community! Along with their colleagues, their poster was titled: “MNBI in the aid of GERD diagnosis. An attempt to set diagnostic cut off based on a real life cohort”:



Presented poster from Voulgaris *et al.* (photo by Warren Jackson)

According to the Lyon consensus, the mean nocturnal baseline impedance (MNBI) of lower oesophageal channel measurement may add significant information towards GERD diagnosis. A cut off value of 2292 Ω was introduced by the Lyon consensus as supportive to GERD diagnosis, based on data from a study executed to clarify normal MNBI values. MNBI values of around 1500 Ω at 3 cm and 5 cm above the lower oesophageal sphincter suggests impairment of oesophageal mucosal integrity. The aim of this study was to evaluate diagnostic MNBI cut-offs in a real life setting, amongst patients reporting mainly typical oesophageal symptoms.

311 consecutive patients referred to their centre for typical GERD symptoms that had both High Resolution Oesophageal Manometry and 24-hour pH-Impedance studies off PPI with available MNBI data from June 2019 to October 2022 evaluated. They excluded patients on pre-operative assessment, patients with diagnosed oesophageal motility disorders (except absent contractility or ineffective oesophageal motility), and patients who had previously undergone oesophageal/gastric surgery. MNBI data from oesophageal channels at 3 cm (Z6), 5 cm (Z5) and 17 cm (Z1) above the lower oesophageal sphincter were evaluated. Patients with total Acid Exposure Time (AET) of >6% were considered to have GERD. Patients with AET of between 4 and 6% were considered to have an inconclusive GERD diagnosis.

Among the 311 evaluated patients, 172 were female and 139 were male. Heartburn was reported in 274 (88.1%) and regurgitation was reported in 168 (54%). Extra-oesophageal symptoms were co-reported in 39 patients (cough: 25, sore throat: 11, globus: 3). GERD was diagnosed in 122 patients (39.2%).

Z6 MNBI ability for diagnosing GERD was good (0.815, $p < 0.001$ 95% CI:0.766-0.863) with an optimal cut-off point of 1281 Ω (sens: 68.8%, spec: 81.1%, NPV 84.4%). Z5 MNBI ability for diagnosing GERD was also good (AUC=0.773, $p < 0.001$ and 95% CI 0.719-0.827). Z1 MNBI ability for diagnosing GERD was bad but statistically significant (AUC=0.573, $p = 0.031$ and 95% CI 0.507-0.638).

The authors concluded that their study proves once more the added value of MNBI in GERD diagnosis. They also highlighted that, most importantly, values much lower than the one previously proposed should be used in a real life setting. Larger studies are needed in order to set the exact cut-off.

Presentation Review: “Neoplasia characterisation in IBD colon: can a generic colon CADx algorithm work in characterising polyps in an IBD colon?”
(Miss Katie Siggins)



Presentation Review by...
Meara Taylor, Clinical Scientist
University Hospital Southampton
NHS Foundation Trust

Miss Katie Siggins, a research fellow from Portsmouth Hospital University NHS Trust, gave a thought-provoking presentation on research regarding neoplasia characterisation in the inflammatory bowel disease (IBD) colon.

Surveillance of the IBD colon poses additional challenges, as it can contain IBD-specific lesions and it can be difficult to detect neoplastic lesions. Although there are clear guidelines for undertaking IBD surveillance (1), interobserver agreement between endoscopists for differentiating lesions in the IBD colon is relatively poor, permitting scope for improvement in this area (2, 3).

Artificial Intelligence (AI) is beginning to be employed in endoscopy, through the use of computer aided characterisation algorithms (CADx). One such CADx is WISE VISION®, produced by NEC Japan, which was awarded Best Procedural Innovation by the European Society of Gastrointestinal Endoscopy last year. Preliminary studies have shown that WISE VISION® aids in the detection of neoplastic lesions in the colon and also in Barrett’s oesophagus (4). One study even found that WISE VISION® had the potential to perform better than the general endoscopist in characterisation of colorectal polyps in the non-IBD bowel (5).

The researchers in this study aimed investigate whether this AI-driven software could be used in the IBD bowel in the same way, despite the additional challenges surveillance in the IBD bowel entails. The study was carried out in two phases, summarised in Figure 1. Phase 1 used images extracted from IBD surveillance videos; endoscopists were asked to characterise lesions as neoplastic or non-neoplastic, and the images were also analysed using CADx algorithm. The findings were compared to histological findings. During Phase 2, CADx was used in real-time surveillance endoscopies and also compared to histological findings.

For both Phase 1 and Phase 2, histology was used as the ultimate method for characterisation (in line with guidelines). The endoscopists involved in Phase 1 of this study were divided into “experts” and “non-experts” (“non-experts” being endoscopists who didn’t regularly undertake surveillance colonoscopy in IBD patients, and “experts” being endoscopists who did).



Fig 1. Flow diagram outlining the methods of each phase of the study

Overall, 57 lesions from IBD surveillance images were analysed in Phase 1 by all three groups, using both white light imaging (WLI) and image enhancement (IE). The results of these are shown in Figure 2. As may be expected, the accuracy of lesion identification increased from non-expert to expert endoscopists. However, the accuracy of the performance of the computer-aided characterisation system was slightly higher (although comparable to expert endoscopists when using IE).

During Phase 2, in the hands of endoscopists during real-time IBD surveillance, CADx continued to demonstrate a high level of accuracy (Figure 3). At this point in the presentation, the audience were able to see a demonstration of WISE VISION® working in real-time through a video. The video showed the apparent ease and convenience of the CADx in detecting a lesion (and, after a quick snapshot, predicting the characterisation of said lesion).

	Non-expert		Expert		CADx	
	WLI	IE	WLI	IE	WLI	IE
Sensitivity (%)	73.0	75.0	70.1	78.3	67.6	76.7
Specificity (%)	55.3	45.1	66.7	60.8	86.3	64.7
Accuracy (%)	65.9	64.1	68.7	72.0	75.0	72.3
Image based performance						

Fig 2. Lesion identification results from Phase 1 of the study

	CADx performance
Sensitivity (%)	88.9%
Specificity (%)	80.6%
Accuracy (%)	74.4%

Fig 3. Results of WISE VISION® performance in real-time IBD surveillance colonoscopies

This study raises the possibility of using a non-dedicated IBD CADx algorithm and further optimising it to be used in IBD patients. WISE VISION® is currently a non-dedicated system which could be improved with AI training to increase its specificity towards the IBD bowel. It could allow for real-time neoplasia detection reducing the number of non-targeted biopsies and polypectomies.

With the rapid expansion of AI only forecast to grow, how many other uses for AI could there be in healthcare? What direction will AI take in GI Physiology?

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Presentation Review: “Surgical management of GORD (Joint talk)”

(Mr Nick Boyle and Dr Rehan Haidry)



Presentation Review by...
Kendra Hall, Trainee Clinical Scientist
Sandwell and West Birmingham
Hospitals NHS Trust

Specialist laparoscopic Upper GI surgeon Mr Nick Boyle and Cleveland Clinic consultant Dr Rehan Haidry provided presentations on the surgical and endoscopic treatment of Gastro-Oesophageal Reflux Disease (GORD).

Mr Boyle began his presentation by providing background information about gastro-oesophageal reflux, which is a common problem impacting up to 30% of the UK population. Acid suppression medication can work well for those with mild oesophagitis and heartburn symptoms, but tend to be less effective for those with regurgitation and volume reflux or laryngopharyngeal and atypical symptoms (Figure 1). There is growing awareness and concern about complications associated with long-term proton pump inhibitor (PPI) use. Poor compliance along with poor PPI response is resulting in a PPI failure rate of 20-30%, which equates to 100,000's of people remaining symptomatic! A proportion of patients with uncontrolled erosive oesophagitis will go on to develop Barrett's oesophagus, a pre-cancerous risk.

