CONVENZIS

Welcome to the NHS Endoscopy Conference!

01st May 2025
15 Hatfields Conference Centre,
Chadwick Court, London, SK1 8DJ

Chair Opening Address

Mr Anil Vara, Bsc (Hons), Msc, MBA, CMgr, FCMI
Director of Elective Recovery (Ex) and Clinical Technologist in Nuclear Medicine
University Hospitals Sussex NHS Foundation Trust

Keynote Speaker

Dr Umakant Dave
Consultant Gastroenterologist
Swansea Bay University Health Board

How to maintain wellbeing and reduce burnout in endoscopy workforce

Dr Umakant Dave, MBE, MD, FRCP, FAcadMEd
Welsh Ass for Gastro & Endoscopy (WAGE) President,
Consultant Gastroenterologist, Swansea Bay UHB & Honorary Senior Lecturer

- **Conflict of interest: ESRT instructor**
- **I claim no expertise!**
- **Listen to your own wisdom**
- **Systems and organisations need to do more to support us**

My story

Stress and Burn-out

- Stress is **the body's reaction to feeling threatened or under pressure**.
- Stress is the mediator for many negative outcomes, but not all stressful situations are bad!
- Burn-out **results from chronic workplace stress that has not been successfully managed**. It is characterized by: exhaustion; detachment from one's job, feelings of being ineffective

Gastroenterology/ Endoscopy scenario

- Most gastroenterologists in the USA experienced moderate levels of burnout, while junior gastroenterologists had higher levels of stress than senior gastroenterologists (Keshwani et al 2011)

- Burnout in gastroenterology trainees within the East of England Deanery was 35% (Ong et al BMJ Open Gastroenterol. 2020)

- Statistically significant associations between work satisfaction and burnout among gastroenterologists and endoscopy staff was found in Germany.

Burnout Impact

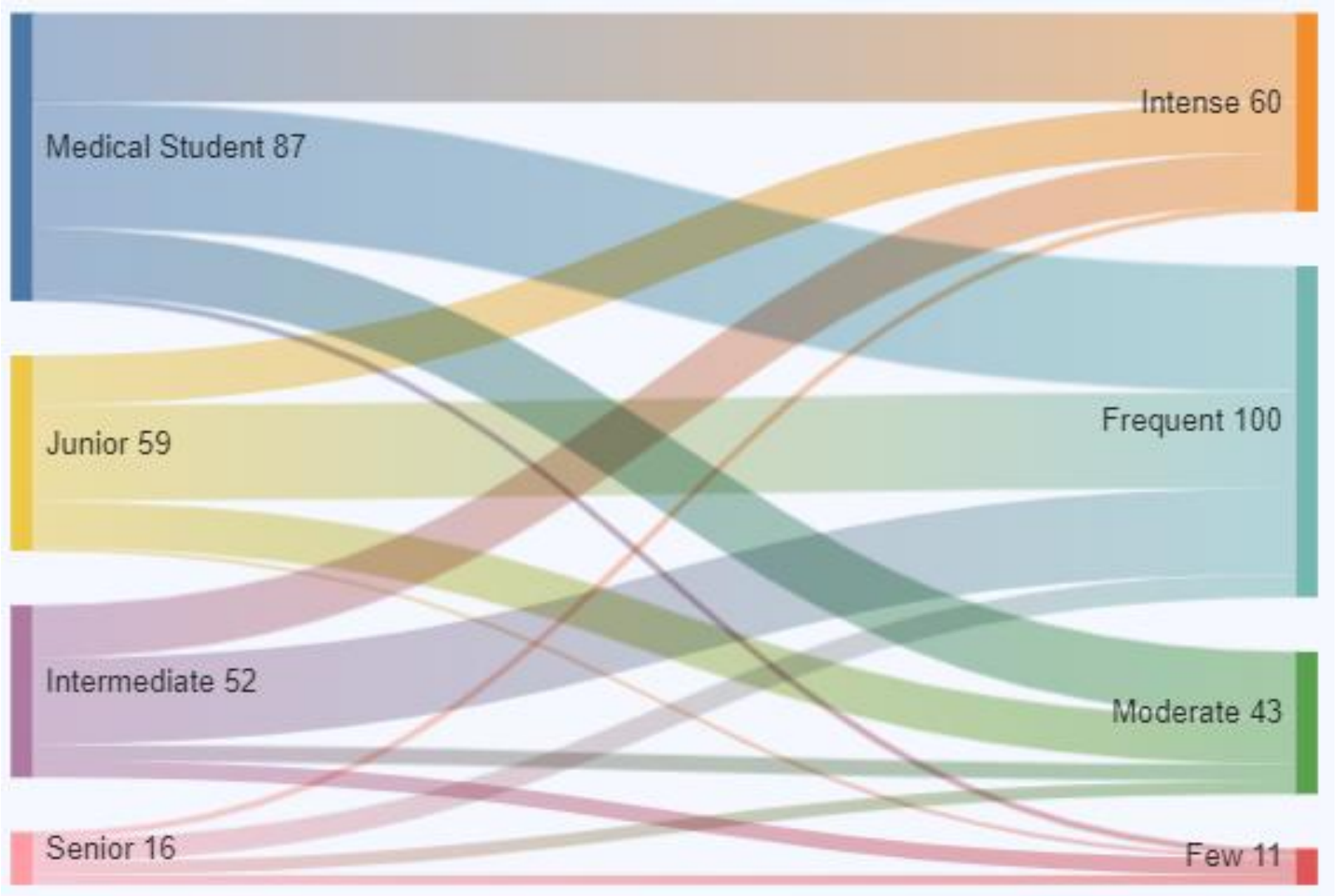
- Patient safety
- Staff health and Wellbeing
- Maladaptation (Alcohol, drug, gambling…)
- Productivity and resource utilisation
- Patient satisfaction and Complaints
- Staff retention

Causes of burnout

- Excessive workload and dysfunctional workplace
- **Lack of control, sense of unfairness**
- Breakdown of community
- Discrimination, bullying and harassment (27% staff)
- Systems and culture: moral injury
- **Neuroticism** as a predictor of Burnout and extent of Exhaustion
- **Imposter Phenomenon**

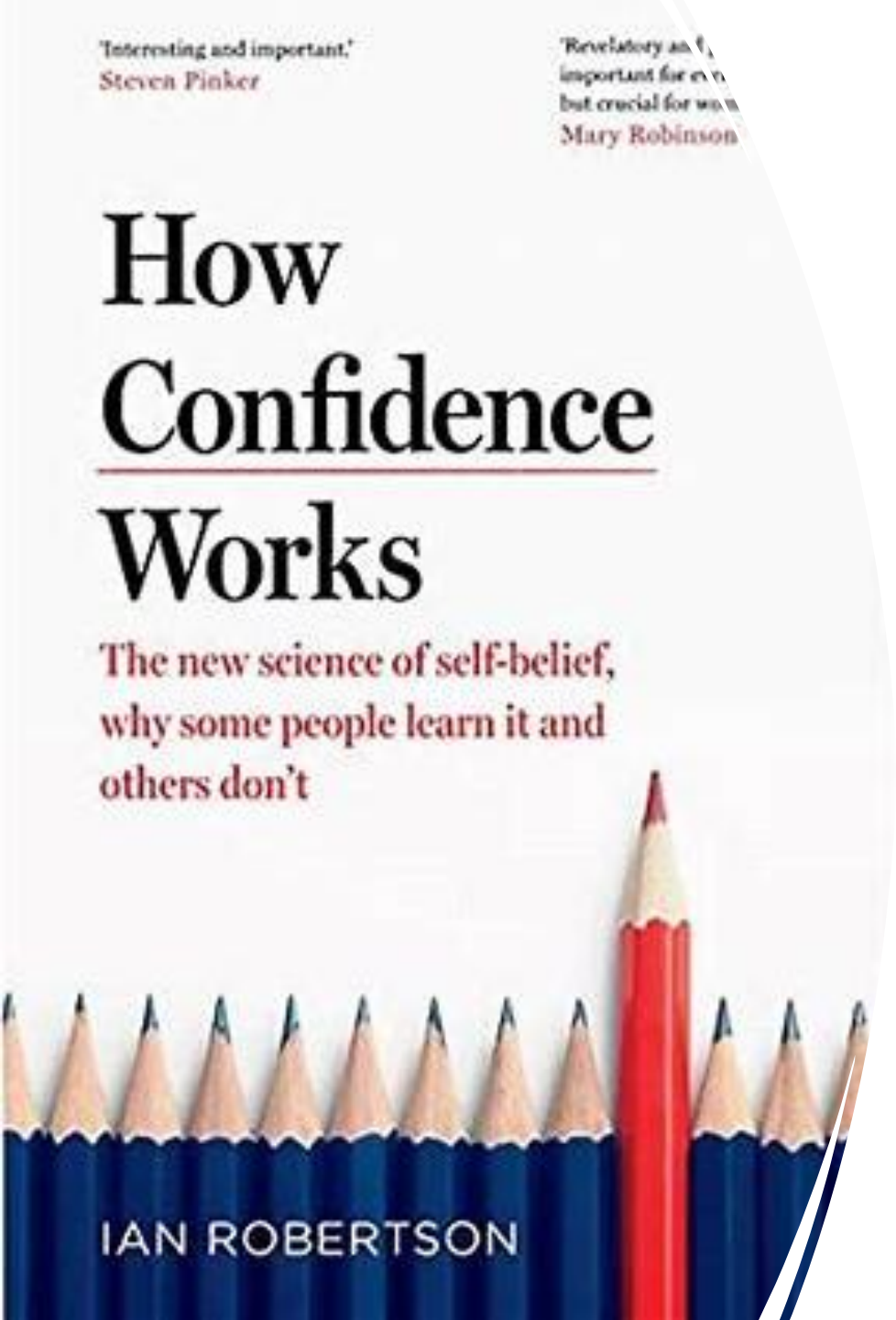
Imposter Phenomenon (IP)

- Measured levels of IP, burnout, wellbeing and perfectionism
- Overall, 75% of medical students reported experiencing frequent to intense levels of IP
- Similarly in clinicians 75% of respondents also reported experiencing frequent **to** intense levels of IP
- No significant difference between different levels of training



Welsh survey ‘23, 215 participants (Medical Students and Clinicians)

Some solutions for personal wellbeing



Confidence

- Control attention
- Action
- Attitude towards failure
- Attitude towards oneself

- It not only helps with success but significantly improve our wellbeing

Prevent Musculoskeletal injury

- 89% of endoscopists report musculoskeletal injuries (MSI) compared to 37% of physicians in other specialties.
- Similarly, studies show that over 50% of endoscopy nurses suffer from MSI injuries related to their work.
- Training and adherence to preventive aspects reduces injury and improves wellbeing

When you change your mind about stress it changes your body.

Physiological response when stress is viewed as a challenge were similar to experiencing joy- **Courage response**

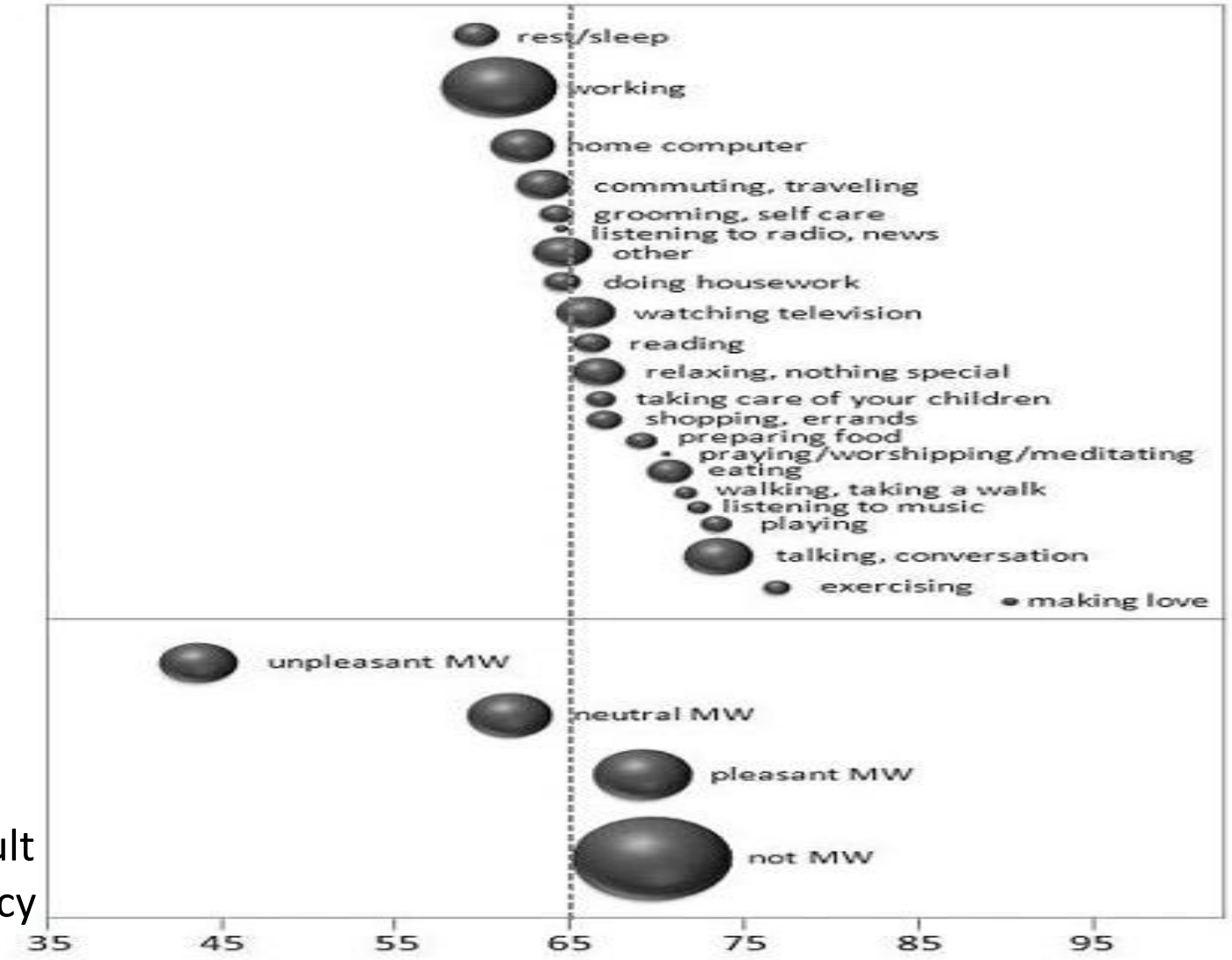
Stress makes us social, reaching out to others for help and to give help (Oxytocin response)- **Tend and Befriend response**

We have option to use them apart from **Flight/ Fight response**

Dr Kelly McGonigal, Harvard Health Psychologist.

A Wandering Mind Is an Unhappy Mind (and increases stress)

KILLINGWORTH MA AND GILBERT D
SCIENCE• 2010



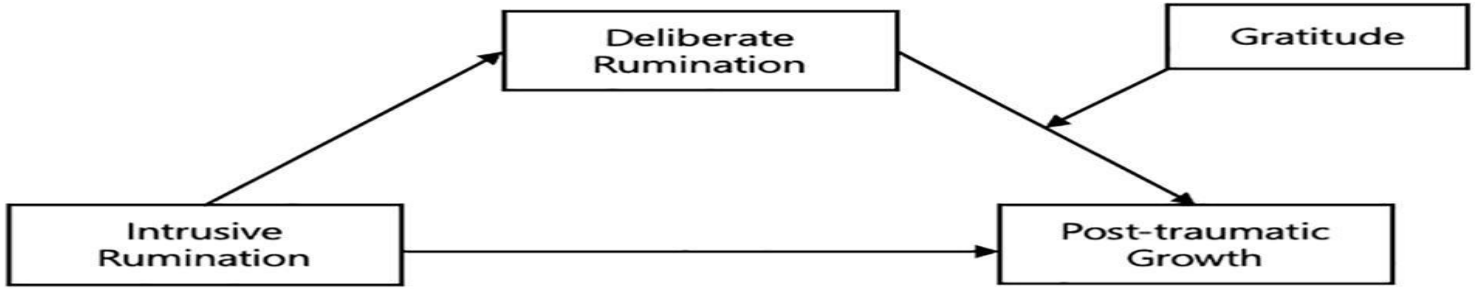
Mind wondering to negative aspects is a default so learning to be present reduces that tendency

It's the second arrow

that causes the most pain.

PTSD V/G PTG and role of reflection

- 80% of doctors in USA experienced trauma in the previous year- Arch Surg 2012
- PTSD prevalence 15% in doctors compared to 3-4% in population- Eur J Psychiat 2016
- Self-reporting screening measures showed very high prevalences of PTSD in HCW (25.4%), the diagnostic interview showed the prevalences to be 7.9% for PTSD (twice rate of public)- The Lancet Psychiatry, 2022

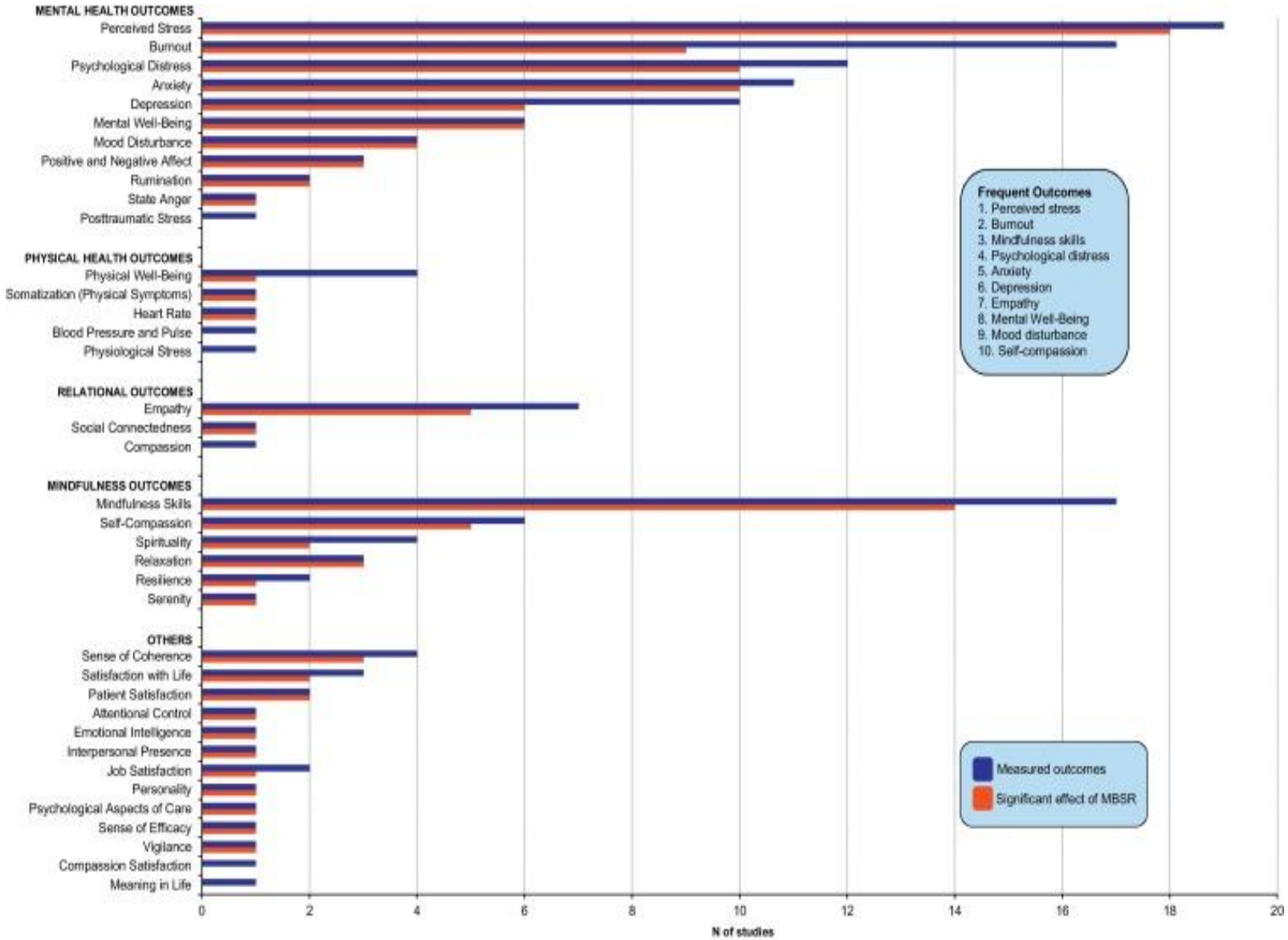


Kim E, Bae S; Front. Psychol. 2019

Dispositional mindfulness

Trainable ability to pay attention to inner thoughts, emotions, and experiences in a non-reactive way

A systematic review. Complementary Therapies in Medicine 24 (2016) 19–28



ENHANCED STRESS-RESILIENCE TRAINING (ESRT) FOR Graduate-Entry Medical Students

A Mixed-Method Investigation

L Sanders, G Budd, C Lebares, U Dave, A Kemp

Acknowledgement: Prof Andy Grant

Results

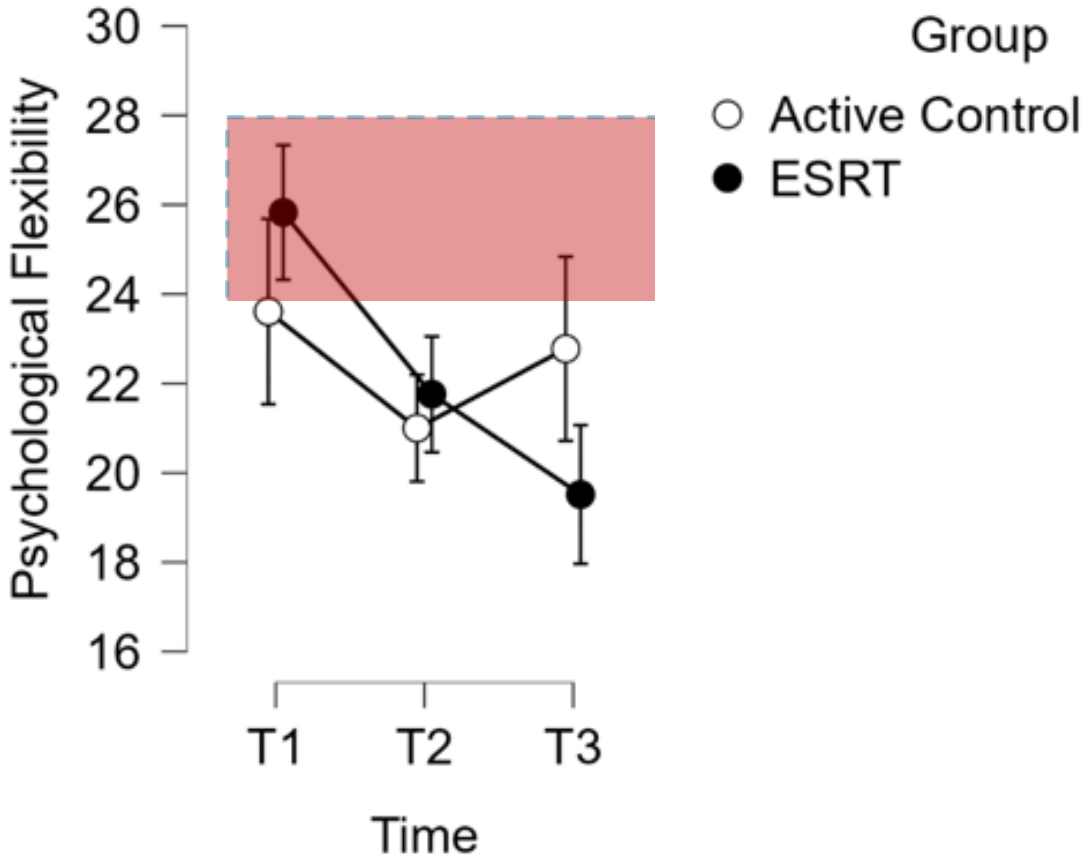
Psychological Flexibility

(n = 47)

Significant time x group interaction:

F (2, 90) = 6.30, p = .003, n2p = 0.123, BF10 = 18.18.

Scores at or exceeding 24-28 are associated with higher levels of depression and anxiety (Bond et al., 2011).



Note. Error bars show confidence intervals of 95%.

[a] Lower scores indicate greater psychological flexibility.

Welsh Nurses Pilot Study:

PM-344 Capstone Project Year: 2023, Swansea University
Liam J. Williams, Dr Alice Hoon, Dr Umakant Dave and Ms Heather Whitaker

- 6 endoscopy/ GP surgery nurses
- 3 minutes mindfulness meditation at the beginning of a shift
- Post-study WEMWBS scores increased, fairly significantly compared to the original mean scores of the pre-study versions (the most significant differences were seen in participants who had poorer wellbeing prior to starting the study)
- Helping them to be more present and aware in their work, enhancing their ability to deal with job-related stresses and to further ameliorate the nurse-patient relationship.
- 5 out of 6 will highly recommend it to colleagues

Are benefits long term?

- 288 medical & psychology students were given either a 15 hour mindfulness course (144 students) or normal curriculum (144 students).
- Six years later effects on wellbeing and better coping strategies persisted.

- PLoS One. 2018 Apr 24;13(4)

Clinical and Experimental Gastroenterology

Dovepress

open access to scientific and medical research

Open Access Full Text Article

PERSPECTIVES

Mindfulness in Gastroenterology Training and Practice: A Personal Perspective

This article was published in the following Dove Press journal:
Clinical and Experimental Gastroenterology

Umakant Dave [1]
Anjali Dave [2]
Simon David Taylor-Robinson [3]

[1]Department of Gastroenterology, Morriston Hospital, Swansea, Wales SA6 6NL, UK; [2]Department of Psychology, Birmingham University, Birmingham B15 2TT, UK; [3]Department of Surgery and Cancer, Imperial College London, St Mary's Hospital Campus, London W2 1NY, UK

Background: Work-related stress is becoming an increasingly recognised occupational hazard that can have detrimental effects on the health of both patient and doctor. The practice of gastroenterology not only includes the demands of clinics and in-patient work faced by other medical specialities but also the additional burden of complex, and often high-risk, endoscopic interventions. Mindfulness, a secular form of meditation, can relieve stress, even if only practiced for a few minutes a day.

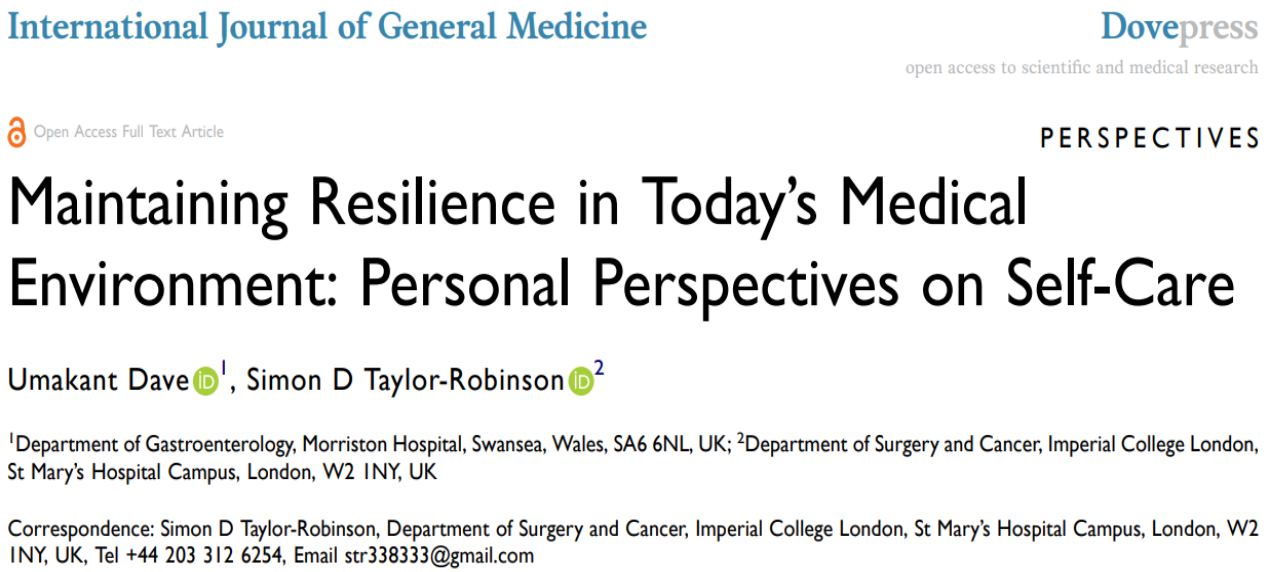
Methods and Results: We present a personal perspective of the burnout experienced in stressful gastroenterology careers and the personal use of mindfulness in the daily routine to provide a source of calm when surrounded by many different pressures. We review some of the literature exploring the role of mindfulness in clinical practice with an emphasis on gastroenterology. While the practice of mindfulness is not designed to obviate immediacy and quick decisions in a rapidly changing clinical environment, it has been held widely useful to mitigate the stress involved in making those decisions.

Conclusion: Practicing mindfulness, meditation and mindful living offers many advantages to gastroenterologists' wellbeing as well improved patient care. We advocate its teaching to both gastroenterology trainees and consultants who are not familiar with the technique.

Keywords: mindfulness, gastroenterology, stress, meditation, wellbeing

8 steps to Wellbeing

- Diet and Nutrition
- Sleep
- Exercise
- Reappraisal of Stress
- Mindfulness
- Gratefulness
- Self-compassion and Self-care
- Being part of a supportive network



International Journal of General Medicine

Dovepress
open access to scientific and medical research

Open Access Full Text Article

PERSPECTIVES

Maintaining Resilience in Today's Medical Environment: Personal Perspectives on Self-Care

Umakant Dave[1], Simon D Taylor-Robinson[2]

[1]Department of Gastroenterology, Morriston Hospital, Swansea, Wales, SA6 6NL, UK; [2]Department of Surgery and Cancer, Imperial College London, St Mary's Hospital Campus, London, W2 1NY, UK

Correspondence: Simon D Taylor-Robinson, Department of Surgery and Cancer, Imperial College London, St Mary's Hospital Campus, London, W2 1NY, UK, Tel +44 203 312 6254, Email str338333@gmail.com

ROI of wellbeing initiatives

- For every £1 spent on supporting the mental health and wellbeing of their workforce, employers get (on average) about £4.70 back in increased productivity.

- For doctors:
  - Improved patient satisfaction
  - Better morale
  - Higher quality of care
  - Reduced medical errors
  - Improved recruitment and retention

Contents lists available at ScienceDirect

The American Journal of Surgery

journal homepage: www.americanjournalofsurgery.com

Key factors for implementing mindfulness-based burnout interventions in surgery

Carter C. Lebares [a, b, *], Ekaterina V. Guvva [a], Aditi Desai [a], Amy Herschberger [a], Nancy L. Ascher [a], Hobart W. Harris [a], Patricia O'Sullivan [a]

[a] Department of Surgery, University of California San Francisco, San Francisco, CA, USA
[b] Osher Center for Integrative Medicine, University of California San Francisco, San Francisco, CA, USA

- Doubt
- Stigma
- Disruptions
- Retribution
- Increased Burden
- Zero Sum Game

- **Culture** (surrounding the intervention)
  - Champions
  - Evidence dissemination
  - Beta-test with thought/opinion leaders
  - Leadership endorsement
  - Identify the coin of the realm
- **Infrastructure** (supporting the intervention)
  - Protected time
  - Use established service gaps
  - Reciprocity
  - *Lift not just Shift*
- **Adaptability** (of the intervention)
  - What's essential? What's malleable?

Slide Provided by Dr Lebares

Learning that has helped me:

- Accept, “Life will be challenging” and be kind to myself and colleagues
- Normalise talking about difficulties and mental health issues
- Running
- Mindfulness & Gratitude
- Books/ podcast: Self-compassion, Only Human
- Job crafting/ Chosen suffering
- **Umakant.dave@wales.nhs.uk**

Panel Discussion

Dr Charlie Andrews
GPwER in Gastroenterology
Somer Valley Medical Group

Dr Marion Sloan
Partner, Sloan Medical Centre, NHS

Dr Toyosi Adeniji
GP Partner & Trainer ; PCN Co-Clinical Director; GPwER in Gastroenterology and Endoscopy; RCGP National First5 Chair, Eleanor Cross Healthcare, Northampton; University Hospitals of Northamptonshire and the Royal College of General Practitioners

Sas Banerjee
Cancer Clinical Lead | National Speciality Advisor – Provider Support, NHS England | Barking Haverin, Redbridge University Hospitals NHS Trust

Main Sponsor

PENTAX®
MEDICAL

Main Sponsor

Paul Whittle
Market Access Manager
Pentax Medical UK

PENTAX Medical UK

Partners in endoscopy

Paul Whittle
Market Access & Communications Manager

paul.whittle@pentaxmedical.com

NHS Endoscopy Landscape

Population challenge

- The population is aging
- Cancer prevalence is increasing at all ages
- Diagnosis is expected/directed to be achieved earlier

Workforce challenge

- Existing workforce pressures due to insufficient Gastroenterologist/Endoscopist numbers
- Predicted further decline in workforce numbers due to imminent retirements & poor recruitment

Endoscopy Transformation

- There has been a BIG focus separating Diagnostics from the Acute setting
- Significant resource allocated to low-risk procedures to free up resource in the Acute setting
- CDC’s taking Endoscopy back in to the Community
- Extra Endoscopy activity in Outpatient & Clinic settings
- Was the released capacity used strategically?

Endoscopy Pathways

Full system pathways must be prioritised

These pathways will inevitably mean certain stakeholders such as GPs or Nurse Endoscopists need more/different skills as they see more patient groups/more pathologies

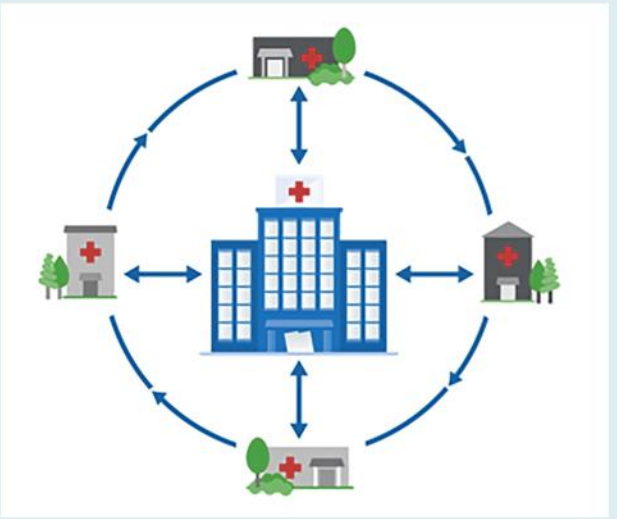
Regional Networks will need to create their own solutions, such as:

- Expanded CDCs
- Stand alone community endoscopy (including GP practices)

Critical diagnostic aspects of biopsy/pathology will phase out, replaced by AI (as the technology comes around)

What does that look like on the front line?


TIME
COST
QUALITY



PENTAX®
MEDICAL

REDUCE ENDOSCOPE DRYING AND STORAGE TO JUST 1–3 MINUTES

carbon neutral
natureOffice.com | DE-077-537721

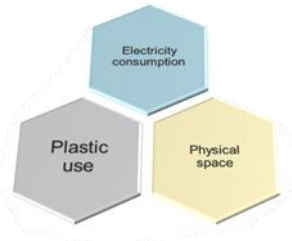
BLUE ANGEL
THE GERMAN ECOLABEL

PLASMATYPHOON+
POWERED BY PENTAX MEDICAL

AUTOMATED BRUSHLESS CHANNELS PRE-CLEANING IN JUST 2–7 MINUTES

AQUATYPHOON
POWERED BY PENTAX MEDICAL

Health Innovation Wessex



PENTAX® MEDICAL

Independent Real-World Evaluation of PlasmaTYPHOON+ & PlasmaBAG

Comparison to Surestore & storage cabinet

kWh **22 times lower** than the cabinet

64% less single-use plastic waste was generated

approximately **2,628kg less** waste per year

Actual savings to the decontamination unit in FY23-24 was **£107,856.59**

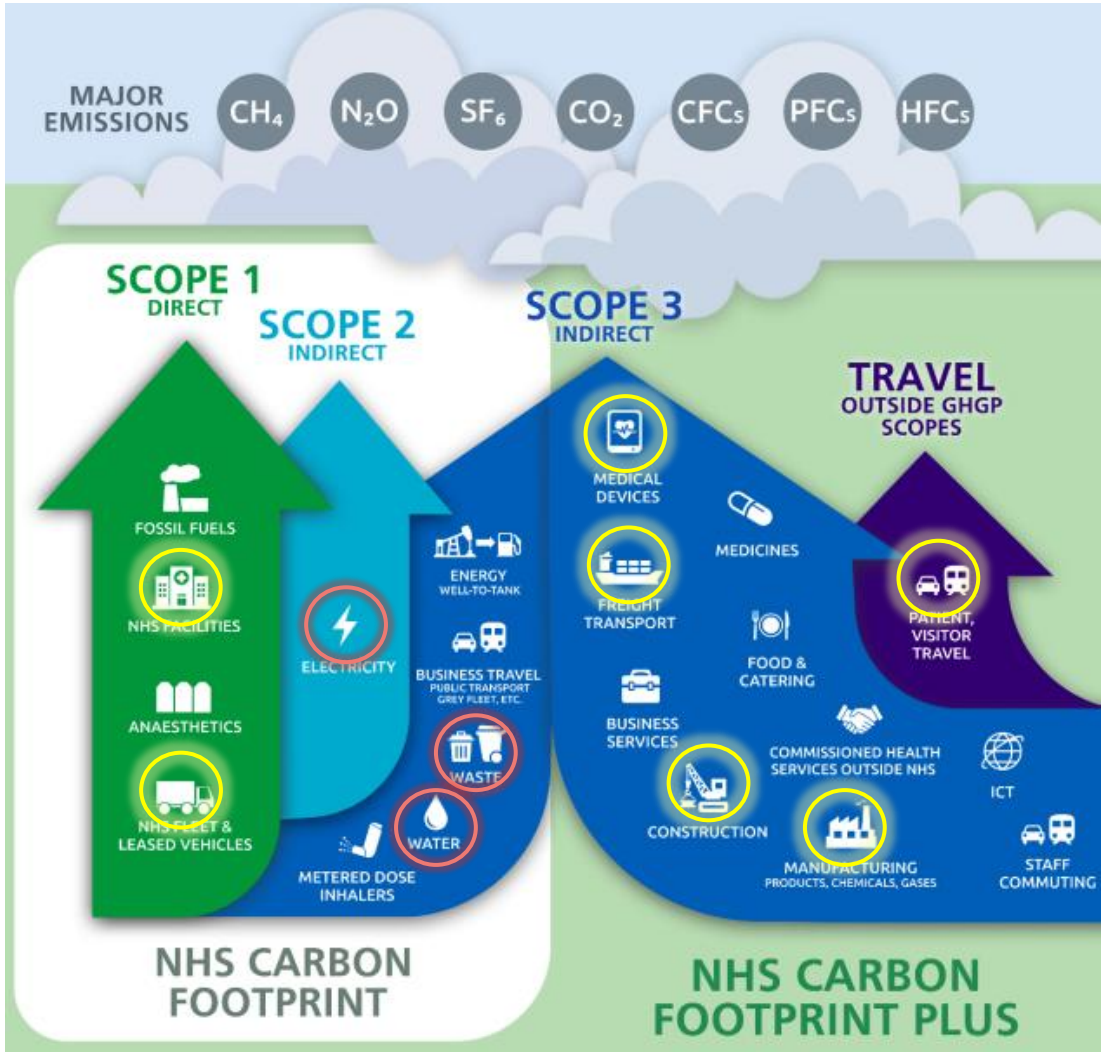
"There is a need for a coordinating force to drive and manage the various stakeholders required to update / create guidance for drying cabinet replacement systems like PlasmaTYPHOON+"

Suppliers or Partners

APRIL 2023 — All contracts above £5 million will require suppliers to publish a CRP for their UK Scope 1 and 2 emissions as a minimum (building on PPN 06/21).

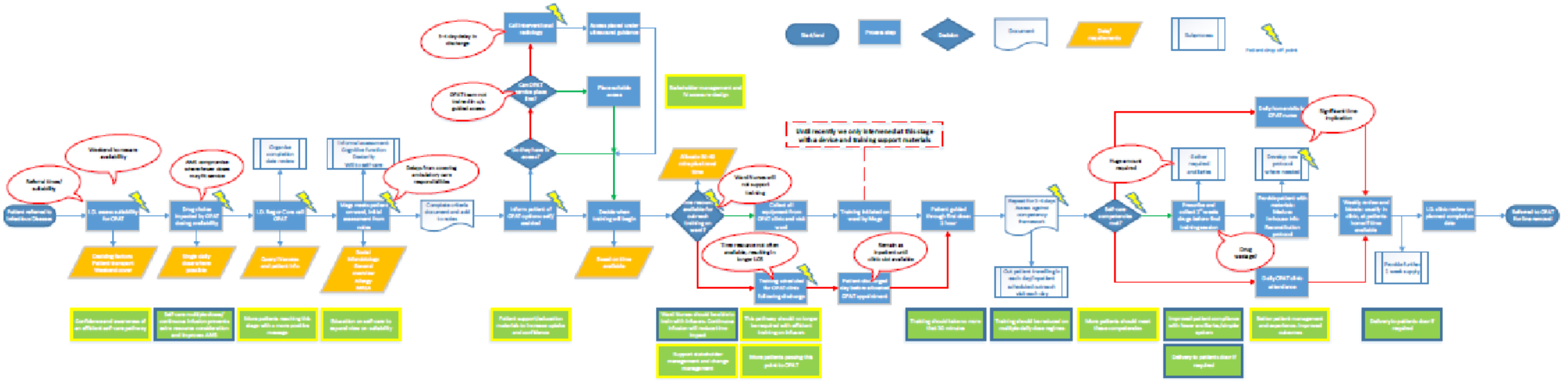
APRIL 2024 — All suppliers will be required to publish a CRP, irrespective of contract value. Suppliers will need to include their UK Scope 1 and 2 as a minimum.

APRIL 2027 — All suppliers will be required to publicly report targets and publish a CRP aligned to the NHS net zero target, for Scope 1, 2 and 3 emissions.



Pathway consultancy

- In-depth analysis of the patient flow through the Hospital
- Engage a wide range of stakeholders
- Uncover genuine opportunity and need for change
- Deliver real change within an organisation



Blackbox Innovations

powered by PENTAX Medical

Blackbox Innovation workshops

Small group of advisor are host in our R&D sites to assess to the latest research in a specific fields

Blackbox Innovation room

Products in an early stage of development are demonstrating in a closed environment to gather clinical input prior to the market introduction

IMPROVE CLINICAL OUTCOMES

ENHANCE EXPERIENCE AND SATISFACTION

MAXIMIZE VALUE

PENTAX® MEDICAL

Artificial Intelligence

PENTAX Medical Discovery™

- Powerful Panel-PC for seamless integration
- 4k touch screen for intuitive interaction
- Customizable profiles adjustable to your preferences

Video Processor

INSPIRA

- Most advanced platform for GI, ERCP, EUS and Pulmonology
- Resolutions up to 4K
- Powerful 5 LED light source
- Broadest range of image enhancement functions with i-scan SE, TE and OE 1&2
- Smartphone-like touchscreen for intuitive usability

Duodenoscopes

DEC Duodenoscopes

- HD+ image ERCP procedures
- Fewer reprocessing steps for faster cleaning
- Disposable elevator cap
- Reduces cross contamination

Balloon for Cryoablation

C2 CryoBalloon

- Treatment for Barrett's esophagus
- Offers flexible ablation options
- Suitable for a wide range of patients
- Less post-procedure pain

PENTAX® MEDICAL

Thank you!

Refreshments & Networking

CONVENZIS TRAINING

Please scan the QR Code on the screen below to register your interest for our accredited training courses.

Chair Morning Reflection

Mr Anil Vara, Bsc (Hons), Msc, MBA, CMgr, FCMI
Director of Elective Recovery (Ex) and Clinical Technologist in Nuclear Medicine
University Hospitals Sussex NHS Foundation Trust

Case Study

inform people

Case Study

Christopher Thomas
CEO
Inform People Ltd

THRIVE

Increasing capacity and performance through list utilisation at scale

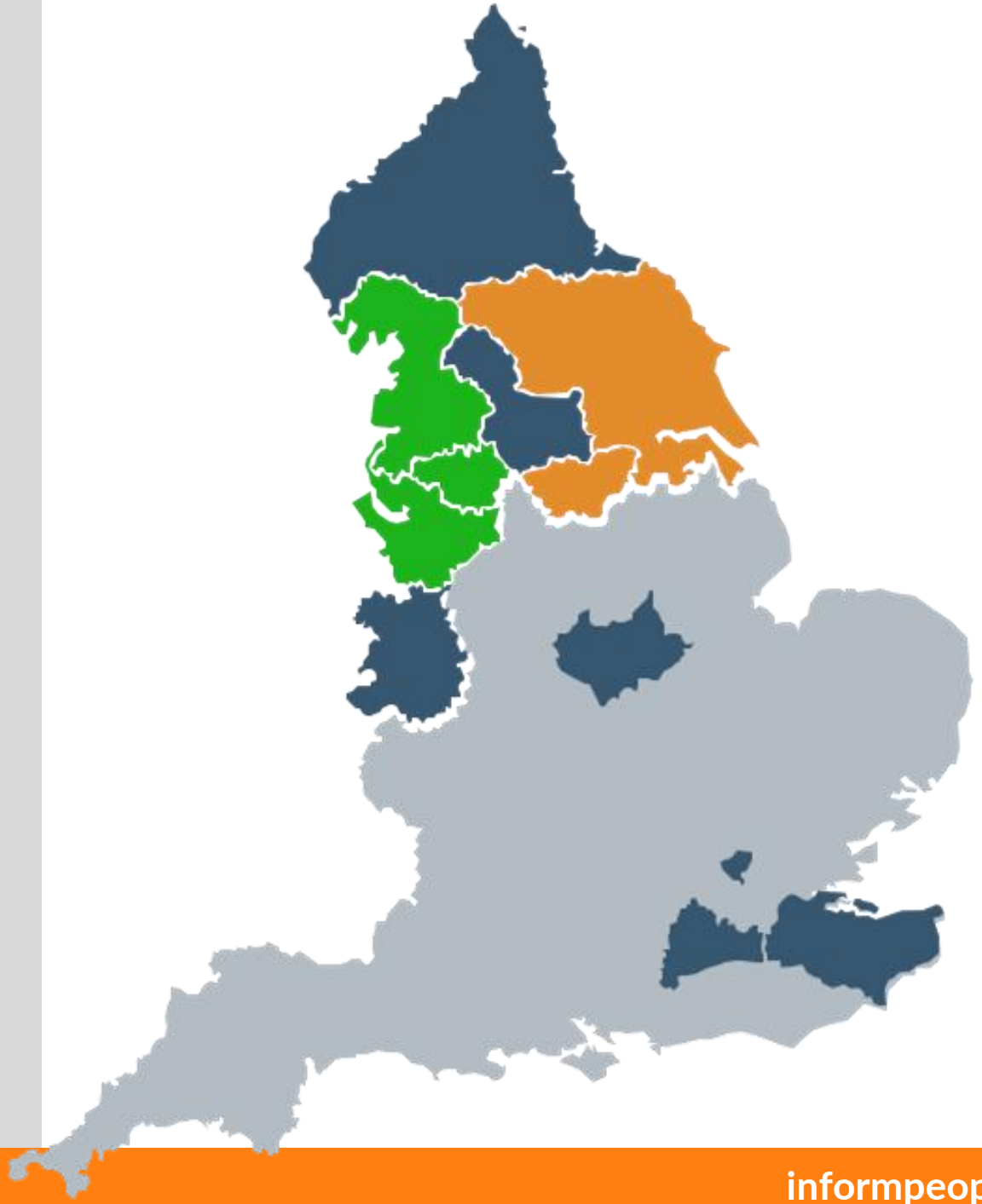
inform people

Introduction

How THRIVE supported in improving performance across multiple regions, with some Trusts **increasing productivity** by up to

23%

year on year.