PPI efficacy for potential manifestations of GERD

Estimates based on available RCT data

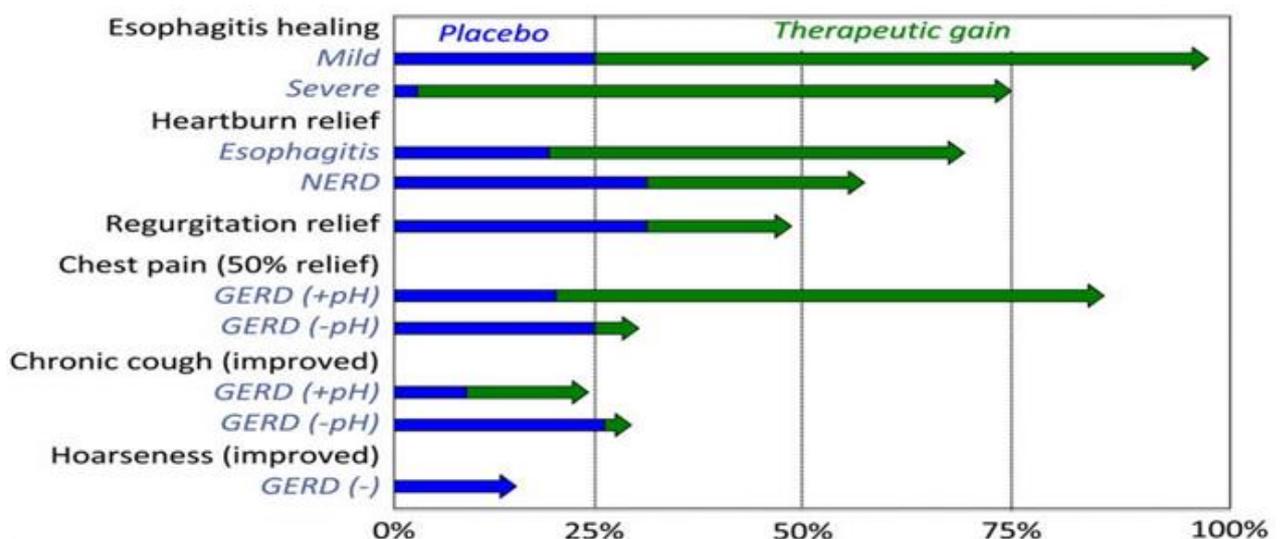


Fig 1. Summary of PPI efficacy for various GORD syndromes as assessed in RCTs

Mr Boyle explained how the lower oesophageal sphincter (LOS), crura and angle of His provide a mechanical barrier to gastric contents, and that failure of any or all of these will manifest as pathological reflux. It follows that mechanical dysfunction requires a mechanical rather than physiological resolution; therefore, anti-reflux surgery (ARS) is considered the gold standard approach for those unable or unwilling to remain on acid suppression medication.

Despite huge numbers of GORD patients with unresolved symptoms, only ~10,000 anti-reflux surgical procedures are performed in the UK annually. Mr Boyle asked: Why are there not more ARS operations carried out in the UK? To answer this, he posed 3 questions.

1) Is there good evidence that surgery works?

Mr Boyle described a paucity of data comparing safety and long-term effectiveness of PPI versus ARS. However, the LOTUS trial (1) found that although PPIs and surgery were equally effective at treating heartburn symptoms, surgery showed improved outcomes for those experiencing regurgitation (albeit at the expense of dysphagia and bloating). A Cochrane study (2) also concluded that ARS outcomes were at least comparable (if not better than) PPI in the short and long term, up to 20 years post-surgery.

2) Are widespread beliefs about intolerable ARS side effects (including the inability to belch and vomit, as well as bloating and wind problems) putting people off?

There are a multitude of ARS options, and some have been introduced with side effects in mind (such as the move away from Nissen fundoplication towards Toupet or LINX). LINX is a day-case procedure where magnetic beads are locked around the LOS; the procedure can even be performed in those with a large hiatus hernia. A 2019 RCT randomised GORD patients into either a high dose Esomeprazole PPI group or a LINX procedure group (3). Patients in the LINX group achieved 90+% improvement in their regurgitation symptoms (Figure 2) compared to 17% improvement for those treated with PPI.

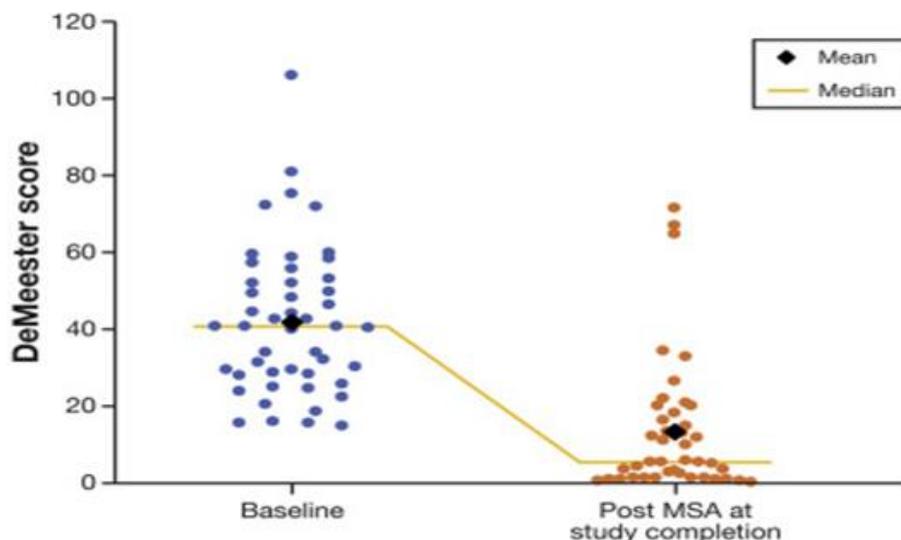


Fig 2. Change in DeMeester score from baseline to post-magnetic sphincter augmentation (MSA) procedure

Long term data suggests a majority of LINX patients remained off PPIs up to 12 years post procedure. One study of 200 UK patients suggested that improvements in GORD-health-related quality of life (GORD-HRQL) scores as well as laryngopharyngeal scores still remained after 5 years (4). Additionally, dysphagia, bloating and flatulence were also improved. NICE guidelines have now been published for the laparoscopic insertion of a magnetic ring for GORD.

3) Is it because published data doesn't reflect what happens in the real world?

A US study of 50,000 patients undergoing fundoplication demonstrated significantly poorer outcomes and double the number of complications in low volume centres compared to high volume centres; surgery taking place in a low volume centre was a key risk factor for revisions. The ARROW study (5) questioned upper GI surgeons performing ARS in the UK and found a similar picture, concluding that this may be because higher volume centres were more likely to work in multi-disciplinary teams (MDTs).

Dr Haidry went on to examine the Endoscopic treatment options for GORD. He began with the Stretta procedure practiced in some UK centres, which delivers radiofrequency energy to the LOS (causing fibrosis and thickening, as well as reduction of sensitivity of the nerves in the distal oesophagus). This acts to tighten the LOS, bolstering its strength to help prevent reflux (Figure 3). He pointed out how only a small amount of conflicting data exists regarding long-term and short-term efficacy of Stretta.

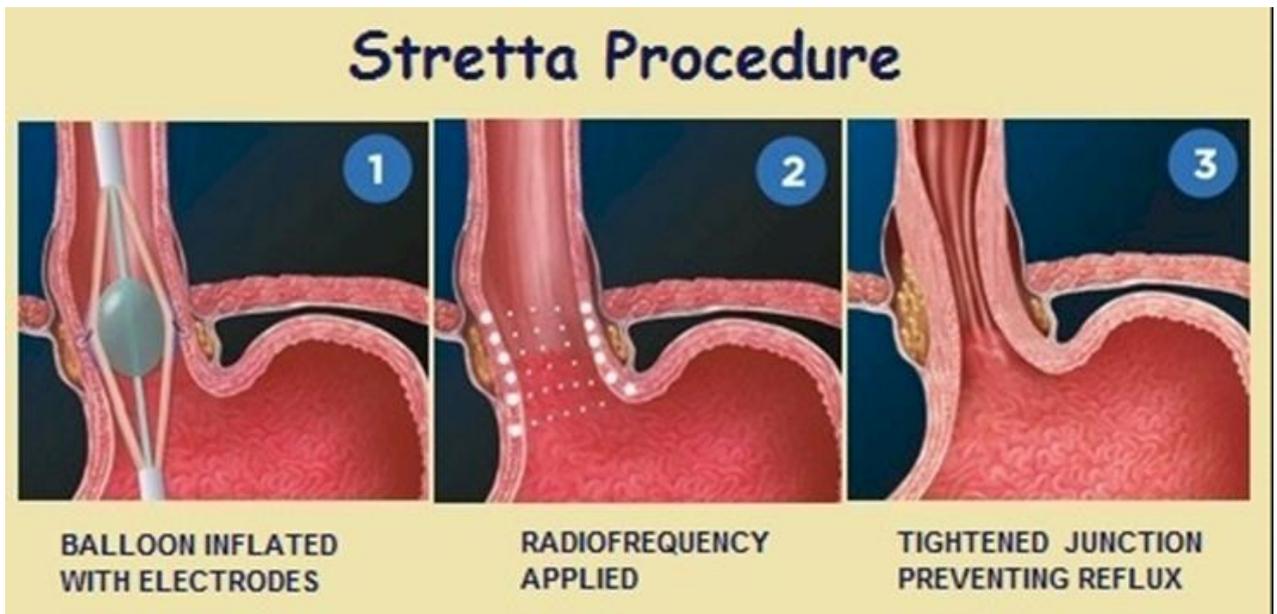


Fig 3. Stretta Procedure

More data is available about Trans-oral Incision Fundoplication (TIF) with over 20,000 procedures carried out worldwide to date. This procedure is recommended by the American College of Gastroenterology (ACG) for those with proven moderate GORD and hiatus hernia <3cm. It involves an EsophyX device being inserted endoscopically. A fundoplication is created and up to 20 staples are inserted into the distal oesophagus to reconstruct a 2-3cm long valve (Figure 4).