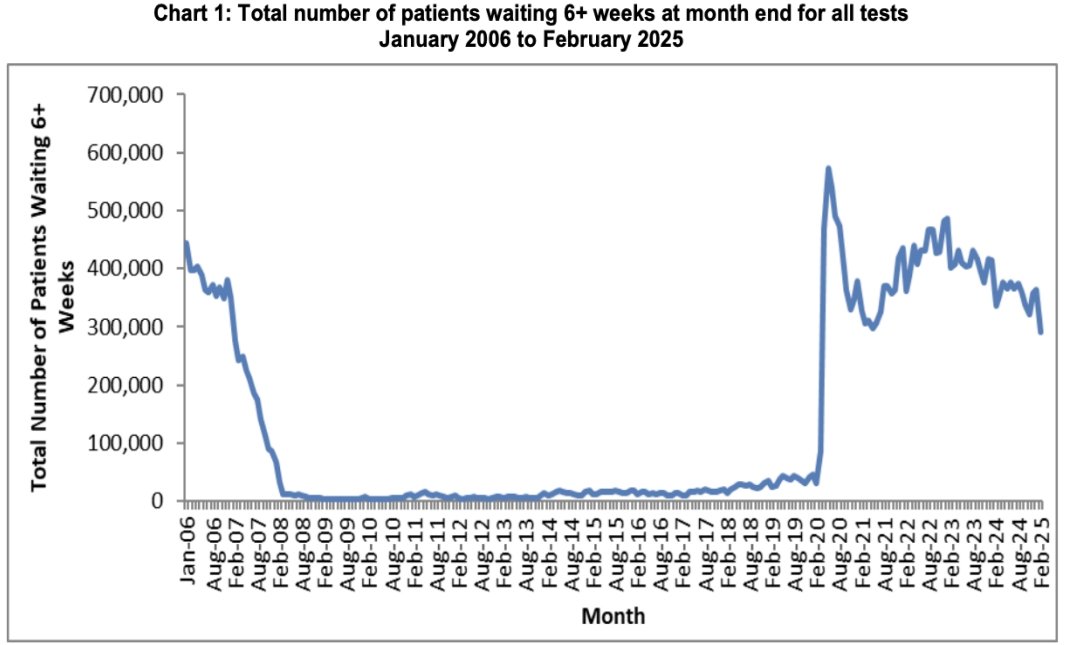


Why a new approach?

Diagnostic Procedure ***Waiting Times have not yet recovered*** from Covid-19

NHS ***Budgets are more restricted*** than ever before

Nationwide ***staffing issues/shortages***



There is a ***need*** to do more with what we already ***have***

*Information taken from the NHS Statistics Statistical Commentary Report for February 2025

How this can be addressed

Understand ***current capacity*** and ***list utilisation***

Set goals on what should be achieved - KPIs

Test changes in working practices, monitor the impact, ***sharing*** **success AND failures**

Health Innovation Network
Local change, national impact

'Data alone will not solve problems: it is an enabler to achieve change'.

Extract from NHS Sponsored Innovation Agency detailing the impact of THRIVE on a trust in the Cheshire & Merseyside Endoscopy Network available on their website

Starting Point

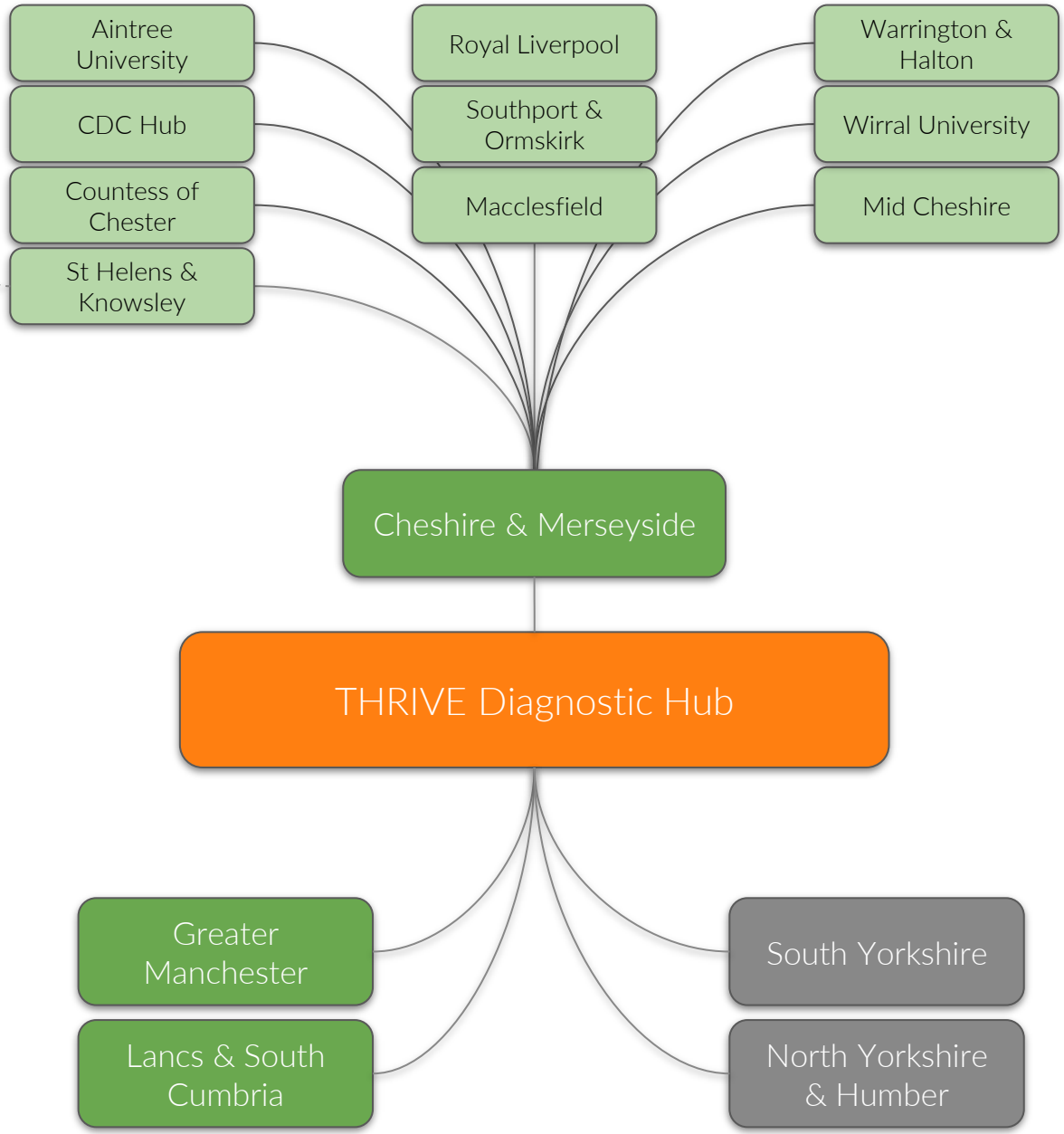
Excel Trial Site

Started with an Excel sheet being used in ***1 trust to monitor productivity***

Moved to ***digital system*** across the region

Accepted as a key part of ***regional endoscopy user group meetings***

Move to ***cross region reporting*** tool to share best practice



What is THRIVE?

Cloud based **real time** activity data

Minimal input requirements

Set baselines for future improvement

Set and ***track KPIs at scale***

Share ***best practice***

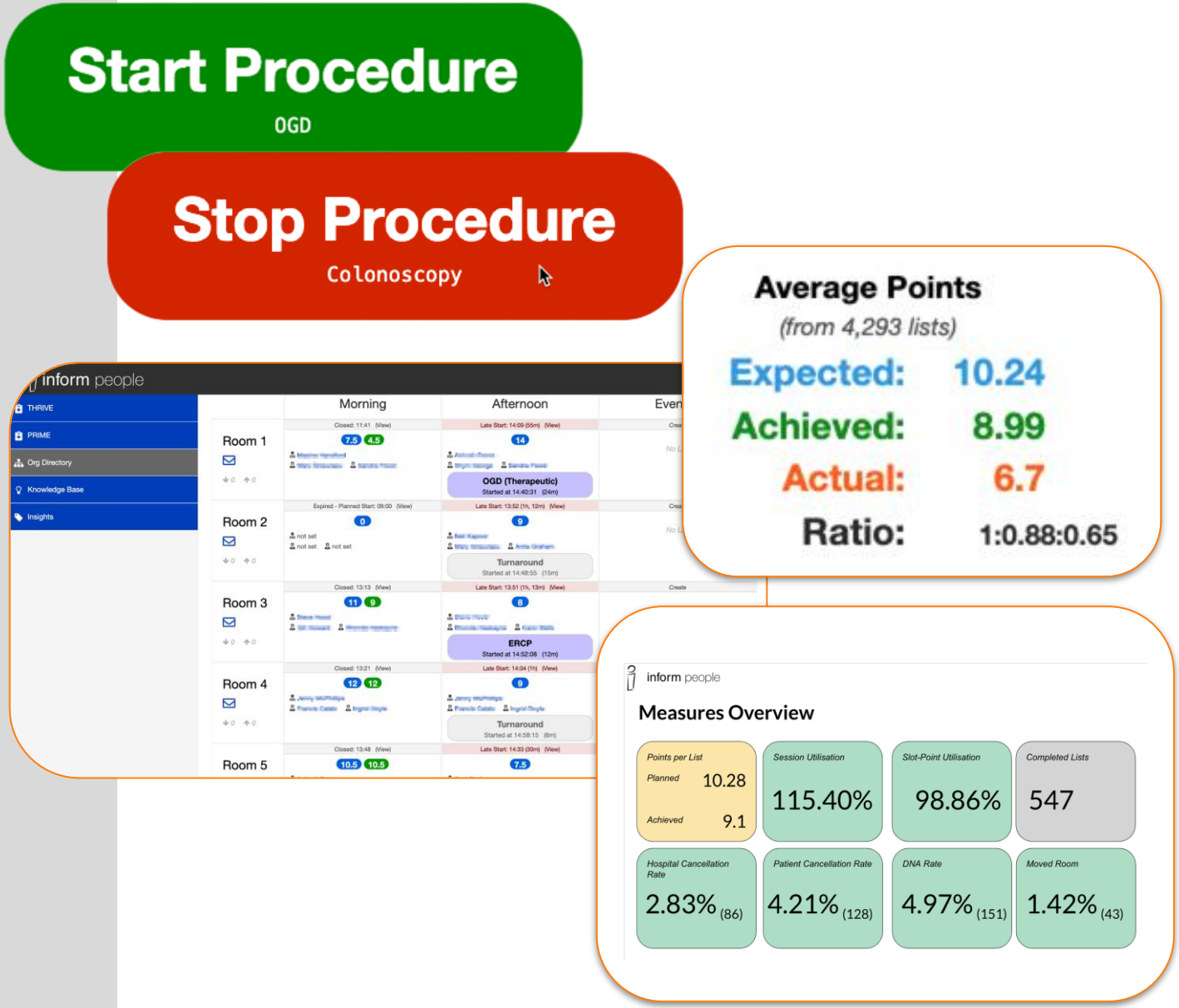
THRIVE in use

Nurses/HCA's - Stop/Start button

Unit Managers - Unit overview

Senior Manager - Quick access live reporting and curated reports to monitor KPIs designed for Endoscopy

Regional Team - Detailed management reports for trials and support for business change



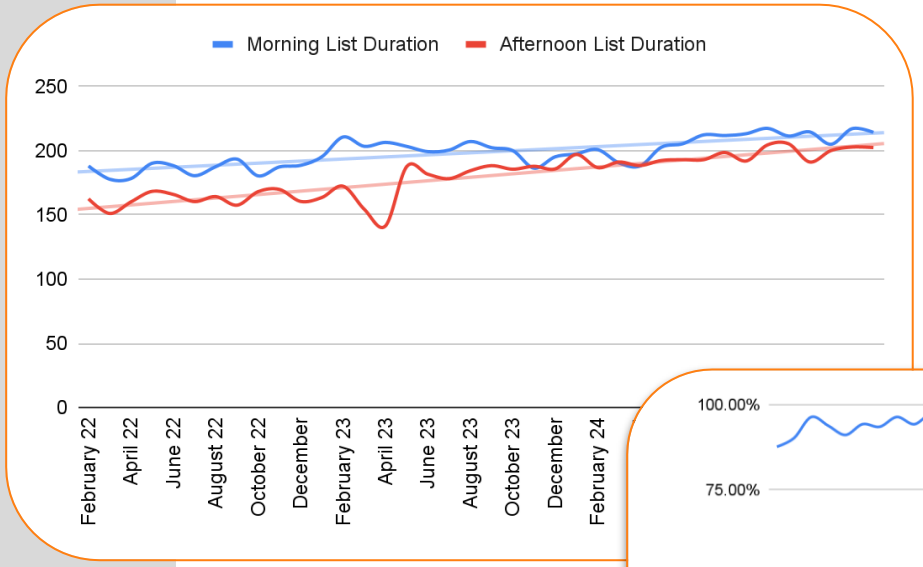
Cheshire & Merseyside Results

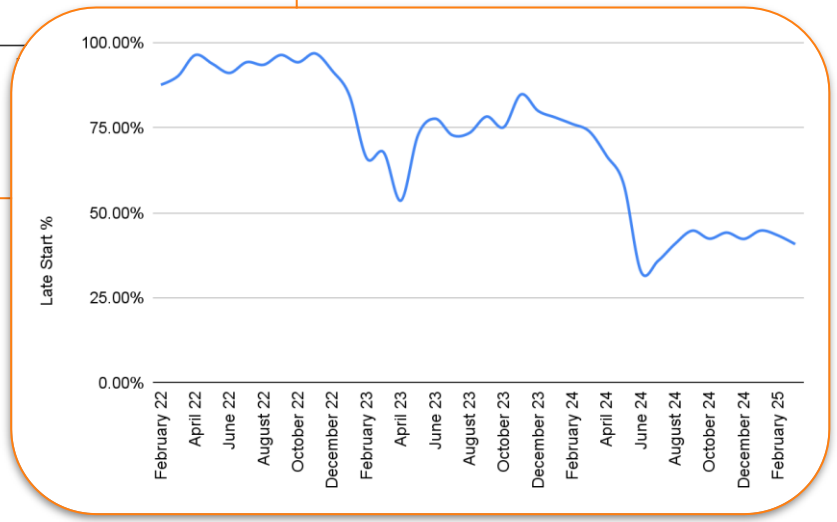
42 % reduction in late starts

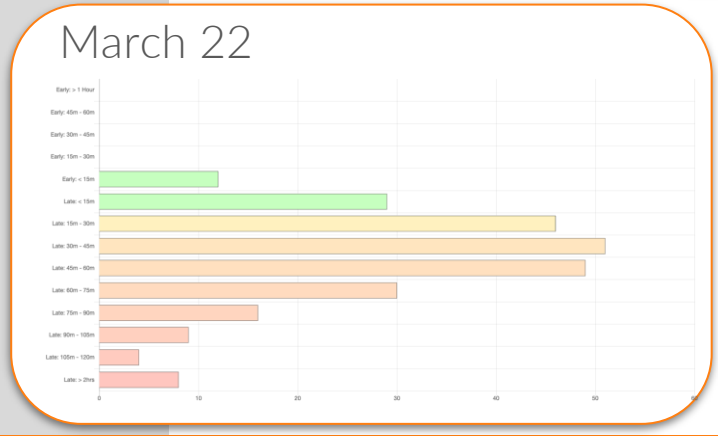
over a 3 year period

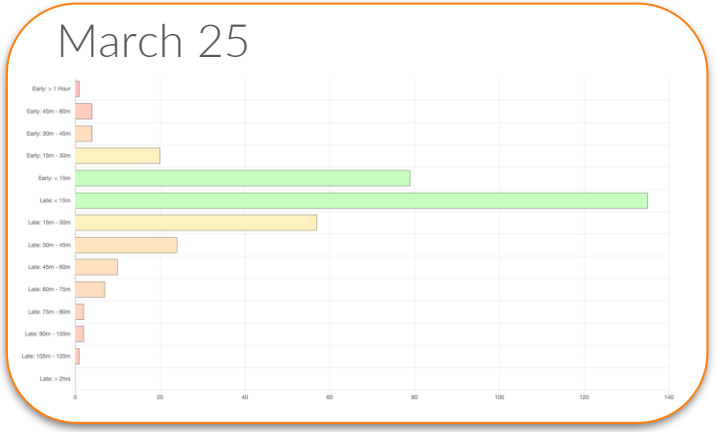
175 hours **per month**

at this *1 trust in C&M*









Cheshire & Merseyside Results

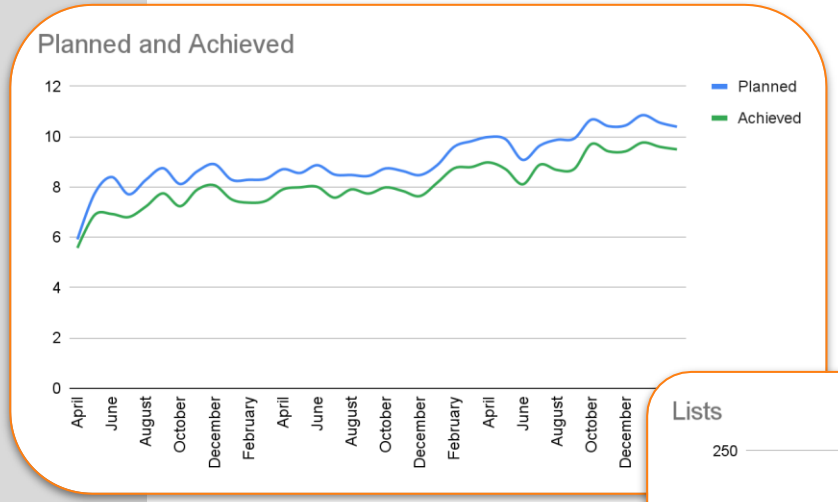
Increase on average points per list, both planned and achieved

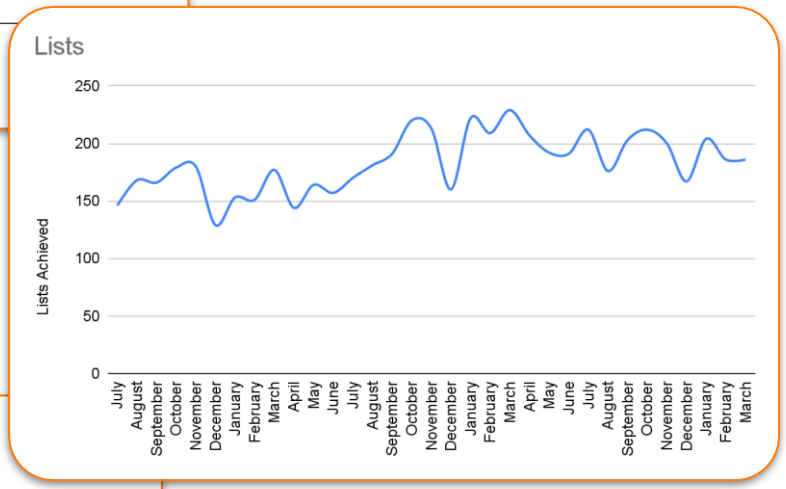
Number of lists completed remaining steady

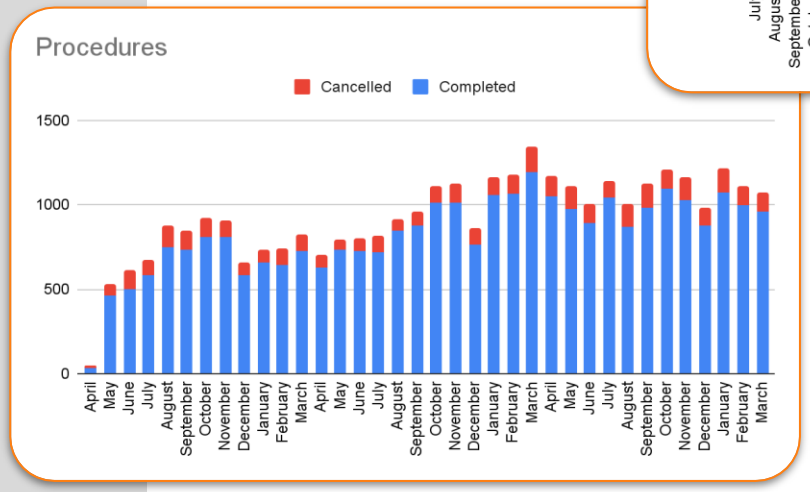
Single Location Results:

	March 2024	March 2025
Planned	9.82	10.40
Achieved	8.80	9.50

*kept anonymous for GDPR



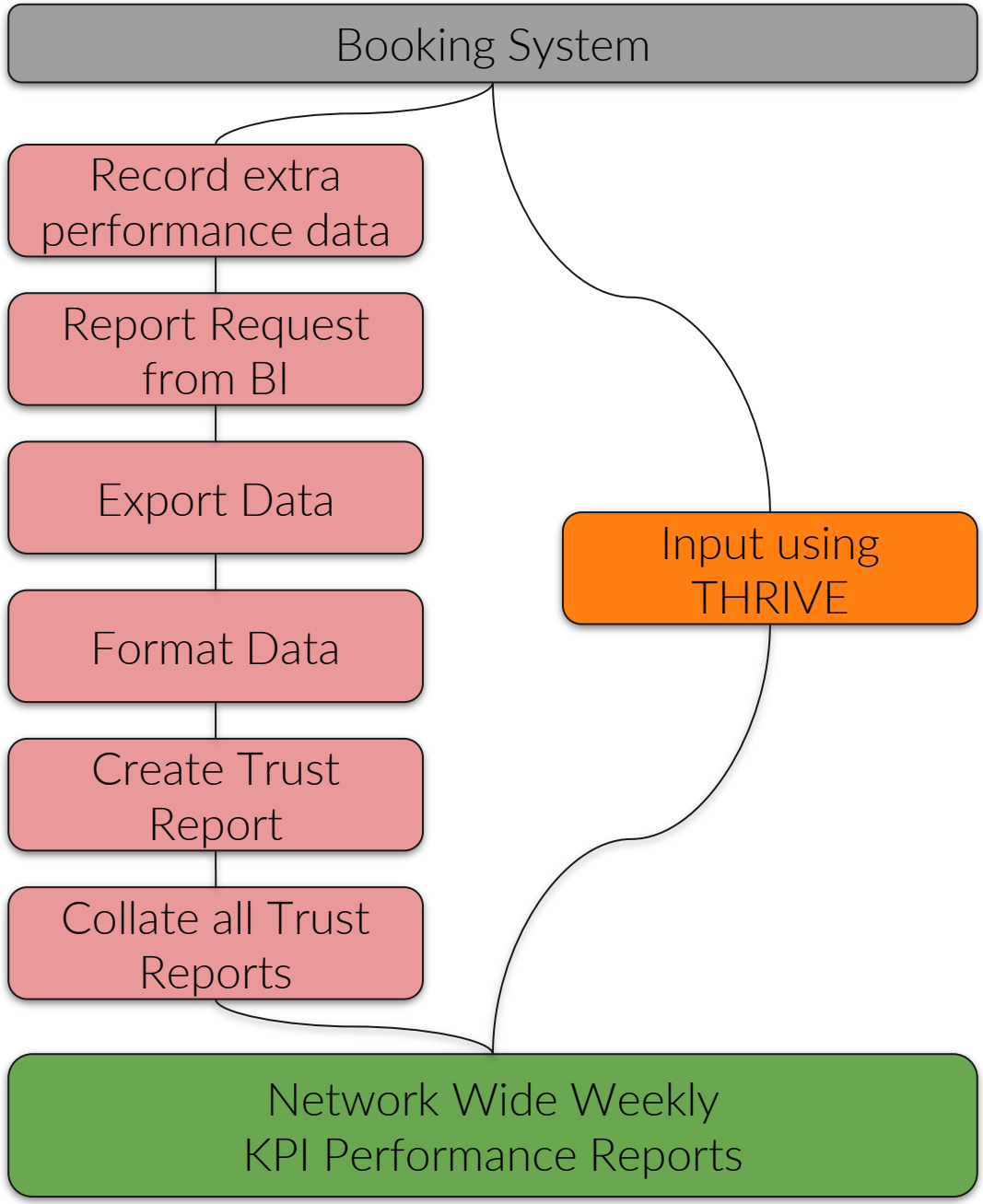




Streamlined Reporting

Example of 1 reporting stream that has been simplified in Cheshire & Merseyside, reducing overall admin requirements.

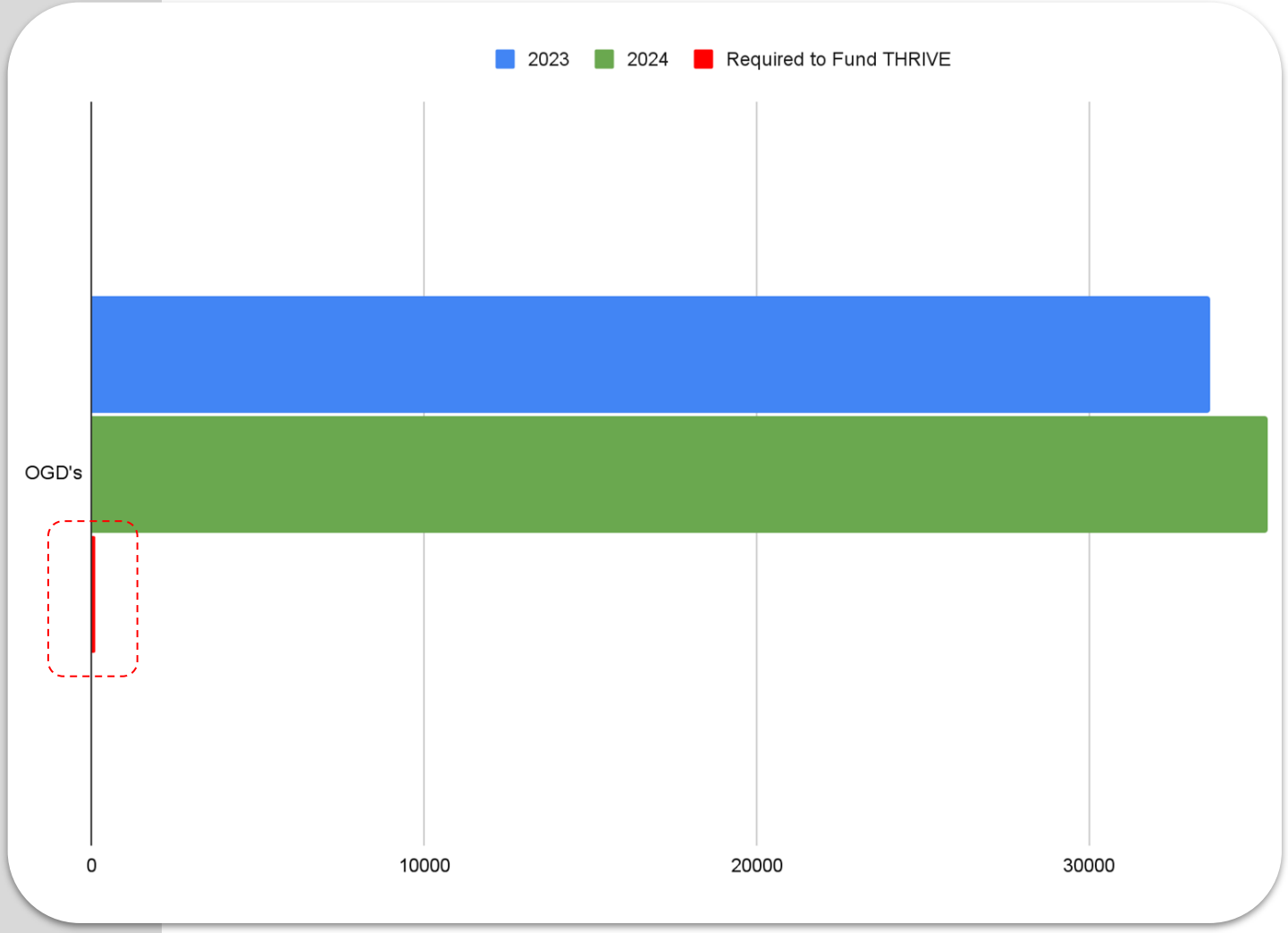
Example based on measuring performance against KPIs on a weekly basis.



Cost of THRIVE

To run THRIVE for a whole year would require an increase productivity by

3 OGD's (or 2 Colons)
per room
per year



Whats next…

EXTRA Greater Manchester …

	January 2024	January 2025	Change
Planned Points	9.36	9.65	+ 0.29
Achieved Points	8.09	8.43	+ 0.34
Session Utilisation	80.93%	86.87%	+ 5.94%
Did Not Attend Rate	8.04%	6.05%	- 1.99%
Hospital Cancellation Rate	4.26%	3.35%	- 0.91%

NHS Lancashire & South Cumbria NHS Foundation Trust

The THRIVE team are incredibly helpful and always on hand to support when needed. We have seen a number of valuable and measurable benefits of THRIVE and have received great feedback from staff using the tool.

Lucy Howard, Lancs and South Cumbria

NHS University Hospitals of Morecambe Bay NHS Foundation Trust

THRIVE is brilliant for measuring data and performance, which is then presented in a clear, easy to understand format… The admin support is extremely helpful and responsive.

Kelly Langley, Unit Manager

NHS Barnsley Hospital NHS Foundation Trust

We have been truly impressed by the ease of implementation and the user-friendly nature of the system itself. Our teams have been highly engaged and have found the onsite training and support to be exceptional. I eagerly anticipate our first data set and the service improvements that THRIVE will enable us to achieve in the future.

Craig Prince, Service Manager

NHS Mid Cheshire Hospitals NHS Foundation Trust

I love this tool, previously I was collecting turnaround times, start/finish and room utilisation by hand - THRIVE saves me and my team so much time.

Carole Lyth, Clinical Service Manager Endoscopy

Questions and Contact Information

inform people

Chris Thomas,
CEO
Inform People Ltd
Chris@informpeople.com

Cloud based **real time** activity data

Minimal input requirements

Set baselines for future improvement

Set and ***track KPIs at scale***

Sharing of best practice

CONVENZIS

Case Study

MEDILOGIK
ems™
ENDOSCOPY MANAGEMENT SYSTEM

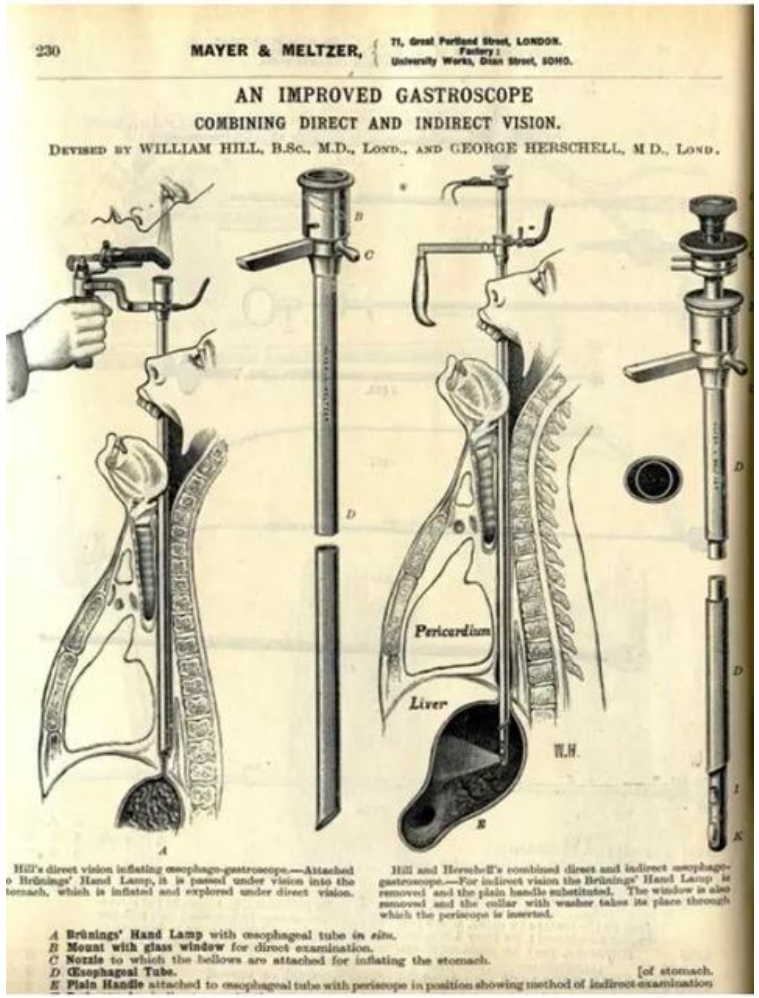
Case Study

Mr David Simpson
Product Director
Medilogik

Dr Tim Elliott
Business Development Director
Medilogik

..... we've come a long way

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM



'Hold the endoscope still and I'll thread the patient over it'

Michael Debakey

MEDILOGIK

MEDILOGIK
ems™
ENDOSCOPY MANAGEMENT SYSTEM

Ryan Beegan
Managing Director

Dr Tim Elliott
Business Development Director

David Simpson
Product Director

www.medilogik.co.uk

Company Overview

MEDILOGIK
ems™
ENDOSCOPY MANAGEMENT SYSTEM

- MEDILOGIK formed in 2012
- Multi-skilled team of 25 located throughout the UK
- Staff have > 130 years endoscopy experience
- All development work carried out in the UK for the UK market

EMS™ Core Product

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- Endoscopy Reporting for Gi, Respiratory & Urology
- with our proprietary HD Image & Video Capture
- delivered via our fully managed Azure Cloud
- supported with FHIR Integration to customer EPR

EMS™ Colonoscopy Report

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

NHS Trust

Colonoscopy Report

Name	**MCCANN, Stefanie (Mrs)** **22-Mar-1939 (86y) (Female)**	Address	**407 Rocky New Blvd.,** **Northampton,** **Lee-on-Solent, Antrim,** **PE49 7YY**	Hospital No. Procedure Date EMS Report Id	**122827615** **15-Apr-2025 11:13** **94126**

Mrs Stefanie Mccann
407 Rocky New Blvd.
Northampton
Lee-on-Solent
Antrim
PE49 7YY

Referral Details

Patient Category	**NHS/Day Case/Urgent**
Referral Date	**08-Apr-2025**
Referral Source	**GP**
Registered GP	**Toby Decker**

Referral Reasons

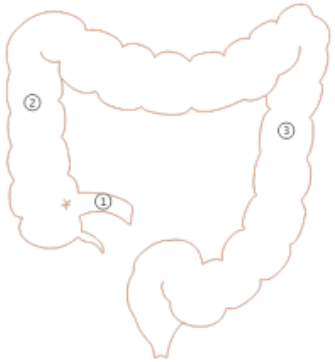
Reasons	**Rectal bleeding (Type: Altered blood)**
Co-morbidities	**Atrial fibrillation** **Pacemaker**
Current Medication	**Clopidogrel**
Preparation	**2 x PLENVU**
Boston Bowel Score	**9 (Excellent)**
WHO/ECOG Grade	**Grade 0**

Procedure Summary

Endoscopist	**Mr Jim Docherty**
Instrument	**32790 (Olympus)**
Scope Guide Used	**Yes**
Medication	**50 mcg Fentanyl** **2.5 mg Midazolam** **Entonox**
Extent of Exam	**Terminal ileum**

Findings & Procedures

1 - Terminal ileum: (1 image)
2 - Distal ascending colon: (3 images)
1 x 15mm, Paris 1s polyp
1 x polyp removed and 1 x retrieved by polypectomy. Excised piecemeal, cold snare with excision - complete. Pre-injected with 6ml lifting solution, 2 clips placed
3 - Proximal descending colon: (2 images)



Diagnosis (recorded at procedure)

Polyp(s), The rest of the colon to the extent of the examination was normal

Post Pathology Diagnosis

Awaiting Results

Procedure Comments

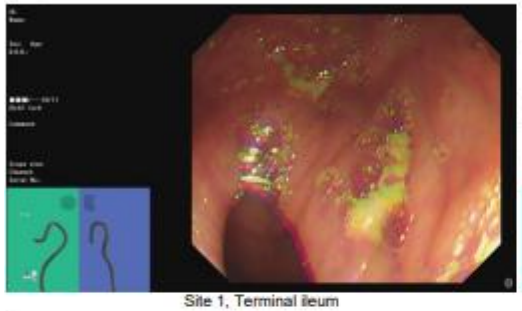
Two simple polyps removed - likely SSL in ascending and TVA in left. If confirmed histologically would come into high risk group in surveillance guidelines suggesting repeat in 3 years. However, having discussed further scopes with patient, both of us in agreement risk is far greater than benefit.

Patient Management & Follow Up

Clopidogrel should be restarted on 16-Apr-2025.
Histology report to be returned to Endoscopist
Follow up to be decided: by pathology

Colonoscopy Image Report

Name	**MCCANN, Stefanie (Mrs)** **22-Mar-1939 (86y) (Female)**	Address	**407 Rocky New Blvd.,** **Northampton,** **Lee-on-Solent, Antrim,** **PE49 7YY**	Hospital No. Procedure Date EMS Report Id	**122827615** **15-Apr-2025 11:13** **94126**


Site 1, Terminal ileum


Site 2, Distal ascending colon


Site 2, Distal ascending colon


Site 2, Distal ascending colon


Site 3, Proximal descending colon


Site 3, Proximal descending colon

Customer Base

- All Independent/Private Sector suppliers with >5 Units.
- Scotland - 5 Health Boards Wales - 6 Health Boards
- NHS Trusts – 52 LIVE at present and growing month by month

MEDILOGIK EMS Customer Map by Post Code	**MEDILOGIK Customers – Google My Maps**

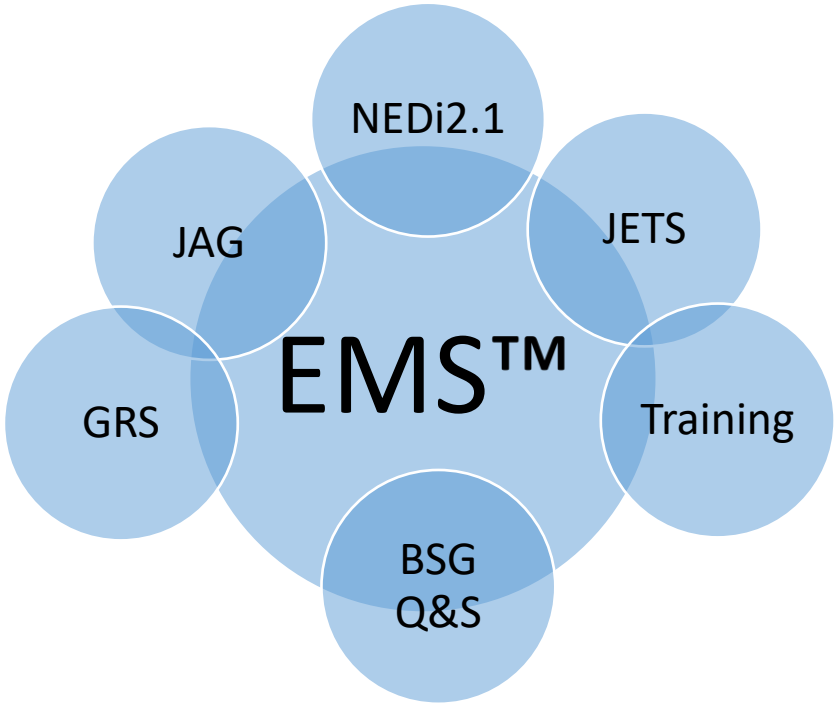
EMS™ Annual Customer Activity

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- > 100 Azure cloud instances across UK & Ireland
- > 20k configured users
- > 1 Million procedure reports signed off
- > 5 million images saved each year

Supporting GI National Requirements

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM



NED NATIONAL ENDOSCOPY DATABASE

JETS JAG Endoscopy Training System

NED Uploads & Supplier Comparison Quarter to March 2025

Supplier	Software Version	Procedures Loaded *	% Sites NEDi2.1
Endosoft	nedi2service 2.1.0.10 nedi2service 2.1.0.15 nedi2service 2.0.0.3	52,442	65%
Epic Lumens Endoscopy	Manchester University NHS Foundation Trust	14,768	0%
HD Clinical	2	104,336	62%
HICSS	08.02.01 08.02.03 08.04.01 08.04.00 08.02.02	46,339	32%
Medilogik	medilogik ems nedi2 export v1.0	286,281	100%

MEDILOGIK EMS

	Uploaded	Rate
Apr-24	74,250	99.92%
May-24	85,229	99.96%
Jun-24	80,070	99.98%
Jul-24	88,363	99.94%
Aug-24	81,342	99.88%
Sep-24	81,299	99.97%
Oct-24	90,621	99.85%
Nov-24	92,846	99.97%
Dec-24	84,959	99.95%
Jan-25	94,952	99.95%
Feb-25	91,823	99.86%
Mar-25	99,506	99.99%

https://ned.thejag.org.uk/SupplierStatus.aspx

Security & Standards

MEDILOGIK
ems™
ENDOSCOPY MANAGEMENT SYSTEM

CYBER ESSENTIALS PLUS

ISO 27001 ISOQAR REGISTERED

ISO 9001 ISOQAR REGISTERED

DCB 0129 Assured by SAFEHAND

ico. Information Commissioner's Office REGISTERED

SME Climate Hub COMMITTED 2024

Scheduling & Booking

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

In use by >70% of NHS Customers

- Advantages of scheduling module:
  - real time status across the organisation
  - select appointments from any hospital in the database
  - calculation of breach dates to meet WT targets
  - match appointments to Endoscopist technical ability
  - Optimises endoscopy list utilisation

What can you expect from EMS™

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- Cloud Hosted ERS with image capture
- Inbound Integration with Trust EPR
- Outbound Proc Report and images to Trust TIE
- GRS Audit Reports
- NEDi2.1 and JETS uploads
- Enhancements driven by User Groups
- All Enhancements delivered at no additional charge
- No downtime – FREE Upgrades delivered OOH

EPR Integration

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

MEDILOGIK integrate with

Altera Health
Daedalus (Lorenzo)
EPIC
InterSystems TrakCare
Meditech Expanse
Orbis
Oracle Cerner
System C

Medtronic PillCam Integration

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

Medilogik North
Medilogik Hospital

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

Capsule Endoscopy Report

Name	**CORNISH, Wayne (Mr)** **05-Jan-1987 (33y) (Male)**	Address	**Weblogik Ltd, IP-City Centre, 1 Bath Street, Ipswich, Suffolk, IP2 8SD**	Hospital No. NHS No. Capsule Issued EMS Report Id	**WRC123334** **123 123 4321** **28-Aug-2020 15:11** **20086**

Case Notes Copy

Referral Details

Patient Category	**NHS/Outpatient/Urgent**
Referral Date	**28-Aug-2020**
Referral Source	**Out Patients**

Referral Reasons

Reasons	**Abdominal distress/pain**
Co-morbidities	**None**
Current Medication	**None**
ASA Status	**ASA I**

Procedure Summary

Endoscopist	**Lady Lawrence Melvin**
Capsule Type	**Colon**
Capsule Serial Number	**123**

Diagnosis

Colon - Polyp(s)

Procedure Comments

This is a test

Patient Management & Follow Up

This is also a test

Patient discharged (no further action required)

Approved electronically
Mr David Simpson (Signed Electronically)
Consultant Surgeon

Recipients: **Registered GP, Case Notes**

ID	Gender	Age	Procedure Date	Indication
KCEVDQ3300_P	Male	69	2017-10-06	

Bowel Prep Quality	Technical Quality	Excreted	Anal Valve	Procedure Duration
Adequate	OK	Yes	No	60

Details of Passage Completion, Section Quality and Position of Polyps >=6mm

Inside blue: Passage complete / Wall blue: Bowel Prep Adequate

Polyps

No	Size (mm)	Location	Morphology	Surface
1	13	Cecum	Sessile (polypoid)	intact
2	8	Right Colon	Sessile (polypoid)	intact
3	4	Left Colon	Sessile (polypoid)	intact
4	3	Rectum	Sessile (polypoid)	intact
5	4	Rectum	Sessile (polypoid)	intact

Additional Findings

No	Location	Finding
1	Other	Rectum
2		

Evaluation by / on

Ursula Valentiner 2017-10-11

Additional Notes

Organization	User	Order Date
NHSH	Etta Grant	2017-10-11

Polyp 1

13 mm Sessile (polypoid)

Cecum intact

Polyp 2

8 mm Sessile (polypoid)

Right Colon intact

Polyp 3

Supporting NHS Regions & ICB's

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

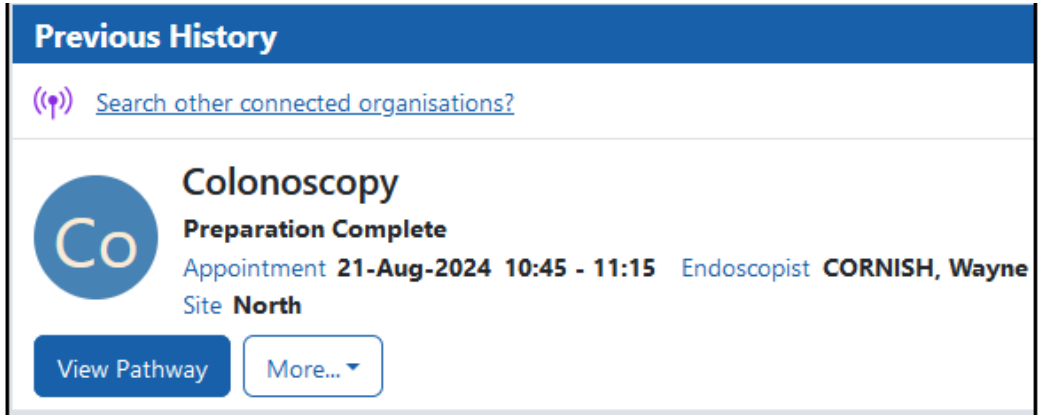
Scenario 1 - ICB of 3 Trusts all LIVE with EMS™

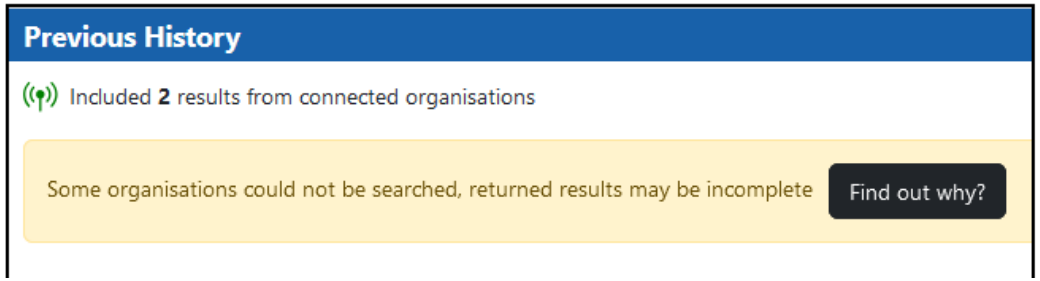
Scenario 2 - ICB with 1 Trust LIVE & additional Trusts joining.

Scenario 3 - with no current EMS Trusts.

1 - Region EMS Report Share

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM





2 - Add Trust(s) to existing EMS Environment

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

SW General Hospital NHS Trust

Edit Group

Organisations

Search... Clear

Show Disabled Organisations: No Yes

+ Create New Organisation

Name	Local Code	Global ML Code
SW General Hospital NHS Trust	RDUH	RDUH

South West ICB

Edit Group

Organisations

Search... Clear

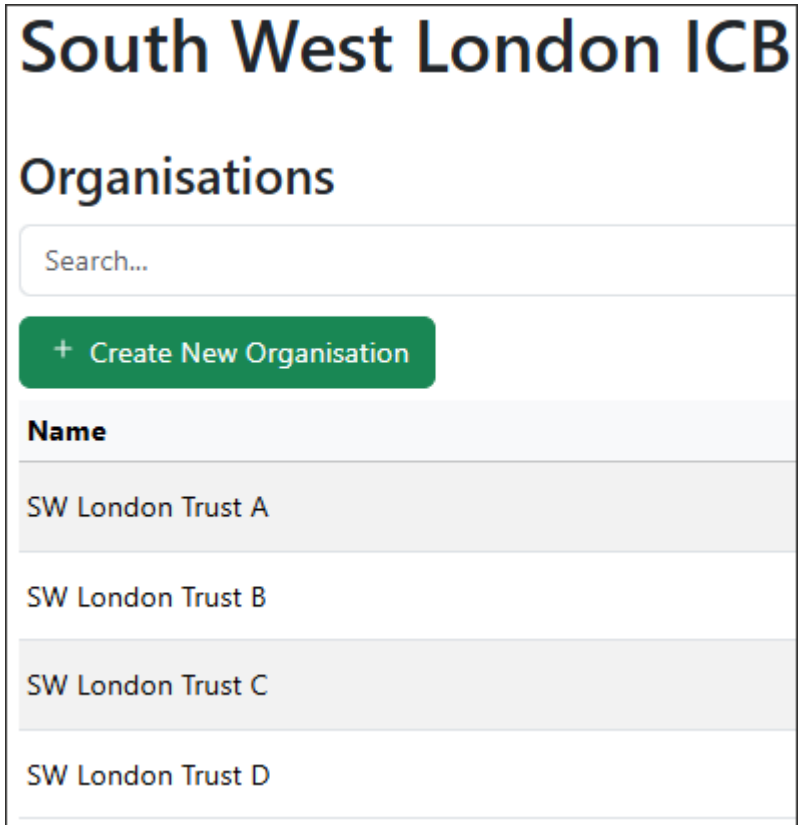
Show Disabled Organisations

+ Create New Organisation

Name	Local Code
SW General Hospital NHS Trust	RDUH
SW London Trust B	TOR
SW London Trust C	PLY
SW London Trust D	SWD

3 - New ICB with 4 Trusts

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM



ICB Solution Benefits

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- Multi tenancy ICB solution
- Maintains 'sovereignty' for each Trust activity & KPI’s
- Legacy Reports uploaded and visible across all Trusts
- Patient History visible across all Trusts
- Economies of scale for EMS Licence, Integration & Cloud Hosting

Questions ?