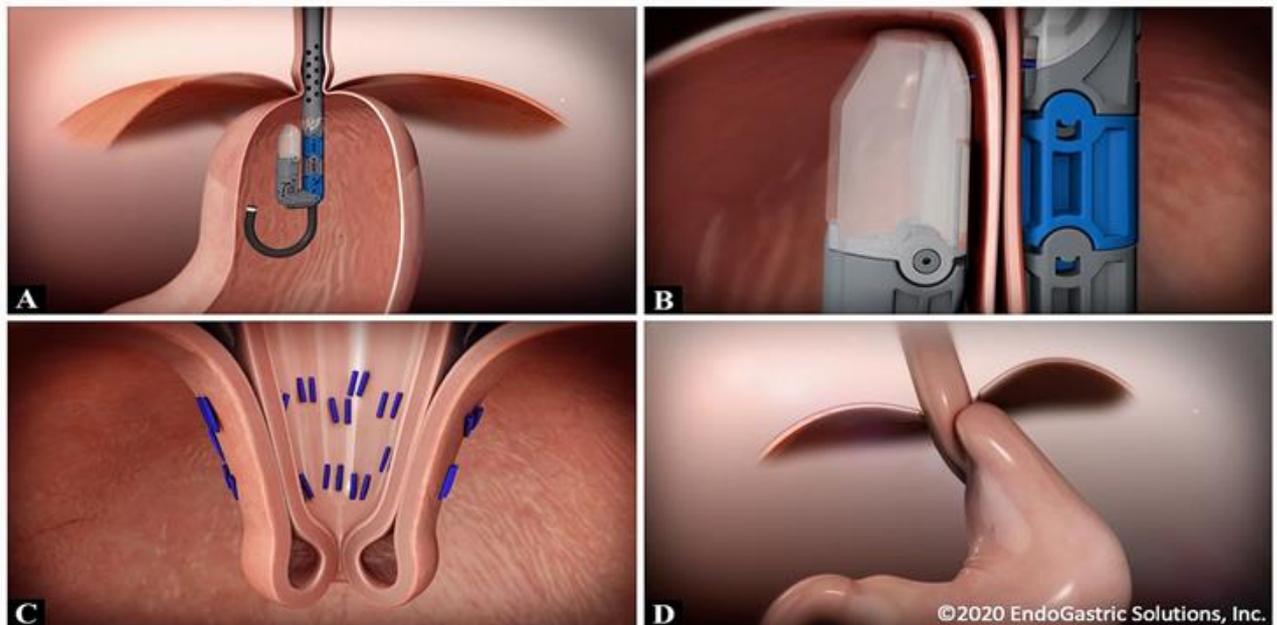


Fig 4. Esophyx at the gastroesophageal junction (A) gastric tissue is retracted into the device (B). H-fasteners used to reconstruct the gastroesophageal junction (C). Final result (D).

There is both short and long-term data on efficacy, allowing a meta-analysis to demonstrate that 89% of patients were able to reduce PPI use post-TIF. TIF was found to have a greater positive effect on QOL scores in terms of symptom control than Nissen fundoplication. cTIF is fast becoming the intervention of choice in the USA, which combines the TIF procedure with a laparoscopic hiatus hernia repair.

Other endoscopic procedures include Medigus Ultrasonic Surgical Endostapler (MUSE), Anti-reflux Mucosectomy (ARMS) and injection techniques such as Gatekeeper. However, these all come with a very small evidence base.

Conclusion

Gastro-oesophageal reflux results from a mechanical rather than physiological problem. Although many respond to medication, for those who do not there are multiple safe and effective surgical and endoscopic approaches available, some with good short and long-term data.

However, each anti-reflux approach is likely to suit a specific cohort of patients, meaning that patient selection is vital for any procedure. This requires good clinical history, to include QOL scores, and multi-disciplinary preliminary testing (including upper endoscopy to exclude early cancer and Barrett's oesophagus, a barium swallow / meal, HRM and pHmetry +/- impedance).

The need for MDT working was emphasised by both speakers, with the ARROW study (5) demonstrating larger centres having better post-surgical results in part due to MDT working. Mr Boyle used this to make the case for centralisation of ARS, reflecting centralisation of upper GI cancer surgery.

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Figure 3: Houston Heartburn and Reflux Centre. Stretta: A Naive Approach to a Complex Problem 2023. Available at <https://houstonheartburn.com/stretta-a-naive-approach-to-a-complex-problem/>.

Figure 4: Taken from Gisi, C., Wang, K., Khan, F. et al. Efficacy and patient satisfaction of single-session transoral incisionless fundoplication and laparoscopic hernia repair. *Surg Endosc* 35, 921–927 (2021). <https://doi.org/10.1007/s00464-020-07796-x>

Presentation Review: “Advances in the diagnosis of typical and atypical symptoms in reflux disease” (Professor Daniel Sifrim)

Presentation Review by...
Tanya Miller, Principal Clinical Scientist / Head of GI Physiology
Oxford University Hospitals
NHS Foundation Trust

Professor Daniel Sifrim is a Gastroenterologist with both a clinical and scientific interest in benign oesophageal disorders. He was eloquently introduced as one of the founding members in the development of the guidelines and reference values that are widely used in upper GI tests today.

Prof. Sifrim’s talk was based on discussing the diagnostic tests for gastroesophageal reflux disease (GORD). He began his talk with a review of the Diamond Study (1) which looked at the accuracy of the diagnosis of GORD by questionnaire, physicians and a trial of proton pump inhibitor (PPI) treatment. He reinforced that heartburn and regurgitation are the most reliable symptoms for a diagnosis of GORD; however, the sensitivity and specificity of these symptoms to diagnose oesophagitis is low, and even with the use of pathological reflux monitoring this is even lower for the diagnosis of non-erosive reflux disease (NERD).

Prof. Sifrim concluded that a diagnosis based on symptoms alone is insufficient, but good enough to start empirical treatment. The PPI test also has low sensitivity and specificity, and a patient who responds symptomatically to PPI does not necessarily have reflux disease (as there are many other situations in which a PPI can work, particularly in relation to dyspeptic symptoms).

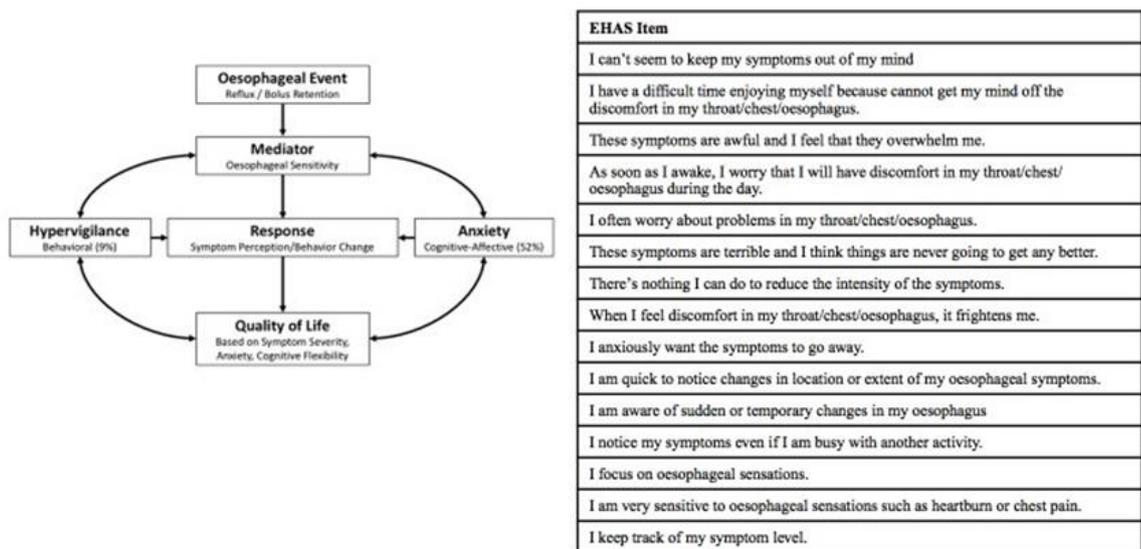
Esophageal Hypervigilance Questionnaire

Prof. Sifrim went on to highly recommend the use of a very good questionnaire, developed as a tool to assess hypervigilance (Figure 1). It is called the EHAS (Esophageal Hypervigilance and Anxiety Scale) and was developed mainly by a group in Chicago (2).

This focuses on the fact that even if heartburn and regurgitation are not investigated, there is good evidence that most patients with reflux and oesophageal symptoms in general have a psychological condition called “hypervigilance”. This can be described as when a patient is continuously aware of and paying attention to their bodily sensations (to the detriment of all other activities, because they are overly focused on their symptoms).

Prof. Sifrim was very enthusiastic regarding use of the EHAS questionnaire, as it provides insight into the importance of hypervigilance as well as levels of patient anxiety. He strongly recommended the use of this tool along with routine questionnaires.

Esophageal Hypervigilance and Anxiety Scale for Chronic Oesophageal Disease



Taft et al 2018

Fig 1: EHAS questionnaire (slide provided by Prof. Sifrim)

Endoscopy and Biopsies

Endoscopy was stated as having an excellent specificity for diagnosis, but lacks sensitivity (many patients are incorrectly reported as endoscopy negative). The reason for this is multifaceted; some patients have true NERD, whereas others may still be under the influence of recent PPI treatment (sometimes only stopping their medication 5 days prior to endoscopy). This false negative can be avoided by allowing for an extended wash-out period, during which patients can be offered alternative treatments to minimise their symptoms prior to their endoscopy.

Endoscopy and biopsies were briefly mentioned; Prof. Sifrim believes that, in the hands of an experienced pathologist, oesophageal biopsies can be useful for the diagnosis of refractory reflux symptoms. However, this does rely on clear cut symptoms in addition to high quality biopsies.

Narrow Band Imaging (NBI)

Another endoscopic technique, narrow band imaging (NBI), was discussed and is available to use in order to distinguish microscopic changes in the mucosa. It can reveal patterns of vascularity, and this technique has high sensitivity and specificity to confirm mucosal abnormalities.

Artificial intelligence (AI) is becoming a tool that will be used to analyse images from NBI to make a diagnosis of NERD. Prof. Sifrim believes that this technology will be available in the near future.

High Resolution Oesophageal Manometry

It is widely appreciated that high resolution oesophageal manometry in isolation is not useful for the diagnosis of reflux disease, but is useful as a tool to better understand the anatomy of the gastro-oesophageal junction (GOJ) and can be used to exclude achalasia, rumination syndrome, provide accurate measurement of hiatus hernias and clarify aspects of oesophageal motility (Figure 2). Prof. Sifrim said that, in his experience, high resolution manometry can clearly reveal what is happening at the GOJ in conjunction with endoscopy, which is particularly helpful for post-surgical patients presenting with persistent symptoms.

High Resolution Manometry

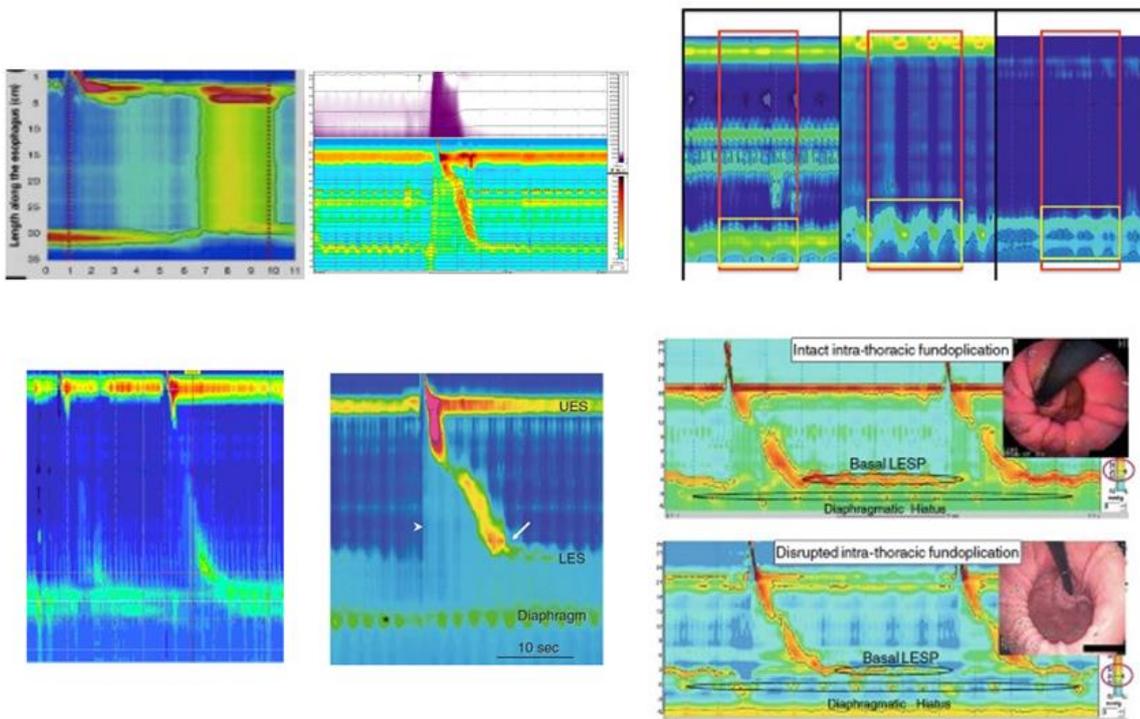


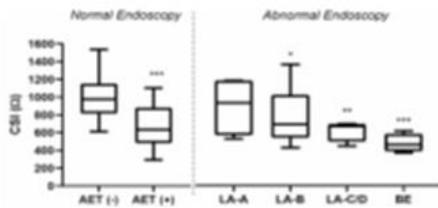
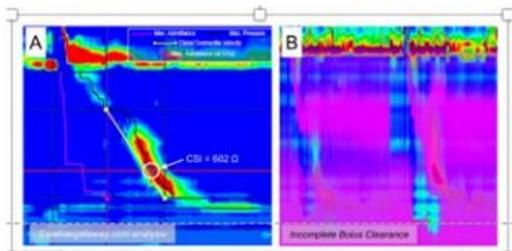
Fig 2: High Resolution Manometry (slide provided by Prof. Sifrim)

Contractile Segment Impedance

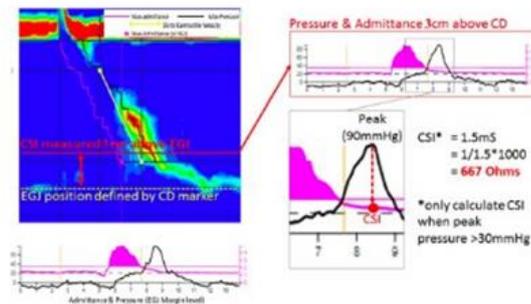
Contractile segment impedance is related to high resolution manometry. When the value of impedance at the time of contraction is known, this provides a realistic impression of the mucosal integrity as measured by impedance. Prof. Sifrim referred to two recent studies (3, 4) demonstrating that this measurement is able to distinguish patients with different phenotypes with different types of reflux disease (Figure 3).

A new study from international collaboration (reference not available) measured impedance at the time of contraction while patients raised their legs (causing an increase in abdominal pressure). Measurement of baseline impedance during this manoeuvre gave a very good sensitivity and specificity for the diagnosis of reflux in patients who did not have a clear conclusive 24-hour pHmetry.

Contractile Segment Impedance During HRM-impedance



Horton et al 2020



was noted between CSI and AET ($r = -0.56, p = 0.0001$, Figure 3C).

TABLE 1 Patient characteristics

	GERD patients (N = 20)	Non-GERD patients (N = 20)	p-value
Female (%)	9 (45.0)	17 (85.0)	0.381
Age (years)	48.1 ± 3.1	46.4 ± 2.2	0.649
BMI	23.8 ± 0.8	22.8 ± 0.6	0.273
Hiatus hernia (%)	9 (45.0%)	10 (50.0%)	0.212
GERDQ	7.5 ± 0.8	6.6 ± 0.7	0.472
DCI (mmHg.s/cm)	765.0 ± 107.7	1502.3 ± 416.0	0.149
IRP-4 s (mmHg)	15.2 ± 2.1	14.2 ± 1.7	0.661
Distal latency (sec)	7.3 ± 0.3	7.2 ± 0.2	0.600
Breaks (cm)	1.2 ± 0.3	0.6 ± 0.2	0.034
AET (%)	7.3 ± 2.0	1.2 ± 0.2	0.068
Supine AET (%)	5.2 ± 2.7	0.1 ± 0.0	0.079
Total reflux events	68.3 ± 7.0	52.5 ± 5.1	0.069
Acid	33.6 ± 3.8	15.8 ± 2.3	<0.001
Weakly acid	33.9 ± 5.4	32.4 ± 3.6	0.814
Weakly	0.8 ± 0.2	4.9 ± 2.6	0.130
CSI (Ohms)	837.5 ± 66.0	1220.8 ± 39.7	<0.001
CSI with SLR (Ohms)	809.1 ± 67.4	1211.8 ± 35.6	<0.001

Ming-Wun Wong et al 2022

Fig 3: Contractile Segment Impedance during HRM-impedance (slide provided by Prof. Sifrim)

Reflux Monitoring

Prof. Sifrim is a great advocate for measuring gastric pH; however, this is not widely used. In his opinion, a gastric pH sensor is very useful as it provides evidence that the PPI is effective and clearly shows patient eating patterns, at an extra cost of only £15!