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

Please visit any of the team for more information

Current Development Workload

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- Enhanced EPR Integration
- Integration with Medtronic PillCam
- Optical Diagnosis
- Post Colonoscopy Colorectal Cancer Audit
- Nurse Care Plan & Pre-assessment Module
- Additional Specialities e.g. ENT

Post Colonoscopy Colorectal Cancer Audit

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

Workflow

- ❖ Upload Cancer Registry/MDT Data to EMS
- ❖ Map against EMS procedures
- ❖ Display results in an EMS data view for Audit
- ❖ Specification agreed and work in progress.

Evidence requirements

- > Evidence that individual endoscopists are given feedback on their safety outcomes at least annually, eg PCCRC
- > Minutes that show that any PCCRC that have arisen in the service (cancer diagnosed within 3 years after a colonoscopy has been performed) have an RCA with action planned as required.
- > Operational policy which describes how PCCRCs are identified and acted upon.

Post-Endoscopy Upper GI (PEUGIC)

- ❖ Data set to be agreed to use same workflow

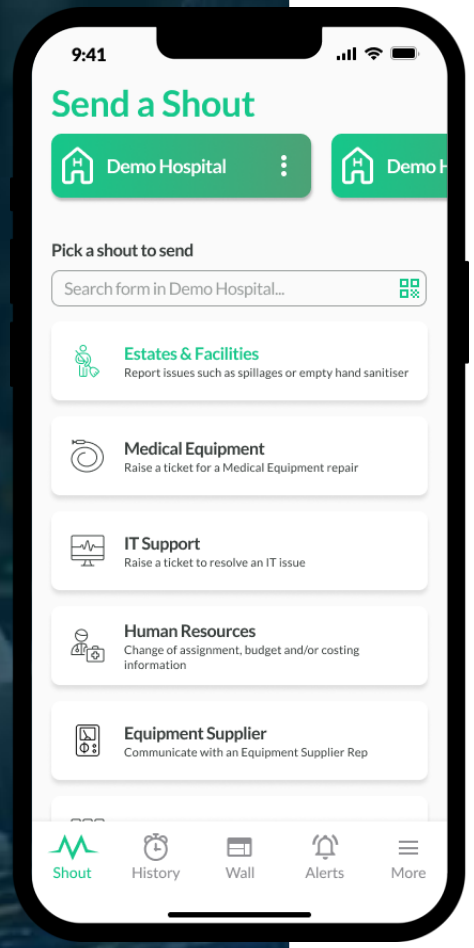
Optical Diagnosis – Resect & Discard

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

Summary | Optical diagnosis

Site	Site Summary	Images	Diagnostic Confidence	Optical Diagnosis	Polyps Discarded
Site 1: Proximal ascending colon	• 1 x 5mm, Paris 2b polyp • 1 x polyp removed and 1 x retrieved by polypectomy. Excised en-bloc, cold biopsy with excision - complete • 1 x polyp specimen discarded - optically diagnosed as serrated with high confidence	1	High confidence	Serrated (including hyper	- 1 +
Site 2: Distal ascending colon	• 1 x 3mm, Paris 2c polyp • 1 x polyp removed and 1 x retrieved by polypectomy. Excised en-bloc, cold biopsy with excision - complete	**None**	**N/A**	**N/A**	**N/A**
Site 3: Distal ascending colon	• 1 x 6mm, Paris 2c polyp • 1 x polyp removed and 1 x retrieved by polypectomy. Excised en-bloc, cold biopsy with excision - complete	1	Select...	**N/A**	**N/A**
Site 4: Distal ascending colon	• 1 x 3mm polyp • 1 x polyp removed and 1 x retrieved by polypectomy. Excised en-bloc, cold biopsy with excision - complete	1	No confidence	**N/A**	**N/A**
Site 5: Distal ascending colon	• 1 x 3mm polyp • 1 x polyp removed and 1 x retrieved by polypectomy. Excised en-bloc, cold biopsy with excision - complete	2	Low confidence	Adenomatous	- 0 +

MediShout<> MEDILOGIK Partnership



Who: MediShout: Partly owned by the NHS and founded by two doctors

What: A one-stop app digitally connecting our customers to our support teams

How: Digital Triage, self-guided question sets, image-based troubleshooting, escalation to our technical experts.

Benefits:

1. Immediate reporting of issues
2. Self-guided resolutions of common issues
3. Improves JAG compliance
4. Saves staff time

MediShout's application is proven to reduce admin burden: Peer-reviewed study

Planned/Possible add Specialities

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- Committed to adding ENT Module
- Opportunities to add further Oscopies such as

  Arthroscopy

  Colposcopy

  Hysteroscopy

Partnership Opportunities

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- CHKS
- Ergea
- Dr Doctor
- Health Edge
- IQ Endoscopes
- Medishout
- Medtronic
- Odin-Vison

Procurement Route

MEDILOGIK ems™ ENDOSCOPY MANAGEMENT SYSTEM

- Direct via NHS Terms & Conditions
- G-Cloud 14
- Framework Partners

Crown Commercial Service Supplier

For advice and guidance on most suitable option

Ryan Beegan will be pleased to assist

MEDILOGIK Contacts

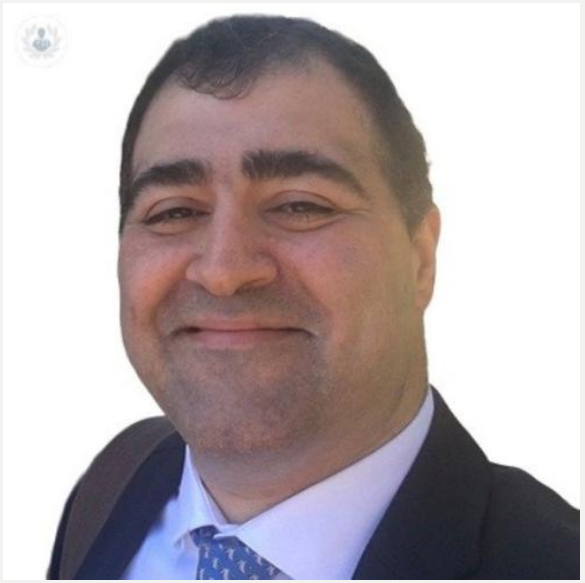
Ryan Beegan
Managing Director
ryan.beegan@medilogik.co.uk

Dr Tim Elliott
Business Development Director
tim.elliott@medilogik.co.uk

David Simpson
Product Director
david.simpson@medilogik.co.uk

Medilogik Limited
5 Deansway, Worcester, WR1 2JG
Tel: +44 (0) 1473 351666
www.medilogik.co.uk

Keynote Speaker



Professor Reza Nouraei
Consultant Airway and Laryngeal Surgeon
The Loxley Centre for Airway Voice and Swallowing, Queen's Medical Centre, Nottingham, UK | The Clinical Informatics Research Unit, Southampton University, UK

Nottingham University Hospitals NHS
NHS Trust

Integrated Foregut Pathways

The NHS Endoscopy Conference, London

Prof. Reza Nouraei MA BChir PhD FRCS

Consultant Airway and Laryngeal Surgeon
Nottingham University Hospitals NHS Trust

1 May 2025

#TeamNottingham

Nottingham University Hospitals NHS
NHS Trust

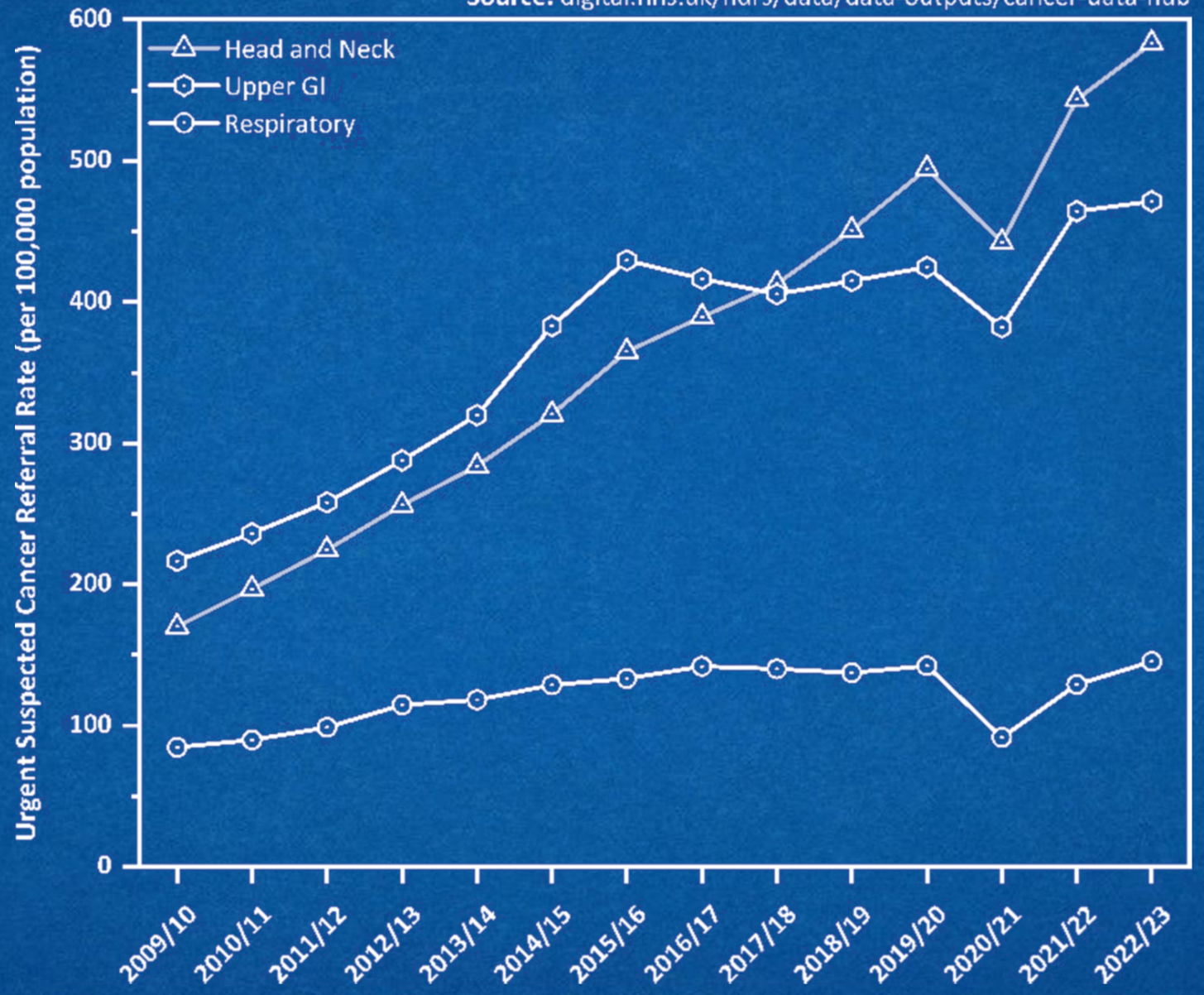
Acknowledgement: We have received unrestricted educational grants from Pentax.

We Listen
We Care

Demand for Endoscopy is increasing

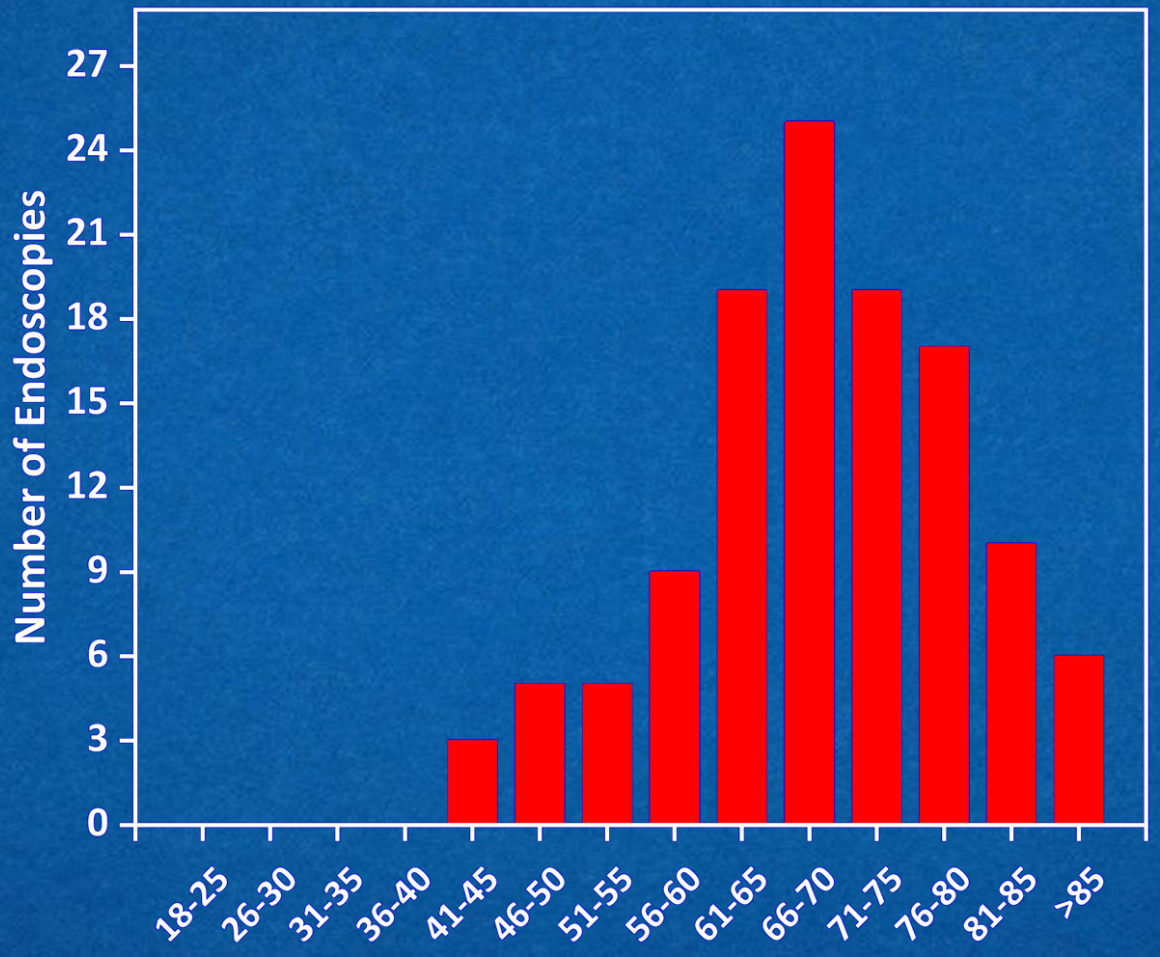
Nottingham University Hospitals NHS
NHS Trust

Source: digital.nhs.uk/ndrs/data/data-outputs/cancer-data-hub

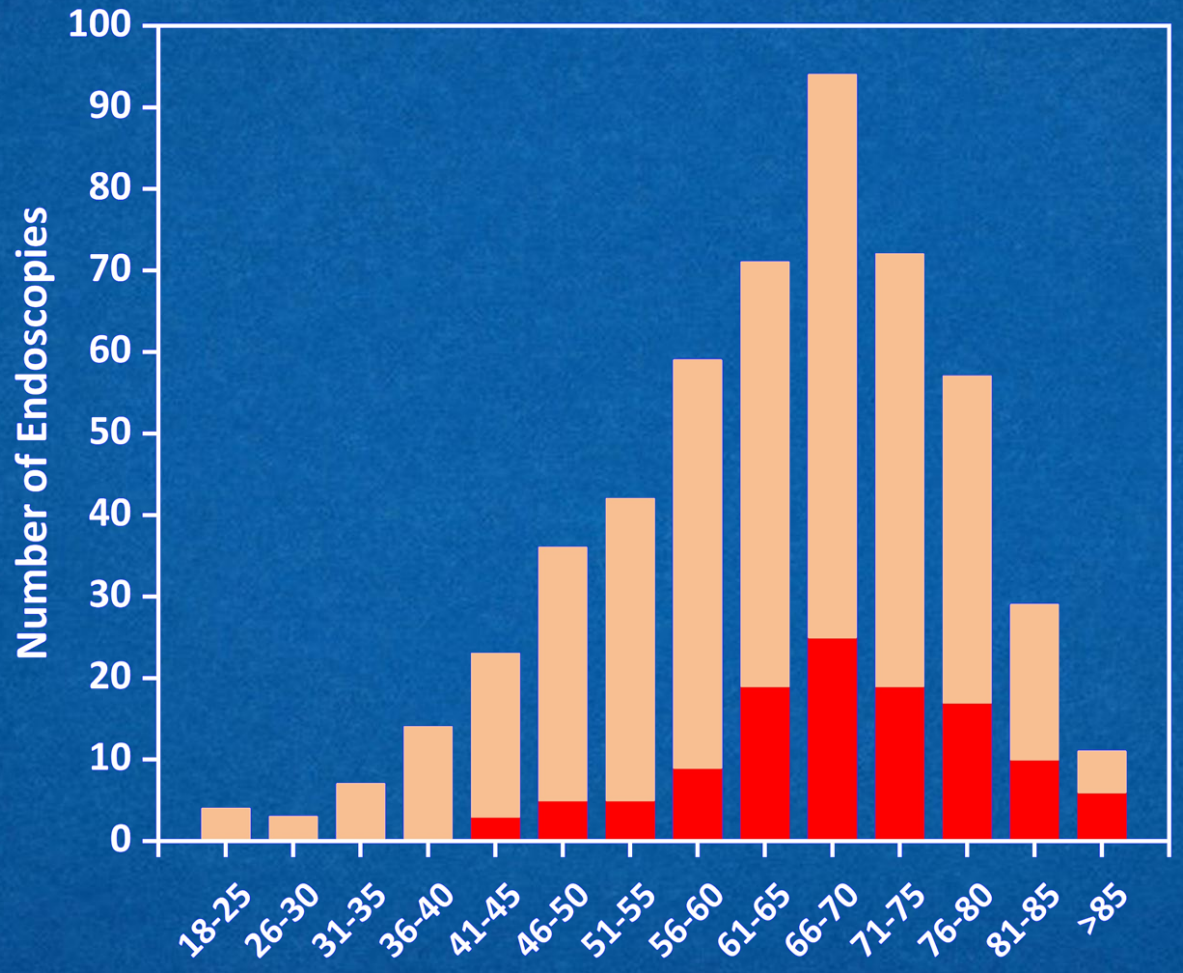


We Listen
We Care

But its diagnostic yield remains low

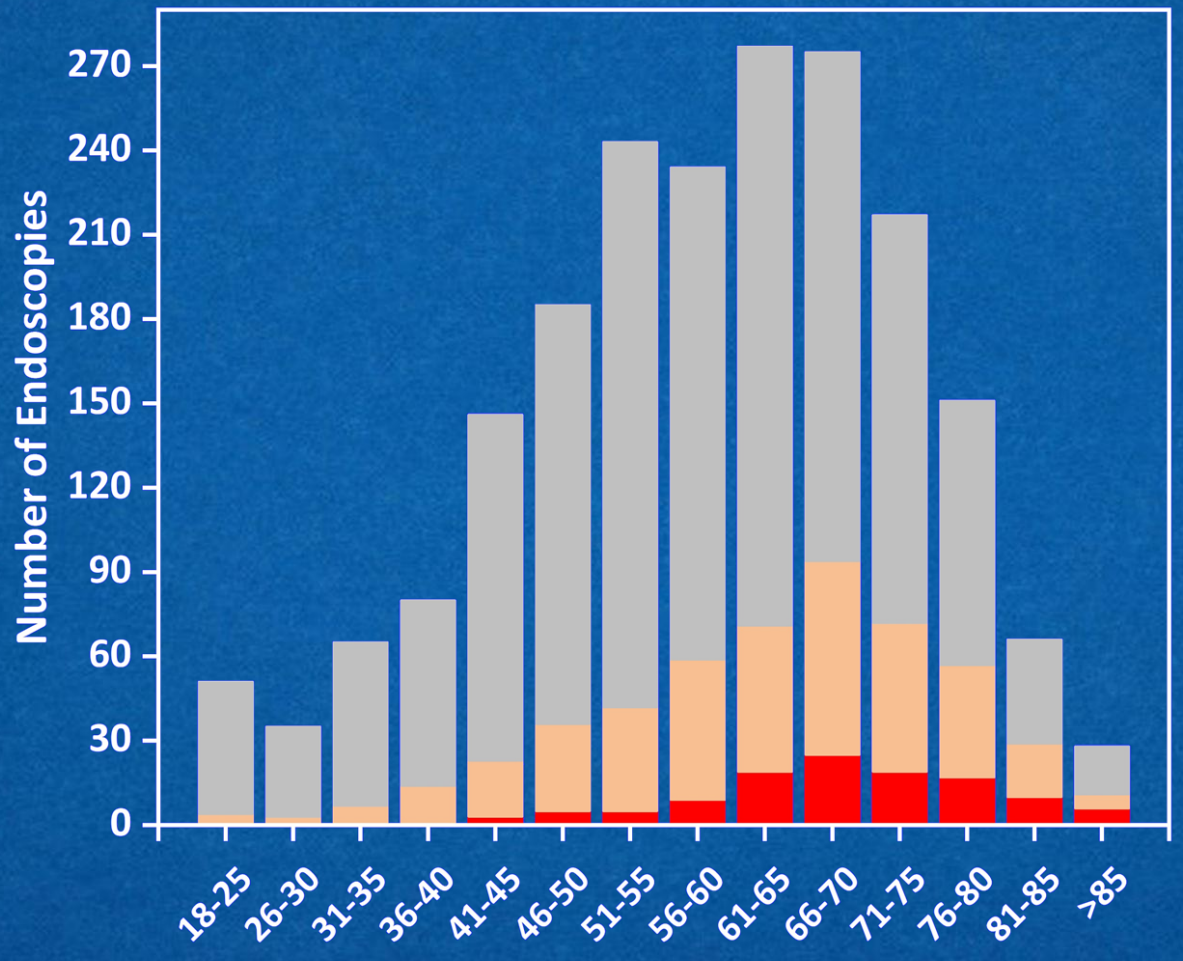


But its diagnostic yield remains low



But its diagnostic yield remains low

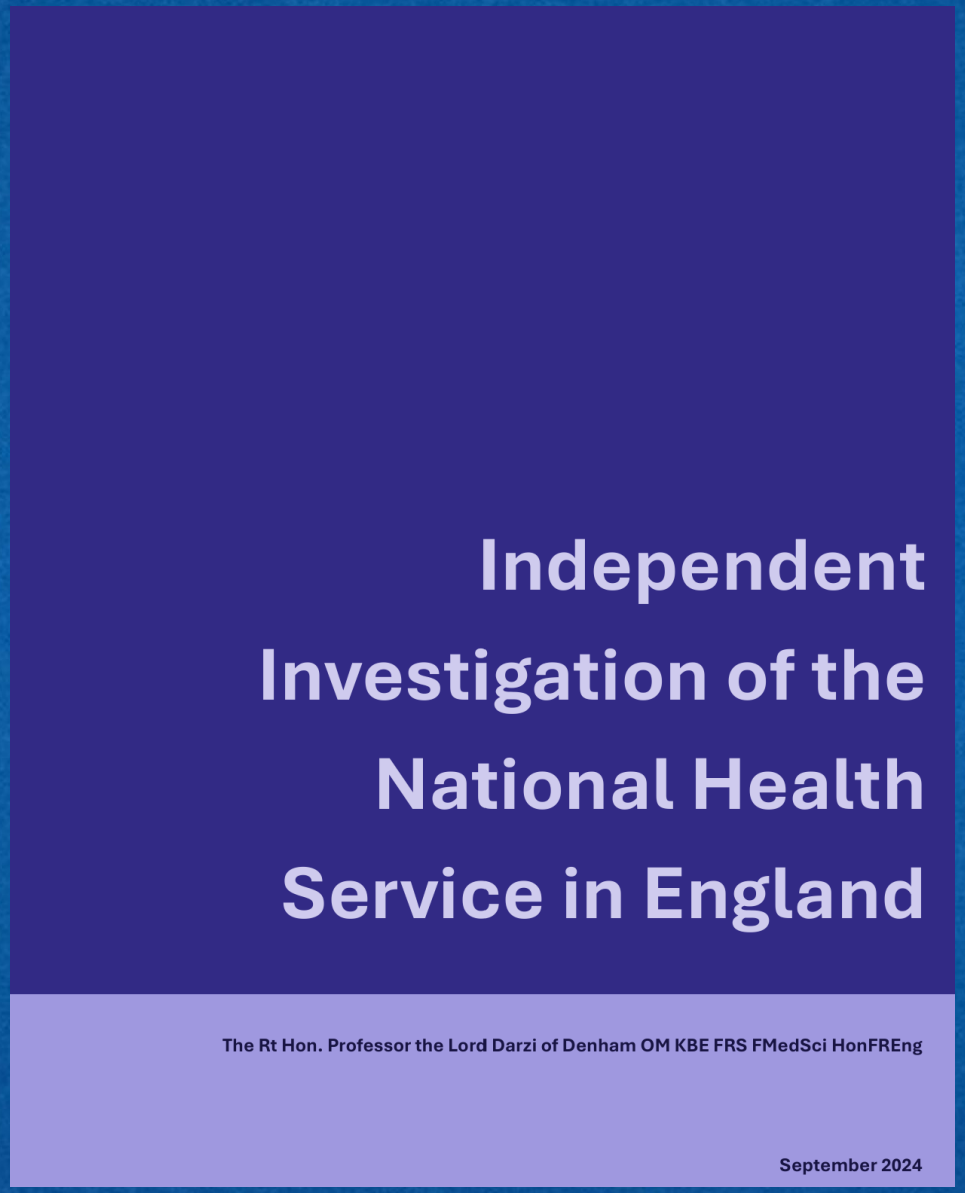
Nottingham University Hospitals NHS
NHS Trust



Endosc Int Open. 2018 Apr; 6(4): E383–E394.

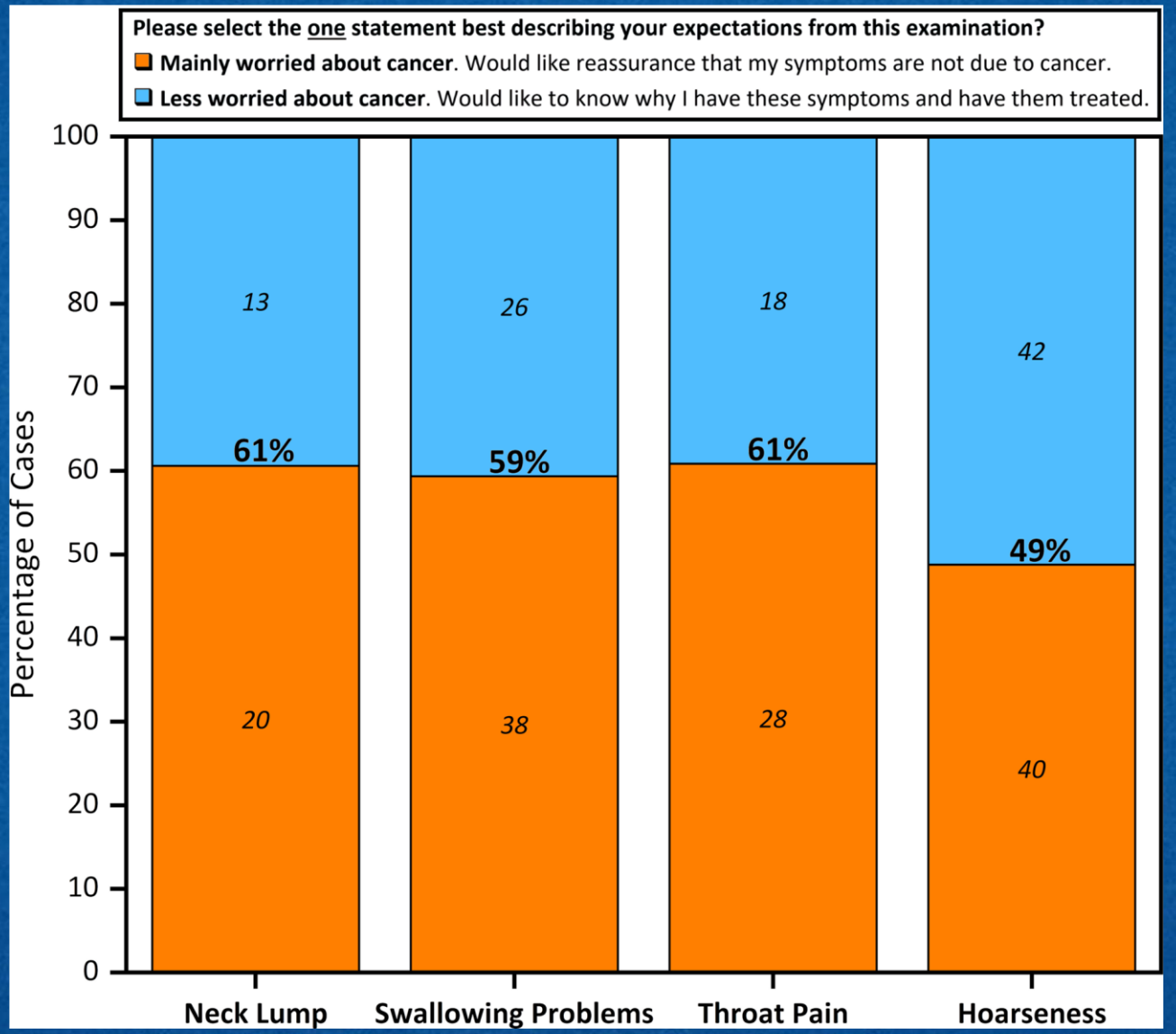
We Listen
We Care

It has had minimal impact on early disease detection



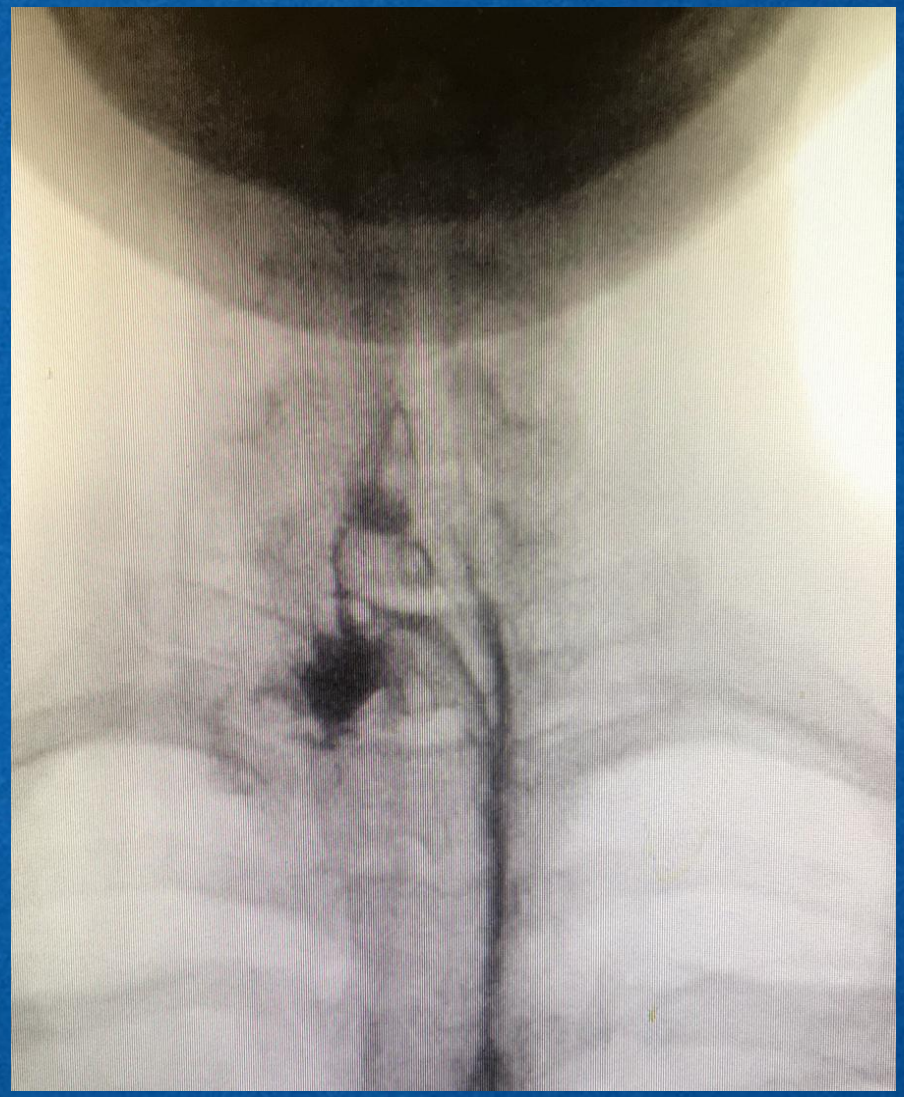
Large numbers of patients are not actually concerned about cancer

Nottingham University Hospitals NHS
NHS Trust



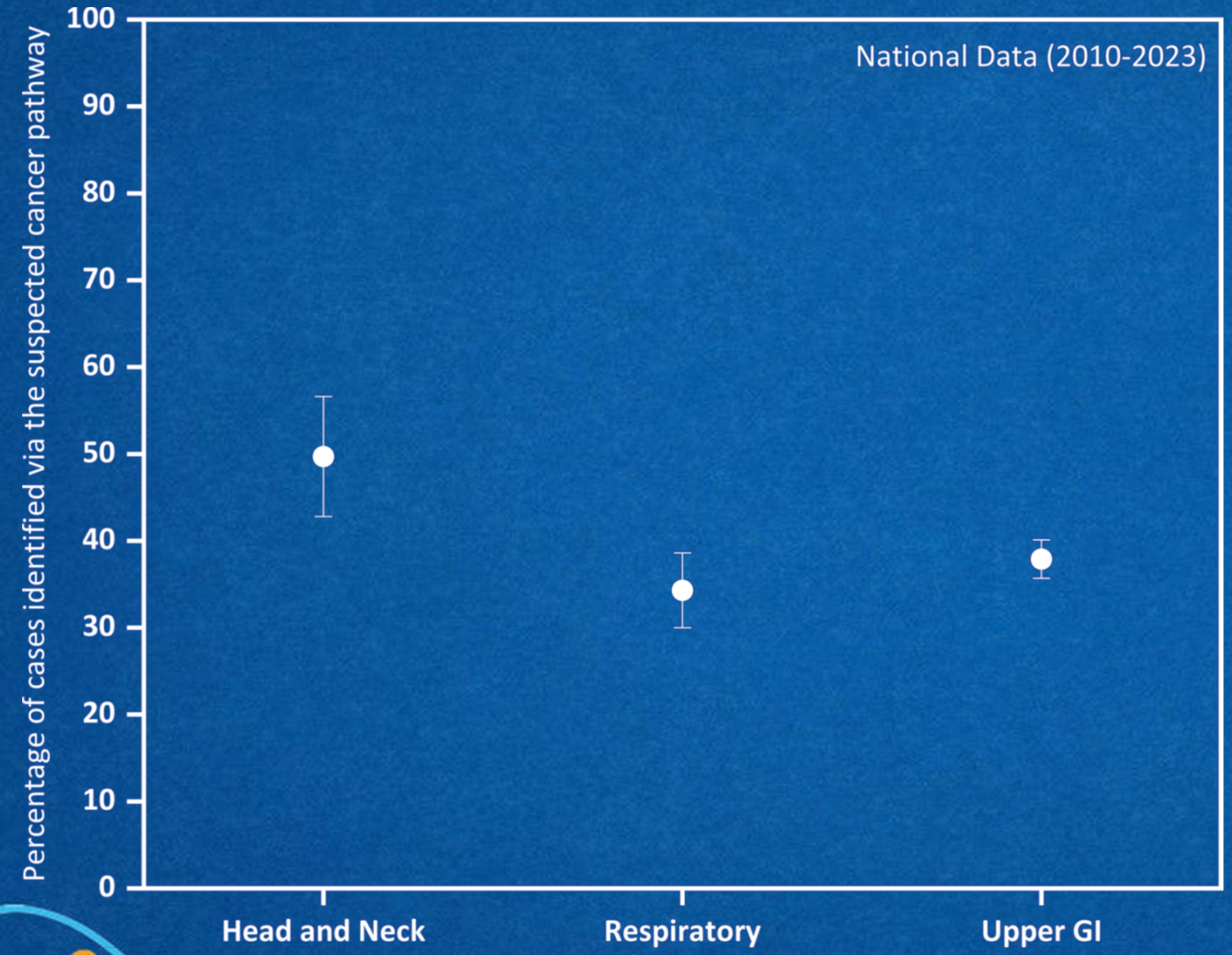
We Listen
We Care

Testing has risks



Most cancers are not actually identified in patients referred to suspected cancer pathways

Nottingham University Hospitals NHS
NHS Trust



We Listen
We Care

The three ideas behind our approach

1. Clinical History as Diagnostic Technology

2. One-stop Awake, Definitive, and Holistically-Supported Endoscopies

3. Vendor-neutral, technology-enabled, tariff-supported communication and quality-assurance within and between specialties

The governing frameworks for the approach

Nottingham University Hospitals NHS Trust

NICE National Institute for Health and Care Excellence

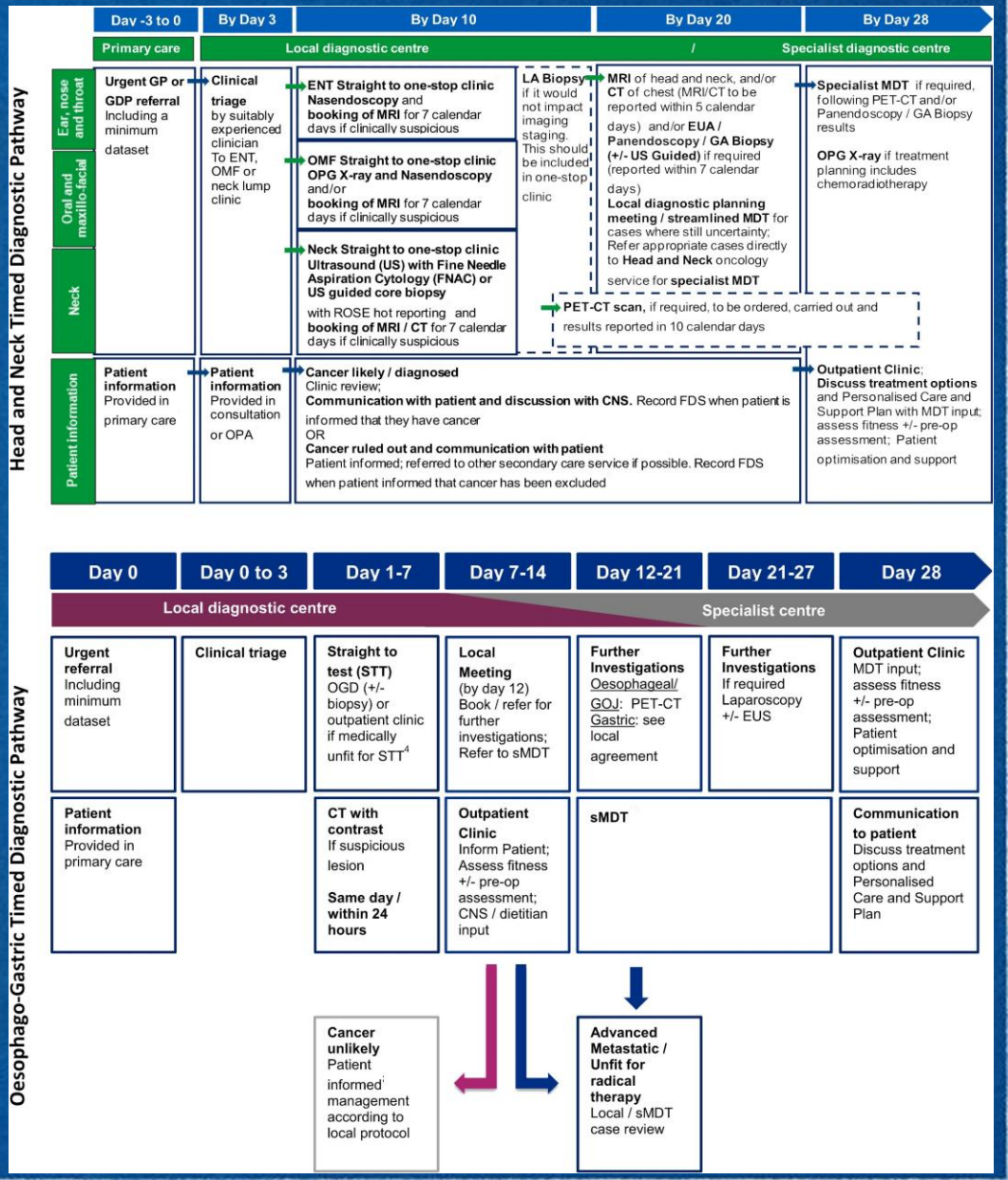
NICE guideline

Suspected cancer: recognition and referral

NICE guideline

Published: 23 June 2015

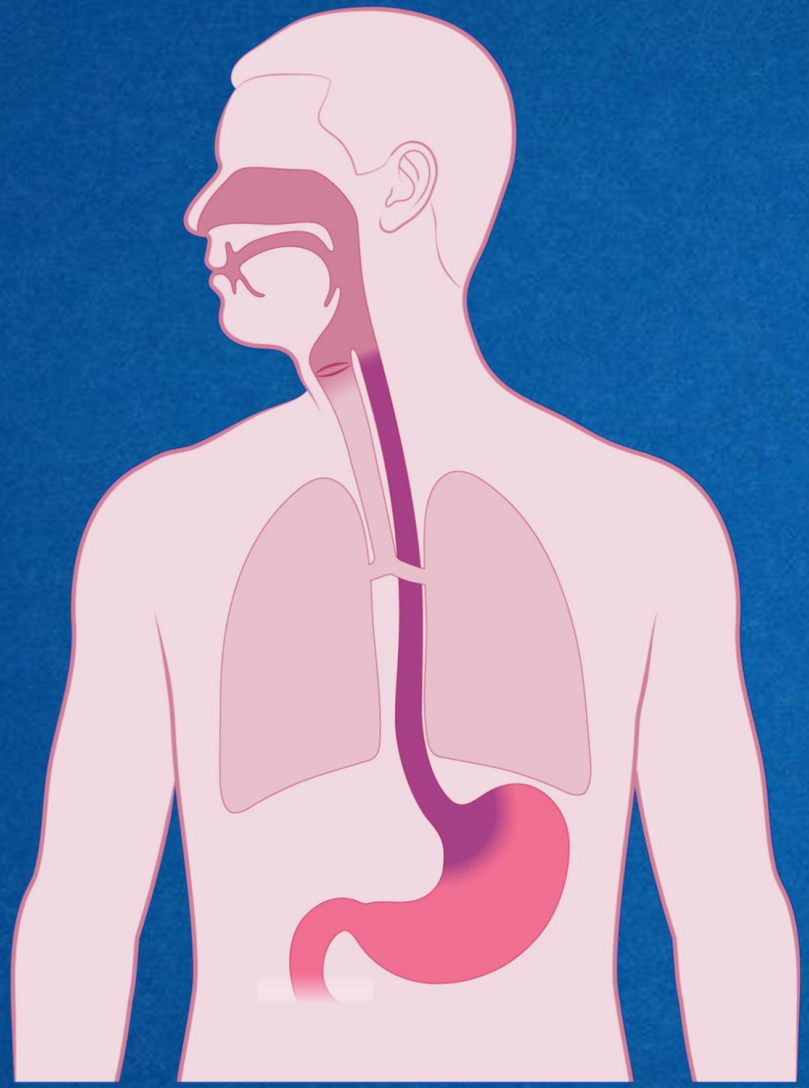
nice.org.uk/guidance/ng12



We Listen We Care

Which area does our approach cover?

Nottingham University Hospitals NHS
NHS Trust



HEAD AND NECK PATHWAY

- Suspicious Lesions Pathway
- Neck Lump Pathway
- **Swallowing Pathway**
- Throat Pathway
- Voice Pathway
- Sinonasal & Misc.