Other parameters of interest could include: measurement of gas in conjunction with reflux combined with impedance; baseline impedance; post swallow induced peristaltic wave (PSPW) and symptom association analysis (not an exhaustive list).

Prof. Sifrim posed the question “Why is this important?” Reflux monitoring is important in patients who do not respond to empirical treatments; the clinician wants to know if the patient has true NERD, functional heartburn or a hypersensitive oesophagus, as the treatment options are different.

He went on to discuss an example of using impedance monitoring to assess gas reflux (supragastric belching (SGB) as a behavioural disorder). Many patients who have refractory reflux disease do so because their reflux is secondary to SGB, and the treatment for this is cognitive behavioural therapy.

With every reflux episode there is a reflex bringing saliva rich in bicarbonates to neutralise acid (PSPW ‘reflex after reflux’); this phenomenon can be abnormal in patients with reflux disease. However, it is difficult to measure, and as such is currently used mainly in research.

Prof. Sifrim recommended caution when comparing oesophageal pH-impedance metrics from other institutions, citing a large international consensus (5) which analysed 350 normal subjects and concluded that data is different between regions of the world. This can be in part due to the different systems in use; therefore, this should be considered when reviewing the literature.

Wireless pHmetry

Wireless pHmetry (such as the BRAVO capsule) allows for longer recording times, which is of value in patients who describe severe symptoms but return a normal study after 24 hours as it allows for day-to-day variability.

Prof. Sifrim conveyed that, in his opinion, a critical message today is that wireless pHmetry and impedance pHmetry are not competing; they are complimentary, and should be used according to the presenting patient needs (in conjunction with availability and cost restraints).

Cost and availability aside, Prof. Sifrim declared that his preference would be to use wireless pHmetry for: patients with clear intermittent symptoms; very anxious patients with a low tolerance for intubation; patients who are clinically suspected of having severe reflux, but had a normal 24 hour pHmetry (as the wireless test would allow an extended study); and patients who are convinced by other clinicians that they have excessive reflux (an extended study can be shared with the patient, to provide proof of the lack of reflux).

Moving back to impedance, Prof. Sifrim explained that impedance is good for studying patients with belch-related symptoms, to distinguish SGB from aerophagia. It is also useful to evaluate the proximal extent of reflux in patients with extra-oesophageal symptoms. Wireless pHmetry cannot provide information on the proximal extent of reflux. Diagnosis of non-acid reflux is especially important in patients with respiratory or ENT disorders, and particularly in babies (who have mostly non-acid reflux, which can cause aspiration and respiratory disorders).

Prof. Sifrim continued by expressing the problems of extra-oesophageal gastroesophageal reflux diagnosis, stating that 'this is a nightmare'. He explained that there are a series of symptoms attributed to reflux, and strongly recommended review of the algorithm in the paper 'AGA clinical practice update on the diagnosis and management of extraoesophageal reflux disease: Expert Review' by Chen *et al.* (Figure 4) (6).

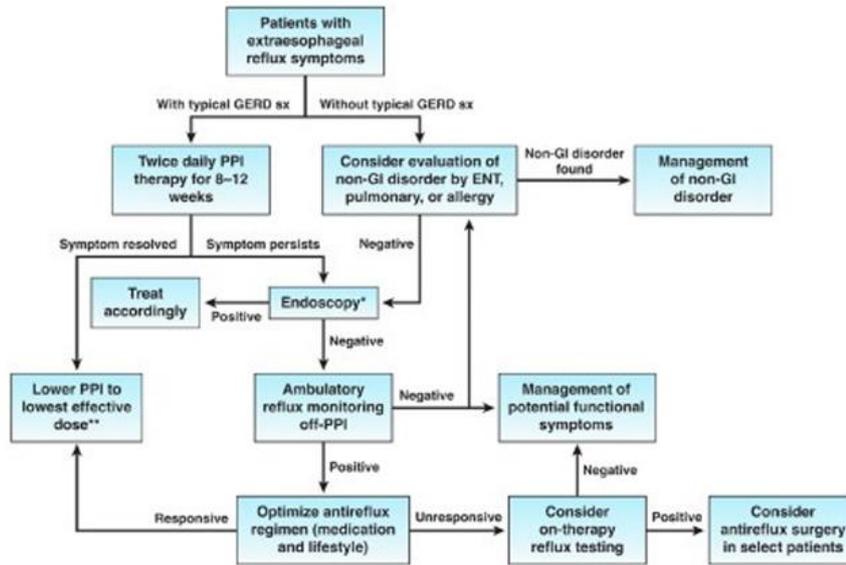
Reflux and Cough

The talk concluded with Prof. Sifrim expressing the importance of the relationship between reflux and cough, and whether reflux is followed by cough or cough is followed by reflux (Figure 5).

It is not sufficient to know that coughing might be linked to reflux; the association in relation to the cough should be established. Proximal baseline impedance is helpful as a marker to better to understand the effect of non-acid reflux.

AGA Clinical Practice Update on the Diagnosis and Management of Extraesophageal Gastroesophageal Reflux Disease: Expert Review

Joan W. Chen,¹ Marcelo F. Vela,² Kathryn A. Peterson,³ and Dustin A. Carlson⁴



Chen et al Gastro 2023

Fig 4: Algorithm to describe the diagnosis and management of Extraesophageal Reflux Disease (slide provided by Prof. Sifrim)

Reflux → cough or cough → reflux ?

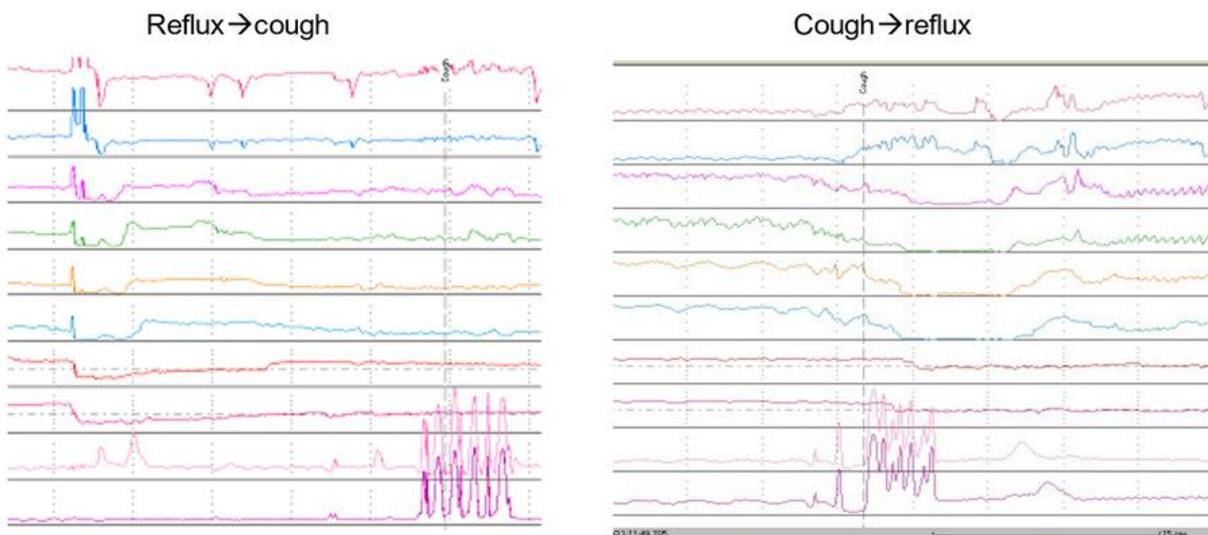


Fig 5: Slide to show pH-impedance trace using 2 distal pressure sensors from a patient with reflux followed by a cough, and a cough followed by reflux (slide provided by Prof. Sifrim)

Laryngeal pharyngeal reflux (LPR) was discussed, and thought to be very difficult to diagnose with impedance (due to air, swallowing etc). Restech® has been used in an attempt to measure aerolised reflux, but reported results are not convincing. Assessment of salivary pepsin is also not a reliable test.

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Presentation Review: “GI Physiology provision update - NHS Diagnostic Transformation Programme” (Dr Anthony Hobson)



Presentation Review by...
Naomi Rune, Clinical Scientist
Oxford University Hospitals
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The AGIP Symposium was held at BSG LIVE 2023 on Thursday 22nd June. One of the many interesting talks given at the Symposium included an update on the status of the Physiological Science Transformation Programme, delivered by Dr Anthony Hobson (Chair of AGIP). As Dr Hobson explained, this programme aims to improve the efficiency and quality of physiology diagnostic services nationally through provision of appropriate support and resources based upon data received from surveys and workbooks.



Fig 1: Dr Anthony Hobson presenting (photo by Naomi Rune)

The NHS England publication titled 'Physiological Science Networks: A Development Framework' (first published on 23rd May 2023) highlights the lack of attention and funding that diagnostic services historically have received. Nationwide, Physiology units have also been poorly connected with a lack of shared data. As a result, there is poor knowledge of the current state of each department across the country.