UPPER GI PATHWAY

- Abnormal Radiology Pathway
- **Swallowing Pathway**
- Indigestion Pathway
- Reflux Pathway
- UGI-adjacents
  - Iron-deficiency anemia
  - HPB Symptoms / Radiology
  - Non-specific symptoms

Integrated Dysphagia

We Listen
We Care

The Neurobiology of Foregut Symptoms

Nottingham University Hospitals NHS
NHS Trust

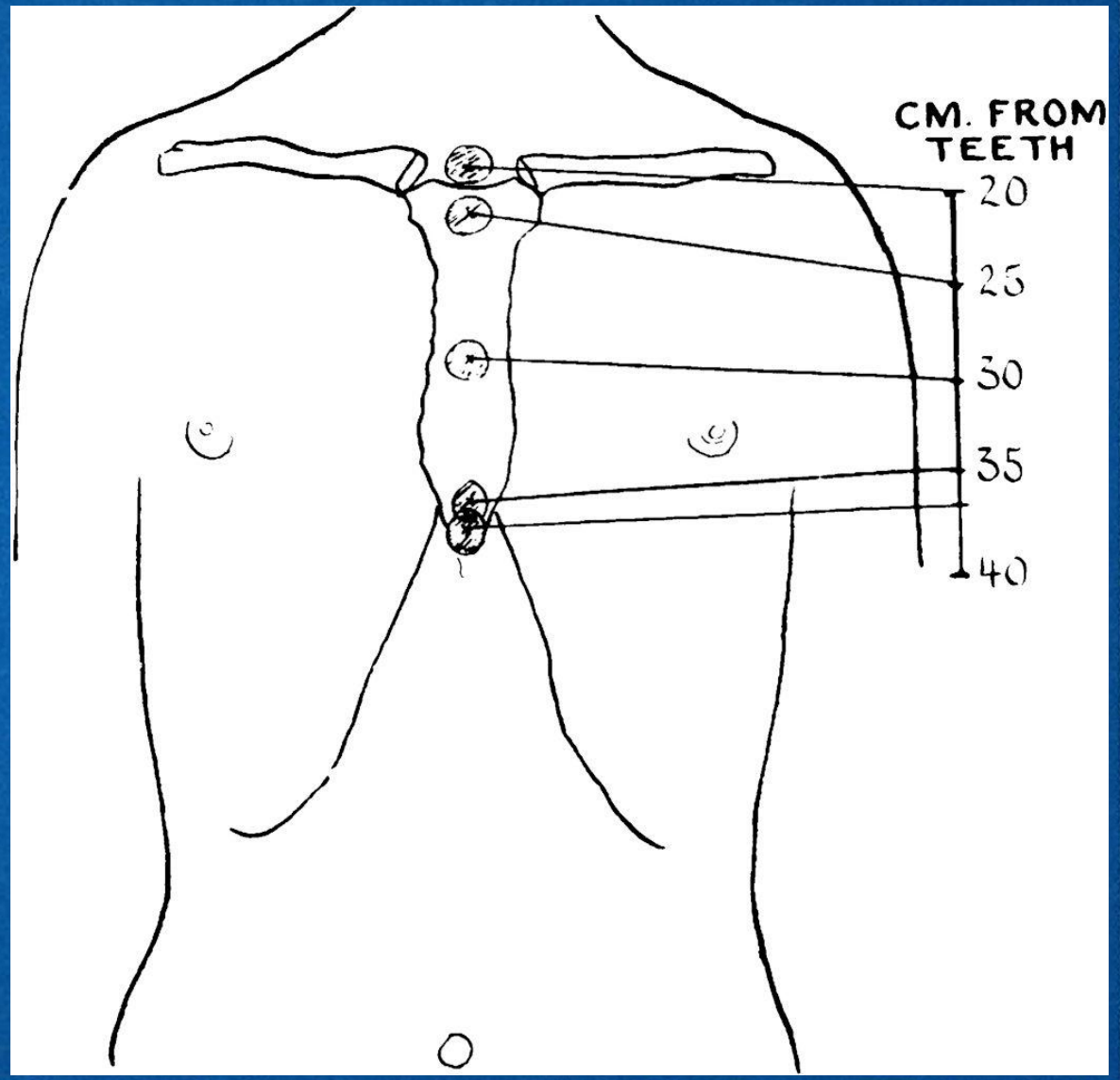
EXPERIMENTAL REFERRED PAIN FROM THE GASTRO-INTESTINAL TRACT. PART I. THE ESOPHAGUS

By W. S. POLLAND and A. L. BLOOMFIELD

(*From the Department of Medicine, Stanford University School of Medicine, San Francisco*)

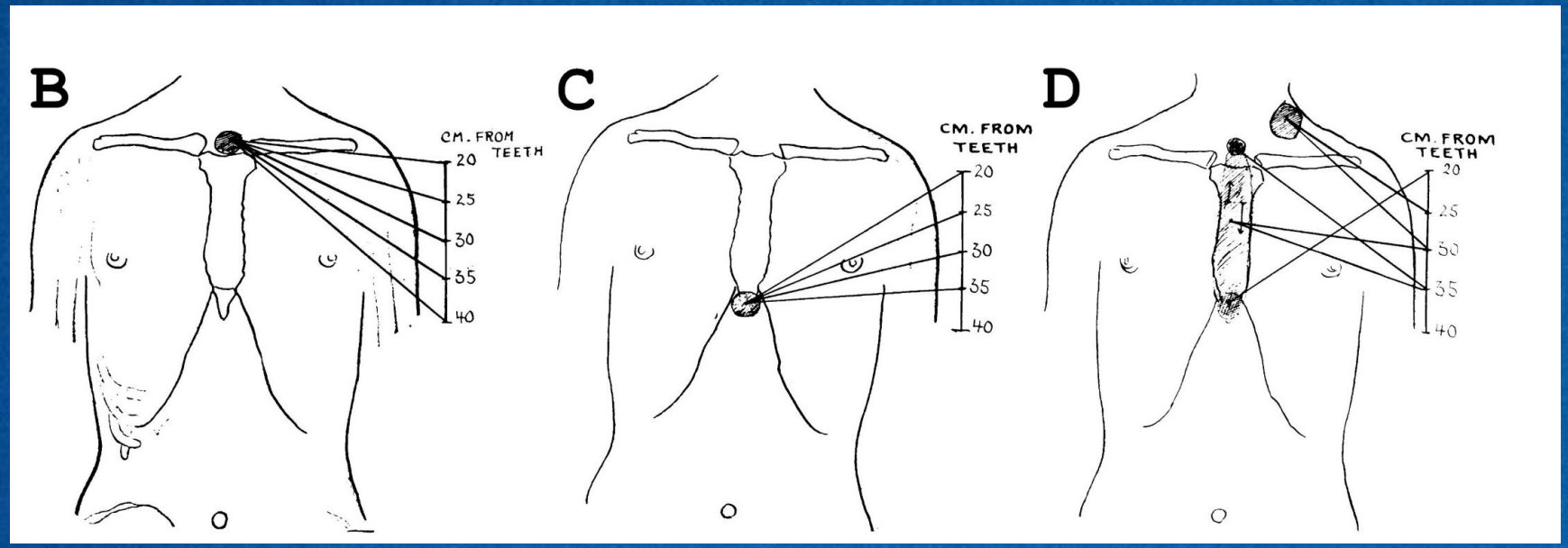
(Received for publication March 30, 1931)

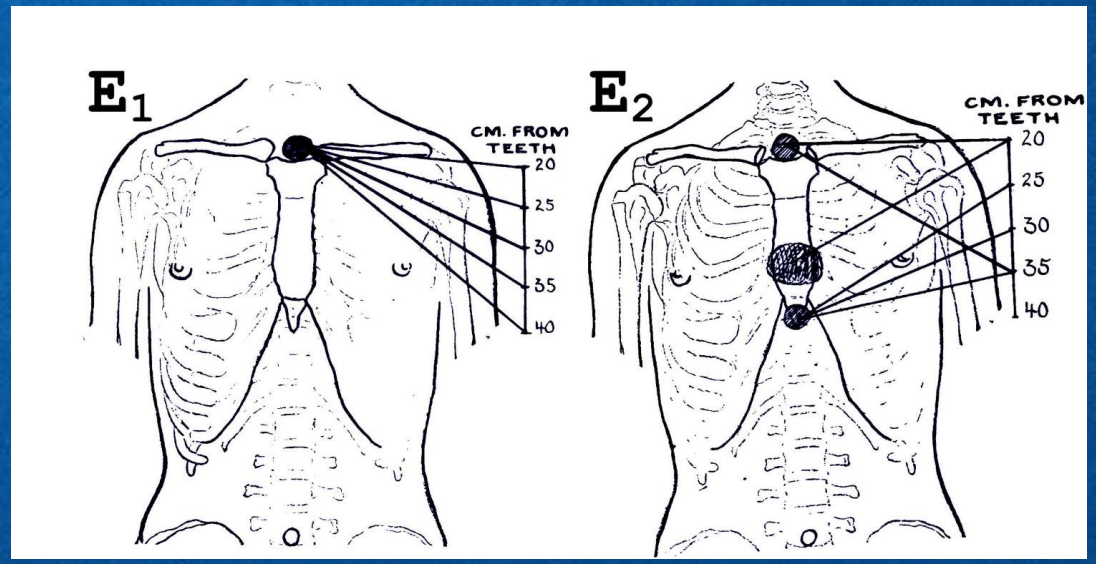
Despite the development of modern diagnostic methods, the exact recognition of the disorders or lesions which are responsible for digestive symptoms remains a difficult problem. In practice the percentage of error in this domain of medicine is high and in many instances diagnosis is based more on the general clinical intuition of the



We Listen We Care

The Neurobiology of Foregut Symptoms





The biology has been optimised to control integrated functions

Nottingham University Hospitals NHS
NHS Trust

Accepted: 25 March 2018
DOI: 10.1111/coa.13115

ORIGINAL ARTICLE

WILEY

Oesophageal causes of dysphagia localised only to the pharynx: Implications for the suspected head and neck cancer pathway

S.A.R. Nouraei[1] | I.A. Murray[2] | K.J. Heathcote[1] | H.R. Dalton[3]

[1]Department of Ear Nose and Throat Surgery, Poole Hospital NHS Foundation Trust, Poole, UK
[2]Department of Gastroenterology, Raigmore Hospital, Inverness, UK
[3]Department of Gastroenterology, Royal Cornwall Hospital, Truro, UK

Correspondence
S.A.R. Nouraei, The Robert White Centre for Airway Voice and Swallowing, Department of Ear Nose and Throat Surgery, Poole Hospital NHS Foundation Trust, Poole, UK.
Email: RN@cantab.net

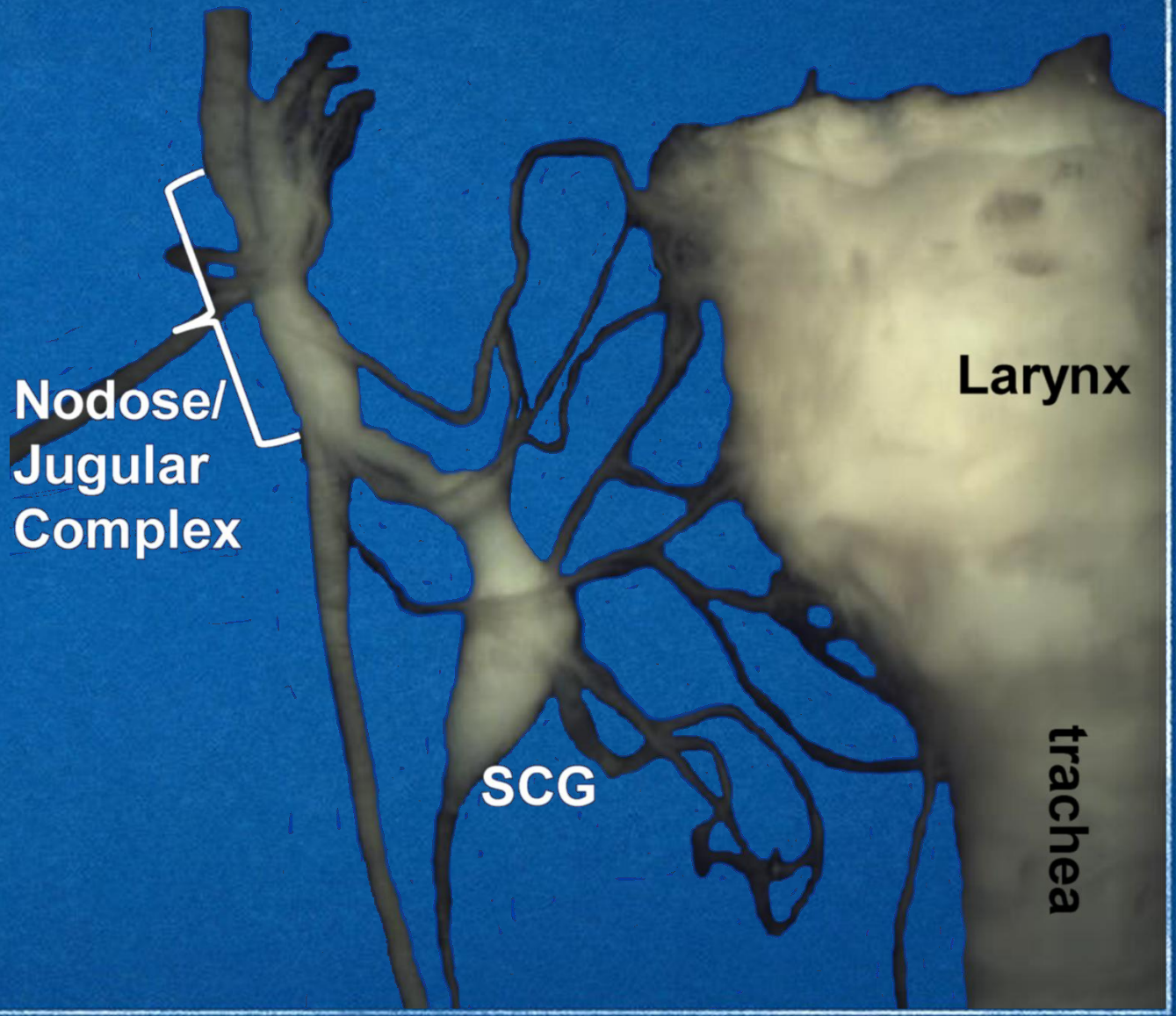
Objectives: Dysphagia is a presenting symptom of both pharyngeal and oesophageal cancers. The referral pathway choice is determined by whether it is thought to be oropharyngeal or oesophageal, and this is in turn influenced by whether dysphagia is perceived to be above or below the suprasternal notch. We studied the concordance between the presence of pharynx-localised dysphagia (PLD) and the location of the underlying disease processes.

Design: A subset analysis of the Dysphagia Hotline Cohort, collected between 2004 and 2015, of patients with PLD and a structural diagnosis.

Main outcome measures: Information about patient demography and presenting symptoms were recorded. The incisor-to-pathology distance, and the nature of the pathology, were recorded. Logistic regression analysis was used to identify independent predictors of malignancy.

Results: The study included 177 patients. There were 92 males, and mean age at presentation was 74 years. The commonest benign pathologies were cricopharyngeal dysfunction with or without pharyngeal pouch (n = 67), peptic stricture (n = 44) and Schatzki's ring (n = 11). There were 49 cases of cancer, including one hypopharyngeal cancer, one cervical oesophageal cancer, 28 cancers of the upper/mid-thoracic oesophagus, 15 cancers of the lower thoracic oesophagus and 4 cardio-oesophageal cancers. In 105 (59%) patients, PLD was caused by oesophageal disease. Independent predictors of malignancy were weight-change (loss >2.7 kg), a short history (<12 weeks) and presence of odynophagia. Nineteen (39%) of oesophageal cancers that presented with dysphagia that was localised only to the pharynx would have been beyond the reach of rigid oesophagoscopy.

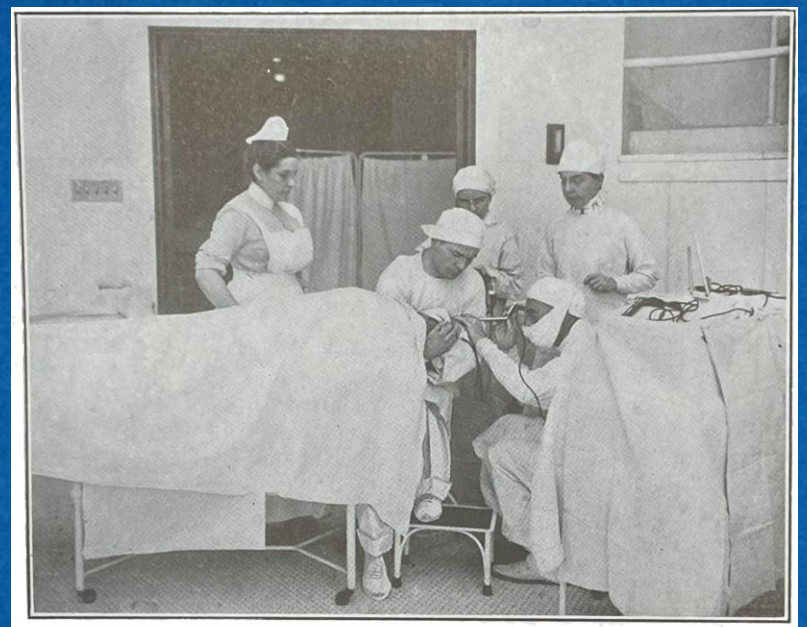
Conclusions: Pharynx-localised dysphagia is more likely to be a referred symptom of structural oesophageal disease, including cancer, than a primary symptom of structural pharyngeal disease. Absence of additional alarm symptoms such as a short history, weight-loss, and odynophagia, do not adequately exclude the possibility of oesophageal cancer. When the differential diagnosis of PLD includes malignancy, cancer should be presumed to be arising from the oesophagus or the cardio-oesophageal region until proven otherwise. This requires direct visualisation of the mucosal surfaces of the oesophagus and the cardio-oesophageal region, using either transoral or transnasal flexible endoscopy, irrespective of whether the initial assessment occurs within head and neck or upper gastrointestinal suspected cancer pathways.

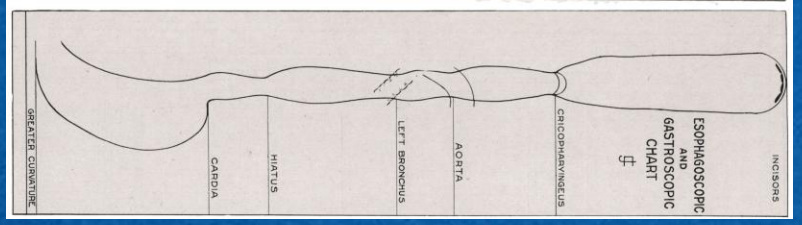


We Listen
We Care

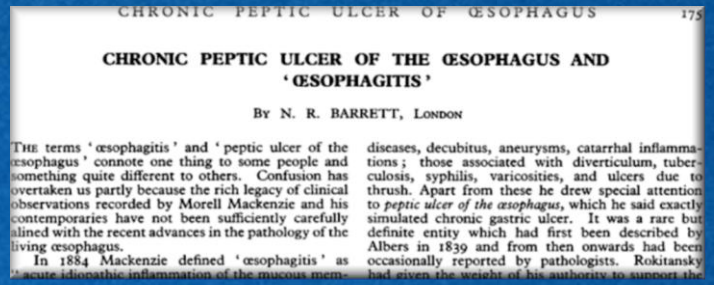
One diagnostic biology has become fractured across organ-based, technology-driven pathways

Nottingham University Hospitals NHS
NHS Trust





Squamous-celled and atypical epithelioma	337
Basal-celled	2
Adenocarcinoma	316
Lymphosarcoma	2
Round-celled sarcoma	2
Fibrocarcinoma (epithelioma developing on scar?)	1
Squamous-celled, plus gumma	1
Squamous-celled, plus tuberculosis	1
Mixed, type uncertain	2
Ulceration but probably malignant	7



CHRONIC PEPTIC ULCER OF ŒSOPHAGUS 175

CHRONIC PEPTIC ULCER OF THE ŒSOPHAGUS AND 'ŒSOPHAGITIS'

By N. R. BARRETT, London

THE terms 'œsophagitis' and 'peptic ulcer of the œsophagus' connote one thing to some people and something quite different to others. Confusion has overtaken us partly because the rich legacy of clinical observations recorded by Morell Mackenzie and his contemporaries have not been sufficiently carefully aligned with the recent advances in the pathology of the living œsophagus.

In 1884 Mackenzie defined 'œsophagitis' as 'acute idiopathic inflammation of the mucous mem-

diseases, decubitus, aneurysms, catarrhal inflammations; those associated with diverticulum, tuberculosis, syphilis, varicosities, and ulcers due to thrush. Apart from these he drew special attention to *peptic ulcer of the œsophagus*, which he said exactly simulated chronic gastric ulcer. It was a rare but definite entity which had first been described by Albers in 1839 and from then onwards had been occasionally reported by pathologists. Rokitansky had given the weight of his authority to support the

ADENOCARCINOMA OF THE OESOPHAGUS AND ECTOPIC GASTRIC MUCOSA.

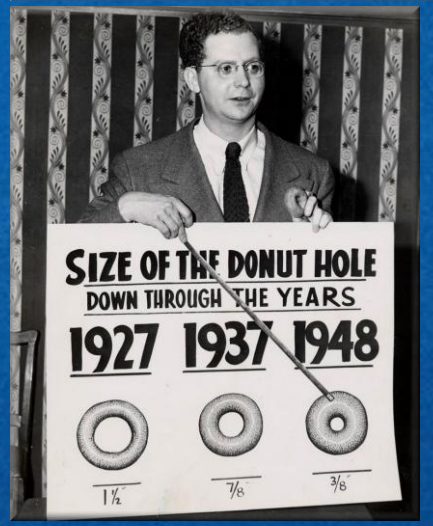
B. C. MORSON AND J. R. BELCHER.

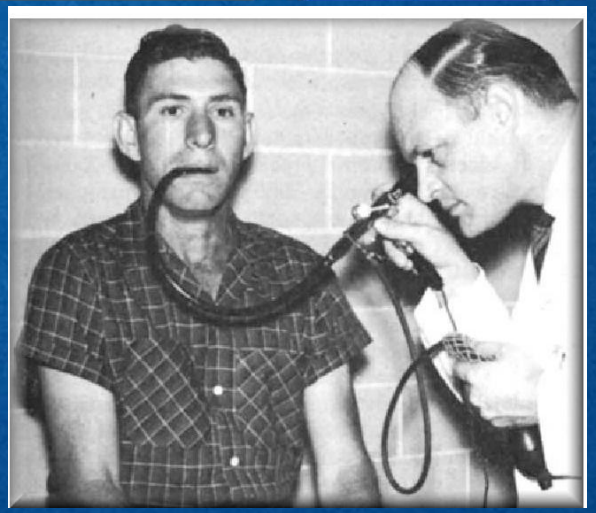
From the wards and the Bland-Sutton Institute of Pathology, The Middlesex Hospital, London, W.1.

Received for publication, May 16, 1952.

ADENOCARCINOMA in the oesophagus may arise in three ways: (1) as an upward extension of a carcinoma of the stomach, (2) as malignant change in the mucous glands that are normally found in the oesophageal submucosa, and (3) from ectopic gastric mucosa. The first is not uncommon; the second is rare. The third, also rare, is the type that concerns us here.

In 1950 Carrie reported a case of adenocarcinoma of the oesophagus that had arisen in an area of ectopic gastric mucosa. He reviewed the literature and likened the lesion to the unicorn in that many authors had described it, but only one had ever seen it.

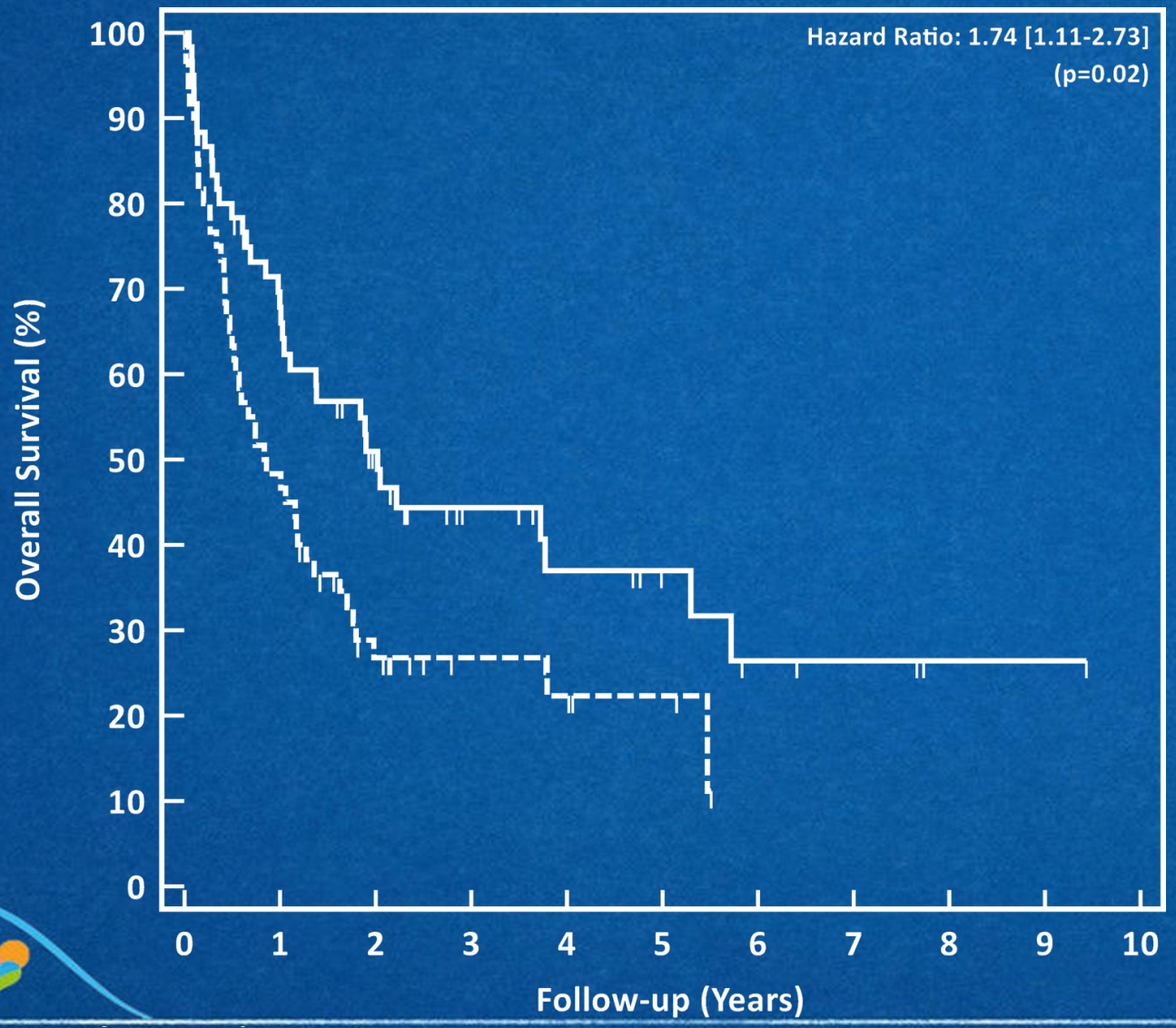




We Listen
We Care

With consequence

Nottingham University Hospitals NHS
NHS Trust



Received: 19 June 2019 | Revised: 18 December 2019 | Accepted: 20 January 2020
DOI: 10.1111/coa.13510

ORIGINAL ARTICLE

WILEY

Interspecialty referral of oesophagogastric and pharyngolaryngeal cancers delays diagnosis and reduces patient survival: A matched case-control study

Jon H. Bird[1] | Elizabeth J. Williams[2] | Kate J. Heathcote[1] | Lachlan Ayres[2] | Nilantha De Zoysa[1] | Emma V. King[1] | Sally D. Parry[2] | S. A. Reza Nouraei[1,3]

[1]Department of Ear Nose and Throat Surgery, Poole Hospital NHS Foundation Trust, Poole, UK
[2]Department of Gastroenterology, Poole Hospital NHS Foundation Trust, Poole, UK
[3]Clinical Informatics Research Unit, University of Southampton, Southampton, UK

Correspondence
Reza Nouraei, The Robert White Centre for Airway Voice and Swallowing, Poole Hospital NHS Foundation Trust, Poole BH15 2BJ, UK.
Email: R.Nouraei@Southampton.ac.uk

Abstract

Objectives: Pharyngolaryngeal and oesophagogastric cancers present with swallowing symptoms and as such, their clinical evaluation traverses boundaries between different specialties. We studied the incidence and significance of interspecialty cancer referrals (ICRs), that is, pharyngolaryngeal cancers first evaluated by gastroenterology and oesophagogastric cancers first evaluated by otolaryngology.

Design: A subset analysis of our Integrated Aerodigestive Partnership's audit dataset, of all ICR patients, and an equal number of controls matched for age, sex and cancer subsite.

Main outcome measures: Information about patient age and presenting symptoms was recorded. The relationship between symptoms and ICR risk was examined with binary logistic regression. Referral-to-diagnosis latency was compared between ICR and control patients with unpaired Student's *t* test. Cox regression was used to identify independent predictors of overall survival.

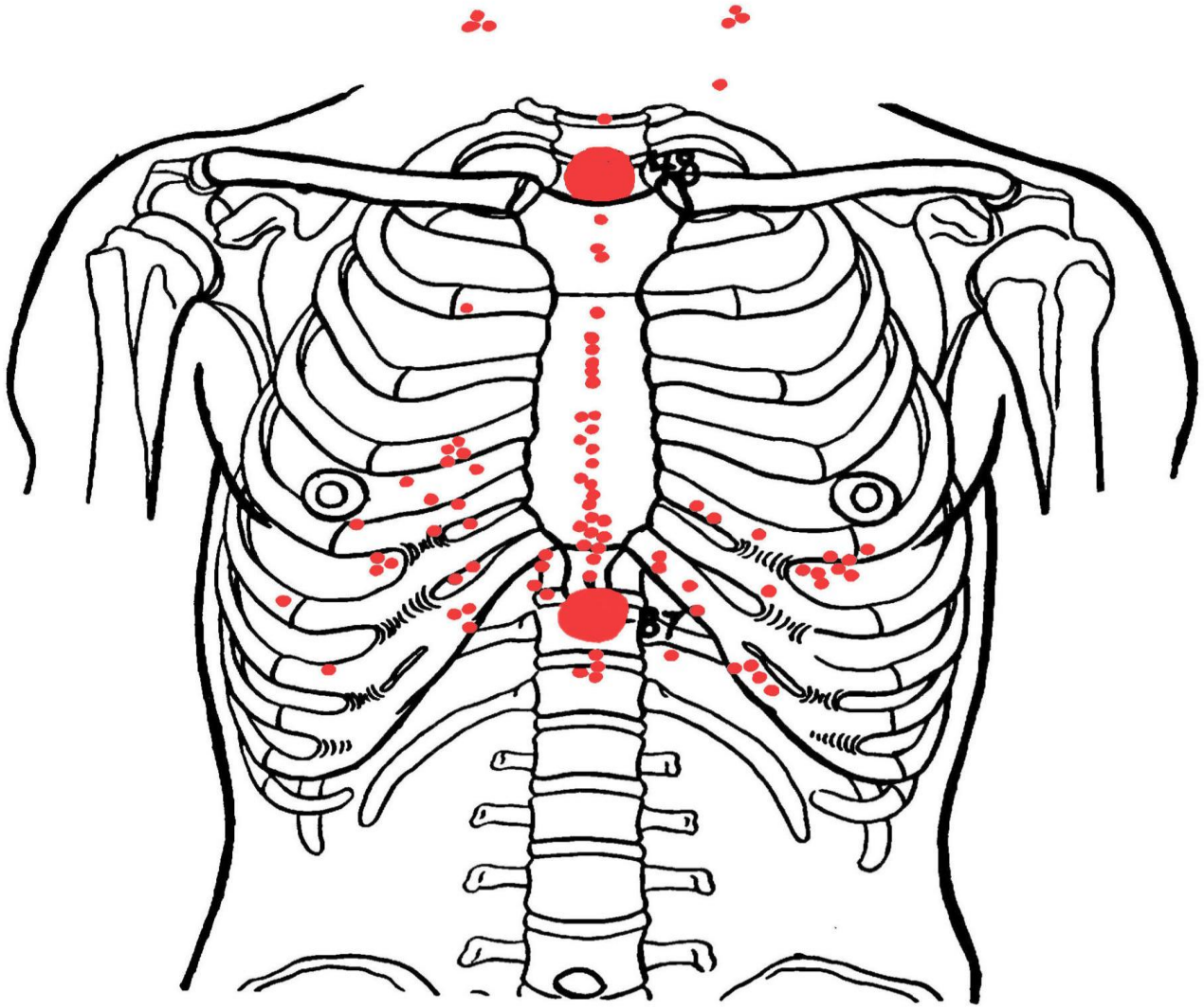
Results: Of 1130 patients with pharyngolaryngeal and oesophagogastric cancers between 2008 and 2018, 60 diagnoses (5.3%) were preceded by an ICR. Referral-to-diagnosis latency increased from 43 ± 50 days for control patients to 115 ± 140 days for ICR patients ($P < .0001$). Dysphagia significantly increased the risk of an ICR (odds ratio 3.34; 95% CI 1.30-8.56), and presence of classic gastroesophageal reflux symptoms (heartburn or regurgitation; OR 0.25; 95% CI 0.08-0.83) and "distal" symptoms (nausea/vomiting, abdominal pain or dyspepsia; OR 0.23; 95% CI 0.08-068) significantly reduced the risk. Eleven pharyngolaryngeal cancers (of 26; 42%) were missed by gastroenterology, and eight (of 34; 24%) oesophageal cancers were missed by otolaryngology. An ICR was an independent adverse prognostic risk factor on multivariable analysis (hazard ratio 1.76; 95% CI 1.11-2.73; $P < .02$; log-rank test). Two systemic root causes were poor visualisation of pharynx and larynx by per-oral oesophago-gastro-duodenoscopy (OGD) for pharyngolaryngeal cancers, and poor sensitivity (62.5%) of barium swallow when it was used to 'evaluate' oesophageal mucosa.

Conclusions: An interspecialty cancer referral occurs in a significant proportion of patients with foregut cancers. It almost triples the time to cancer diagnosis and is associated with a high incidence of missed cancers and diminished patient survival. It is a complex phenomenon, and its reduction requires an integrated approach between

We Listen We Care

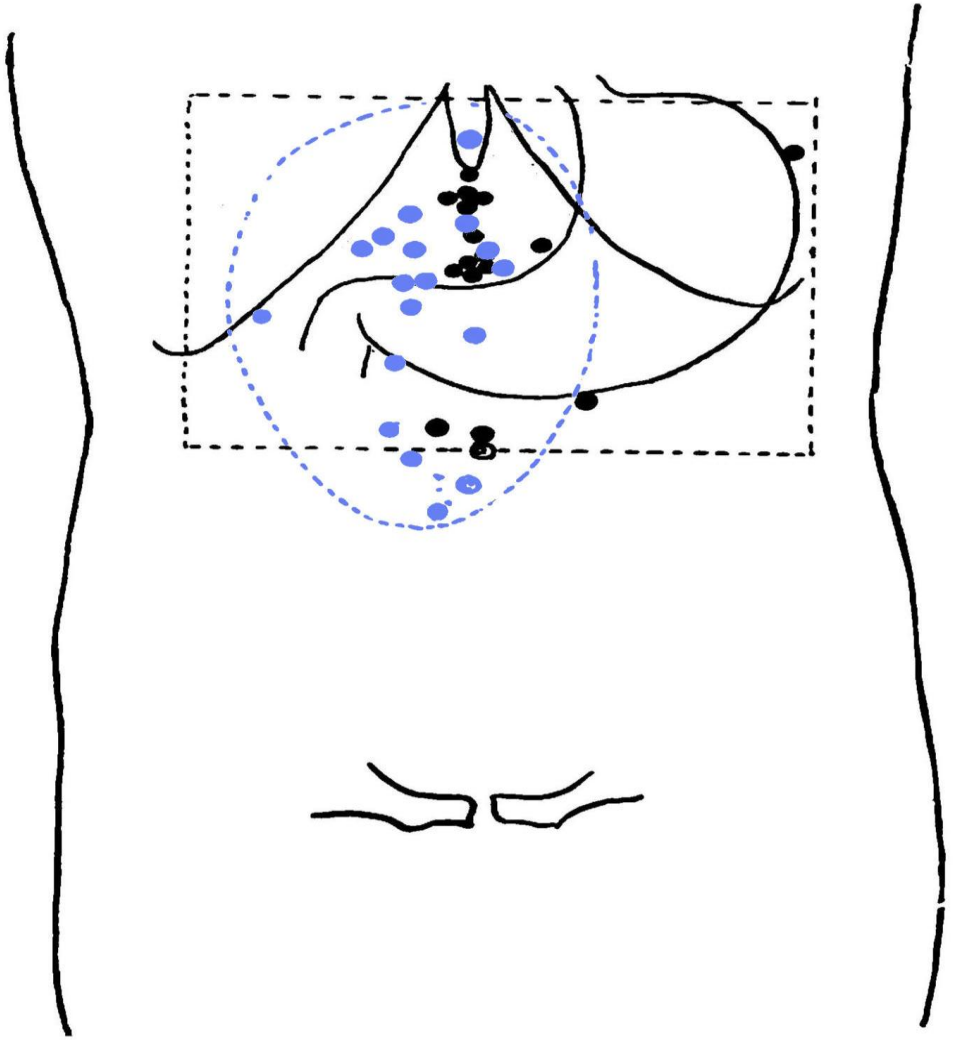
Throat & Oesophagus vs. Oesophagus and Stomach

Oesophagus



Stomach

Duodenum



Throat & Oesophagus vs. Oesophagus and Stomach

Nottingham University Hospitals NHS
NHS Trust

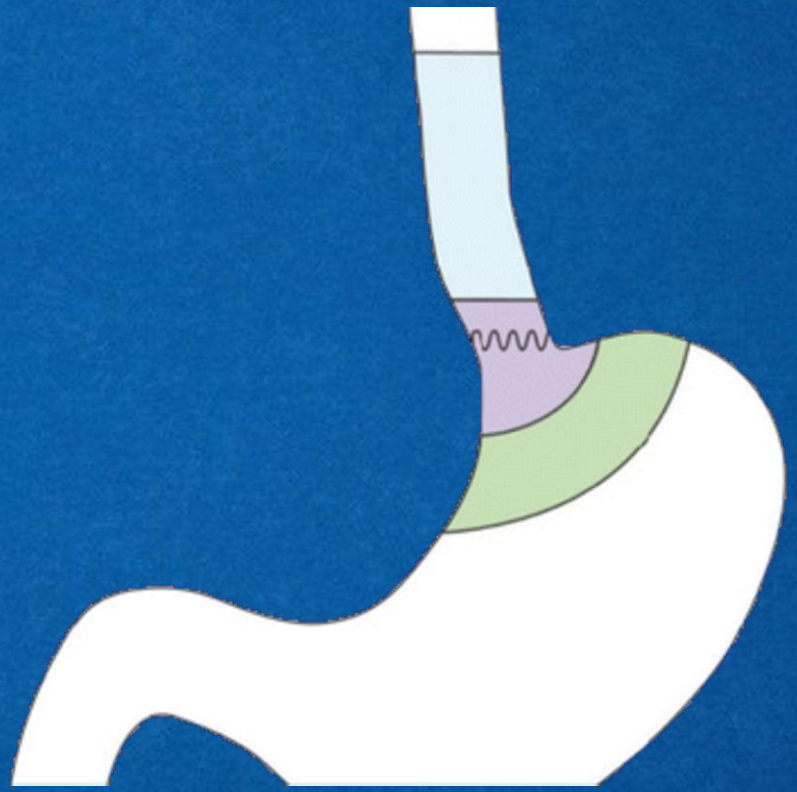
Dysphagia (2014) 29:305–309
DOI 10.1007/s00455-013-9507-4

ORIGINAL ARTICLE

Incidence and Predictive Features of Pharyngeal Pouch in a Dysphagic Population

Iain Alexander Murray · David R. Grimes · Adam D. Wilde · Jo Palmer · Carolyn Waters · Harry R. Dalton

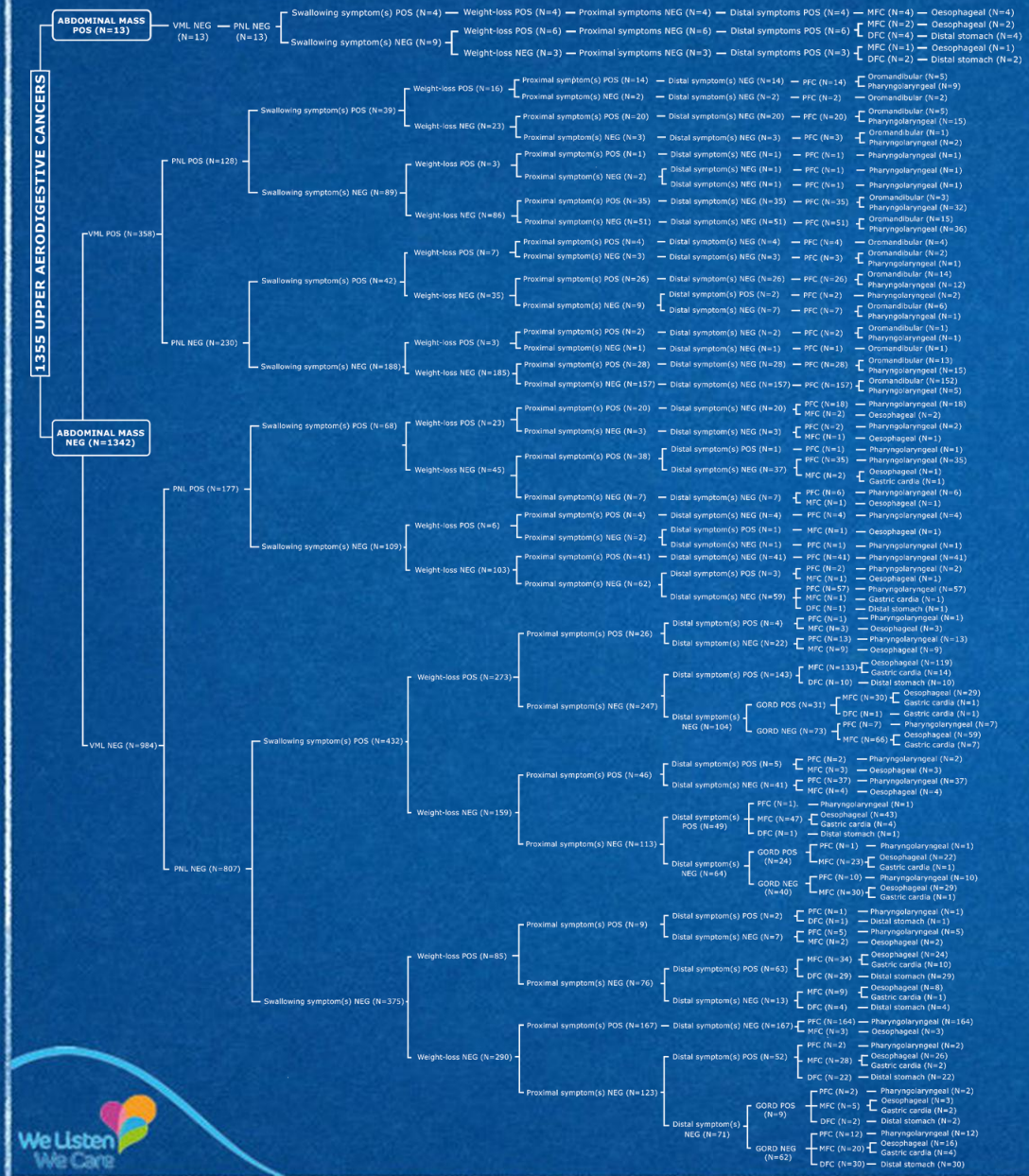
- ✕ Dyspepsia
- ✕ Epigastric Pain
- ✕ Nausea & Vomiting
- ✕ Early Satiety
- ✕ History of peptic ulcers

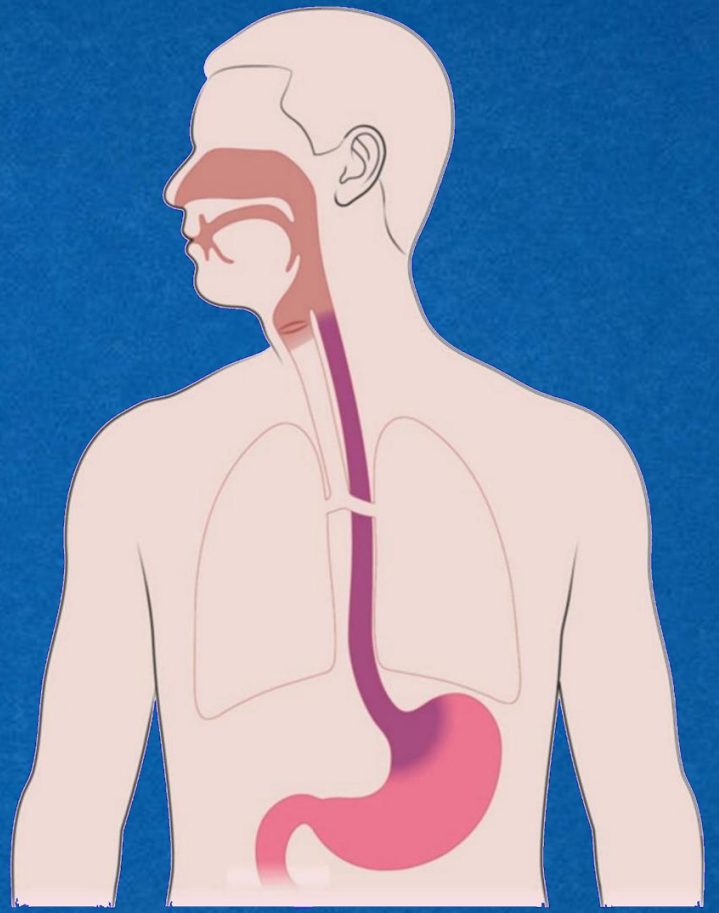


We Listen
We Care

Clinical History as Diagnostic Technology

Nottingham University Hospitals NHS
NHS Trust





Proximal Field

- Abnormal Radiology
- Visible Oral/Pharyngeal Lesion
- Palpable Neck Lump
- Throat Pain / Odynophagia
- Lateralised Throat Symptoms
- Hoarseness
- Aspiration

- Pharynx-localised Dysphagia
- Daily, typically dry cough >8 weeks
- Non-acid regurgitation
- Painless Midline Throat Symptoms

Middle Field

- Abnormal Radiology
- Non-cardiac Chest Pain
- Swallow-associated Chest Pain
- Retrosternal Dysphagia
- Classical Reflux Symptoms

- Epigastric Mass
- Iron-deficiency Anaemia
- Epigastric Pain
- Dyspepsia

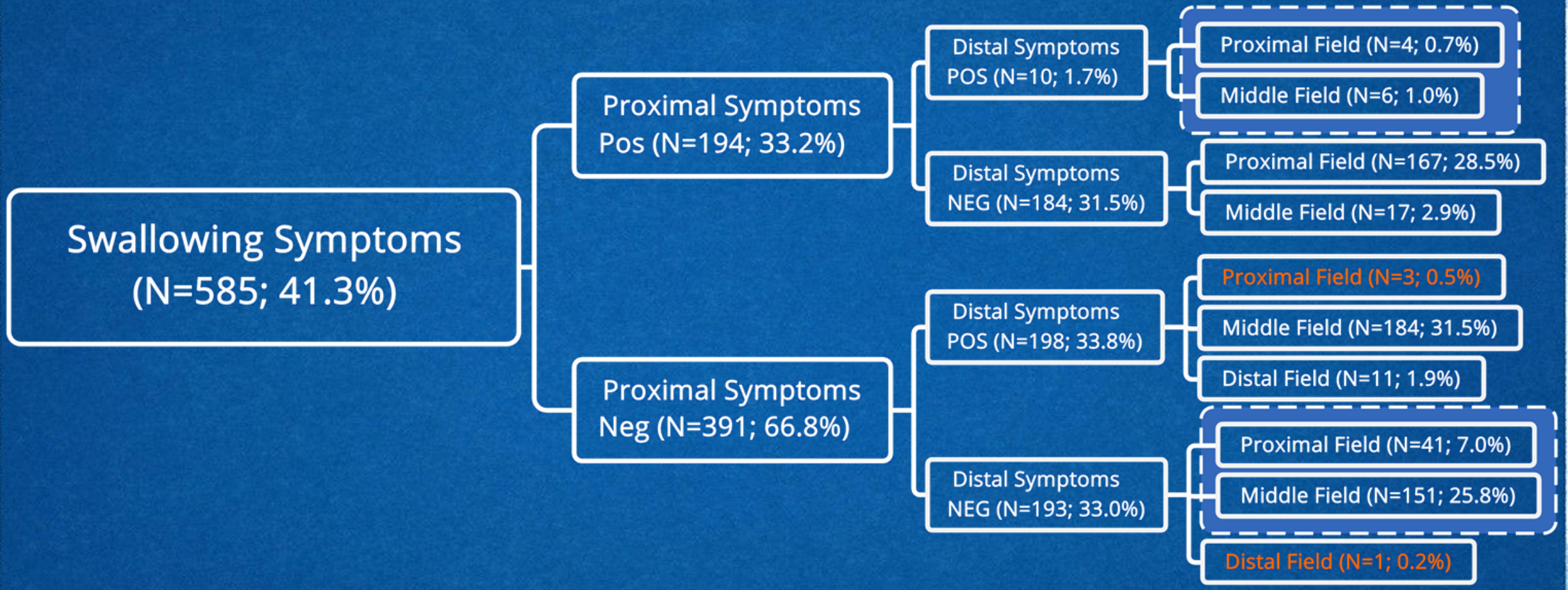
Distal Field

- Abnormal Radiology
- Nausea and/or Vomiting
- Early Satiety
- History of Peptic Ulcer(s)
- Bloating

We Listen
We Care

Clinical History as Diagnostic Technology
Co-localisation

Nottingham University Hospitals NHS
NHS Trust



We Listen
We Care

Clinical History as Diagnostic Technology
The Integrated Foregut Clinical History

Nottingham University Hospitals NHS
NHS Trust

Review

The medical history as a diagnostic technology

Nick Summerton

ABSTRACT

The medical history is a powerful diagnostic technology. However, in seeking to establish an appropriate balance between the history and the other diagnostic modalities more explicit consideration must be given to the performance characteristics of the medical history. Building on recent work undertaken in the UK and elsewhere in Europe it is now feasible to develop a library of setting-specific likelihood ratios and x statistics for key elements of the medical history. Of particular importance to those working in primary care, statistically adjusted combinations of information from the medical history can be generated; furnishing clinicians with likelihood ratios of significant magnitudes. It is suggested that developing a more rational approach to the use of the medical history could lead to improvements in diagnostic efficiency and effectiveness, with benefits for individual patient care in addition to the overall NHS budget. When diagnosis is viewed as a processing pathway founded on a robust medical history, it becomes clear than in some situations investigations may become unnecessary and, in other circumstances, their impact will be enhanced.

Keywords
diagnosis; Bayes theorum; likelihood ratios; primary care.

N Summerton, MA, MPH, DM, MRCGP, FFPH, GP, Department of Primary Health Care, University of Hull, Welton, Brough.

Address for correspondence
Dr Nick Summerton, University of Hull, Department of Primary Health Care, 7 Hall Walk, Welton, Brough, HU15 1PN.
E-mail: n.summerton@hull.ac.uk

Submitted: 30 November 2007; **Editor's response:** 4 January 2008; **final acceptance:** 29 January 2008.
This article was originally submitted as an editorial.