Furthermore, many Physiology departments are still unaccredited, particularly within certain disciplines. As it stands currently, there are just 4 GI Physiology departments in the UK with IQIPS accreditation. In addition to this, services have previously been delivered by a variety of healthcare workers from a variety of training backgrounds, including those from a nursing or medical profession. Now, there are designated training pathways resulting in healthcare scientists taking more prominence in diagnostics. Gathering this data regarding the running of the physiology departments, including these points mentioned, would mark first steps towards standardisation and service improvement.

To design an informed plan for the appropriate allocation of resources for service improvement, NHS England has called for Physiology departments to participate in national surveys, the latest being the NHSE National Workbook Assessment. In the survey, departments involved submitted data relating to waiting lists, workforce, facilities, equipment, and digital tools.

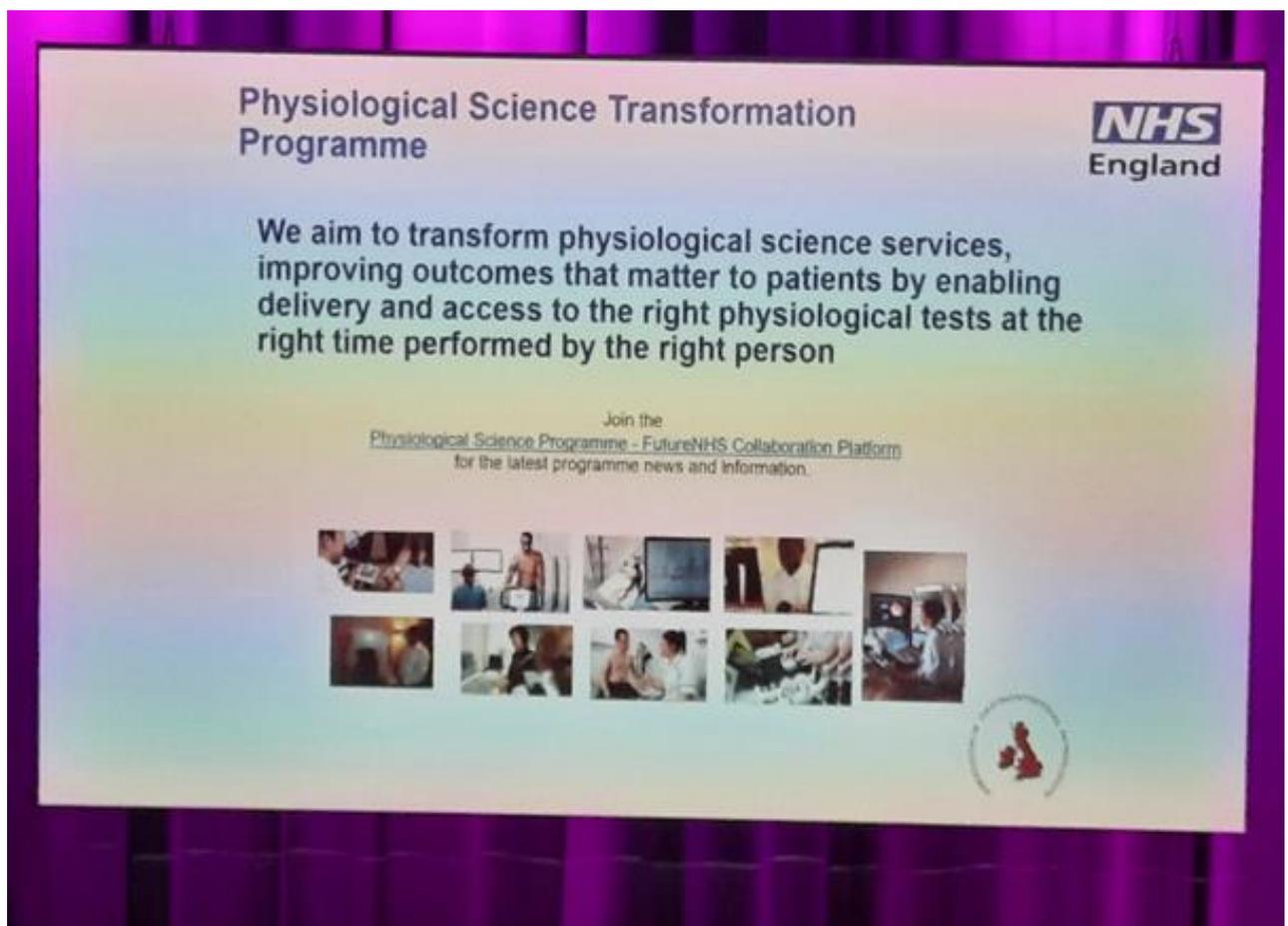


Fig 2: Aims of the Physiological Science Transformation Programme

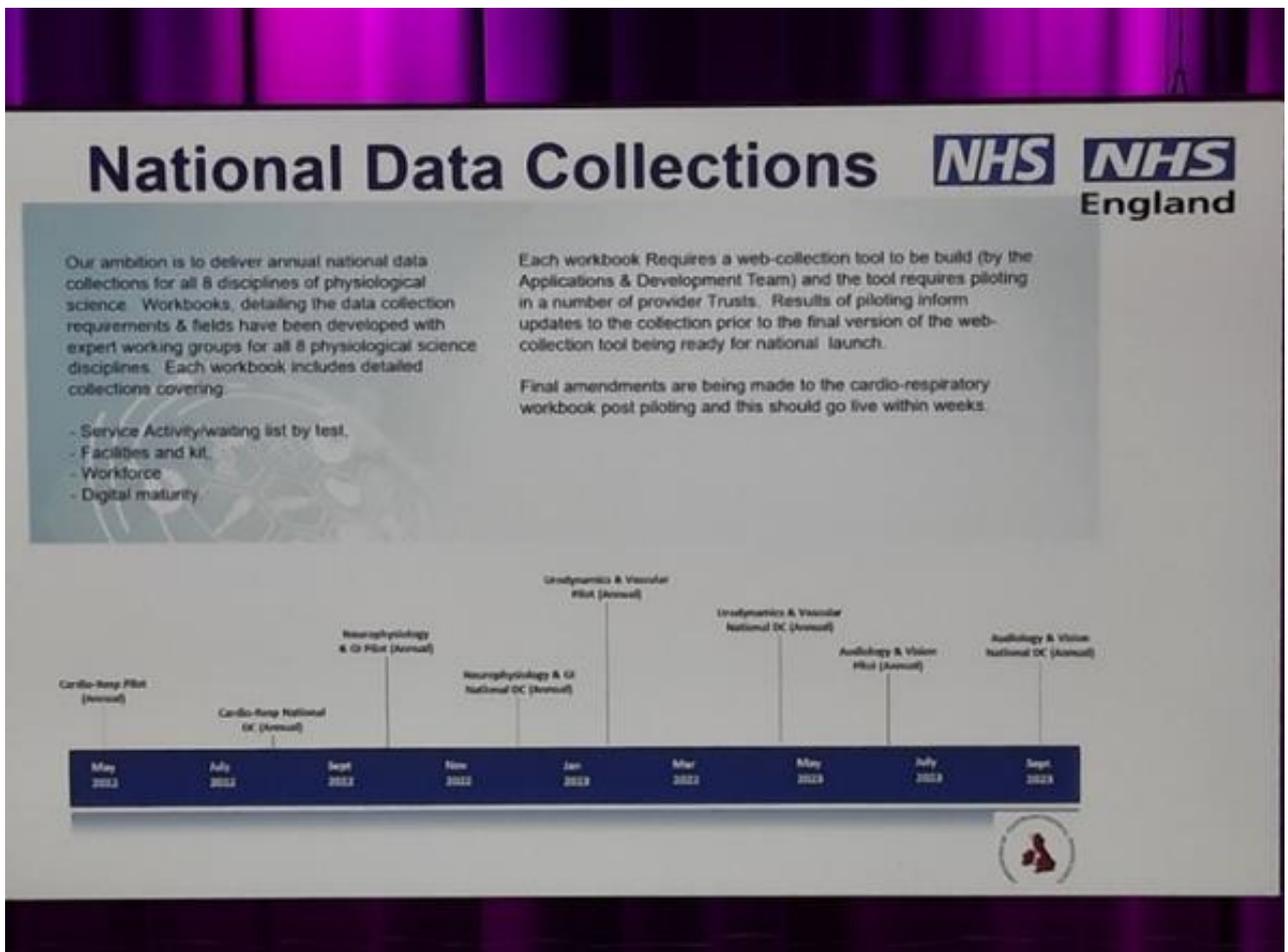


Fig 3: Timeline for National Data Collections

According to 'Physiological Science Networks: A Development Framework', once appropriate support and resources have been given, the main goals are to restore waiting times to pre-COVID levels and ensure that those employed in diagnostic services are appropriately trained to provide 'the right physiology tests, at the right time, by the right person'.