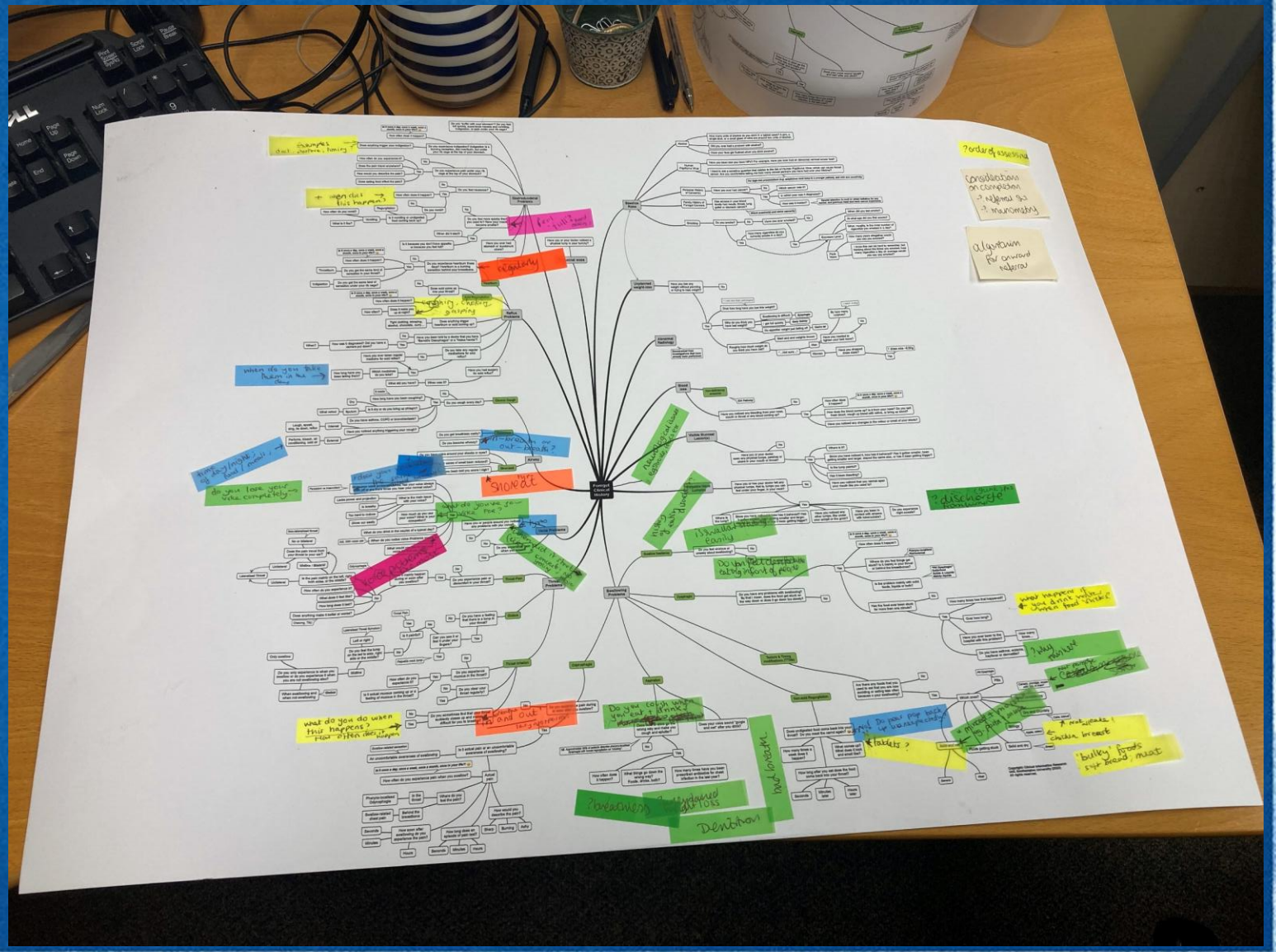
DOI: 10.3399/bjgp08X279779

INTRODUCTION

Has the medical history become redundant? Over 30 years ago Hampton and colleagues suggested that the history determined 83% of the diagnoses in medical outpatients.[1] However, with the rapid growth in new diagnostic technologies there is now a suggestion that it is more efficient and cost-effective to employ a technician to undertake a battery of investigations rather than have an expensive clinician spending time listening to patients. In his recent speech on the health service the Prime Minister, Gordon Brown, stated 'utilising these new technologies must be at the heart of any progressive health policy'.[2]

Diagnostics is a central element within the Department of Health's initiative, designed to deliver an 18-week patient pathway from GP referral to the start of treatment. However, whereas there is a particular focus on endoscopy, imaging, pathology, and physiology testing, with the appointment of four clinical leads in these areas, the medical history has not been afforded any similar special prominence.[3] Furthermore, although the National Institute for Health and Clinical Excellence (NICE) is charged with appraising diagnostic technologies, its remit is restricted to those newer technologies that are CE marked.[4] Nowadays it also seems as if anyone is permitted to take a medical history without the requirement for any specific training to understand the complexities of symptom reporting, symptom evolution, symptom classification, or symptom interpretation.[5,6]

This trend towards investigation-centred diagnosis is misplaced. Aside from the direct physical risks associated with some of the more invasive investigations there are major cost implications to consider. For example, in a Department of Health press release highlighting the expansion in magnetic resonance imaging (MRI) scanning, the accompanying notes stated that 'MRI scans help diagnose … acute or chronic migraine and headaches'.[7] However, using Bayes' theorem it can be calculated that in those with a new onset unilateral headache and nausea presenting to a primary care clinician the probability of migraine after taking a medical history is already greater than 80% (Box 1).[8,9]



We Listen
We Care

Clinical History as Diagnostic Technology
The Nonspecific Symptoms Pathway Approach

Nottingham University Hospitals NHS
NHS Trust

"…Patients referred have a comprehensive history taken, including details of their symptoms, and will usually receive a range of tests, including blood tests, chest X-ray, CT scan and endoscopy to rapidly progress them to the most appropriate diagnostic and treatment pathway…"

Research

Dave Chapman, Veronique Poirier, Karen Fitzgerald, Brian D Nicholson, and Willie Hamilton
on behalf of the Accelerate Coordinate Evaluate Multidisciplinary Diagnostic Centre projects

Non-specific symptoms-based pathways for diagnosing less common cancers in primary care:

a service evaluation

Abstract

Background
Although less common cancers account for almost half of all cancer diagnoses in England, their relative scarcity and complex presentation, often with non-specific symptoms, means that patients often experience multiple primary care consultations, long times to diagnosis, and poor clinical outcomes. An urgent referral pathway for non-specific symptoms, the Multidisciplinary Diagnostic Centre (MDC), may address this problem.

Aim
To examine the less common cancers identified during the MDC pilots and consider whether such an approach improves the diagnosis of these cancers.

Design and setting
A service evaluation of five MDC pilot projects in England from December 2016 to March 2019.

Method
Data items were collected by pilot sites in near-real time, based mainly on the English cancer outcomes and services dataset, with additional project-specific items. Simple descriptive and comparative statistics were used, including χ^2 tests for proportions and *t*-tests for means where appropriate.

INTRODUCTION

Rare and less common cancers (hereafter 'less common cancers') account for almost half of all cancer diagnoses in England and over half of all cancer deaths.[1–3] This broad term incorporates >200 different tumour types, excluding the four most common malignancies: breast, colorectal, lung, and prostate cancers (hereafter 'common cancers').[4]

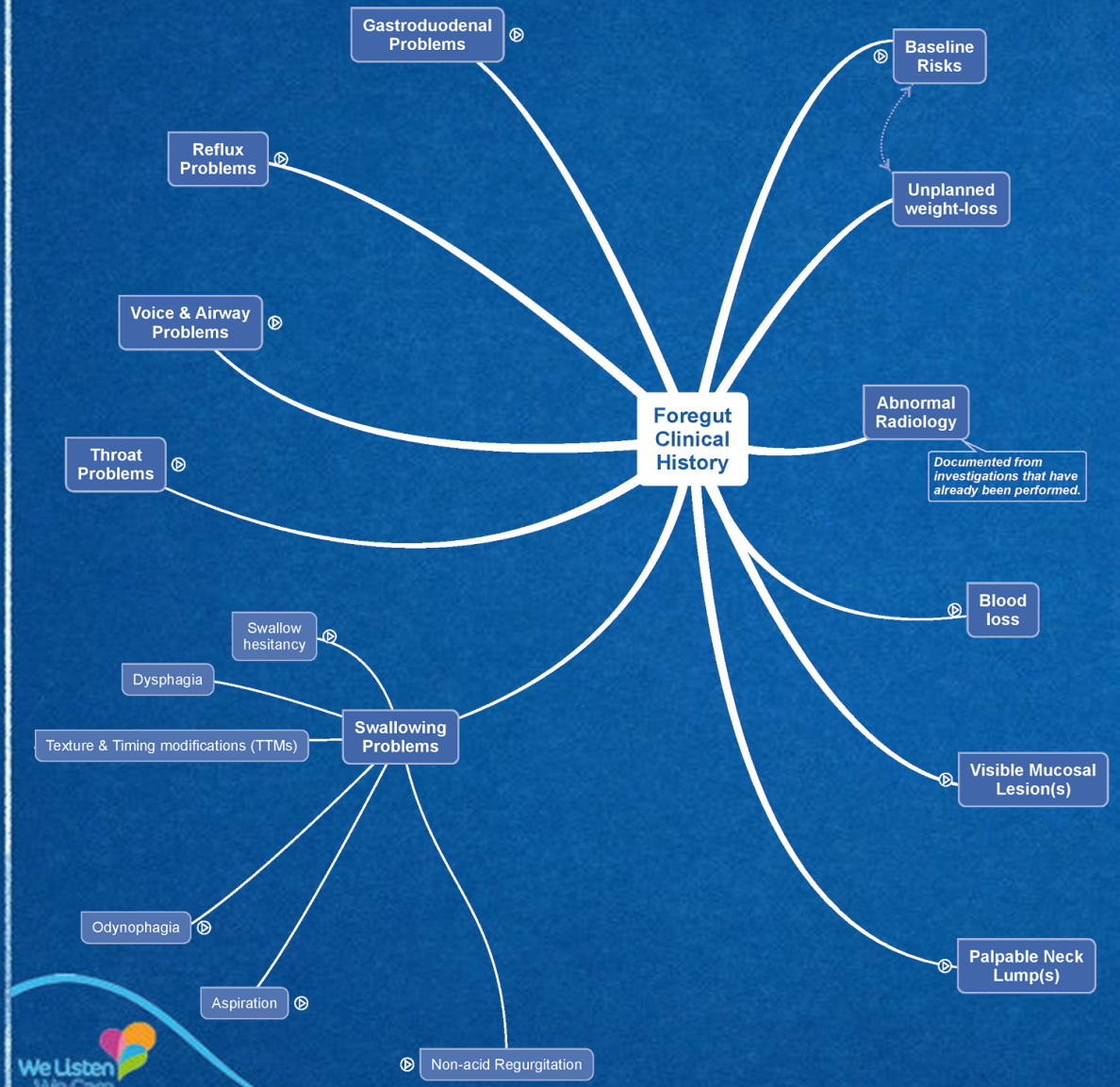
With the exception of cervical cancer, there is currently no established screening programme for less common cancers,[5] and recognition of disease relies on the development and presentation of symptoms.[6–8] In many cases, these cancers present with non-specific symptoms, which can also originate from multiple benign conditions.[6,9–11] For example, unexpected weight loss is associated with several cancers at all cancer stages but may also arise from serious and non-serious diagnoses associated with a wide range of body systems.[12–13] Additionally, the relative scarcity of less common cancers often makes the risk of cancer in symptomatic patients lower than the UK's recommended 3% threshold for urgent cancer investigation, even when symptoms are highly specific as well as those presenting with non-specific symptoms is often characterised by multiple primary care consultations, investigations, and referrals.[15–19] Lengthy intervals from presentation to diagnosis are common,[6,16,17,20] as is diagnosis by emergency presentation,[16,21–22] with both being associated with high rates of advanced stage diagnosis,[16] worse survival,[23] and a poorer experience of care.[3,24]

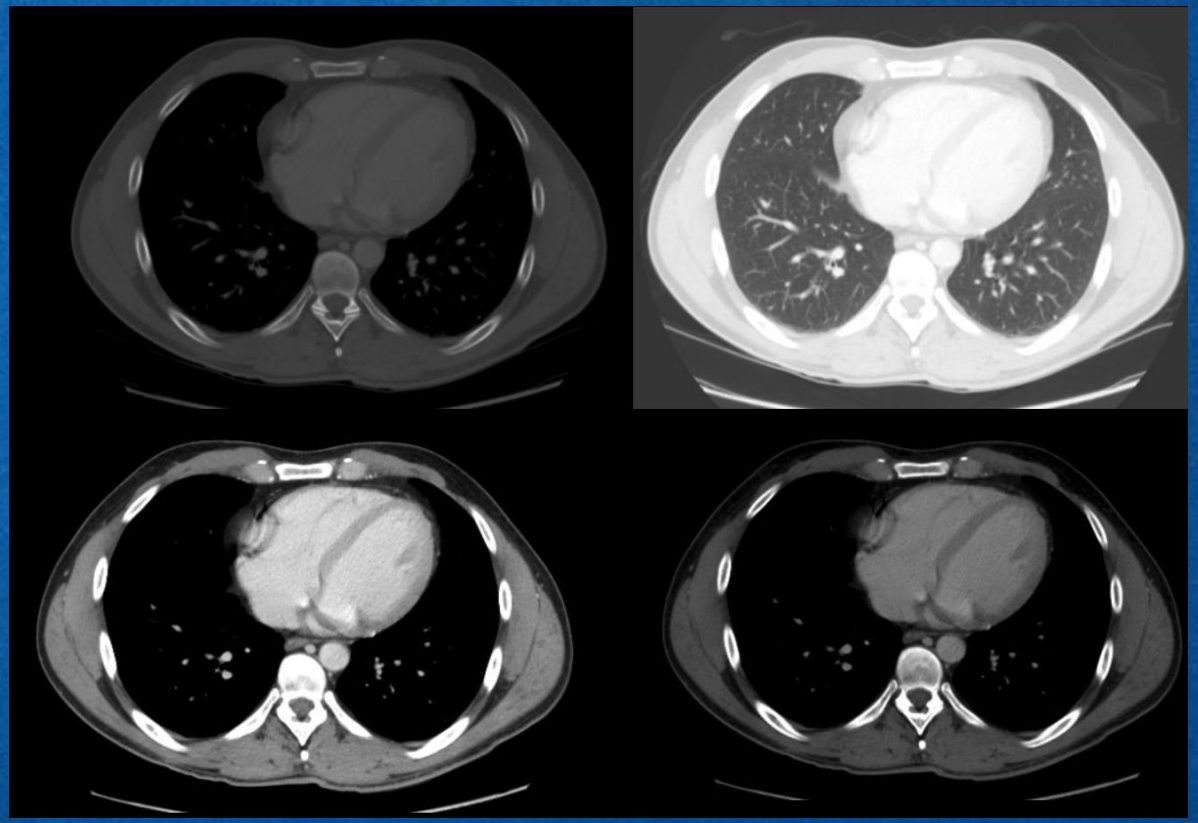
A Multidisciplinary Diagnostic Centre (MDC) approach was piloted in England from December 2016, establishing a dedicated pathway for patients presenting with non-specific symptoms indicative of possible cancer. An evaluation by the Accelerate Coordinate Evaluate (ACE) Programme, which aimed to improve cancer pathways and associated outcomes through the provision of evidence-based information and support,[25] demonstrated that the MDC approach diagnosed a broad range of cancers, including a notable proportion of less common cancers.[10] The aim of this study was to examine the less common cancers identified during the MDC pilots in detail and to consider whether such an approach has benefit for the diagnosis of these cancers.

We Listen
We Care

Integrated Foregut Clinical History
A Systems-based Approach

Nottingham University Hospitals NHS
NHS Trust

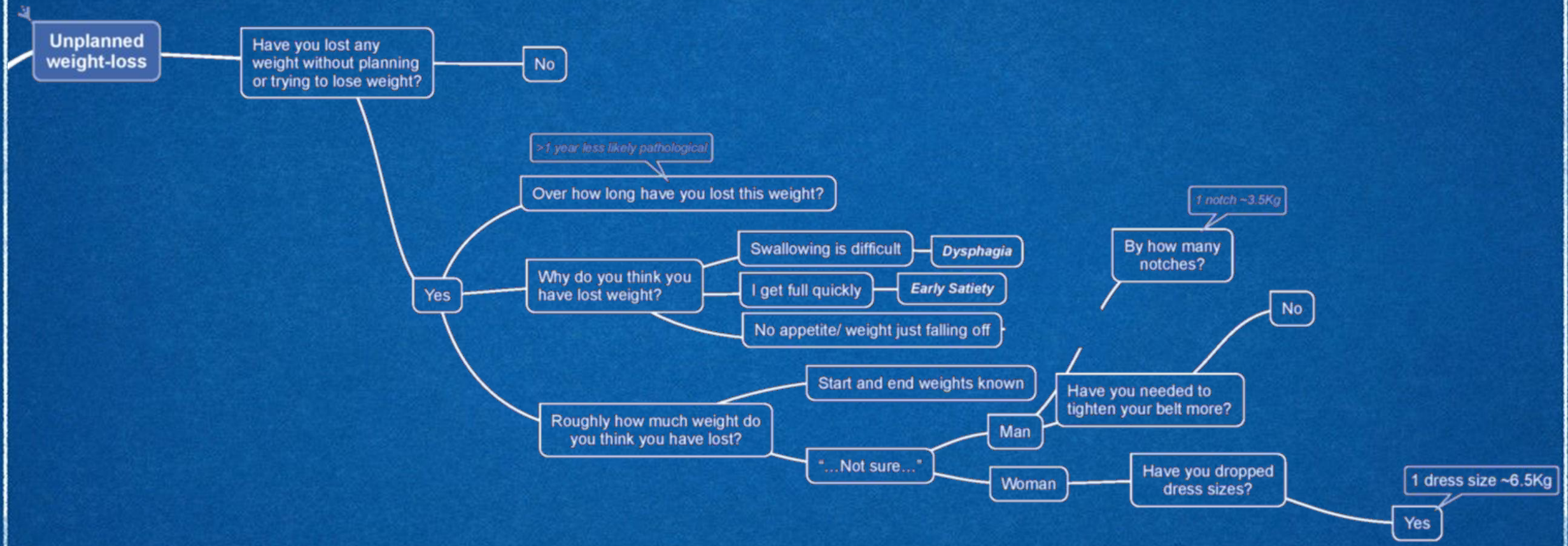




We Listen
We Care

Clinical History as Diagnostic Technology
Reducing "Semantic Ambiguity"

Nottingham University Hospitals NHS
NHS Trust



We Listen
We Care

Clinical History as Diagnostic Technology
Structured Language as “Test Ingredients”

Age group	0-39 40-49 50-59 60-69 70-79 80-89 90-99	0 4 5 6 7 8 9
+ Weight Loss of > 3 kg	(present=1,absent=0)	(0 or 1) X 2
+ Duration of symptoms	(> 6 months =1 < 6 months = 0)	(0 or 1) X -1.5
+ Sex	(male = 0 , female=1)	(0 or 1) X -1

Quest Journals
Journal of Medical and Dental Science Research
Volume 2~ Issue 12 (2015) pp: 09-13
ISSN(Online) : 2394-076X ISSN (Print):2394-0751
www.questjournals.org

Research Paper

Evaluation of validity of Edinburgh Dysphagia score in predicting oesophageal cancer in patients with dysphagia

Dr SS Prasad[1], Dr Chethan Kishanchand[2], Dr Inugala Anusiri[3], Dr Padmapriya J[4], Dr Anitha S[5]

Received 05 December, 2015; Accepted 15 December, 2015 © The author(s) 2015. Published with open access at **www.questjournals.org**

***ABSTRACT: -* Background:** The Edinburgh dysphagia score was developed at the University of Edinburgh in 2010 to predict carcinoma oesophagus in patients presenting with symptoms of dysphagia. We designed a prospective observational study at our institution to validate this scoring system at our institution.
Materials and Methods: 341 patients who presented with dysphagia and underwent esophagogastroduodenoscopy were included in the study conducted for a period of two and half years at Kasturba Hospital. Observations were made with regards to the components of the scoring system and Edinburgh dysphagia score was calculated for all patients.
Observations and Results: The Edinburgh dysphagia score had a sensitivity of 89.20% in detecting patients with carcinoma oesophagus. Specificity of Edinburgh dysphagia score was 70.30% and the positive predictive value was 76.21%.The negative predictive value was 85.92%.
Conclusion: The sensitivity of Edinburgh dysphagia score being low cannot be used to definitely rule out cancer in patients stratified as being at low risk, and hence patients at low risk also need to be thoroughly evaluated to rule out malignancy. However we are of the opinion that more studies may be required to study the validity of the score in different populations

Keywords: - *dysphagia score, carcinoma, oesophagus* ***Abbreviations:*** *EDS – Edinburgh Dysphagia Score*

I. INTRODUCTION

Dysphagia is a common symptom among patients presenting to surgical clinic. The causes for dysphagia vary from benign causes like gastro esophageal reflux disease to sinisterly etiology like carcinoma of the esophagus. Suspecting carcinoma in a patient presenting with dysphagia results in early evaluation with endoscopic studies and initiation of timely treatment.
Edinburgh dysphagia score was first described by Rhatigan et al [1]. In this study the authors claimed that application of EDS effectively predicts carcinoma of the esophagus in a patient presenting with dysphagia. Edinburgh dysphagia score is a scoring system developed to predict carcinoma esophagus in patients presenting with the symptom of dysphagia .Six parameters are used to calculate the score. The parameters are age, sex, loss of weight, duration of dysphagia, localization of dysphagia and acid reflux. The score stratifies the patients with dysphagia into high risk and low risk for carcinoma esophagus .The allocation of points in the scoring system is as shown in Table 1. A patient with a score of < 3.5 is considered to be at low risk for carcinoma esophagus and a patient with a score of ≥ 3.5 is considered to be at high risk for Carcinomaoesophagus.

Age group	0-39 40-49 50-59 60-69 70-79 80-89 90-99	0 4 5 6 7 8 9
+ Weight Loss of > 3 kg	(present=1,absent=0)	(0 or 1) X 2
+ Duration of symptoms	(> 6 months =1 < 6 months = 0)	(0 or 1) X -1.5
+ Sex	(male = 0 , female=1)	(0 or 1) X -1

*Corresponding Author: Dr Chethan Kishanchand

by the Edinburgh Dysphagia score in this study. There were 157 true positive cases, 19 true negative cases and 49 false positive cases in the study

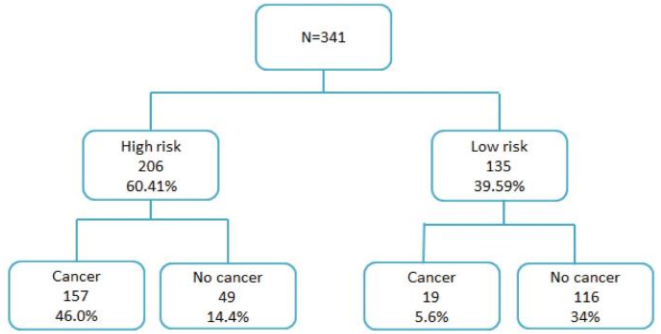


Fig 1: flow chart showing risk stratification according to EDS and cancer detection by OGD

	Cancer	No Cancer	Total
EDS > 3.5 High risk	157	49	206
EDS < 3.5 Low risk	19	116	135
Total	176	165	341

Table 2: Table showing cancer detection in risk groups as stratified by EDS

The Edinburgh Dysphagia score had a sensitivity of 89.20% in detecting patients with carcinoma oesophagus.
Specificity of Edinburgh score was 70.30%.
The positive predictive value of Edinburgh Dysphagia score was 76.21%.
The negative predictive value of the Edinburgh Dysphagia score was 85.92%.

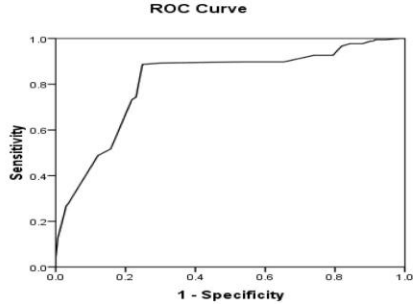
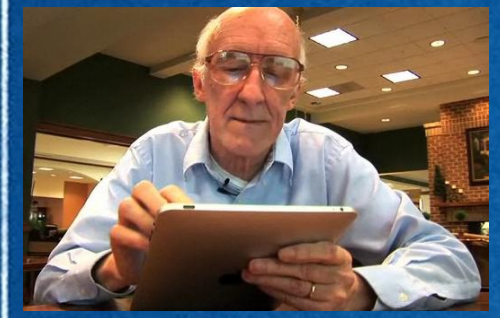


Fig 2: Area under Receiver operating characteristic (ROC) curve of EDS = 0.890

*Corresponding Author: Dr Chethan Kishanchand

Clinical History as Diagnostic Technology Implemented as “Pre-Visit Planning”

Nottingham University Hospitals NHS Trust



Head and Neck Timed Diagnostic Pathway

	Day -3 to 0	By Day 3	By Day 10	By Day 20	By Day 28
	Primary care	Local diagnostic centre		/ Specialist diagnostic centre	
Ear, nose and throat	**Urgent GP or GDP referral** Including a minimum dataset	**Clinical triage** by suitably experienced clinician To ENT, OMF or neck lump clinic	**ENT Straight to one-stop clinic Nasendoscopy** and **booking of MRI** for 7 calendar days if clinically suspicious	**LA Biopsy** if it would not impact imaging staging. This should be included in one-stop clinic	**MRI** of head and neck, and/or **CT** of chest (MRI/CT to be reported within 5 calendar days) and/or **EUA / Panendoscopy / GA Biopsy (+/- US Guided)** if required (reported within 7 calendar days) **Local diagnostic planning meeting / streamlined MDT** for cases where still uncertainty; Refer appropriate cases directly to **Head and Neck** oncology service for **specialist MDT**	**Specialist MDT** if required, following PET-CT and/or Panendoscopy / GA Biopsy results **OPG X-ray** if treatment planning includes chemoradiotherapy
Oral and maxillo-facial			**OMF Straight to one-stop clinic OPG X-ray and Nasendoscopy** and/or **booking of MRI** for 7 calendar days if clinically suspicious			
Neck			**Neck Straight to one-stop clinic Ultrasound (US) with Fine Needle Aspiration Cytology (FNAC) or US guided core biopsy** with ROSE hot reporting and **booking of MRI / CT** for 7 calendar days if clinically suspicious		**PET-CT scan,** if required, to be ordered, carried out and results reported in 10 calendar days	
Patient information	**Patient information** Provided in primary care	**Patient information** Provided in consultation or OPA	**Cancer likely / diagnosed** Clinic review; **Communication with patient and discussion with CNS.** Record FDS when patient is informed that they have cancer OR **Cancer ruled out and communication with patient** Patient informed; referred to other secondary care service if possible. Record FDS when patient informed that cancer has been excluded			**Outpatient Clinic**; **Discuss treatment options** and Personalised Care and Support Plan with MDT input; assess fitness +/- pre-op assessment; Patient optimisation and support

We Listen We Care

Clinical History as Diagnostic Technology
Diagnostic Problems List

Nottingham University Hospitals NHS Trust

B **SWALLOWING (CONTINUED)**

Non-acid regurgitation

Does undigested food come back into your throat?
Do you meet the carrot again? Do peas or pills pop back up unexpectedly? 😊

Non-acid regurgitation is different from acid regurgitation, and it is different from vomiting. Food boluses, rather than passing through the throat and into the oesophagus, get 'stored' somewhere and come back up. If the pea pops back up undigested, it will have been sitting somewhere above the stomach.

- *Think **Pharyngeal Pouch** is >65 and >1 year history*
- *Think **Oesophageal Cancer** if short history and older patient*
- *Think **Achalasia** in all patients, but especially if also chest pain.*
- *Think **Oesophageal Dysmotility** for every presentation of non-acid regurgitation.*

After enquiring about non-acid regurgitation, you can consider 'jumping page' to reflux and then back.

❑ No non-acid regurgitation

How often does it happen? Is it ❑ less than once a month, ❑ less than once a week, ❑ some time every week, ❑ every day, ❑ during every meal or ❑ every swallow

How soon after eating does it happen? ❑ Seconds after ❑ Minutes ❑ Hours ❑ Next day

What comes up? What does it look and smell like? ❑ Fresh ❑ Old/fermented

Do you experience bad breaths? ❑ No ❑ Rarely ❑ Often

C **Please write a history of the patient with pertinent features and negatives in flowing language**

Stefan is a 68 years old male who presents with **8 months history** of **increasingly frequent solid-food pharynx-localised dysphagia**. He has **lost 5Kg** of weight over the **last 4 months without planning** to do so. He does not report throat pain or pains associated with swallowing, and does not report aspiration or non-acid regurgitation. His **father died of oesophageal cancer** age 65 and he is quite concerned about this. He **experiences weekly heartburn** but does not report acid regurgitation, gastroduodenal, or other symptoms. He **had a gastroscopy** 10 years ago which showed a **hiatus hernia**. He is hypertensive and has raised cholesterol. He takes atorvastatin, amlodipine and **omeprazole**. He has no allergies.

D **Please write the "Problems" that need to be assessed**

Problem #1	Problem #2	Problem #3	Problem #4
Progressive dysphagia	Unplanned weight-loss		

*A "Problem" is an **investigation-requiring / pathway-defining** symptom and/or sign. This is not exactly the same as a symptom and/or sign. There is often one, and sometimes, there are many. For example, retrosternal dysphagia and refractory GORD are one problem, because their initial investigation is one test (gastroscopy). Dysphagia and Odynophagia (different to swallow-associated chest pain) are two problems, because odynophagia needs neck MRI and path-of-swallowing endoscopy. Dysphagia and unplanned weight-loss (i.e. >3Kg as per Edinburgh Dysphagia Score thredhold) are two problems. They need a gastroscopy and CT Chest-Abdomen-Pelvis. Lateralised throat pain is one problem, but its assessment requires two investigations (a Definitive Pharyngolaryngoscopy and a neck MRI) as a matter of course.*

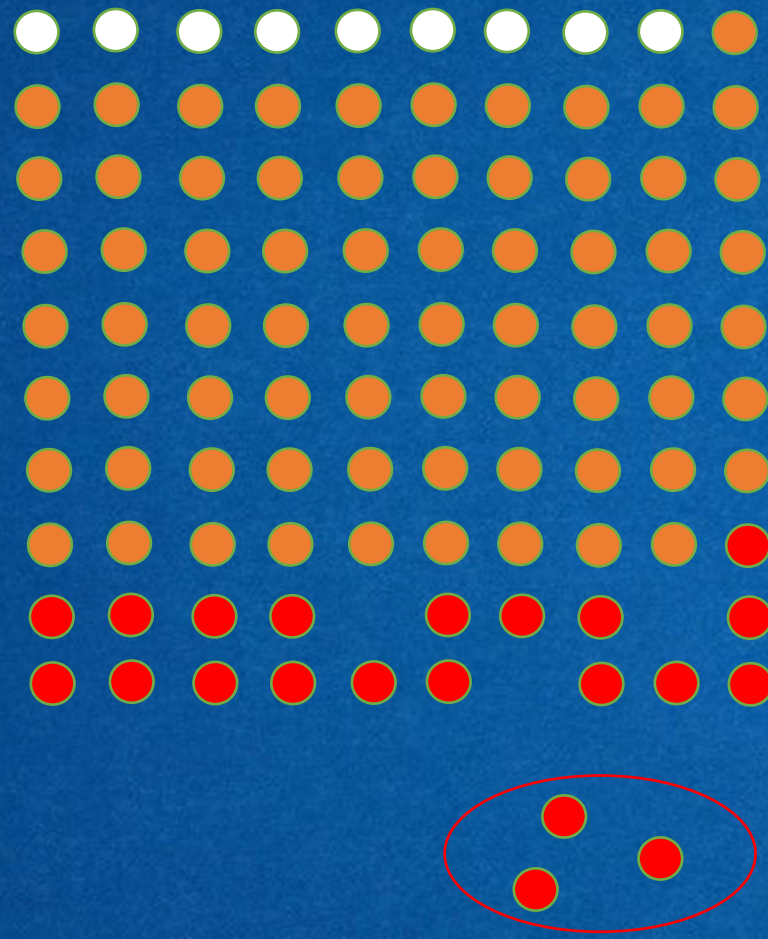
E **Please write the first-line investigation(s) that are needed to assess the identified Problems**

Problem #1 Test(s)	Problem #2 Test(s)	Problem #3 Test(s)	Problem #4 Test(s)
Gastroscopy	CT chest-abdo-pelvis		

We Listen We Care

The Integrated Foregut Clinical History: Why not ask the GP to do it?

Nottingham University Hospitals NHS
NHS Trust



Tiredness	Constipation	Blood in stool/rectal bleeding
Night-time urination	Increase in waist circumference	Difficulty swallowing
Lack of energy	Change in stool frequency	Weight loss
Headache	Diarrhoea	Incontinence without stress/urge
Back pain	Nausea	Vaginal bleeding after intercourse
Abdominal bloating	Swollen legs	Pain/burning when urinating
Memory problems	Difficulty in emptying the bladder	Swollen lymph/nodes
Abdominal pain	Frequent urination	Black stool
Erectile dysfunction	Stress incontinence	Postmenopausal bleeding
Coughing	Shortness of breath	Repeated vomiting
Concentration problems	Pelvic pain during intercourse	Blood in urine
Change in stool texture	Hoarseness	Blood in semen
Dizziness	Urge incontinence	Coughing up blood
Pelvic pain	Loss of appetite	Blood in vomit
Feeling unwell	Fever	

We Listen
We Care

The Integrated Foregut Clinical History: Why not ask the GP to do it?

Nottingham University Hospitals NHS
NHS Trust

Research

Chris Salisbury, Sunita Procter, Kate Stewart, Leah Bowen, Sarah Purdy, Matthew Ridd, Jose Valderas, Tom Blakeman and David Reeves

The content of general practice consultations:

cross-sectional study based on video recordings

Abstract

Background
Demographic and policy changes appear to be increasing the complexity of consultations in general practice.

Aim
To describe the number and types of problems discussed in general practice consultations, differences between problems raised by patients or doctors, and between problems discussed and recorded in medical records.

Design and setting
Cross-sectional study based on video recordings of consultations in 22 general practices in Bristol and North Somerset.

Method
Consultations were examined between 30 representative GPs and adults making a pre-booked day-time appointment. The main outcome measures were number and types of problems and issues discussed; who raised each problem/issue; consultation duration; whether problems were recorded and coded.

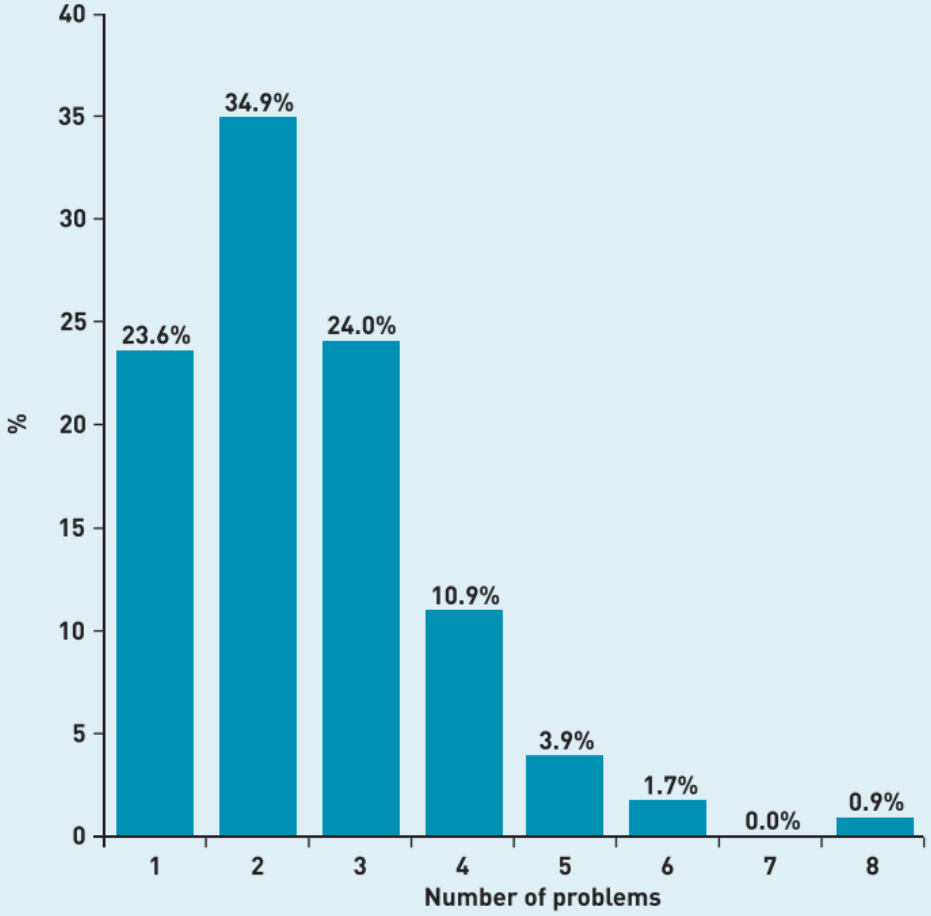
Results
Of 318 eligible patients, 229 (72.0%) participated. On average, 2.5 (95% CI = 2.3 to 2.6) problems were discussed in each consultation, with 41% of consultations involving at least three problems. Seventy-two per cent (165/229) of consultations included problems in multiple disease areas. Mean consultation duration was 11.9 minutes (95% CI = 11.2 to 12.6). Most problems discussed were raised by patients, but 43% (99/229) of consultations included problems raised by doctors. Consultation duration increased by

INTRODUCTION

General practice in most countries has been based historically on providing short consultations to provide accessible treatment for common health problems, while identifying patients with serious problems requiring specialist referral. Several trends are challenging this approach. The ageing population and the shift of work from hospitals into the community mean that the main role of general practice is now managing chronic conditions.[1] To improve quality of care, managing chronic conditions has become highly structured, based on evidence-based guidelines, with adherence incentivised through pay-for-performance schemes.[2] However, most patients consulting in general practice have multiple coexisting chronic conditions, or multimorbidity,[3] which means that a large number of guidelines and incentivised actions could apply to each patient encountered in typical consultations.[4,5]

These trends are likely to have an impact on the content and complexity of general practice consultations. Clinicians may be expected to undertake screening, health promotion, and chronic disease management alongside responding to the patient's presenting complaints.[6] Given that each patient may have multiple chronic conditions, typical consultations may require consideration of a wide range of problems, some raised by the patient and some by the doctor. It can be impossible to adequately deal with all these problems within a short time-limited consultation, so prioritisation is sometimes necessary.[7]

There is a long history of research to describe the clinical content of general practice, for example the national morbidity studies in the UK[8], the BEACH study in Australia,[9] and the CONTENT project in Germany[10]. However, fewer studies have explored the number of different problems dealt with at each consultation. Most of these have been based on analysis of medical records or encounter forms completed by GPs[11–14] (an approach which assumes that doctor's records capture the full content of consultations), whereas those based on direct observation or video recordings[15–18] have been limited in scope and have had methodological limitations, in particular providing little information about the reliability of the process of coding consultations. Furthermore, since this research was conducted there have been major changes that are likely to have increased the complexity of consultations, including new models of chronic disease management, the use of guidelines, introduction of pay-for-performance schemes, and developments in computerised record systems which



We Listen We Care

The Integrated Foregut Clinical History: Is it cost-effective?

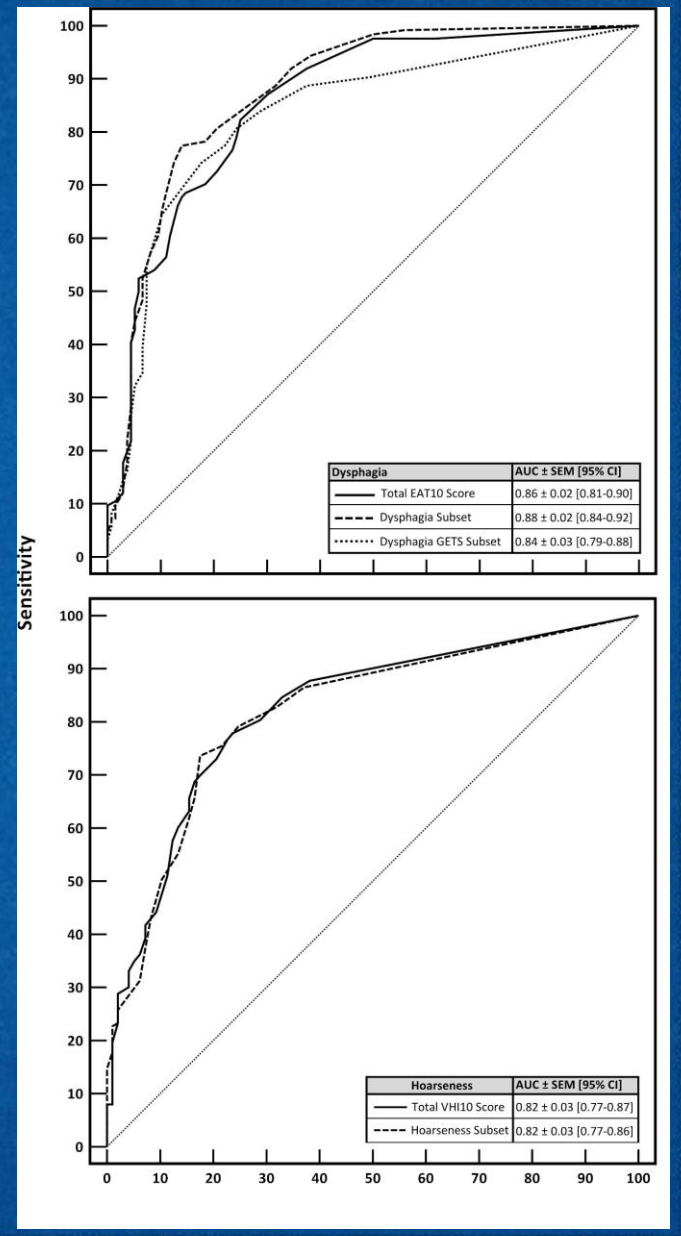
Nottingham University Hospitals NHS
NHS Trust

CT Neck with Contrast requires:

- To registered staff (band 6)
- One cannulator (band 3)
- One imaging assistant (band 2)

Integrated Foregut Clinical History requires:

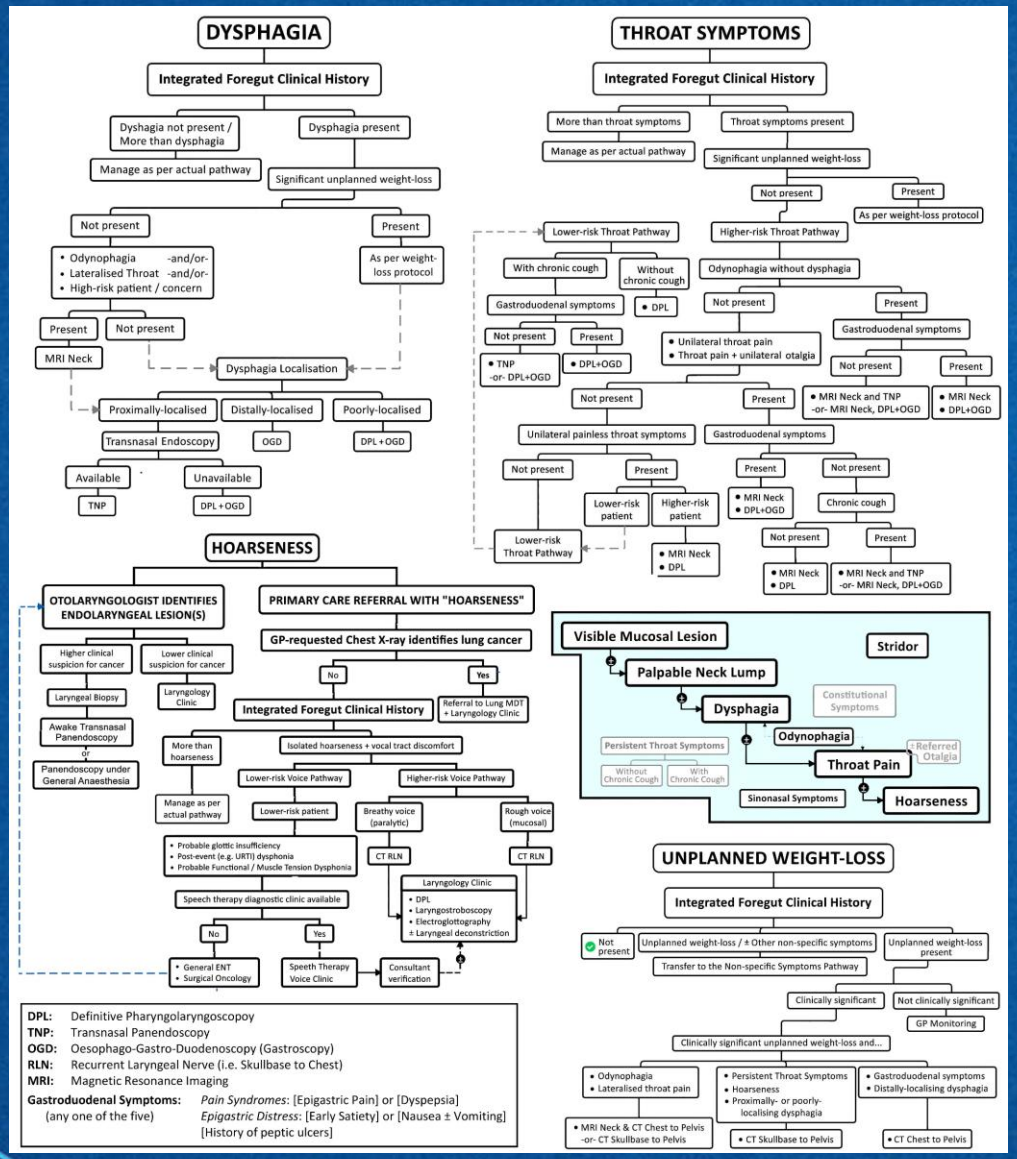
- One trained band 6 nurse

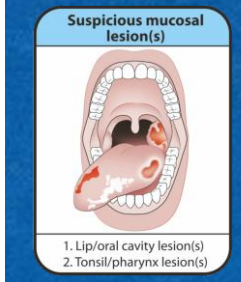


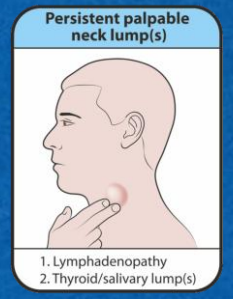
We Listen
We Care

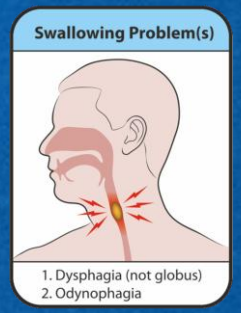
The Integrated Foregut Clinical History: Can it reduce downstream variation?

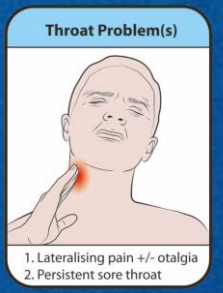
Nottingham University Hospitals NHS
NHS Trust

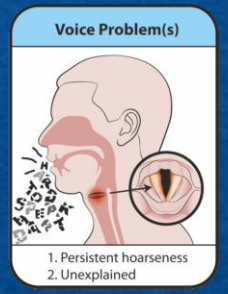












We Listen We Care

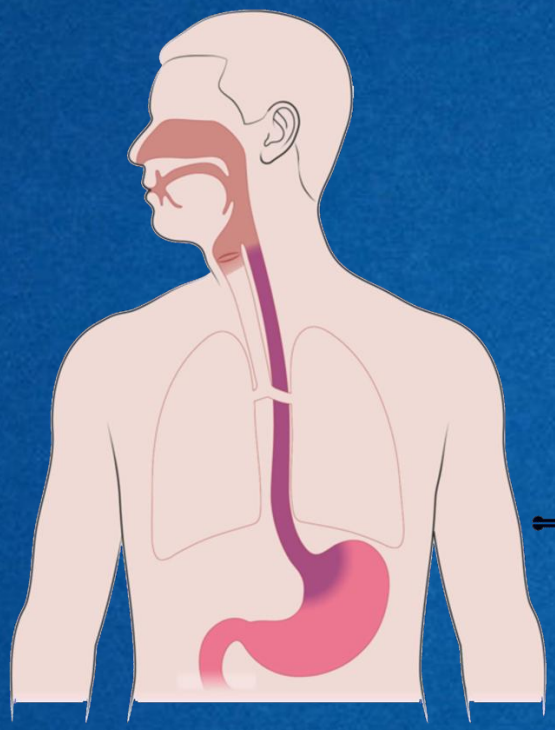
The Integrated Foregut Clinical History: Does it work?

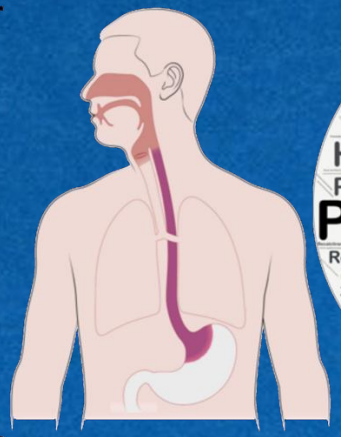
A total of 301 (241 H&N and 60 UGI) patients, referred through the suspected-cancer (2week-wait) pathway, underwent pre-visit planning.

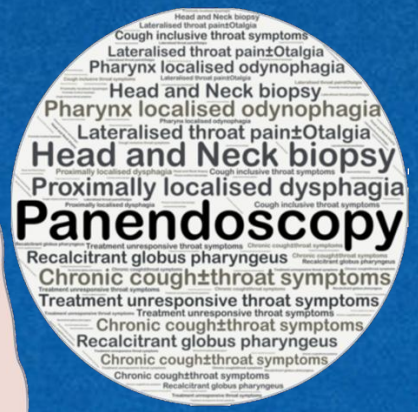
- H&N pathway waiting time fell from 51 days before pre-visit planning, to 28.3 days;
- 16.6% of patients (10/60) originally referred for Gastroscopy did not need it;
- 10.8% of H&N patients (10/93) who needed Gastroscopy had major oesophageal pathologies, including oesophageal cancer and Eosinophilic Oesophagitis.

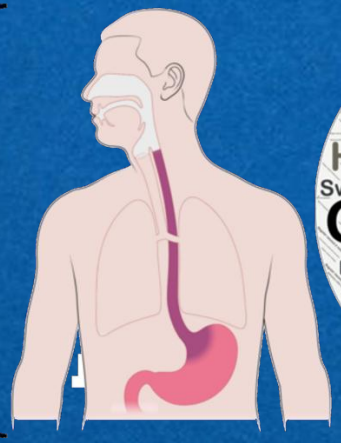
Path-of-Swallowing Endoscopy

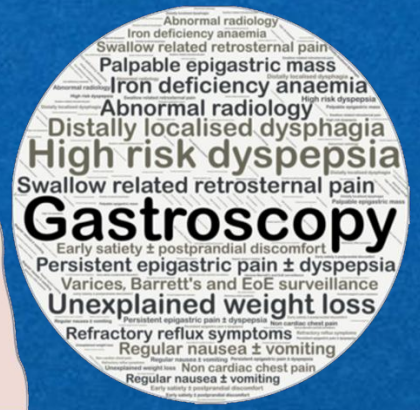
Nottingham University Hospitals NHS
NHS Trust

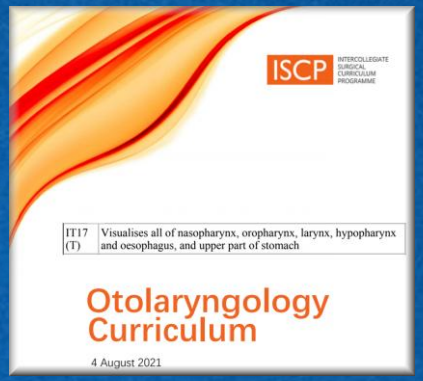


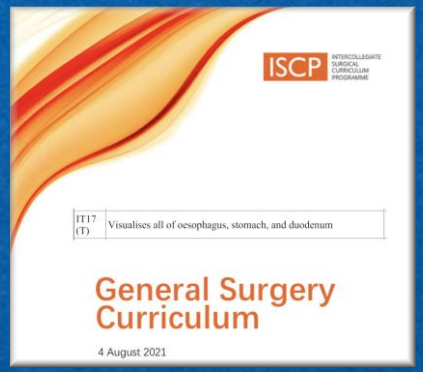


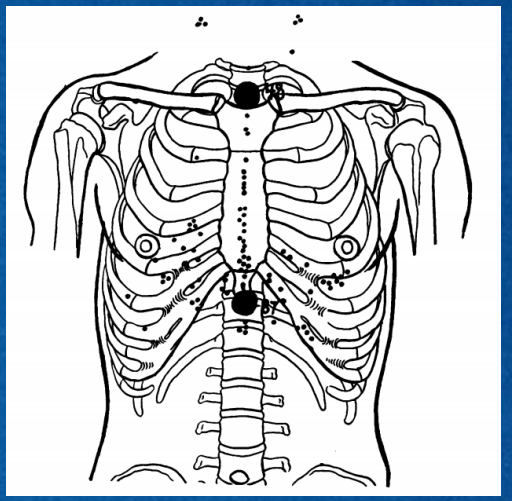












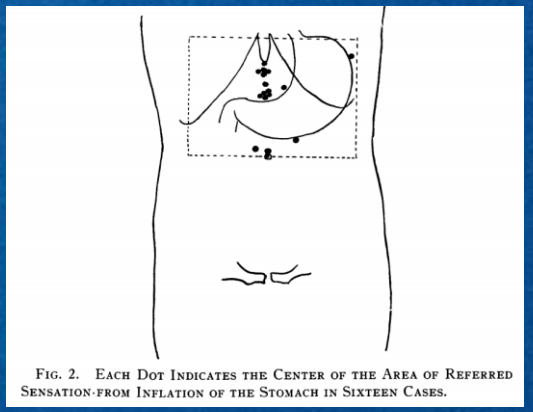


Fig. 2. Each Dot Indicates the Center of the Area of Referred Sensation from Inflation of the Stomach in Sixteen Cases.

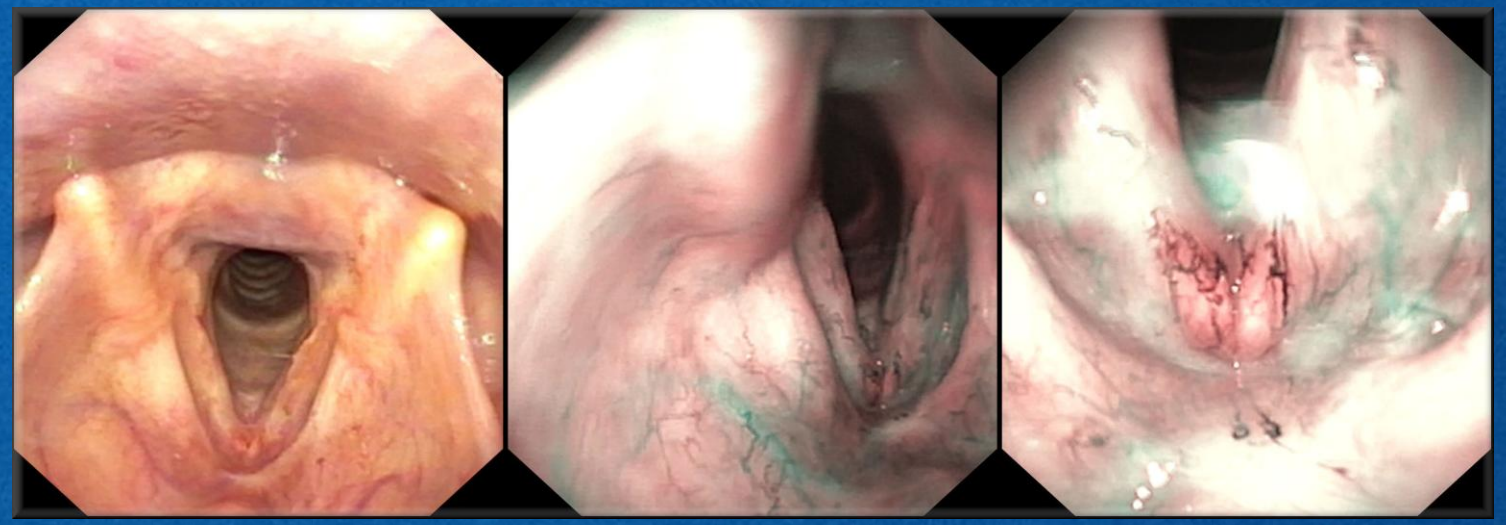
We Listen
We Care

High-definition transnasal endoscopies are not available

FUNCTIONAL PHARYNGOESOPHAGOSCOPY: A NEW TECHNIQUE FOR DIAGNOSTICS AND ANALYZING DEGLUTITION

INGO F. HERRMANN, MD, SARA ARCE RECIO, MD

FIGURE 1. Video image of a fibroendoscopic view of the pharyngolarynx in position 1 during the oropharyngeal phase of the deglutition. The bolus is collected in the valleculae.



Creating a Specific Visual Documentation Standard

Nottingham University Hospitals NHS
NHS Trust

Received: 28 January 2021 | Revised: 23 February 2021 | Accepted: 7 March 2021
DOI: 10.1111/coa.13783

LETTERS TO THE EDITOR

WILEY

Should twin-mode white-light and virtual chromoendoscopy of pre-defined mucosal stations be considered a standard of care for Transnasal Panendoscopy?

1 | SIR,

Robust cancer diagnostics is central to delivering the long-term NHS Plan of saving 55,000 lives a year.[1] For Foregut cancers, symptoms-directed visualisation of the relevant at-risk mucosal stations (between the lips and the second part of the duodenum) forms the mainstay of evaluation. Available tools include direct inspection, flexible nasendoscopy (FNE), examination under general anaesthesia (Panendoscopy), and Oesophago Gastro Duodenoscopy (OGD).

Gastrointestinal endoscopy is regulated and audited against explicit quality standards, including specific mucosal stations that need to be documented during every OGD.[2] Head and neck evaluations are not regulated in the same way, and whilst some diagnostic pathways (e.g. suspicious lesions and palpable neck lumps) are becoming standardised, symptom-based presentations (i.e. dysphagia, odynophagia, lateralising throat pain, and hoarseness) are evaluated in different ways.

Process variations arise because different cancers manifest the same symptom(s) and can initiate different diagnostic pathways. For example, dysphagia is common to gastroenterology and head and neck, hoarseness is common to respiratory and head and neck, and neck lump is common to haematology and head and neck. Moreover, what constitutes a safe and cost-effective pathway for excluding cancer, with standardised anatomical definitions and documentation standards for at-risk mucosal stations, remain variable.

Digital endoscopes are superior to fibreoptic endoscopes for cancer diagnosis[3] and using Virtual chromoendoscopy further enhances their performance. Virtual chromoendoscopy emphasises a narrow range of the light spectrum to enhance surface microvasculature and mucosal lesions. This is achieved either by passing light-through a physical filter (e.g. Narrow Band Imaging) or by applying software algorithms to achieve a similar effect digitally (Flexible Spectral Imaging Colour Enhancement-FICE- and i-Scan). Software-based chromoendoscopy enables concurrent display of white-light and enhanced images (Figure 1). Virtual chromoendoscopy was-shown to enable detection of primary mucosal cancers in 36% of patients who had been declared as having a carcinoma of unknown primary.[4] Moreover, routine use of virtual chromoendoscopy and structured pharyngeal evaluation in Japan may have contributed to the fact that most hypopharyngeal cancers are identified at an early stage (T_{is} to T_2) in that country.[5]

Transnasal Panendoscopy thus could provide an effective one-stop evaluation for patients with dysphagia, odynophagia, and lateralising throat pain. In this context, structured evaluation and dual-light documentation of pre-defined mucosal stations could increase cancer diagnostic yield[4] and confidence in negative findings. This may in turn enable safe cancer exclusion and cost-effective discharge in order to maintain high-quality diagnostics in the settings of long-standing increases in demand which now need to be supported by services that have been profoundly affected by the coronavirus pandemic.

We believe that a standardised approach to performing transnasal panendoscopy and dual-light digital endoscopy and documentation should be considered as a standard of care and part of the solution in the new normal, and its safety and cost-effectiveness in largescale deployment should be evaluated through a multicentre clinical trial.

ACKNOWLEDGEMENT

Nil

CONFLICT OF INTEREST

University of Southampton (SARN) has received an unrestricted research and educational grant from Pentax Corporation.

Elizabeth J Williams[1]
S A Reza Nouraei[2]

[1]*Consultant Gastroenterologist, University Hospitals of Dorset NHS Foundation Trust, Poole, UK*
[2]*Robert White Professor of Laryngology and Clinical Informatics, University of Southampton, Southampton, UK*

Correspondence
Professor Reza Nouraei, Robert White Centre for Airway Voice and Swallowing, Department of Ear Nose and Throat Surgery, University Hospitals of Dorset NHS Foundation Trust, Poole, BH15 2JB, UK.
Email: RNouraei@nhs.net

We Listen We Care

Using the BSG Documentation Standard as Template for Path-of-Swallowing Endoscopy

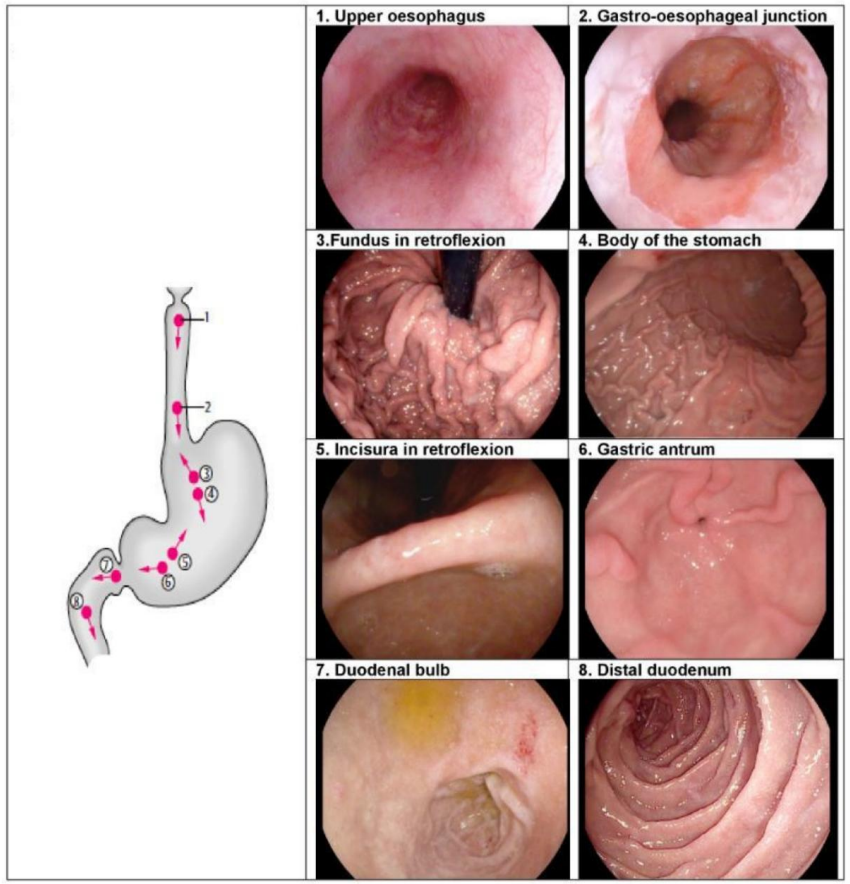
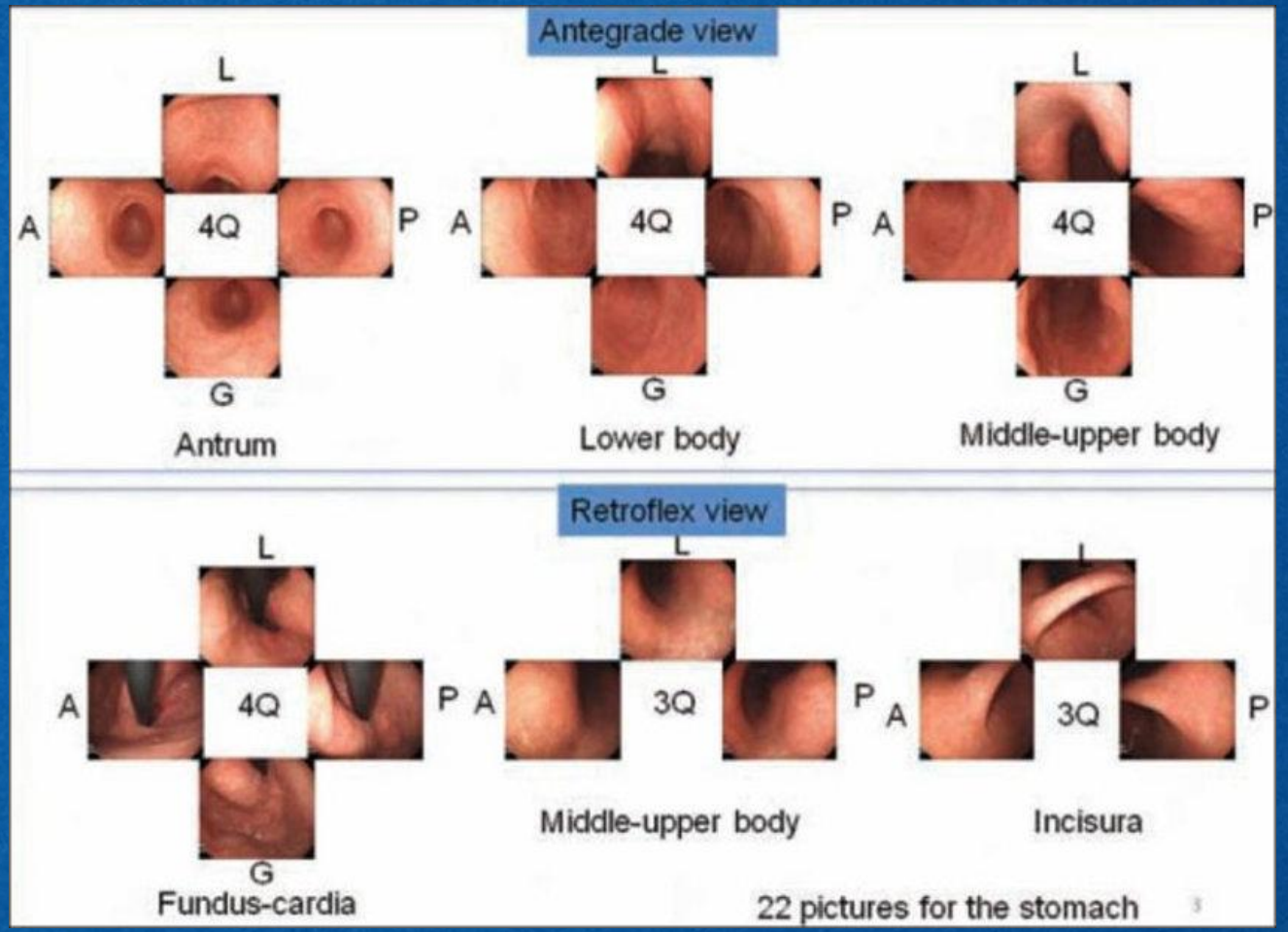


Figure 2 A schematic demonstrating the recommended stations for photo-documentation during a diagnostic oesophago-gastro-duodenoscopy. (Reproduced with permision from Thieme [43]).



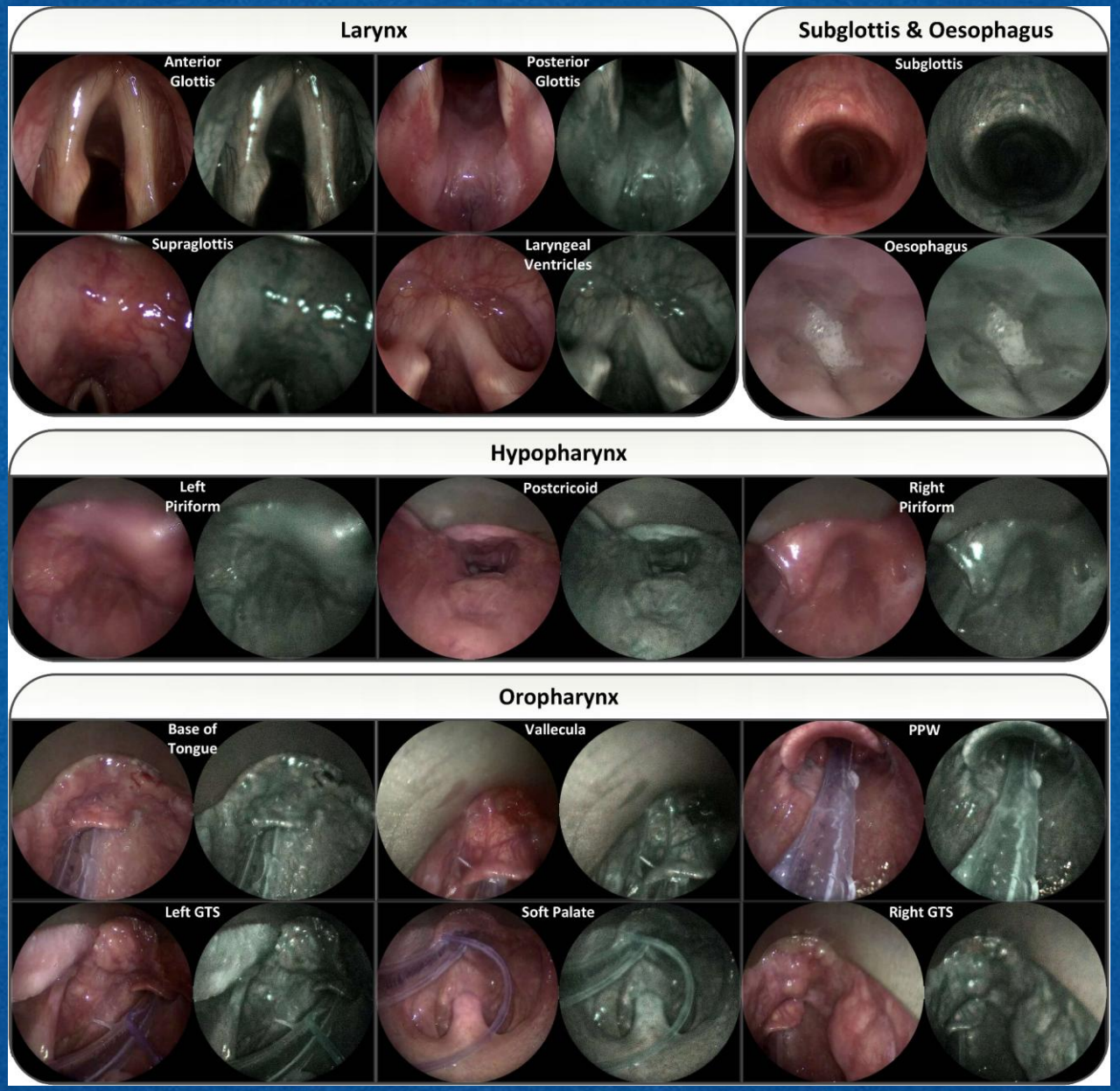
Awake Endoscopy must be equivalent or superior to examinations under general anaesthesia

Nottingham University Hospitals NHS
NHS Trust

We Listen
We Care

Panendoscopy Standard

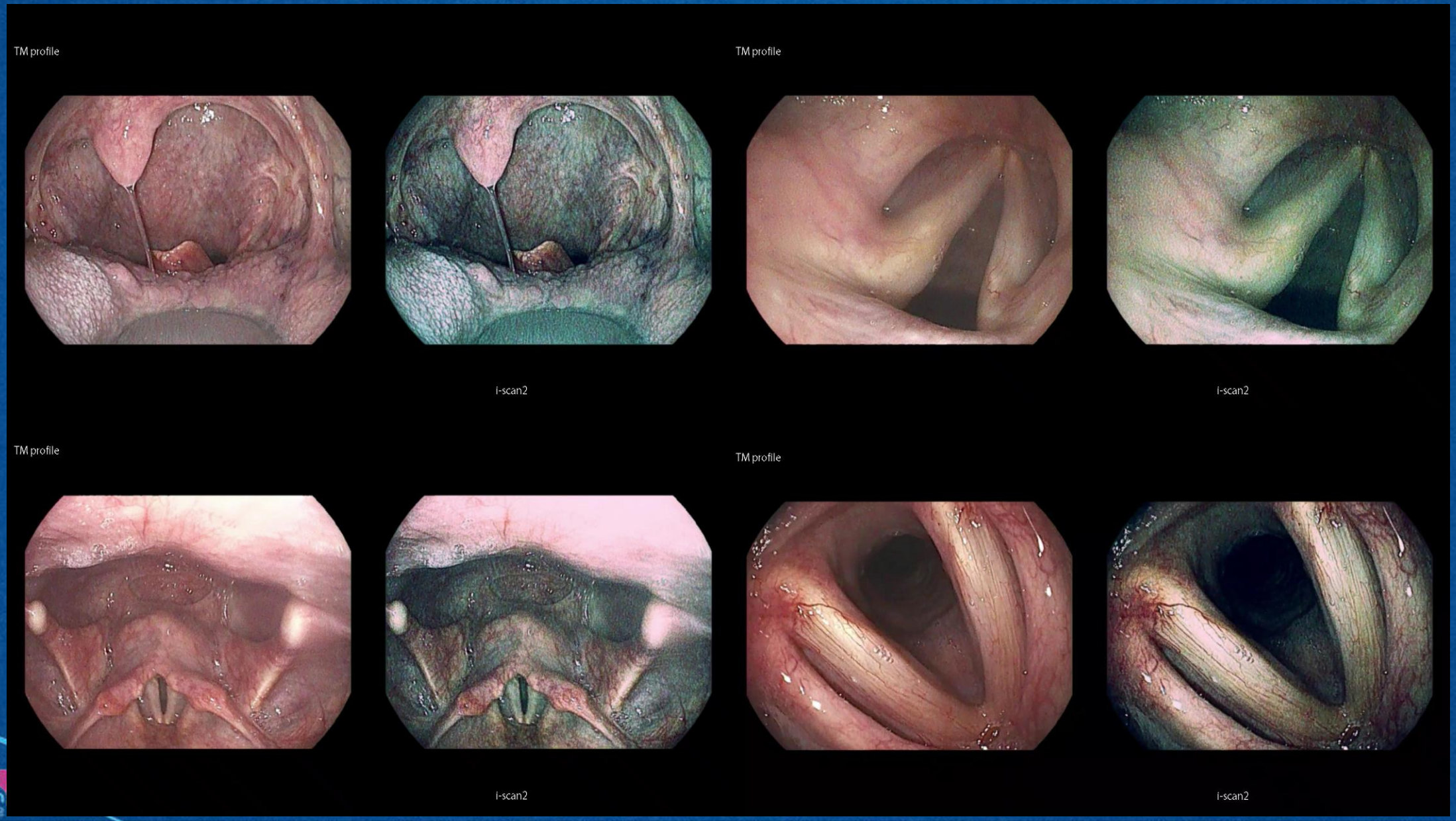
Nottingham University Hospitals NHS
NHS Trust



We Listen
We Care

Endoscopy Optimised for Early Disease Detection

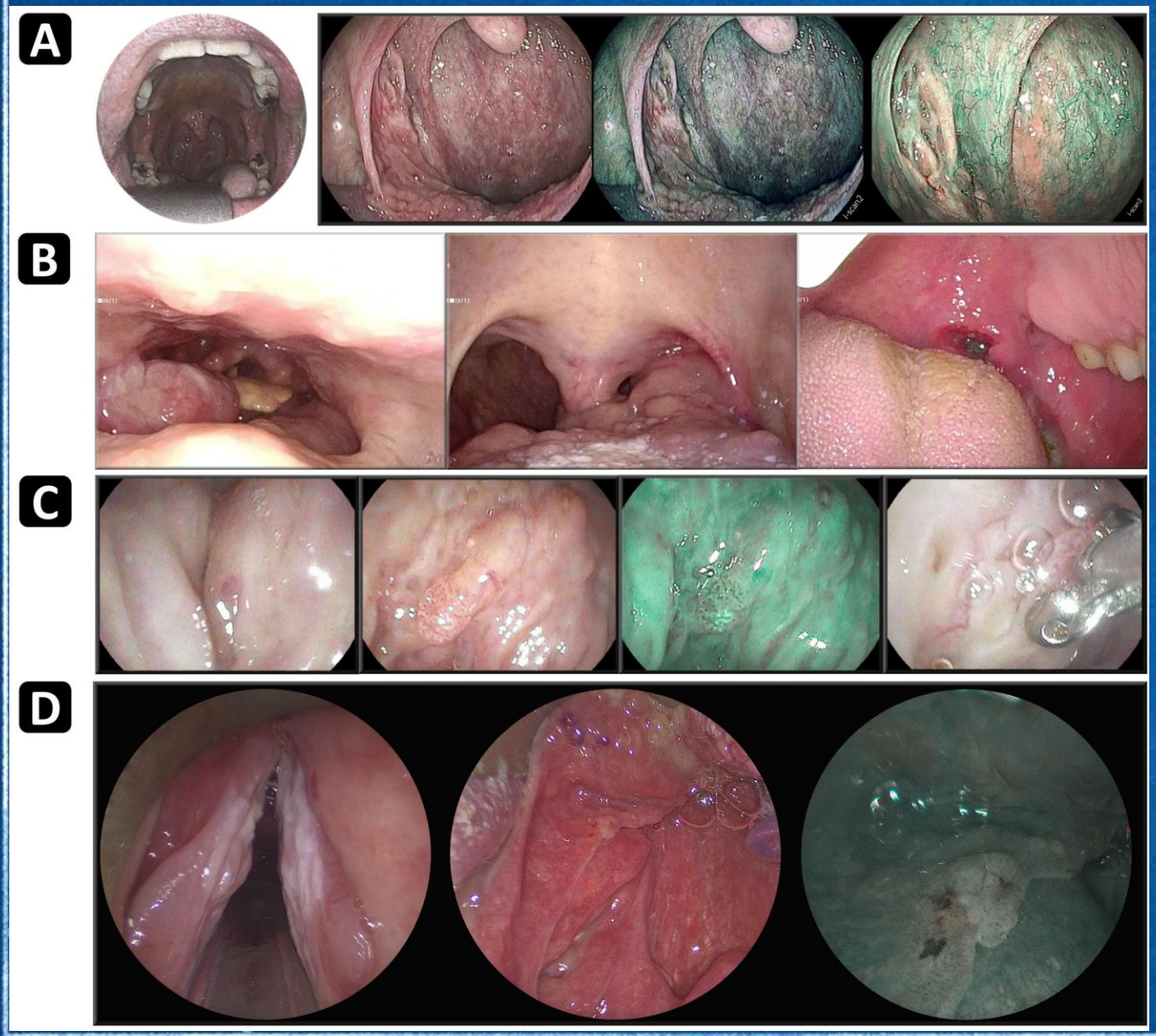
Nottingham University Hospitals NHS Trust



We Listen We Care

Endoscopy Optimised for Early Disease Detection

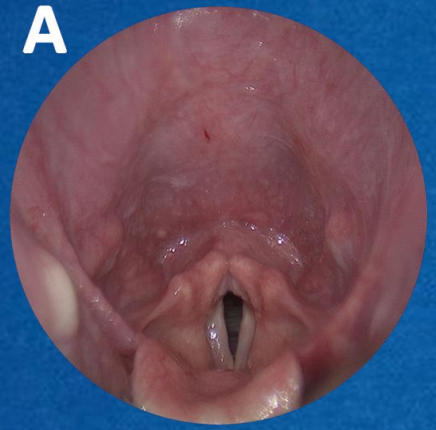
Nottingham University Hospitals NHS
NHS Trust

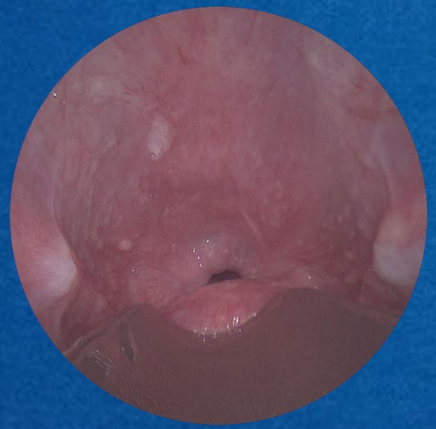


Endoscopy Optimised for Early Disease Detection

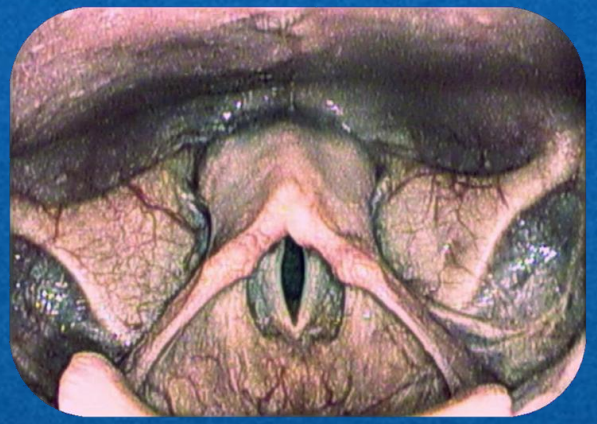
Nottingham University Hospitals NHS
NHS Trust

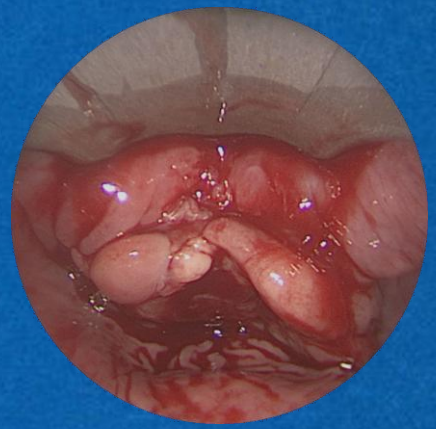
A

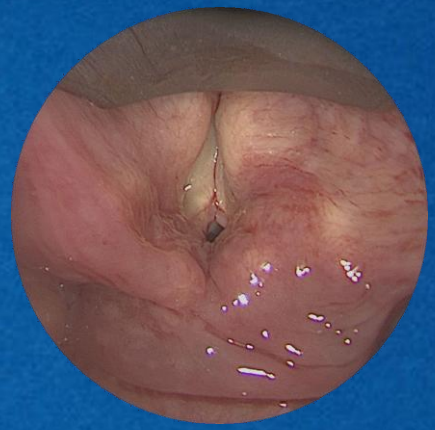


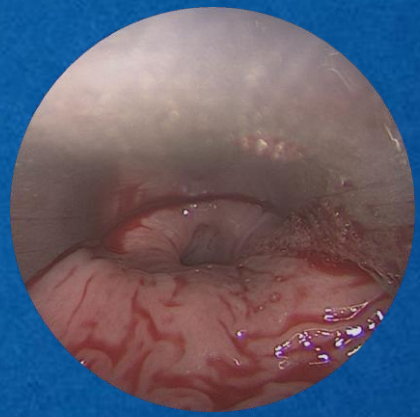


B





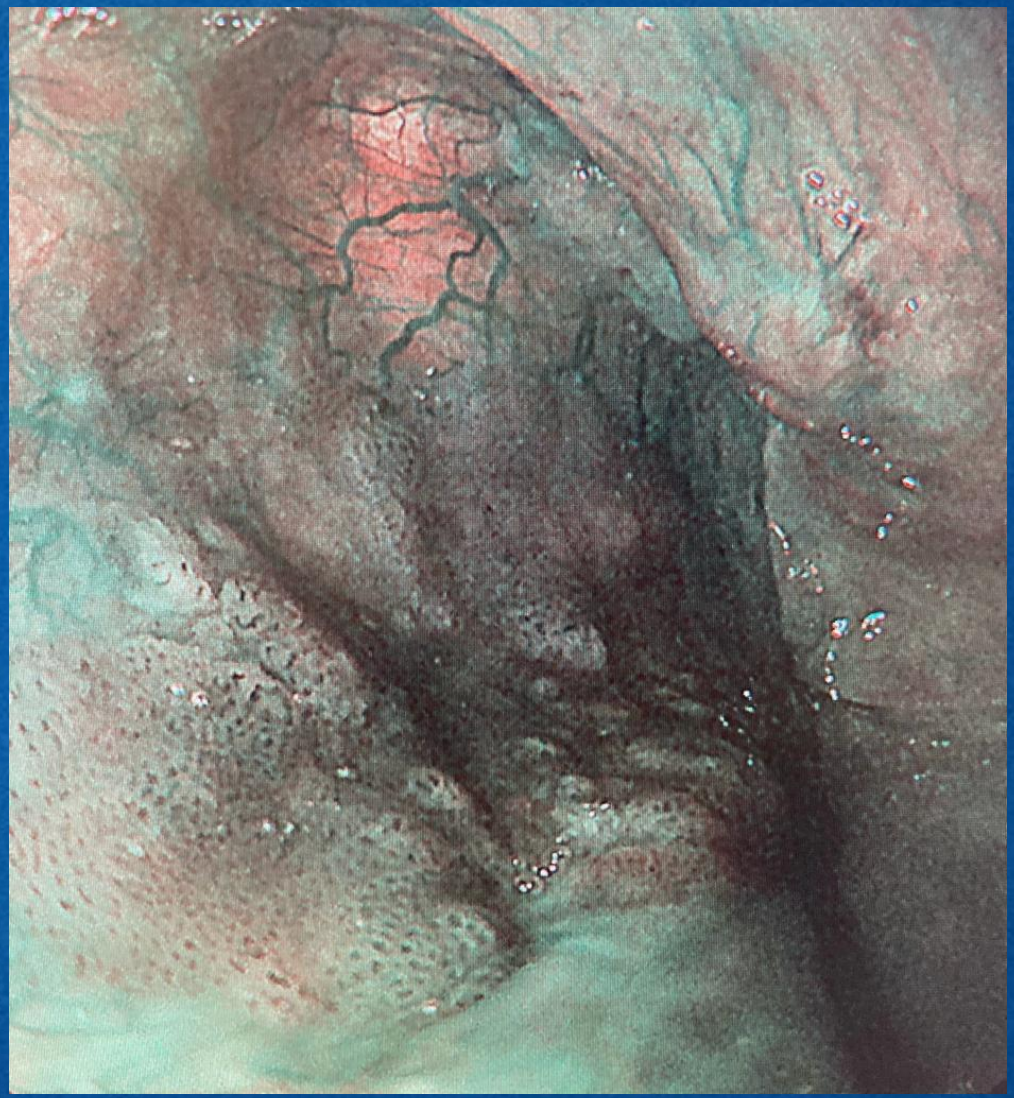




We Listen
We Care

Endoscopy Optimised for Early Disease Detection

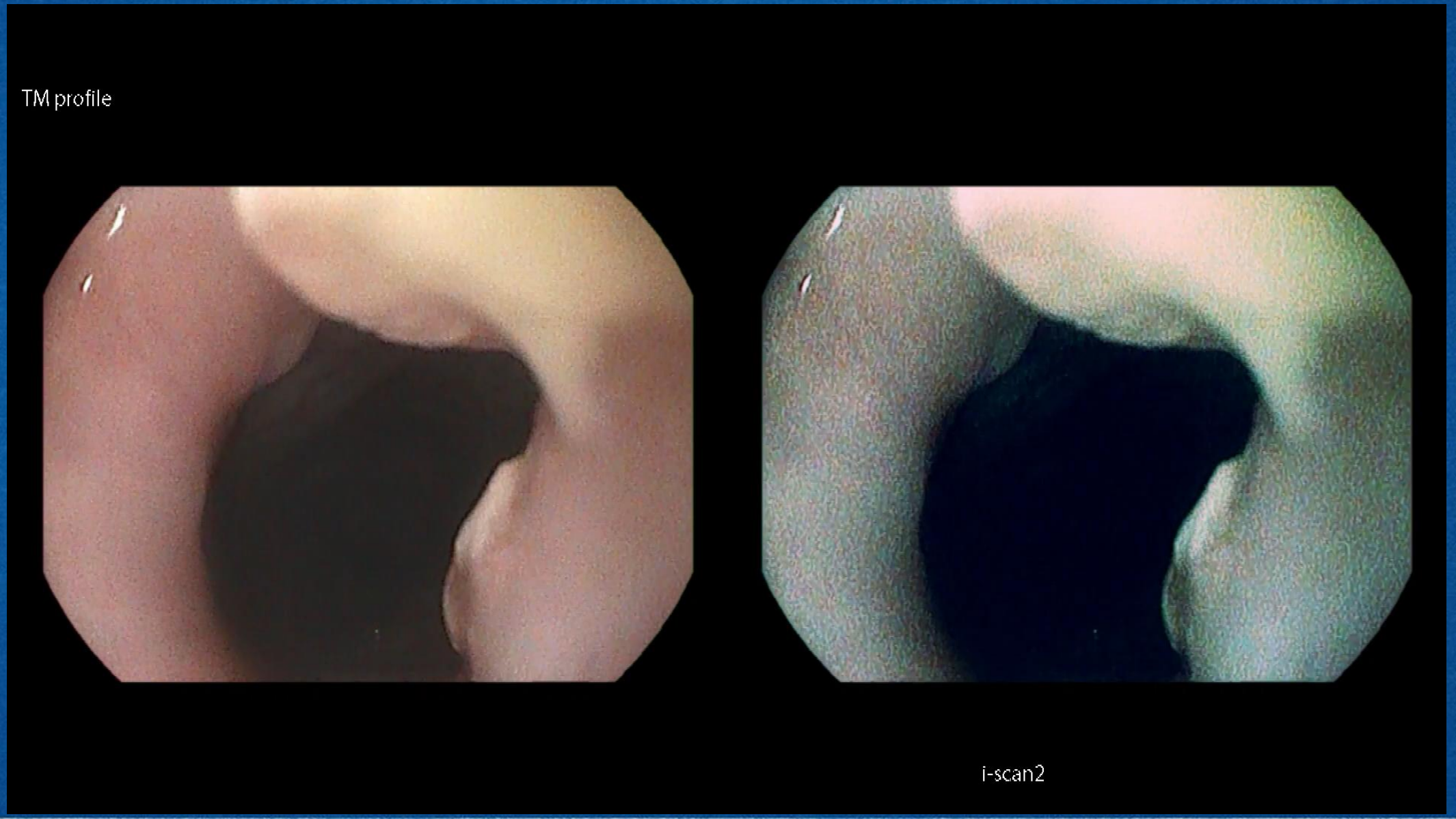
Nottingham University Hospitals NHS
NHS Trust



We Listen
We Care

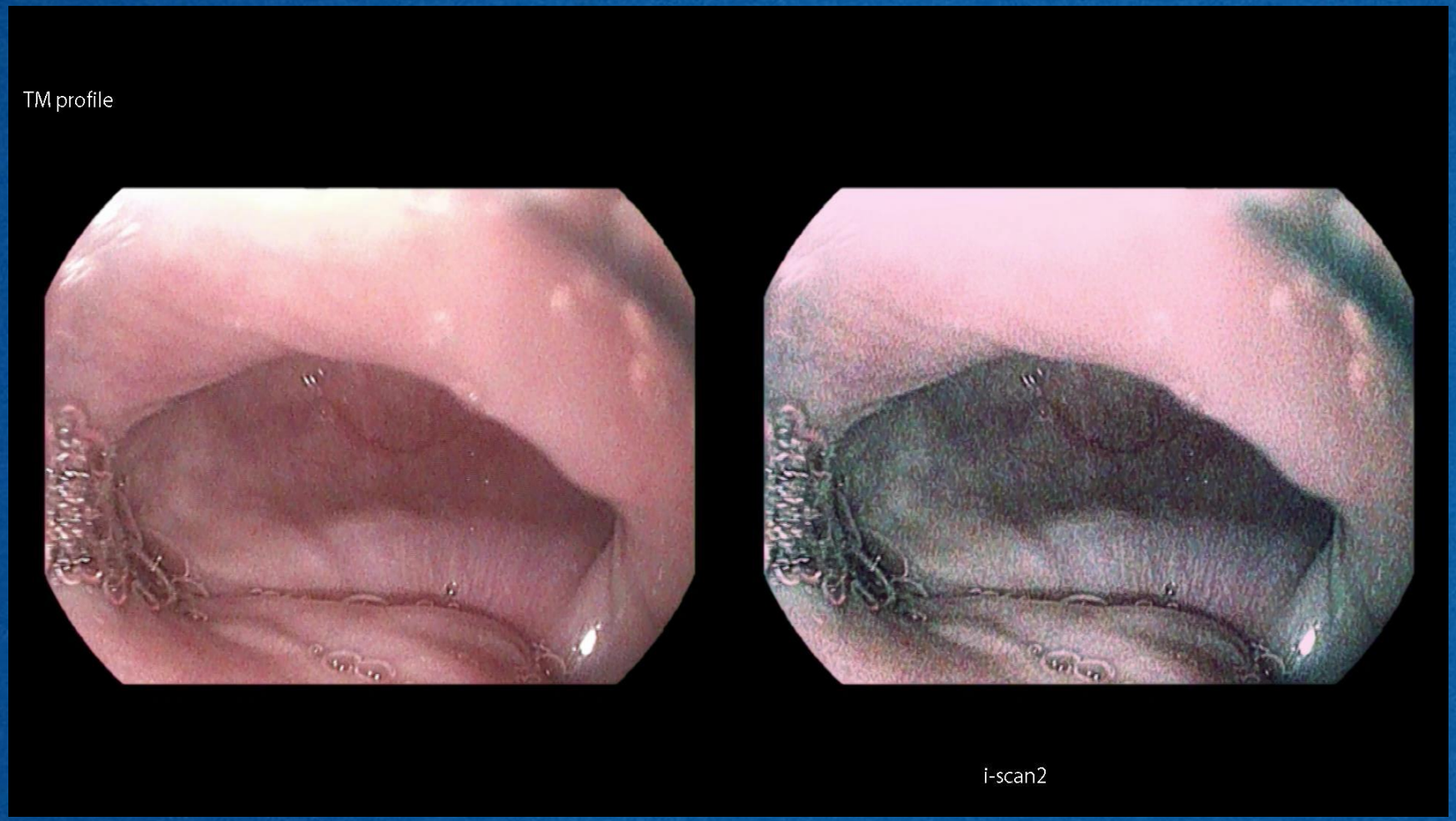
Endoscopy Optimised for Early Disease Detection

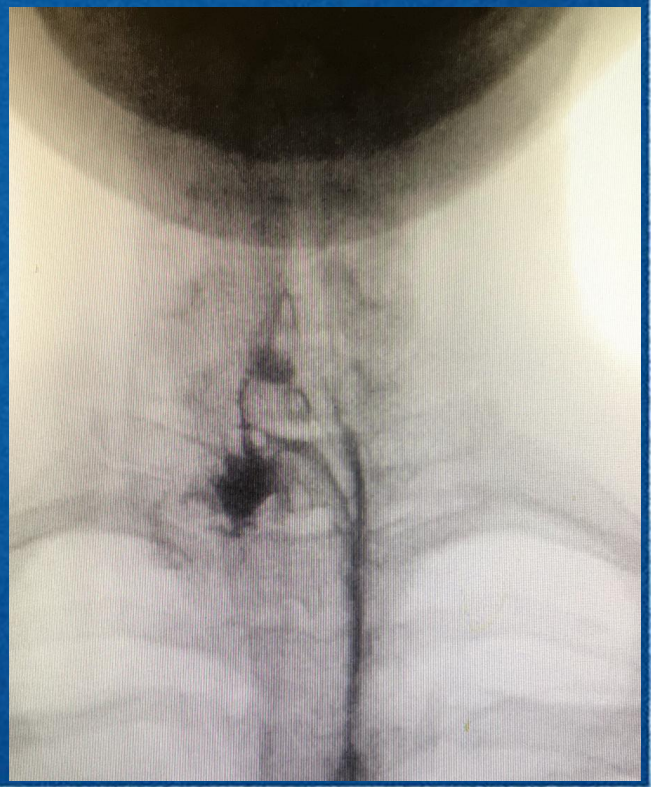
Nottingham University Hospitals NHS
NHS Trust