The data will be collected as per the above timeline (Figure 3). GI Physiology departments submitted data in October 2022 (the same deadline as Neurophysiology). Once the complete data has been gathered from all departments, this will be reviewed (in September 2023).

The proposed service delivery improvement models include the following:

- The implementation of Community Diagnostic Centres (CDC's). These centres are in principle 'one stop' units, allowing for patients to undergo a number of diagnostic tests in one visit. This aims to minimise the length of time a patient will be waiting on their pathway before receiving a diagnosis (and therefore treatment)
- Thorough evaluation of referrals to determine which cases are elective and which are urgent (allowing prioritisation of patients needing urgent evaluation and intervention)

Dr Hobson concluded his talk stressing the importance of regional diagnostic networks, which enable the sharing of knowledge and collaboration; as the saying goes, there is 'strength in numbers'. In addition, Dr Hobson urged us to fully engage with further surveys, as they give rise to great opportunities to gain much needed support and attention for diagnostic services.

I would like to thank Dr Hobson for his talk as it has inspired me with new motivation to engage and push for the investment that we deserve in our services. I would also recommend others to read the NHS England document 'Physiological Science Networks: A Development Framework' for further information.

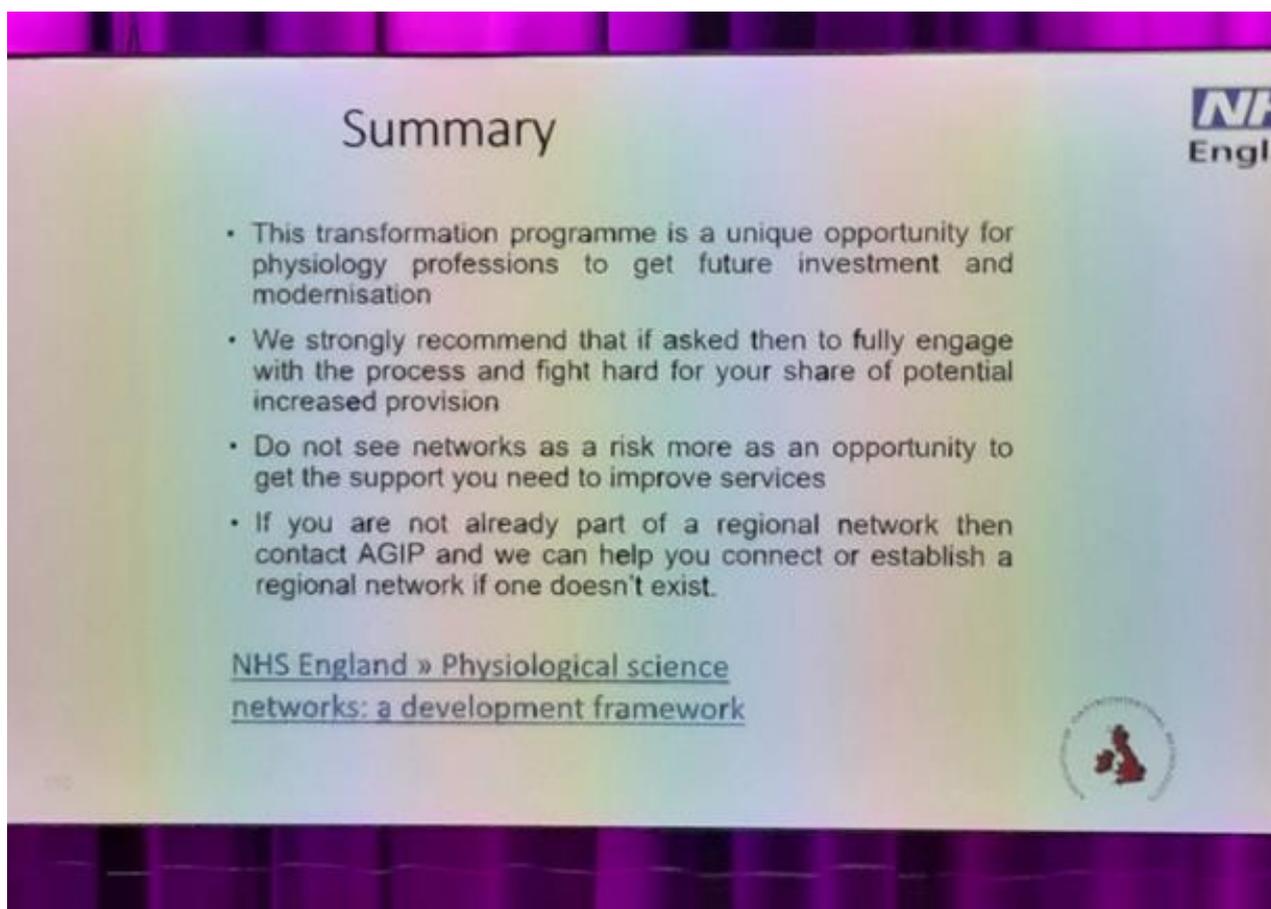


Fig 4: Presentation summary

Neurogastroenterology and Motility E-Poster P282

Review: “Patient Satisfaction Using Home Testing Kits for Hydrogen and Methane Breath Testing” (Ms Marianne Otterstad)

Poster Review by...

Samantha Hewitt, Specialist Practitioner in GI Physiology
 Hull University Teaching
 Hospitals NHS Trust

I was very impressed with the electronic posters presented at BSG LIVE 2023 in Liverpool. An insightful poster from the Functional Gut Clinic titled ‘Patient Satisfaction Using Home Testing Kits from Hydrogen and Methane Breath Testing’ was presented by Marianne Otterstad, Charlotte Pitcher and Anthony Hobson.

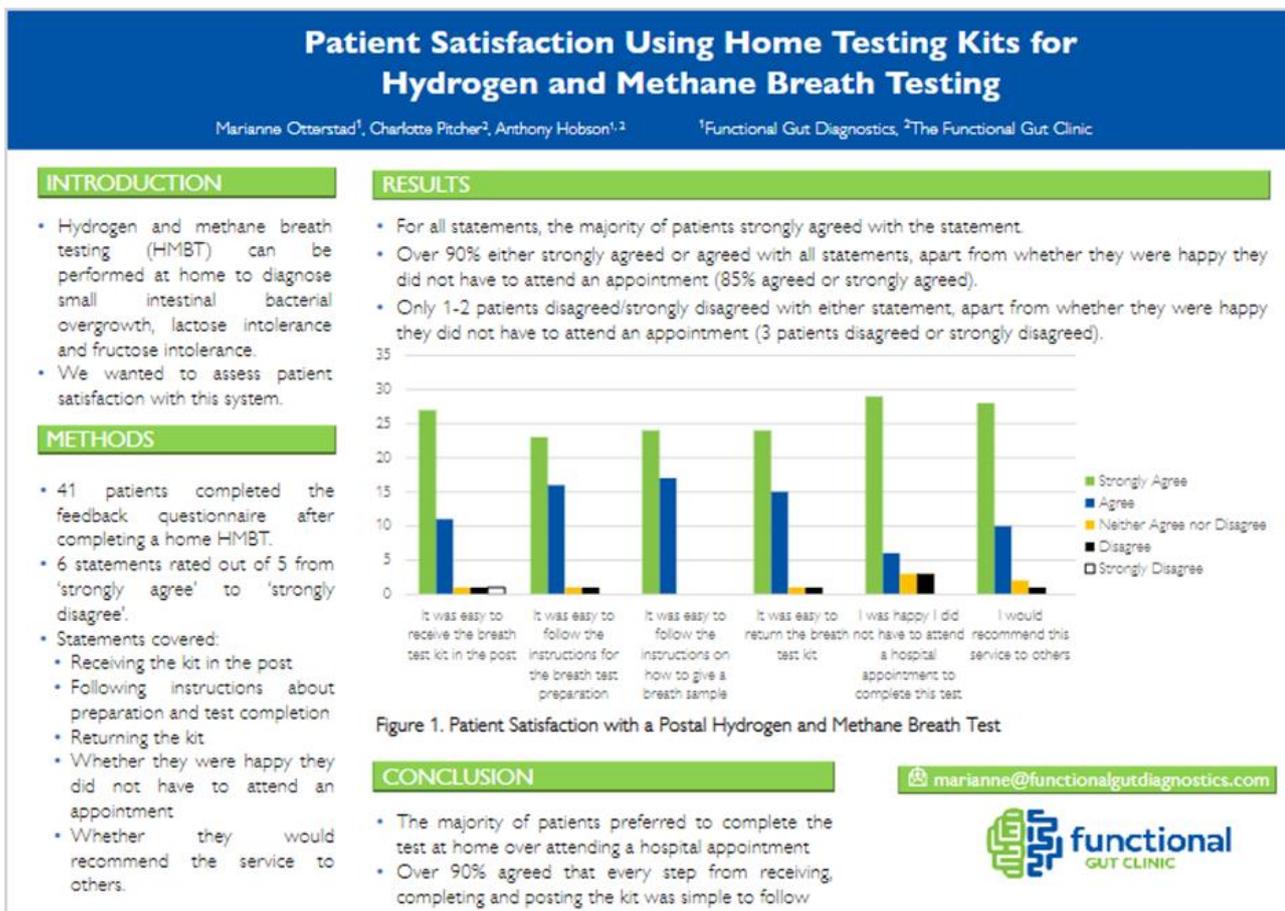


Fig 1. Poster presented by The Functional Gut Clinic

Their study aimed to establish the level of patient satisfaction with using a home testing kit for hydrogen and methane breath testing. 41 patients completed a feedback questionnaire, where they were asked to rate the following 6 statements (from “strongly agree” to “strongly disagree”):