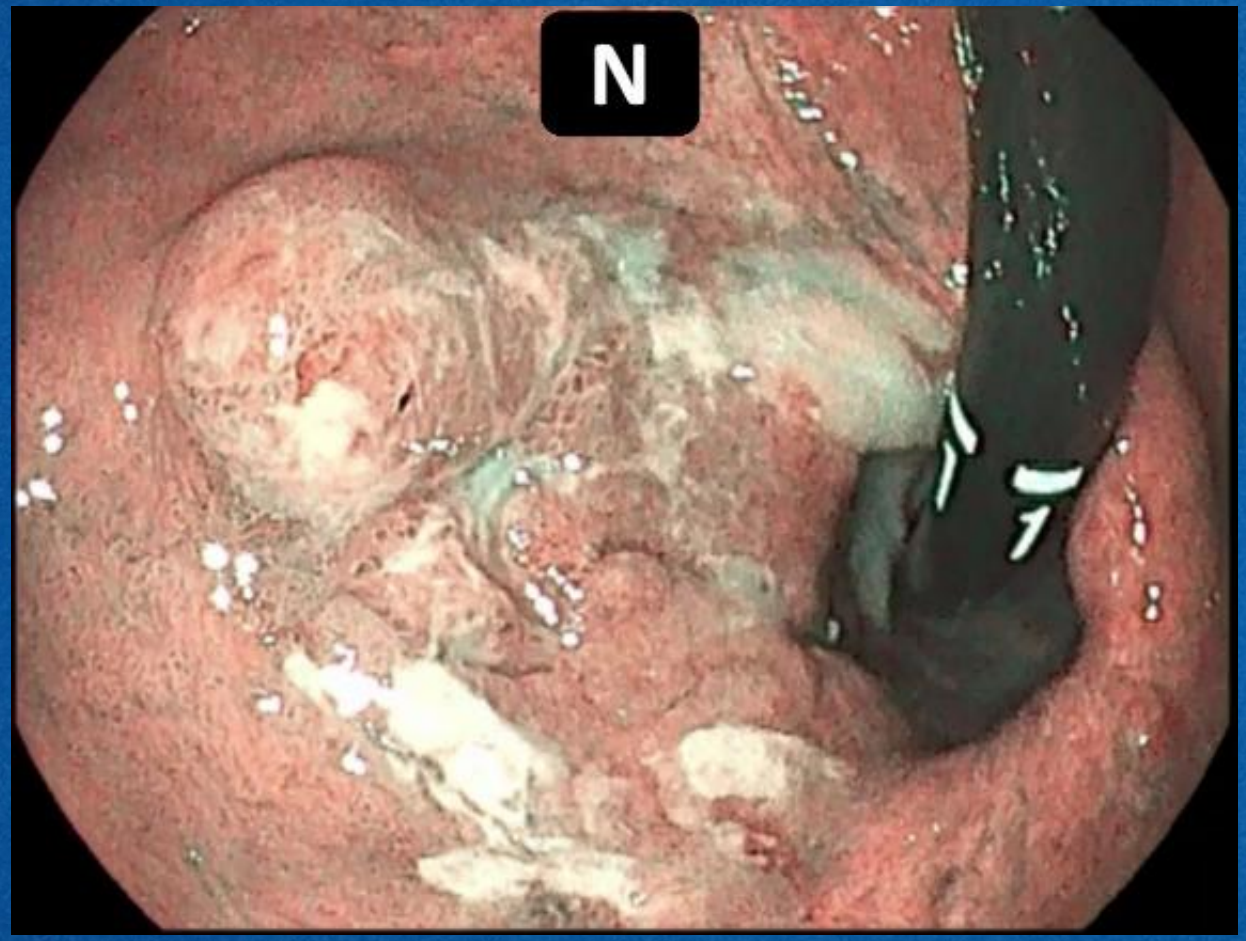
We Listen
We Care

Endoscopy optimised to avoid known pitfalls



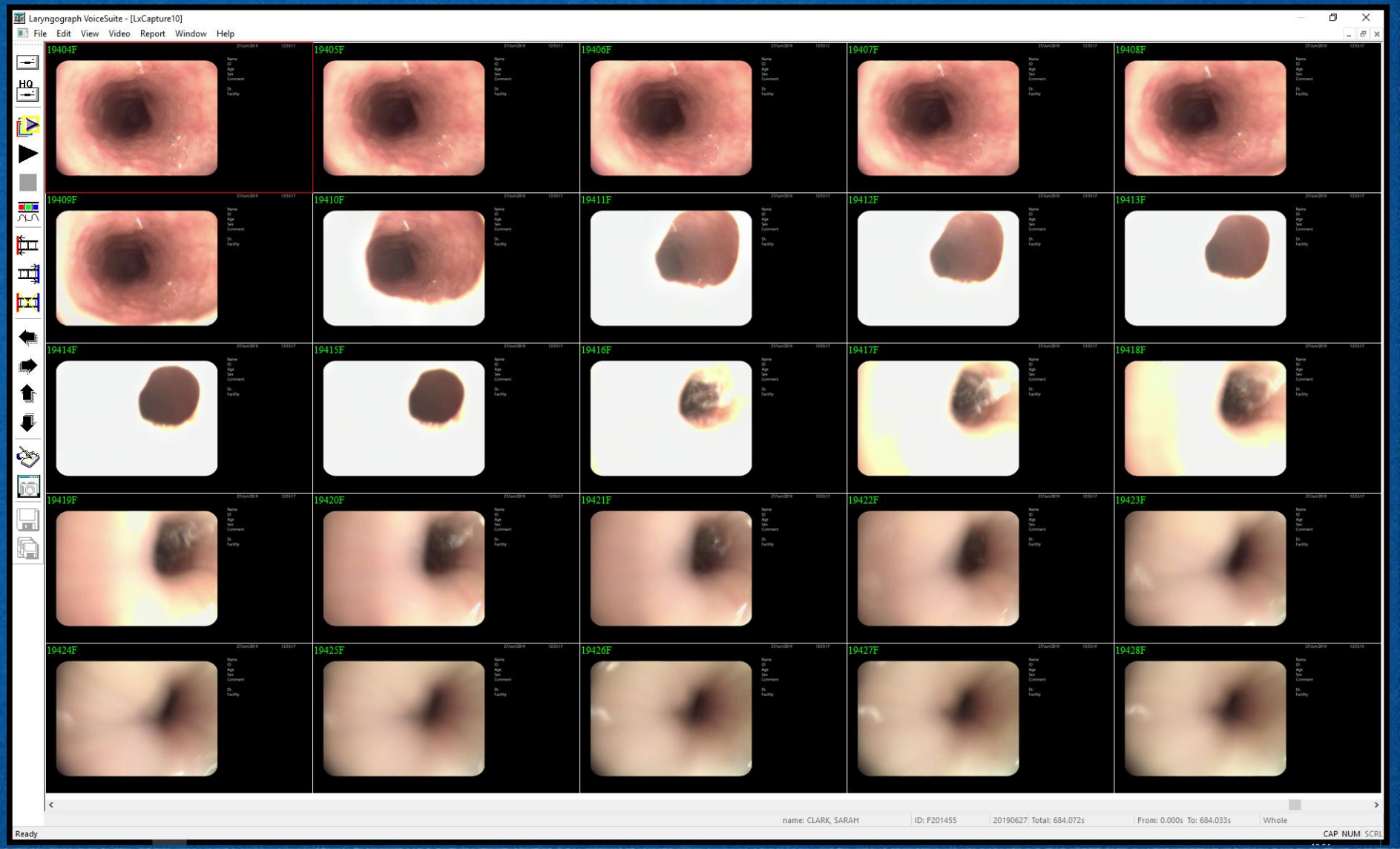


Full path of swallowing endoscopy in all cases



Video recording of all examinations with second-reading

Nottingham University Hospitals NHS Trust



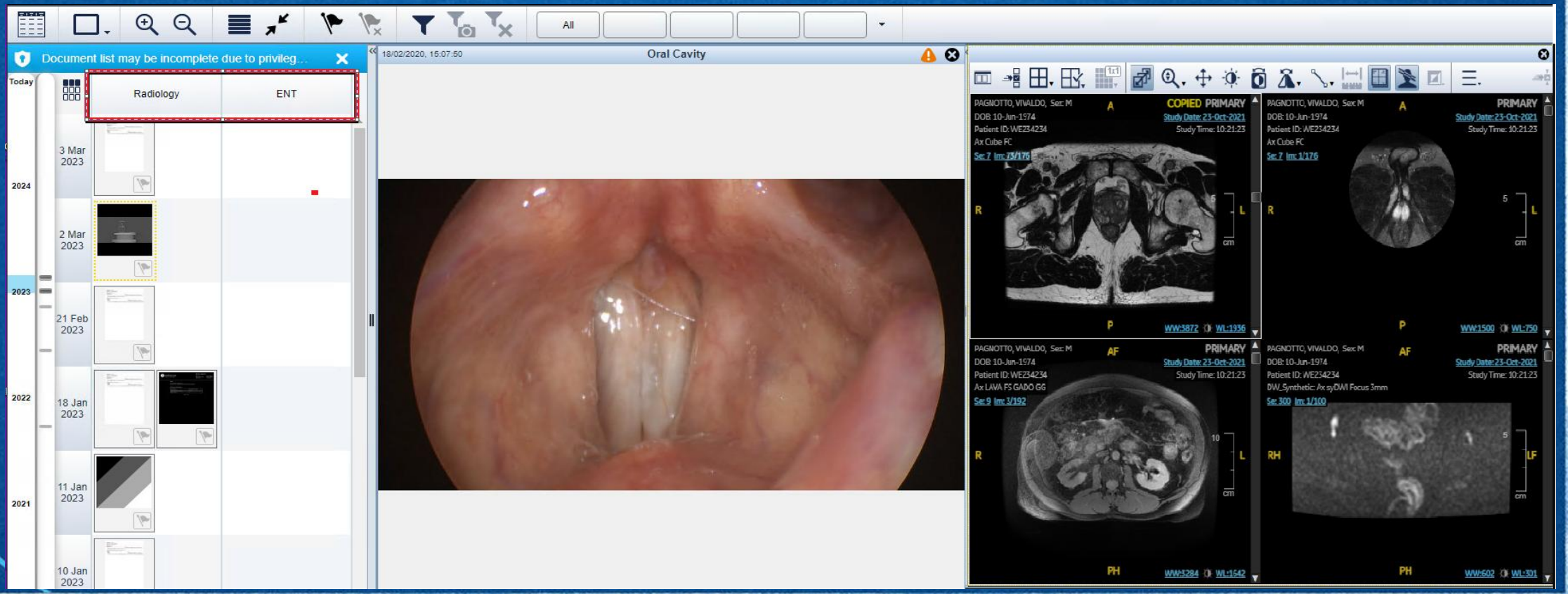
We Listen We Care

Vendor-neutral endoscopy data integration

Nottingham University Hospitals NHS Trust

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Record metadata file created using Laryngograph VoiceSuite10 against the schema mm.xsd-->
<documentMetadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <patient identifier="RX1K3156882" assigningAuthority="RX1"/>
    <creationDateTime>2020-02-18T15:07:10+00:00</creationDateTime>
    <author name="C6057583" assigningAuthority="Nottingham University Hospitals NHS Trust"/>
    <title>Stomach</title>
    <comments>Oral cavity comment</comments>
    <classCode displayLabel="AUDIO" code="AUDIO" codeScheme="XDS Class Code"/>
    <typeCode displayLabel="Stomach" code="STM-ALL" codeScheme="SNOMED"/>
    <mimeType>audio/mpeg</mimeType>
    <eventCodeList>
        <eventCode displayLabel="Endoscopy" code="ES" codeScheme="DCM"/>
    </eventCodeList>
    <referenceIdList>
        <referenceId type="urn:ihe:iti:xds:2013:uniqueId" value="1^^^&amp;1.2.826.0.1.1135704.1.4000.1&amp;ISO"/>
        <referenceId type="urn:ihe:iti:xds:2013:uniqueId" value="2^^^&amp;1.2.826.0.1.1135704.1.4000.2&amp;ISO"/>
    </referenceIdList>
</documentMetadata>
```

GE HealthCare



We Listen We Care

Complete Oral & Pharyngeal Endoscopy requires holistic patient support

Nottingham University Hospitals NHS
NHS Trust

Please affix patient label

Patient Name:

Date of birth:

Medical Record ID:

Transnasal Endoscopy Process Flow & Patient Safety Checklist NHS

Date of the Examination: ...../...../202.....

Patient Height: ..... cm | **Weight:** ..... Kg **BMI:** .....

100ml H_2O Test: .....secs | **Cough:** ❑ Y ❑ N | **Wet Voice:** ❑ Y ❑ N

Step 1. Before the patient enters the room...

Healthcare Assistant (ESP_2) and Trained Nurse (ESP_1) to do

♫ Relaxing music plays in the background before the patient enters the room. ♫

Have all paper/specimen(s) of the previous patient been removed?	❑ Yes
Is the room clean and ready for use?	❑ Yes
Are oxygen and the resuscitation trolley immediately accessible?	❑ Yes
Have 4 drops of Otrivine been added to the Co-Phenylcaine bottle?	❑ Yes
Has the correct instruments table been laid out for the procedure?	❑ Yes
Has silicone-based lubricant been applied to endoscope buttons?	❑ Yes
Has the endoscope been connected and tested?	❑ Yes
Have patient's details been entered onto the endoscopy software?	❑ Yes
Has the patient completed the pre-endoscopy questionnaire?	❑ Yes ❑ No *ESP_2 to support patient if needed*

❑ **Yes to all**

Endoscopist to do: Has the patient's clinical history / indication(s) / previous results been checked? ❑ Yes

Step 2. Patient enters the room (Introductions, Starting the checklist and Infacol)

ESP_2 to the left of the patient: Connects monitoring equipment.
ESP_1 to the right of the patient: Starts the safety checklist.

Led by the Trained Nurse (ESP_1). Team members introduce themselves and reassure the patient.

"...Please can you tell us your full name & date of birth?..."	❑ Confirm against Paperwork and the Endoscopy Software
"...What name would you like us to call you?..."	.....
"...How many hours ago did you last have something to eat?..."	..... hours ago ate ..... **(if <4h, stop)**
If capable of pregnancy and <55... ***"...Are you or could you be, pregnant?..."***	❑ N/A ❑ No ❑ Yes **– STOP –**
"...Do you have allergies, especially to medicines, you are aware of?..."	❑ No ❑ Yes .....
"...Specifically, do you have allergy to lidocaine or chlorhexidine...?"	❑ No ❑ Yes **–STOP –**
"...Do you have allergy to citrus? Could you eat an orange if you wanted?..."	❑ No ❑ Yes ← ESP_2: Infacol to patient please
If explanation needed: This drinks helps reduce bubbles and secretions to help us see better. It has citrus in it....	
"...Has a doctor ever told you that you have Mad Cow Disease (CJD)?..."	❑ No ❑ Yes **– STOP –**
"...Do you take any medicines that thins the blood?..."	❑ No ❑ Yes.....
If patient unsure: these are medicines like aspirin, clopidogrel, warfarin, riveroxiban, and apixaban, and eoxaban.	
"...Are you wearing any dentures at the moment?..."	❑ No ❑ **Yes** Make mental note for later

Step 3. First set of Observations — ESP_2 records. Can be around consent discussion. ESP_2 then leaves for PPE.

Systolic BP		Diastolic BP		Heart Rate		O_2 Sats.	

Step 4. Consent and Anaesthesia — After consent and anaesthesia, endoscopist leaves for PPE.

Has the doctor obtained written consent for the procedure?	❑ Yes ❑ No *Please gently remind the doctor! ☺*
Has the patient been given their copy of the consent form?	❑ Yes

Step 5. Preprocedure Pause and Practice — Led by ESP_1, but could be led by an extended-scope ESP_2

① Has advice about *"throat and swallowing feeling peculiar"* after local anaesthetic been given? ❑ **Yes**

② Have relaxation and **Mindful Breathing** been practiced with the patient? Can the patient do it well? ❑ **Yes**

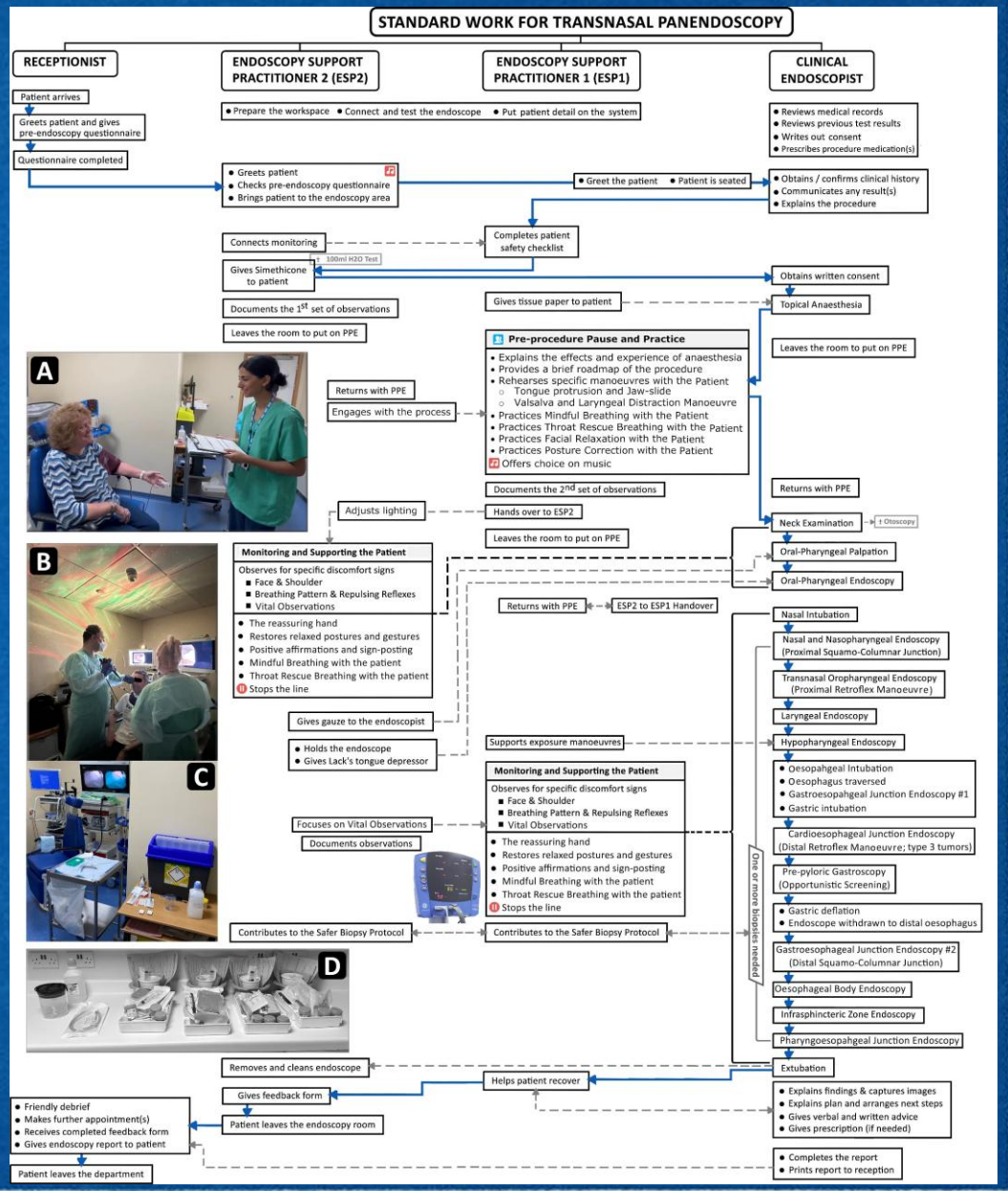
A relaxed and reassuring tone is key. How things are said to communicate a calm and caring atmosphere matters more than exact words.

Some suggestions: *We will be looking after you through the whole procedure (**Teamwork**). You can breathe and swallow normally and talk to us (**Reassurance**). We are all a team working together today and helping each other (**Teamwork**). Your part is to keep your breathing nice, slow and steady. Let's practice (**Signposting**). Slow down your breathing..." "Breathe in through the nose, out slowly through pursed lips, like whistling...keep breathing out going longer" (**Technique**) Focus on the sensation of air going through your nose and coming out of your mouth. (**Technique**) Focusing on breathing is a good way of distracting the brain from the procedure which is not painful, but can feel very peculiar. (**Why it works - Distraction**) Breathing out slowly, unscrewing your face and dropping your shoulders all send signals to the brain that you are feeling relaxed. (**Why it works - Physiology**)*

These sentences and phrases are to help, not to be read out loud. Each interaction is unique and needs your clinical judgement to be tailored to the patient.

These Please turn overleaf for further steps

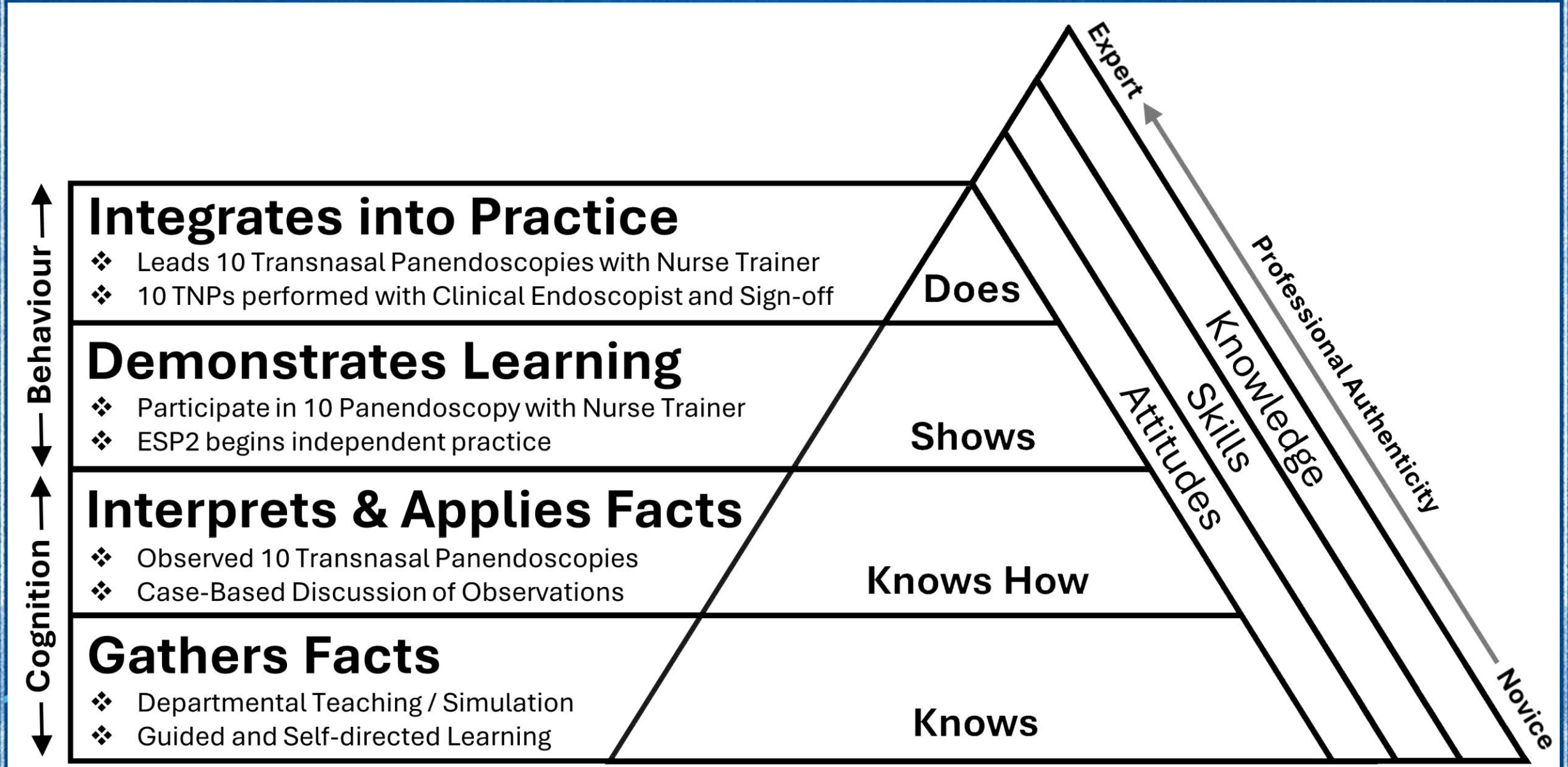
Page 1 of 2



We Listen We Care

Creating the Mindful Endoscopy Team

Nottingham University Hospitals NHS
NHS Trust



Validated Patient-Reported Experience Measures

Nottingham University Hospitals NHS
NHS Trust

NHS

Endoscopy Satisfaction Questionnaire

Please complete all questions across these four pages

Affix Patient Label here

Date: ...../...../ 202.....

This section has been developed with the aim of obtaining YOUR personal views based upon YOUR experience of having an endoscopy. There are no right or wrong answers to any of the questions: simply put a cross in the box that best describes how you think. Your answers will be treated in a confidential manner, and they will not affect your treatment in any way. The information provided will be used to find out how satisfied people are with their endoscopy, and to improve the endoscopy service.

1. How easy to understand was the information that was sent to you before your endoscopy?

Very easy	Easy	Fair	Difficult	Very difficult
☐	☐	☐	☐	☐

2. Was the information sent to you before your endoscopy appointment useful in answering your questions?

Very useful	Useful	Fair	Not very useful	Not at all useful
☐	☐	☐	☐	☐

3. Before you had your endoscopy, how much opportunity did you have to ask questions about the endoscopy procedure?

Plenty	A little	None
☐	☐	☐

4. How easy to understand was the explanation given to you before your endoscopy?

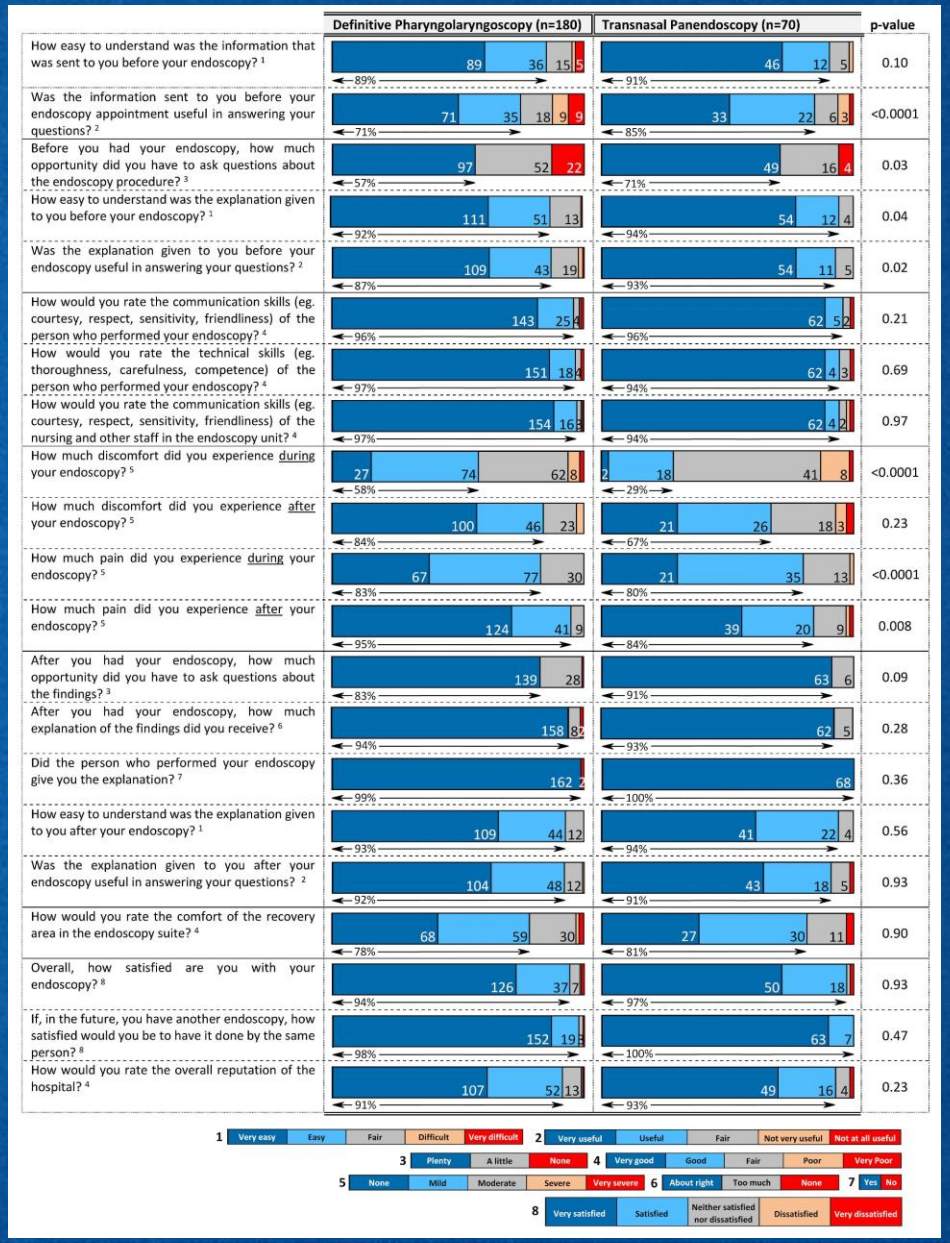
Very easy	Easy	Fair	Difficult	Very difficult
☐	☐	☐	☐	☐

5. Was the explanation given to you before your endoscopy useful in answering your questions?

Very useful	Useful	Fair	Not very useful	Not at all useful
☐	☐	☐	☐	☐

Page **1** of **4**

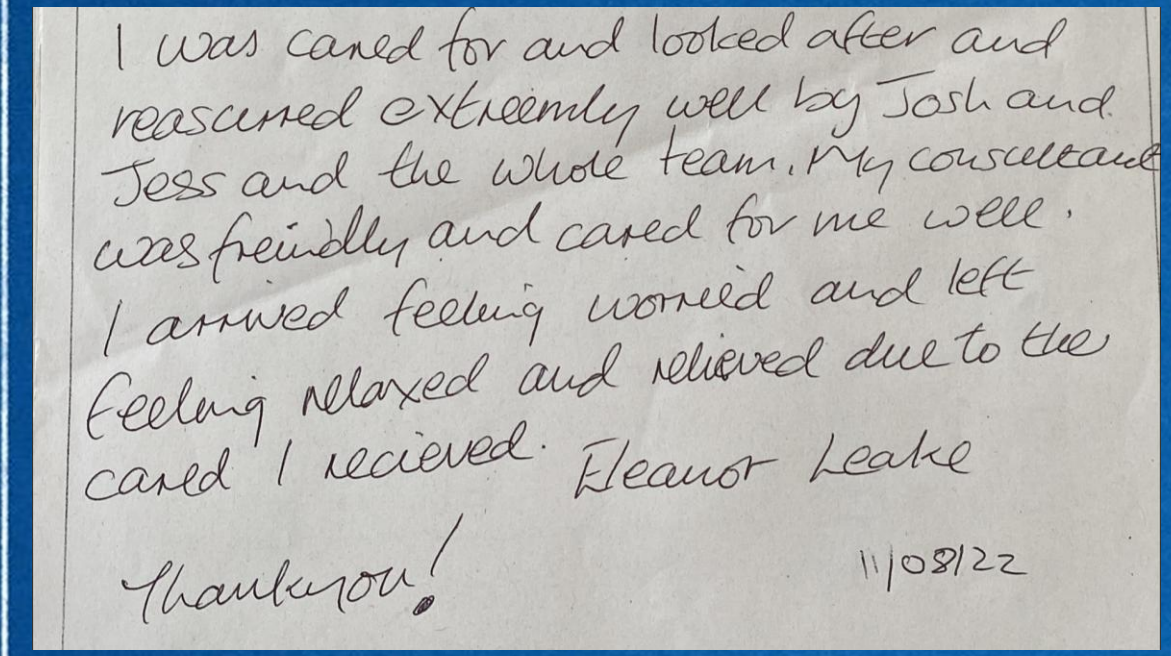
1



We Listen We Care

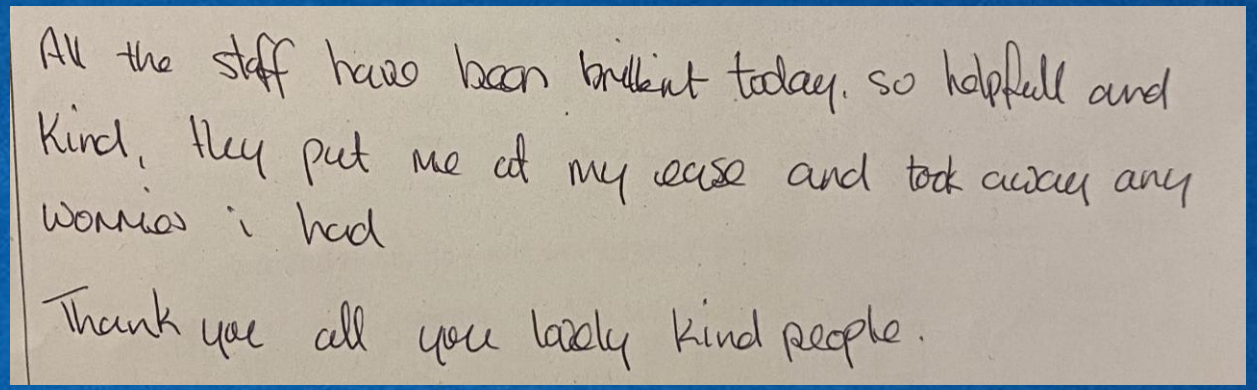
Patient Experience drives immediate reflective practice

Nottingham University Hospitals NHS
NHS Trust

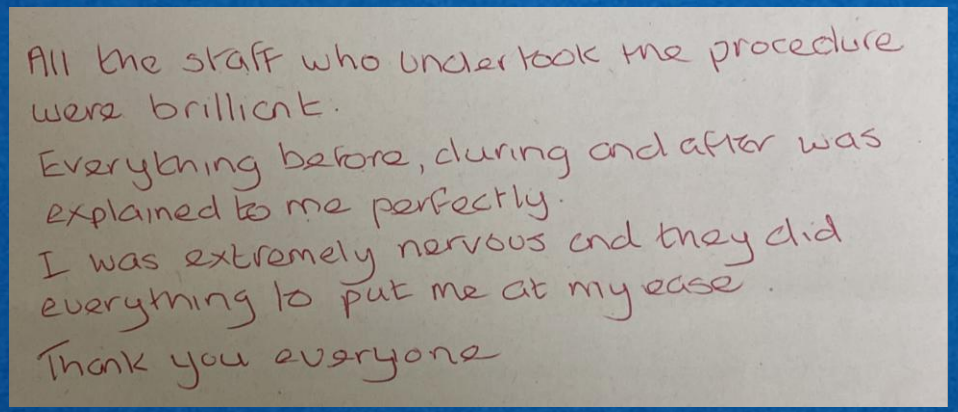

I was cared for and looked after and reassured extremely well by Josh and Jess and the whole team. My consultant was friendly and cared for me well. I arrived feeling worried and left feeling relaxed and relieved due to the cared I recieved. Eleanor Leake

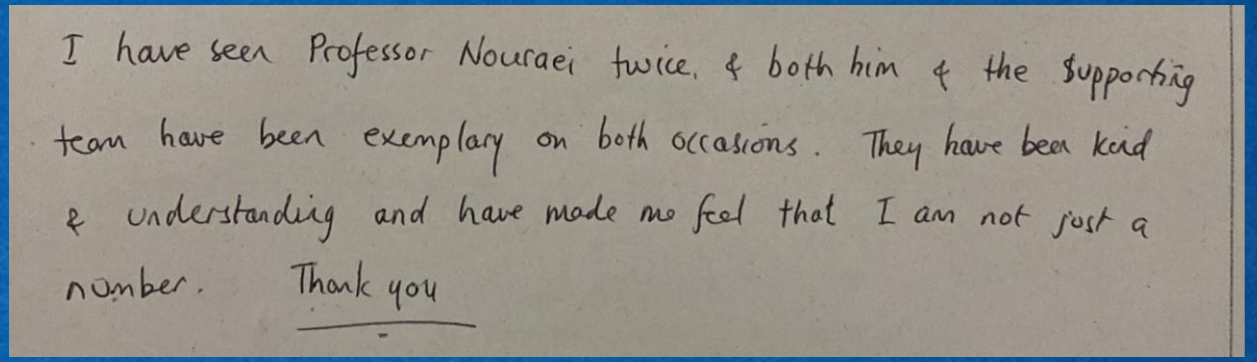
Thankyou!

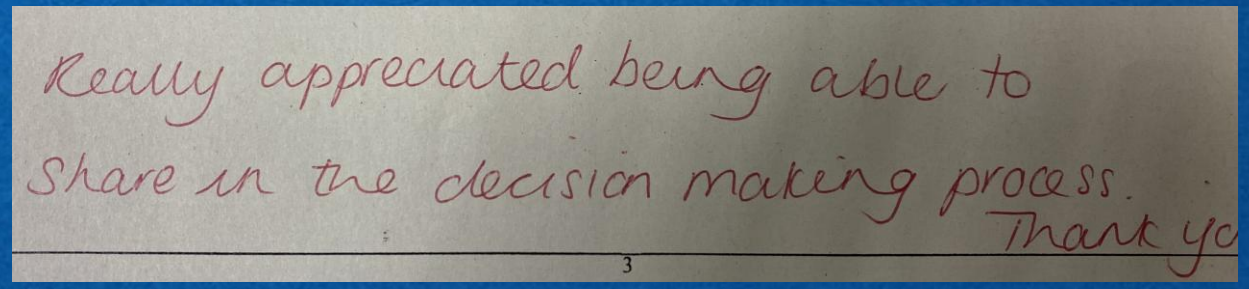
11/08/22


All the staff have been brilliant today. so helpfull and Kind. they put me at my ease and took away any worries i had

Thank you all you lovely kind people.


All the staff who undertook the procedure were brilliant.
Everything before, during and after was explained to me perfectly.
I was extremely nervous and they did everything to put me at my ease.
Thank you everyone


I have seen Professor Nouraei twice, & both him & the supporting team have been exemplary on both occasions. They have been kind & understanding and have made me feel that I am not just a number. Thank you


Really appreciated being able to share in the decision making process.

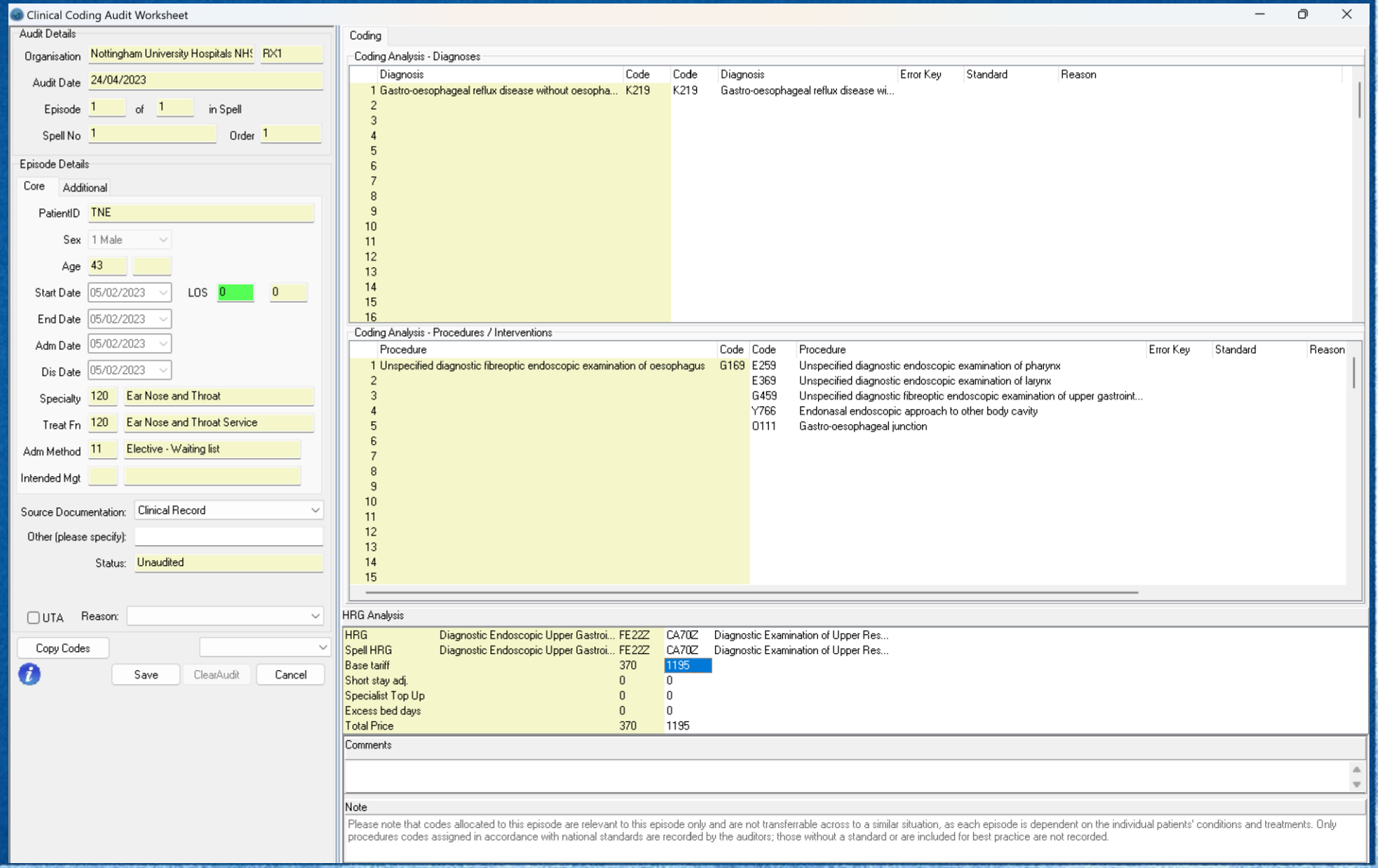
Thank yo

3

We Listen
We Care

Agreement with commissioners around tariff

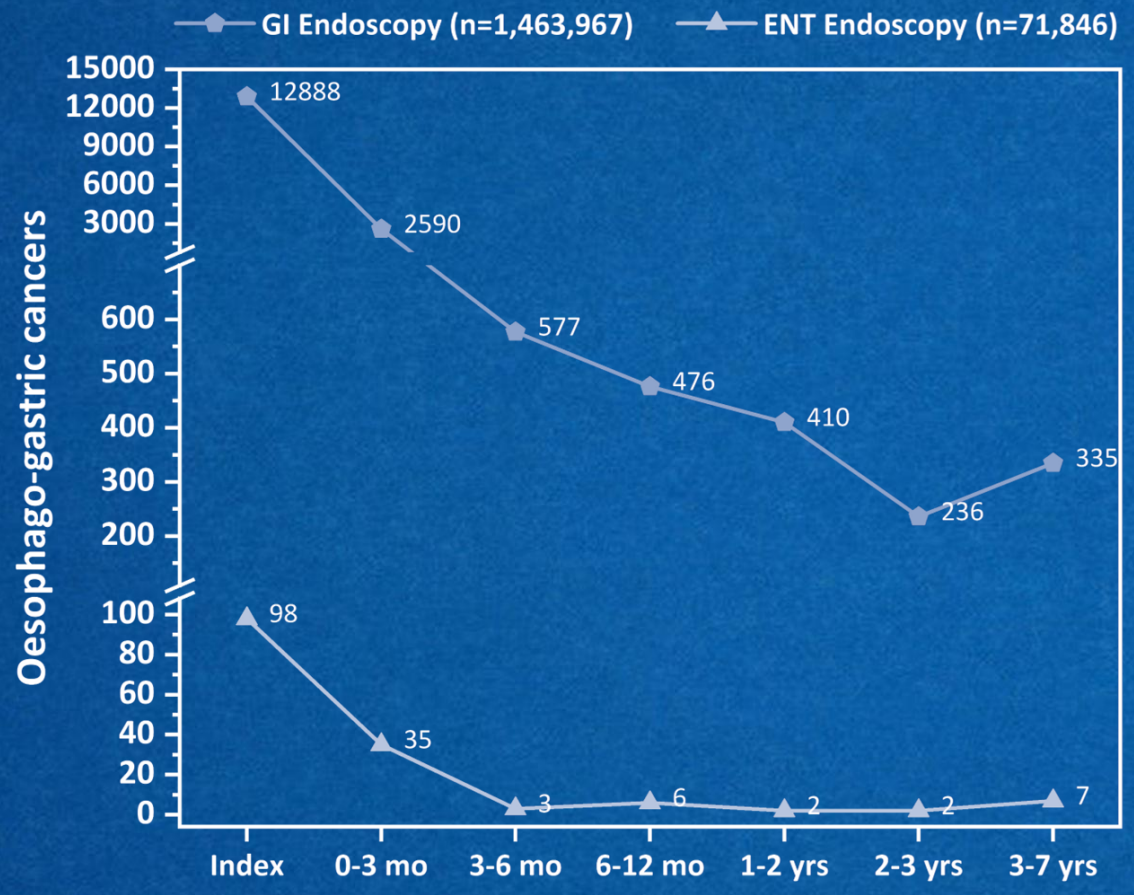
Nottingham University Hospitals NHS Trust



We Listen We Care

Audit and Post-investigation Cancers

Nottingham University Hospitals NHS
NHS Trust



First cancer diagnosis from initial endoscopy date

Head & Neck Cancer (C00 to C14 OR C30-C32 *)

Age-specific incidence rate per 10^5 UK population. Source: cancerresearchuk.org (2017-19 data)

Age Range	Male	Female
0 to 4	0.1	0.1
5 to 9	0.1	0.1
10 to 14	0.3	0.3
15 to 19	0.4	0.7
20 to 24	0.5	0.7
25 to 29	0.9	1.0
30 to 34	2.2	1.9
35 to 39	4.0	3.2
40 to 44	10.2	5.4
45 to 49	22.3	9.3
50 to 54	40.8	15.1
55 to 59	59.1	21.6
60 to 64	74.6	28.0
65 to 69	84.6	30.7
70 to 74	80.8	31.2
75 to 79	77.9	32.9
80 to 84	73.1	32.1
85 to 89	65.5	36.5
90+	65.4	34.8
All Ages	**29.3**	**11.9**

SIR = 263.2 [99% CI 1.3-1955.3]

Calculating Standardised Incidence Ratio (SIR)

63M 2.8 years followup (FU) after an all-clear

$$P_{Cancer,FU} = 1 - e^{-(\frac{I_{Granular}}{100{,}000} \times FU)}$$

$$P_{63M,2.8y} = 1 - e^{-(\frac{74.6}{100{,}000} \times 2.8)}$$

= 1 - EXP(-((74.6 / 100000) * 2.8))

P 63M, 2.8y FU : 0.00208662

Age	Sex	Followup	Probability	Missed Cancer
63	M	2.8	0.0021	0
57	F	3.7	0.0008	0
81	M	0.7	0.0005	1
43	M	4.1	0.0004	0

Expected = 0.0021+0.0008+0.0005+0.0004

Expected	Observed
0.0038	1

$$SIR = \frac{Observed}{Expected} = \frac{1}{0.0038} = 263.2$$

$\alpha = 0.05\ (95\%\ CI)$ $\alpha = 0.01\ (99\%\ CI)$ $\alpha = 0.001\ (99.9\%\ CI)$

$Lower\ DOF = 2 \times Observed = 2 \times 1 = 2$

$Upper\ DOF = 2 \times (Observed + 1) = 2 \times (1 + 1) = 4$

SIR Lower =(CHISQ.INV(**[Alpha]**, 2 * **[Observed]**) / 2) / **[Expected]**

=(CHISQ.INV(**0.01**, 2 * **1**) / 2) / **0.0038** = 1.3

SIR Upper =(CHISQ.INV(**[1 - Alpha]**, 2 * (**[Observed]** + 1)) / 2) / **[Expected]**

=(CHISQ.INV(**0.995**, 2 * (**1** + 1)) / 2) / **0.0038** = 1955.3

$$SIR_{Lower\ (99\%)} = \frac{Upper\ Limit\ of\ Expected}{Observed} = \frac{\frac{1}{2}\chi^2_{(\frac{\alpha}{2}, Lower\ DOF)}}{Observed} = \frac{\frac{1}{2}\chi^2_{0.005,2}}{Observed} = \frac{\frac{1}{2} \times 0.010025}{0.0038} = 1.3$$

$$SIR_{Upper\ (99\%)} = \frac{Upper\ Limit\ of\ Expected}{Observed} = \frac{\frac{1}{2}\chi^2_{(1-\frac{\alpha}{2},\ Upper\ DOF)}}{Observed} = \frac{\frac{1}{2}\chi^2_{0.995,4}}{Observed} = \frac{\frac{1}{2} \times 14.8603}{0.0038} = 1955.3$$

We Listen We Care

In Summary

Nottingham University Hospitals NHS
NHS Trust

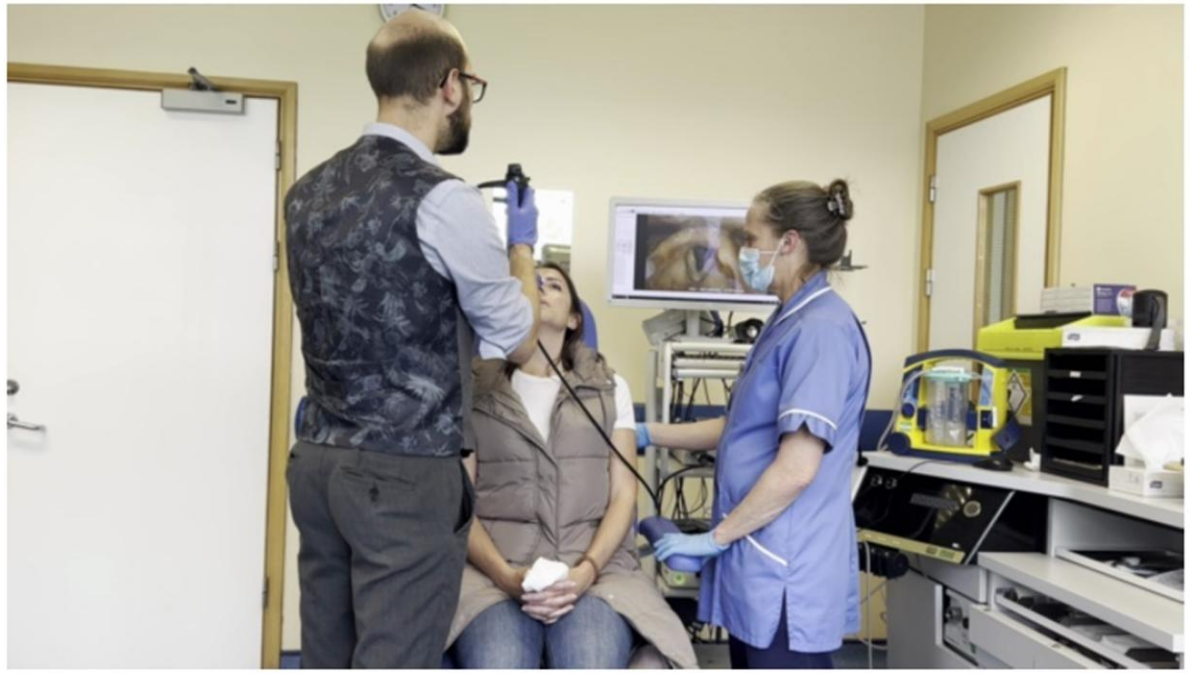
REFERRAL CONSIDERED (PRIMARY CARE)
- Highly targeted support for primary care
  - PROMs
  - Blood Tests
  - Voice Recordings
- Interface-of-care referral management
  - Enhanced Advice and Guidance
  - Risk-sharing with primary care

REFERRAL RECEIVED (SPECIALIST CARE)
- Consistent Vetting
- Information parsing

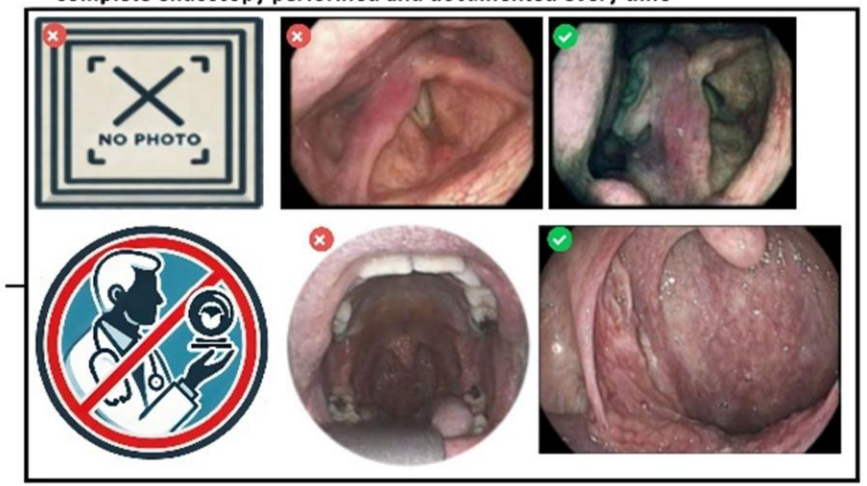
PRE-VISIT PLANNING (REMOTE CONSULTATION)
- Structured training to onboard pre-visit planners
- Nurse or junior doctor led
- **Complete information gathered every time**
- Integrated Foregut Clinical History
- First-line test(s) (e.g. MRI Neck)

FACE-TO-FACE CONSULTATION
- Value-add Consultation
  - Build on pre-visit planning
  - Clarify key information in more detail
  - More time to build rapport
  - Expeditiously proceed to examination
- Mindful Endoscopy