- *It was easy to receive the breath test kit in the post*
- *It was easy to follow the instructions for the breath test preparation*
- *It was easy to follow the instructions on how to give a breath sample*
- *It was easy to return the breath test kit*
- *I was happy I did not have to attend a hospital appointment to complete this test*
- *I would recommend this service to others*

>90% of the participants selected “strongly agree” or “agree” for all statements (barring the statement “I was happy I did not have to attend the hospital appointment to complete this test”, for which 85% of the participants selected “strongly agree” or “agree”).

The poster concluded that the majority of patients preferred to complete the test at home rather than attending a hospital appointment. Over 90% of participants agreed that every step from receiving, completing and posting the kit was simple to follow.

As a healthcare professional who uses hydrogen and methane breath testing kits, I found the results of this survey particularly interesting. The majority of our patients undergo the investigation within our department in the hospital. However, these findings suggest that at-home testing may be the preferred option for patients.

Presentation Review: “The consequences of limited training in disorders of gut-brain interaction: results from a national survey of gastroenterology trainees” (Dr Ayodele Sasegbon)



Presentation Review by...
Elisabeth Kirton, Clinical Scientist
Hull University Teaching
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I enjoyed watching this excellent presentation from Dr Ayodele Sasegbon, a ST6 Academic Clinical Lecturer at the University of Manchester. Dr Sasegbon presented the results from a national survey of gastroenterology trainees (1), the largest study of trainee attitudes towards disorders of gut-brain interaction (DGBIs) yet performed.



Fig 1. Presentation opening slide

DGBIs are a group of gastrointestinal disorders, characterised by motility disturbances, visceral hypersensitivity and altered CNS processing (irritable bowel syndrome is included among DGBIs). DGBIs are very common, with a UK prevalence of 37%. As such, Dr Sasegbon argued that all gastroenterologists should know how to manage these disorders, regardless of their sub-speciality interest.

Despite the widespread prevalence, there is little emphasis on DGBI in medical education, or in the current or previous gastroenterology curriculum (2). Concerns regarding the training and teaching DGBI exist worldwide, prompting a US study of

attitudes towards DGBI in American gastroenterology trainees in 2022 (3).

For this UK based study, the research team designed a survey to examine attitudes towards DGBI by answering three broad questions:

- 1) What exposure do UK trainees have to DGBI?
- 2) What are UK trainee attitudes towards DGBI?
- 3) How confident are UK trainees regarding DGBI diagnosis and management?

The authors constructed an anonymous online survey of 16 questions, and sent it out to Gastroenterology training programme directors nationwide.

The survey was divided into 5 sections:

- 1) Demographics
- 2) Access to training
- 3) Attitudes towards DGBIs
- 4) Access to DGBI-related services
- 5) Barriers to DGBI management

In total, the researchers received responses from 112 trainees across the UK (37.5% female and 61.6% male). They received responses from all training grades, across all four nations of the UK and from all deaneries. This UK based survey had a higher response than the American survey, at 21.4% of national training post holders.

Regarding trainee opportunities, 49% of the trainees stated that they had received formal lectures on DGBI, and only 22% had attended dedicated DGBI clinics. Only 9% stated that they had received training in DGBI communication skills.

In terms of DGBI diagnosis, 36% were “comfortable” or “very comfortable” making a diagnosis of DGBI, and 39% were “comfortable” or “very comfortable” communicating a diagnosis of DGBI to a patient. When asked about neuromodulators, 36% were “comfortable” or “very comfortable” initiating neuromodulators, while even fewer (21%) were “comfortable” or “very comfortable” titrating the dose.

Regarding trainee perceptions, 21% of trainees stated that their consultants “very often” or “often” had a dismissive attitude towards patients with DGBI. Concerningly, 39% of trainees stated that their co-trainees “very often” or “often” had a dismissive attitude towards patients with DGBI, and 30% of trainees felt frustrated or burnt out after interacting with patients with DGBI.

In terms of access to services, only 8% often had access to a psychologist. 74% often had access to a dietician, and 23% often had access to biofeedback. Dr Sasegbon noted that these numbers were concerningly low, as all of these services are needed to comprehensively manage DGBI patients.

When asked about barriers to managing patients with DGBI, 57% cited a lack of a DGBI MDT to refer patients to, while 64% reported that there was insufficient time available to manage patients appropriately.

Access to services

General data

- 8% of trainees often had access to a psychologist
- 74% of trainees often had access to a dietician
- 23% of trainees often had access to biofeedback

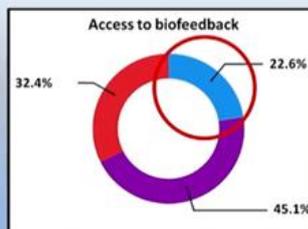


Fig 2. Access to services (slide from presentation)

Dr Sasegbon explained that several sub-analyses were performed on the data available. For example, when divided into “junior” (ST3 – 5) and “senior” (ST6 – 7) groups, senior trainees were significantly more likely to have attended DGBI lectures and clinics compared to junior trainees (Dr Sasegbon noted that this makes sense, as senior trainees have been in the field for longer). However, when it came to DGBI management, there was no significant difference in the self-reported confidence or competence between the “junior” and “senior” trainees. Despite having attended more lectures and clinics, senior trainees were as uncomfortable as their junior colleagues when it came to DGBI management.

International comparison

	UK Survey	US Survey
Access (often)		
Access to a dietician	↓ 74%	86%
Access to a psychologist	↓ 8%	37%
Access to biofeedback	↓ 23%	77%
DGBI management (comfortable/very comfortable)		
Diagnosing DGBI	↓ 36%	50%
Initiating neuromodulators	↓ 36%	57%
Perceptions (often/very often)		
Co trainees dismissive attitudes	↑ 39%	16%
Consultants dismissive attitudes	↑ 21%	8%
Barriers (often/very often)		
Lack of DGBI MDTs	↑ 57%	36%



Fig 3. International comparison (slide from presentation)

When looking at sub-speciality interest, the researchers found that significantly more luminal trainees attended DGBI clinics and communication skills training. However, across the board <50% of trainees had accessed these opportunities (irrespective of subspecialty interest).

Across all comparable questions and sections, the results of this survey suggest that the UK picture is worse than the picture in the US (much worse in some areas). When the US data was published, it was seen as so concerning that it prompted a re-evaluation as to how DGBIs were taught and integrated into the US curriculum. Based on the results of this UK survey, Dr Sasegbon suggested that something similar should happen here.

Dr Sasegbon explained that the full paper of their findings has been accepted for publication, and that the data is currently being disseminated (including at BSG LIVE 2023 and Digestive Disease Week 2023). In the medium term, the hope is that this data can help improve lecture attendance, and trainee access to DGBI clinics, help organise communication skills training within deaneries, and help prompt regular DGBI education days. In the long term, the authors believe that mandatory UK DGBI training requirements are needed, to ensure a basic level of confidence and competence within the trainee body. This includes a set number of work-based assessments, clinics, lectures and at least one communication skills training day within the course of a training programme.

Dr Sasegbon acknowledged that this would not be a popular suggestion, as there are already many hoops for trainees to get through; however, the findings of this survey show that it is necessary.

Dr Sasegbon concluded that all gastroenterologists need to be competent in treating DGBI, as they are common and commonly encountered. Currently, UK training in DGBI is “ad hoc”, influenced by subspecialty interest and does not equip trainees with the skills to comfortably manage DGBIs.



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Conclusion

- All gastroenterologists need to be competent in treating DGBI.
- **Current UK DGBI training is ad hoc, influenced by trainee interests and does not equip trainees with the skills to comfortably manage DGBI**
- We have proposed and are implementing solutions to the problems identified



Fig 4. Conclusion (slide from presentation)

This was a very clear and comprehensive presentation, and the findings were of particular interest to me. DGBIs affect many of our patients referred to GI Physiology services, and the often debilitating symptoms can have a severe impact on quality of life. Implementing solutions to the training problems identified in this survey can better equip Gastroenterology services to manage patients with DGBIs competently and compassionately, ultimately helping improve patient outcomes.

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