  - **Complete endoscopy performed and documented every time**
- Clear communication with primary care (Frugal IT solution to save time).

DEFINED 2ND-LINE PATHWAYS
- Cancer
  - Diagnosis Confirmed
  - Disease Staged
  - Treatment Initiated
- Non-cancer
  - Discharged
  - Referred to subspecialty



Every patient holistically supported with care and kindness using Mindful Endoscopy.

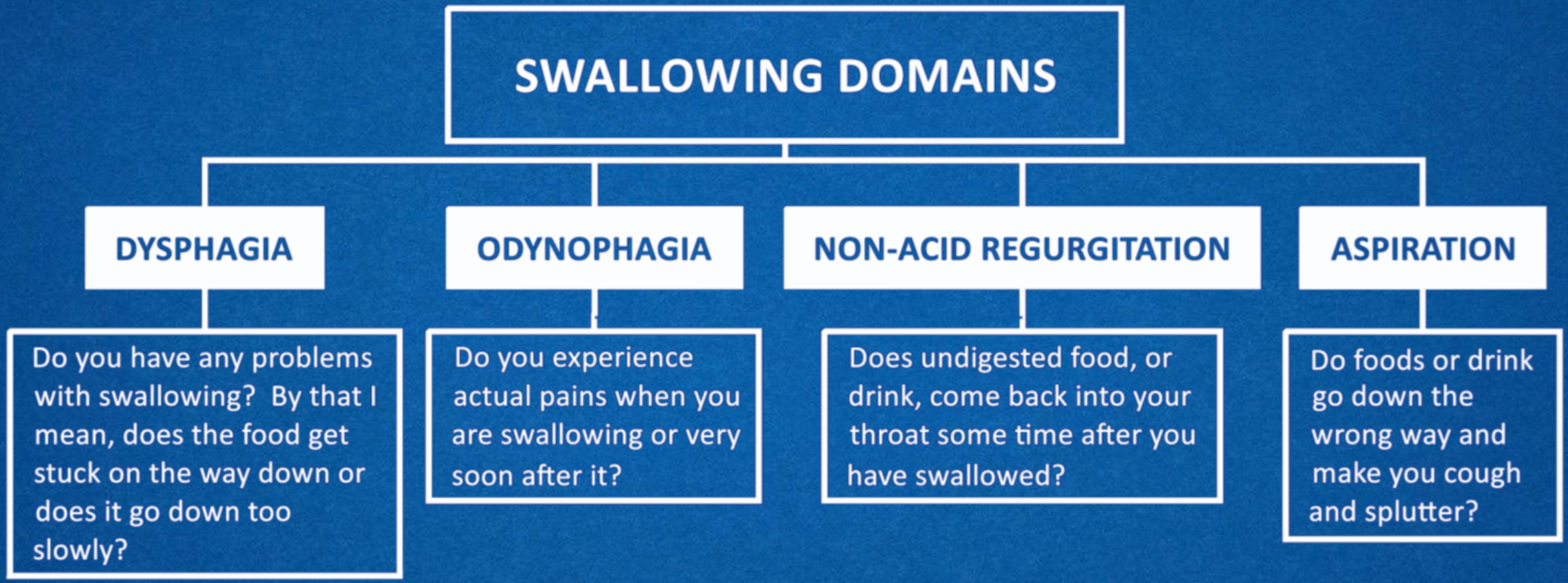


In Summary

1. The vagus nerve shows no deference to ‘traditional specialty boundaries’
2. Clinical History as diagnostic technology
3. Standardised pathways within and between specialities
4. Holistically-supported Awake and Definitive Endoscopies
5. Fully captured endoscopies to enable community → specialist support
6. Clearly defined standards supported by best-practice tariffs
7. Perpectual quality assurance

Clinical History as Diagnostic Technology
Structured Language as "Test Ingredients"

Nottingham University Hospitals NHS
NHS Trust



We Listen
We Care

Clinical History as Diagnostic Technology
Structured Language as "Test Ingredients"

Nottingham University Hospitals NHS
NHS Trust

ORIGINAL ARTICLE

Screening patients with sensorineural hearing loss for vestibular schwannoma using a Bayesian classifier

Nouraei, S.A.R.,* Huys, Q.J.M.,† Chatrath, P.,* Powles, J.,* & Harcourt, J.P.*

*Department of Otolaryngology, Charing Cross Hospital, London, and †Gatsby Computational Neuroscience Unit, Queen Square, London, UK

Accepted 15 March 2007
Clin. Otolaryngol. 2007, **32**, 248–254

Objectives: Selecting patients with asymmetrical sensorineural hearing loss for further investigation continues to pose clinical and medicolegal challenges, given the disparity between the number of symptomatic patients, and the low incidence of vestibular schwannoma as the underlying cause. We developed and validated a diagnostic model using a generalisation of neural networks, for detecting vestibular schwannomas from clinical and audiological data, and compared its performance with six previously published clinical and audiological decision-support screening protocols.
Design: Probabilistic complex data classification using a neural network generalization.
Settings: Tertiary referral lateral skull base and a computational neuroscience unit.
Participants: Clinical and audiometric details of 129 patients with, and as many age and sex-matched patients without vestibular schwannomas, as determined with magnetic resonance imaging.
Main outcome measures: The ability to diagnose a patient as having or not having vestibular schwannoma.
Results: A Gaussian Process Ordinal Regression Classifier was trained and cross-validated to classify cases as 'with' or 'without' vestibular schwannoma, and its diagnostic performance was assessed using receiver operator characteristic plots. It proved possible to pre-select sensitivity and specificity, with an area under the curve of 0.8025. At 95% sensitivity, the trained system had a specificity of 56%, 30% better than audiological protocols with closest sensitivities. The sensitivities of previously-published audiological protocols ranged between 82–97%, and their specificities ranged between 15–61%.
Discussion: The Gaussian Process ORdinal Regression Classifier increased the flexibility and specificity of the screening process for vestibular schwannoma when applied to a sample of matched patients with and without this condition. If applied prospectively, it could reduce the number of 'normal' magnetic resonance (MR) scans by as much as 30% without reducing detection sensitivity. Performance can be further improved through incorporating additional data domains. Current findings need to be reproduced using a larger dataset.

A vestibular schwannoma is a benign nerve sheath tumour which most commonly arises from the Schwann cells of the vestibular division of the eighth cranial nerve.[1] It has a reported incidence of 1 in 100 000 and grows at a slow mean rate of approximately 1.2 mm/year. Many lesions reach a static size without surgical intervention and a small proportion of tumours may spontaneously regress.[1] Conversely, tumour growth at the cerebello-pontine angle can lead to potentially life-threatening neurological complications (Fig. S1),[2] and furthermore, when surgery is indicated, excision of a smaller tumour is associated with less postoperative morbidity.[2] This is therefore a diagnosis that once suspected, should be secured or satisfactorily discounted.

The majority of patients with a vestibular schwannoma present with asymmetrical sensorineural hearing loss,[3] but in terms of the overall number of otolaryngology consultations for the evaluation of audiovestibular symptoms, this diagnosis remains an uncommon cause of a very common presentation. Indeed, as many as one in five of all patients presenting to general ENT clinics have symptoms which could be considered compatible with the diagnosis of vestibular schwannoma.[4] This presents the otolaryngologist with the difficult diagnostic and medicolegal conundrum of deciding which of the many patients evaluated for audiovestibular symptoms are at higher risk of harbouring a vestibular schwannoma, and should be

Correspondence: Dr Reza Nouraei MA (Cantab) DO-NHS, Department of Otolaryngology, Charing Cross Hospital, London W6 8RF, UK, Tel.: 0044 7841 124610; fax: 0044 870 4580775; e-mail: RN@cantab.net.
Presented at the Royal Society of Medicine, London, UK (March 2006)
Poster presented at the Triological Society, Marco Island, Florida, USA (February 2007)
Dr Nouraei and Dr Huys contributed equally to the manuscript.

Supplementary material

The following supplementary material is available as part of the online article from http://blackwell-synergy.com:

Figure S1. Radiology of a case.

Figure S2. Distribution of the degree of hearing threshold asymmetry in patients with and without a vestibular schwannoma.

Please note: Blackwell Publishing is not responsible for the content or functionality of any supplementary materials supplied by the authors. Any queries (other than missing material) should be directed to the corresponding author for the article.

Appendix 1

A mathematical description of the machine learning process. Let $\{x^i\}_{i=1}^N$ be training data from N patients. For each patient, indexed by $i = 1...N$, x^i is a D-dimensional vector containing the data on the basis of which we would like to predict the presence of vestibular schwannoma. In this study $D = 16$ when all the data was used: auditory thresholds for each ear at six frequencies and age, sex and presence of tinnitus and vertigo. For each patient output is a binary variable $y_i \in \{0,1\}$ indicating the presence ($y^i=1$) or absence ($y^i=0$) of vestibular schwannoma.

The aim is to use a new patient's input vector x and the training data $\{y_i, x^i\}_{i=1}^N$ to probabilistically predict whether the patient suffers from a vestibular schwannoma, i.e. the probability $P(\dot{y}|x, D)$. A Gaussian Process Ordinal Regression Classifier (GPORC)[12,13] achieves this in several steps. First, GPORC partitions the real line into two parts using a logit function, i.e. for each value $f \in R$ on the real line, there is a $p(\dot{y} = 1|f)$. x is mapped onto the real line, writing $p(\dot{y}|f(x))$, i.e. rather than using the simple input x, some function $f(x)$ is used for prediction. This is related to what hidden layers achieve in neural networks and is a powerful approach.[12,13]

Rather than assuming a particular $f(x)$ however, a GPORC averages over all possible mappings, weighted by some prior distribution $p(f(x))$ and the predictive distribution of interest then becomes $p(\dot{y}|x) = \int df(x)p(y|f(x))$.

This prior is chosen to incorporate the evidence from the data D, writing the predictive prior given the data.

$$p(f(x)|D) = \int p(f(x)|\mathbf{f})p(\mathbf{f}|D)\mathrm{d}f = \int p(f(x)|\mathbf{f})\frac{p(D|\mathbf{f})p(\mathbf{f})}{\int \mathrm{d}f' p(D|\mathbf{f}')p(f')}\mathrm{d}\mathbf{f}$$

where $\mathbf{f}$ is a vector, with its ith component the mapping $f(x^i)$ for each input data point x^i and y is similarly a vector with $y_i = y^i$. The second equality holds by Bayes' theorem. Let $p(D|\mathbf{f}) = \prod_i p(y^i|f(x^i))$ be the likelihood of all the outcomes $\mathbf{y} = \{y^i\}_{i=1}^N$ given the input x^i given by the logit function described above. Let finally the joint distribution $p(\mathbf{f})$ of all hidden functions $f(x^i)$ for all i be a normal distribution (this is a Gaussian Process prior):[12,13]

$$p(\mathbf{f}) = N(0, \Sigma) \sum_{ij} = \exp\left(-\frac{k}{2}\sum_{d=1}^{D}(x_d^i - x_d^j)^2\right)$$

with parameter $\kappa > 0$ which is chosen during training. Then, using approximations to some of the hard integrals, we can evaluate the distribution over outcomes given the data: $p(\dot{y}|x, D) = \int df(x)p(\dot{y}|f(x))p(f(x)|D)$.

Thus, assuming a joint prior $p(\mathbf{f})$ over *hidden functions* $f(x^i)$ of the data, together with a mapping from these hidden functions onto probabilities of binary events y allows a full probabilistic data classification.

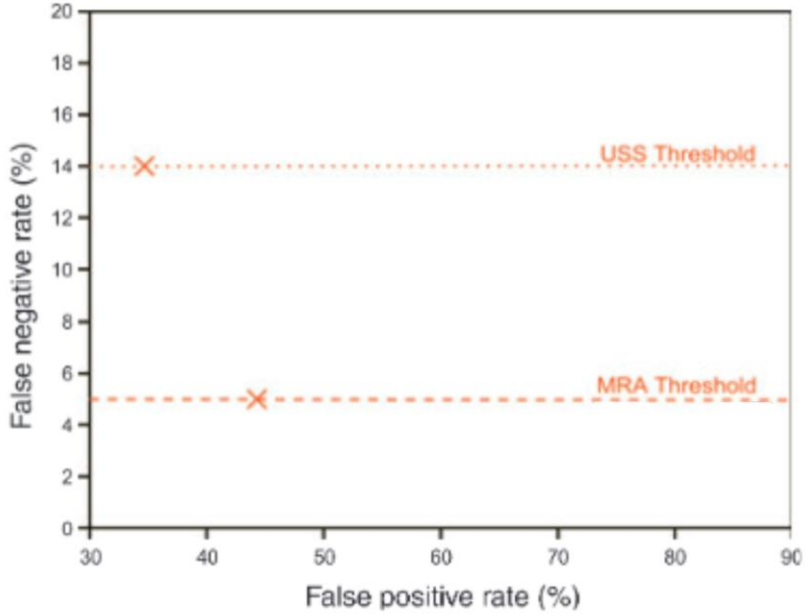


Fig. 3. A comparison of the Gaussian Process Ordinal Regression Classifier with existing audiological screening protocols. A, Seattle Protocol;[7] B, Charing Cross Protocol;[8] C, Nashville Protocol;[10] D, Oxford Protocol;[9] E, UK Department of Health; F, Sunderland Protocol.[6] The threshold levels (95% and 86%) correspond to the pooled sensitivity of MR angiography (MRA) and carotid ultrasonography (USS) for detecting significant carotid artery stenosis on meta-analysis.[16] The crosses on the threshold lines correspond to the specificity of the system at those levels.

We Listen
We Care

Lunch & Networking

Chair Afternoon Reflection

Mr Anil Vara, Bsc (Hons), Msc, MBA, CMgr, FCMI
Director of Elective Recovery (Ex) and Clinical Technologist in Nuclear Medicine
University Hospitals Sussex NHS Foundation Trust

Keynote Presentation

Dr Charlie Andrews
GPwER in Gastroenterology
Somer Valley Medical Group

GPwER in gastroenterology

Dr Charlie Andrews

NHS South West

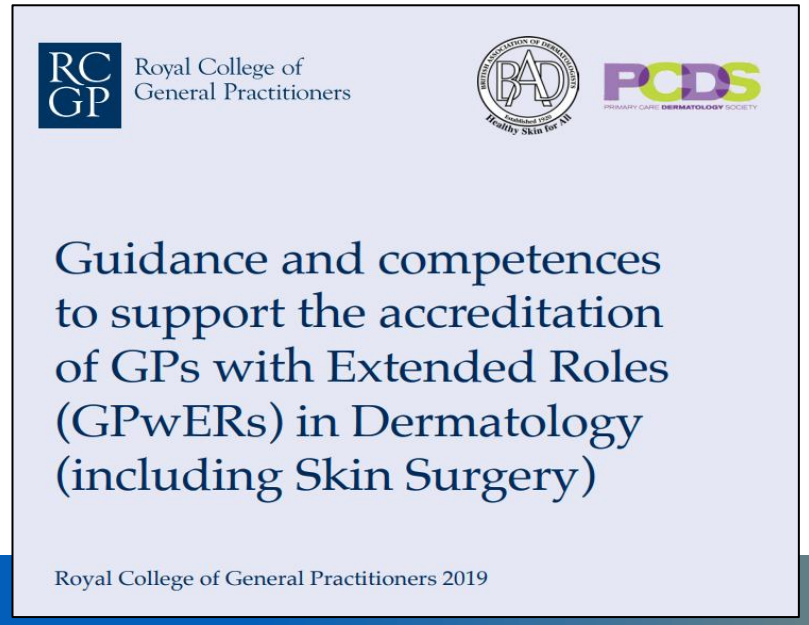
The Primary Care Society for Gastroenterology

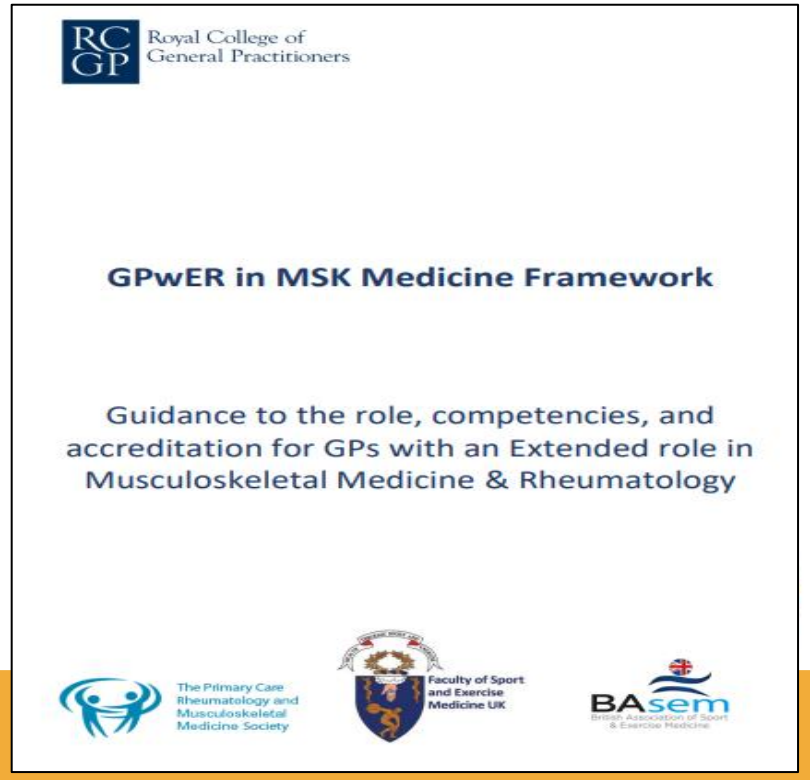
PCSG

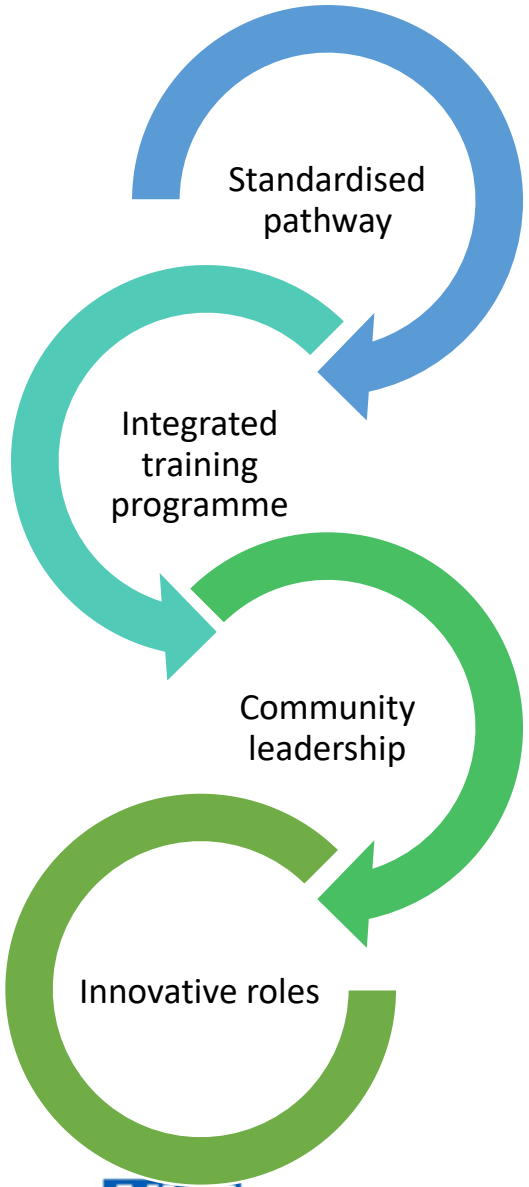
What is a GPwER (GP with extended role)

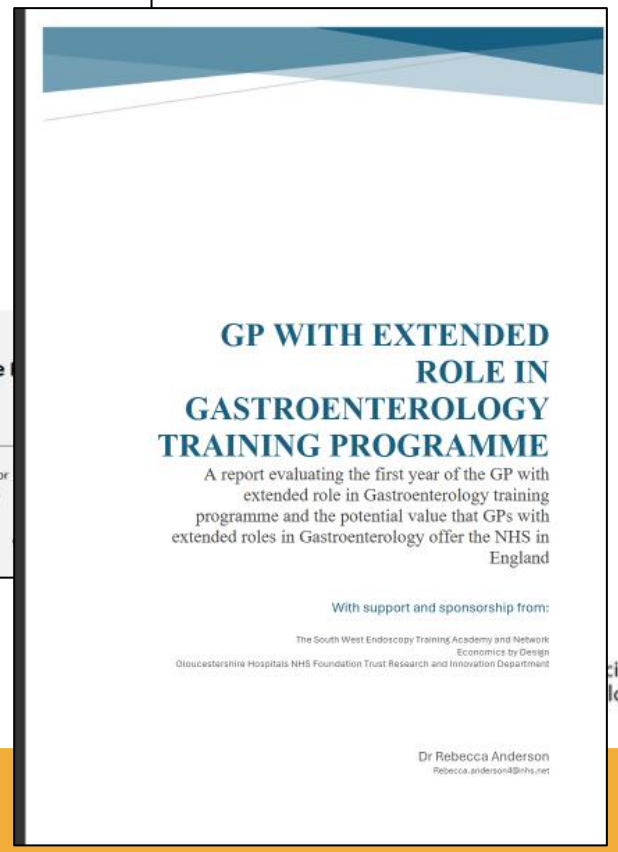
‘a GP with a UK license to practice, who is maintaining a primary care medical role, but undertaking an activity that is beyond the scope of general practice and requires further training’

(RCGP, 2021)



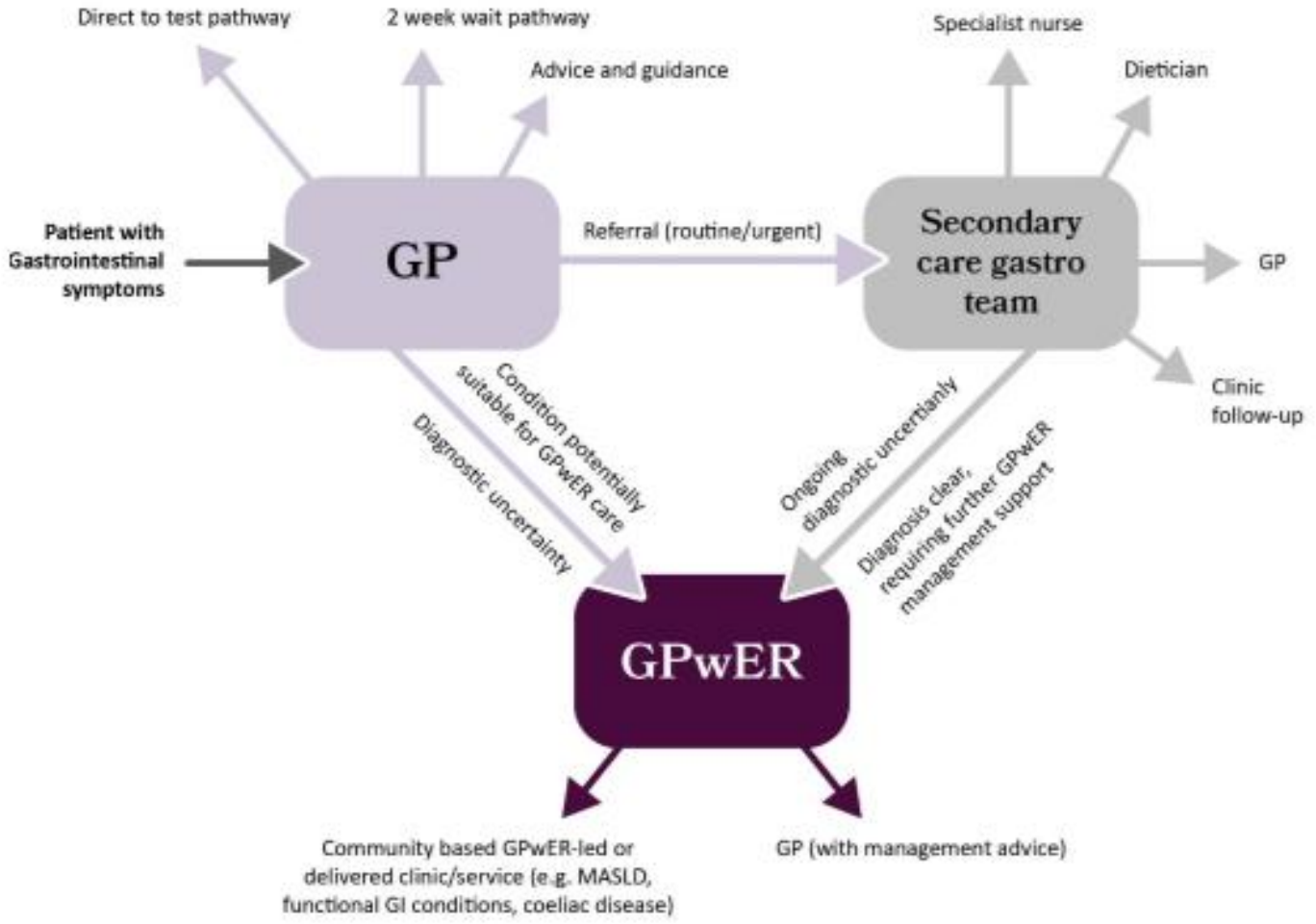






NHS South West

Example of potential GPwER role within gastroenterology pathway



PCSG GP W ER

The GP with Extended Roles in Gastroenterolgy Training Programme

Endorsed by

PCSG The Primary Care Society for Gastroenterology & Hepatology

NHS England South West

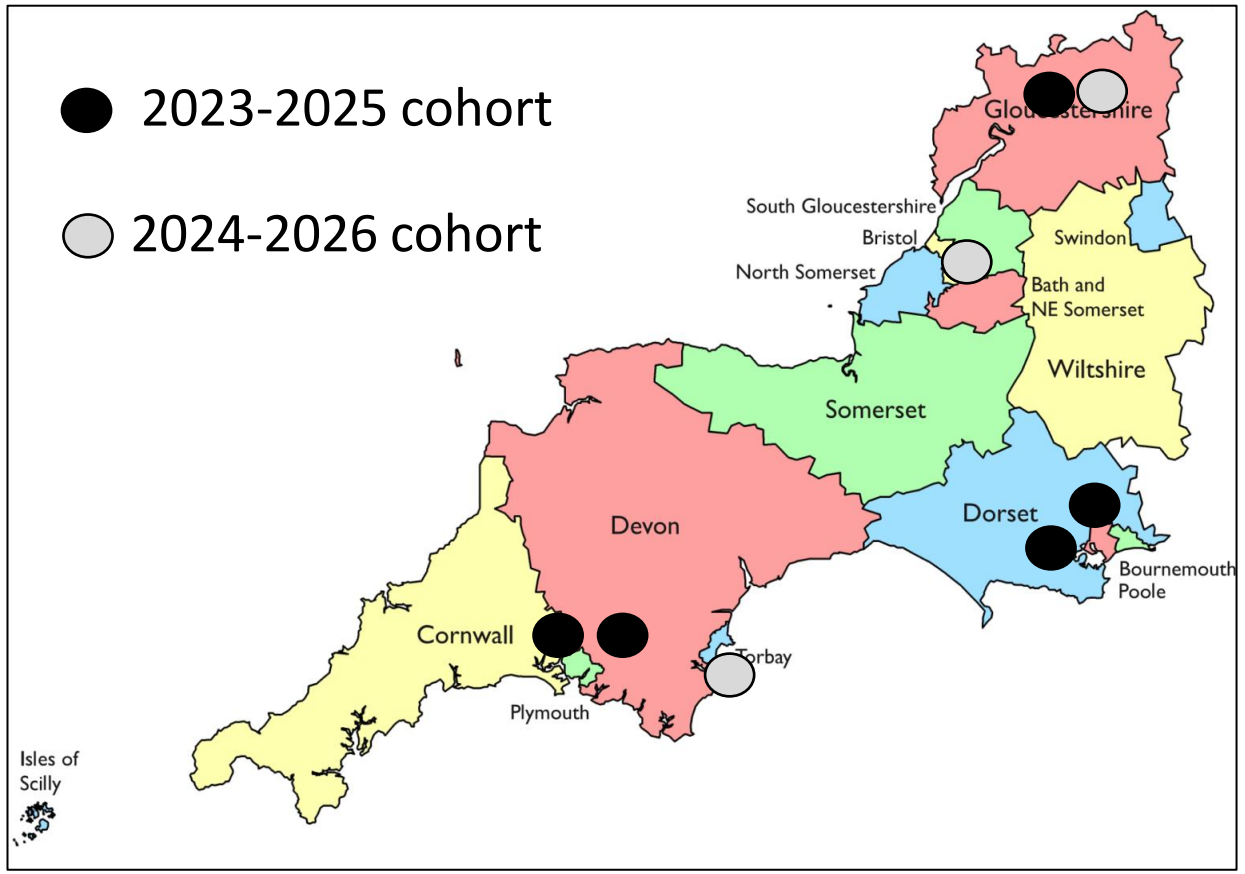
Endoscopy Training Academy and Network

NHS South West

The Primary Care Society for Gastroenterology PCSG

The Southwest GPwER programme

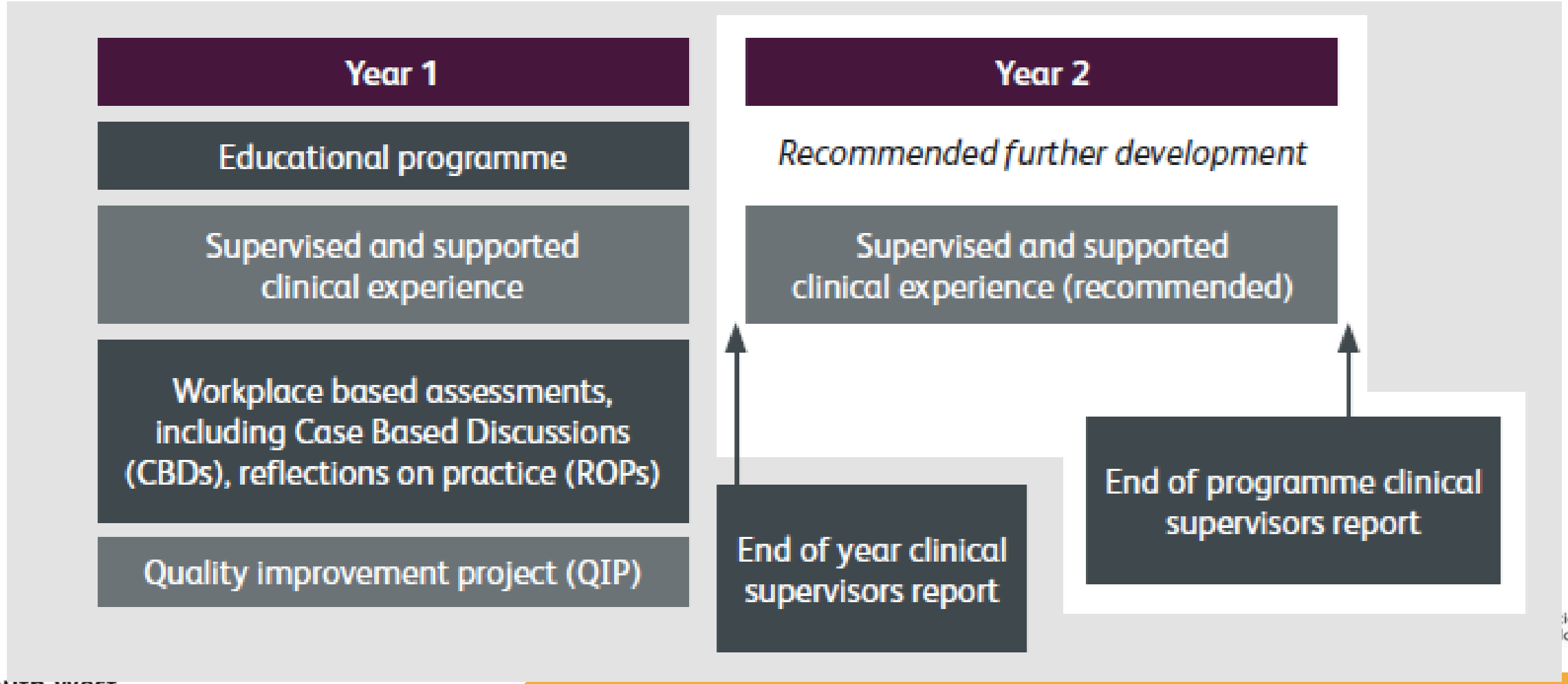
- Launched April 2023
  - Cohort 1 – April ‘23 – April ’25
  - Cohort 1 – Sept ‘25 – Sept ‘27
- 4 GPs training per year
- 2-year programme, *‘all-in-one’* programme
  - Clinical training
  - Education programme

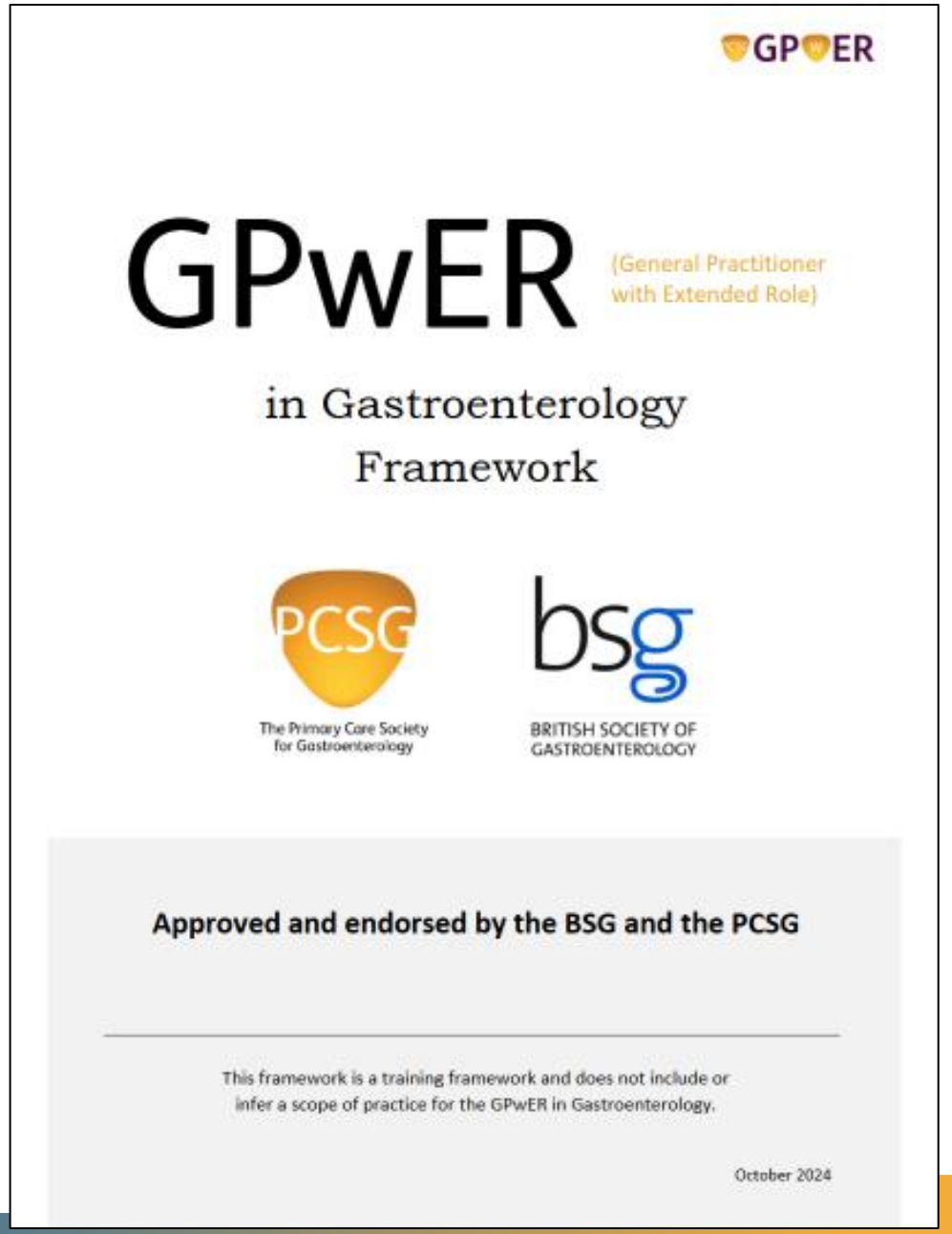


NHS South West

The Primary Care Society for Gastroenterology PCSG

The GPwER in gastroenterology training programme





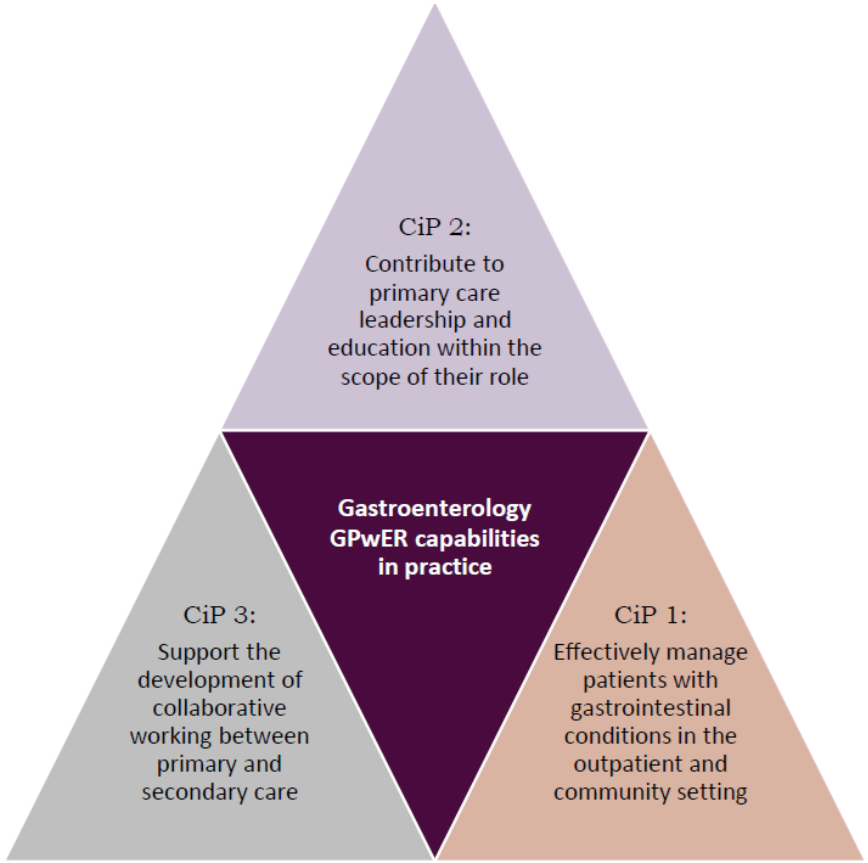
NHS South West

The Primary Care Society for Gastroenterology PCSG

The GPwER framework

- A competency-based framework
- Completed October 2024
- Approved and endorsed by the BSG and PCSG
- ‘Best practice’ for the development of a GPwER
- Guidance around:
  - The acquisition and demonstration of appropriate clinical knowledge, skills and experience
  - Ongoing appraisal and continued professional development

Capabilities in practice



Comprehensive curriculum

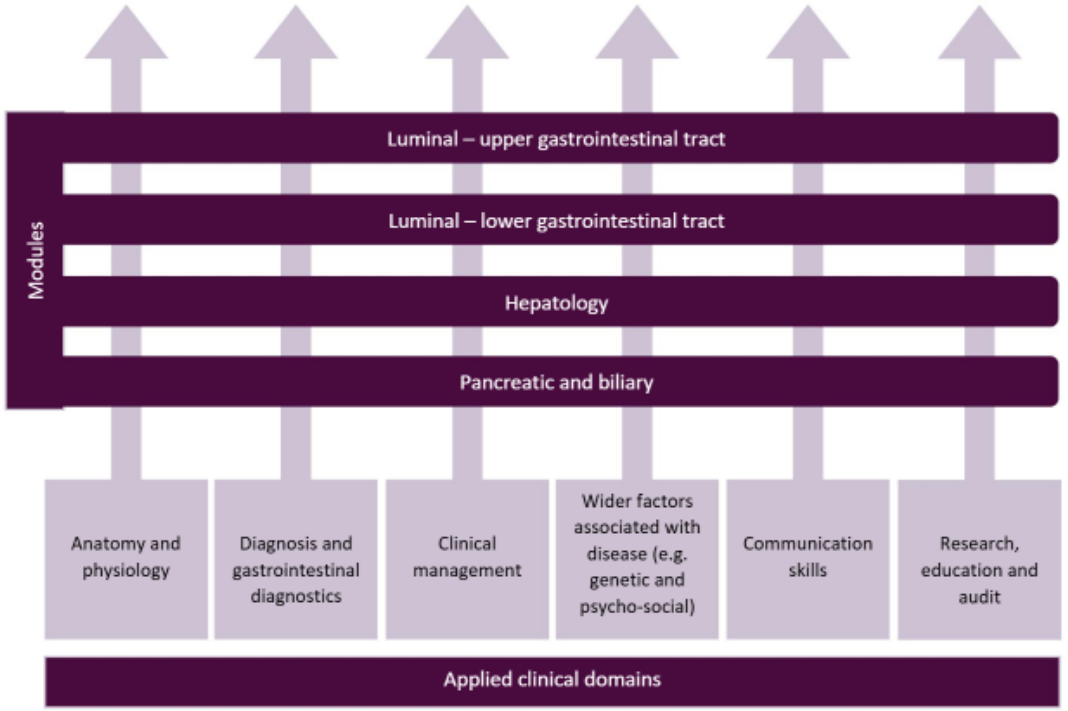
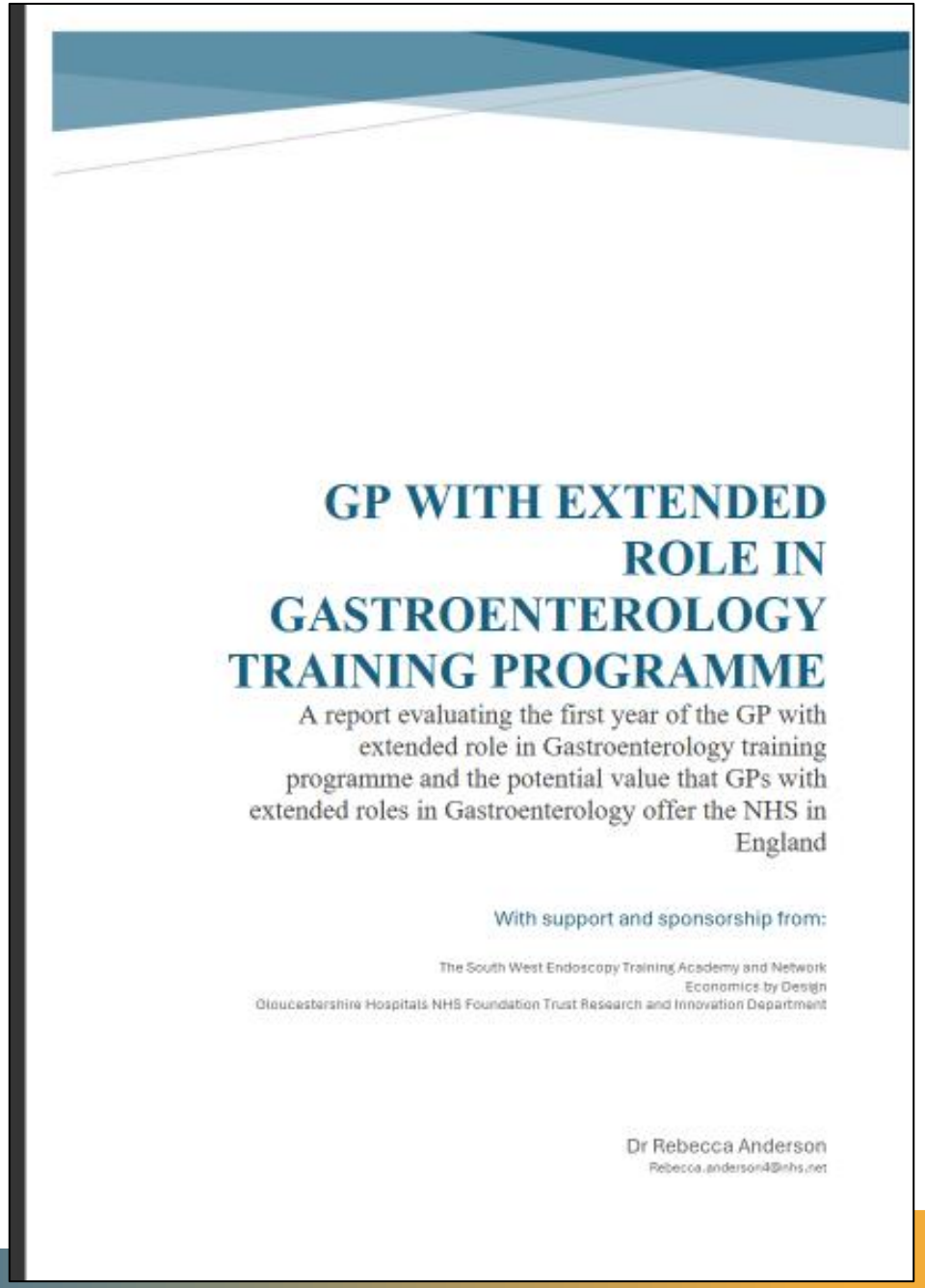


Figure 1: Knowledge acquisition framework, including domains and modules to help guide GPwER training.



GP WITH EXTENDED ROLE IN GASTROENTEROLOGY TRAINING PROGRAMME

A report evaluating the first year of the GP with extended role in Gastroenterology training programme and the potential value that GPs with extended roles in Gastroenterology offer the NHS in England

With support and sponsorship from:

The South West Endoscopy Training Academy and Network
Economics by Design
Gloucestershire Hospitals NHS Foundation Trust Research and Innovation Department

Dr Rebecca Anderson
Rebecca.anderson4@nhs.net

NHS South West

The Primary Care Society for Gastroenterology PCSG

- Mixed methodology evaluation:
  - Formative process evaluation of training programme
  - Impact evaluation of pre-existing GP-led community Gastro services
  - Economic evaluation

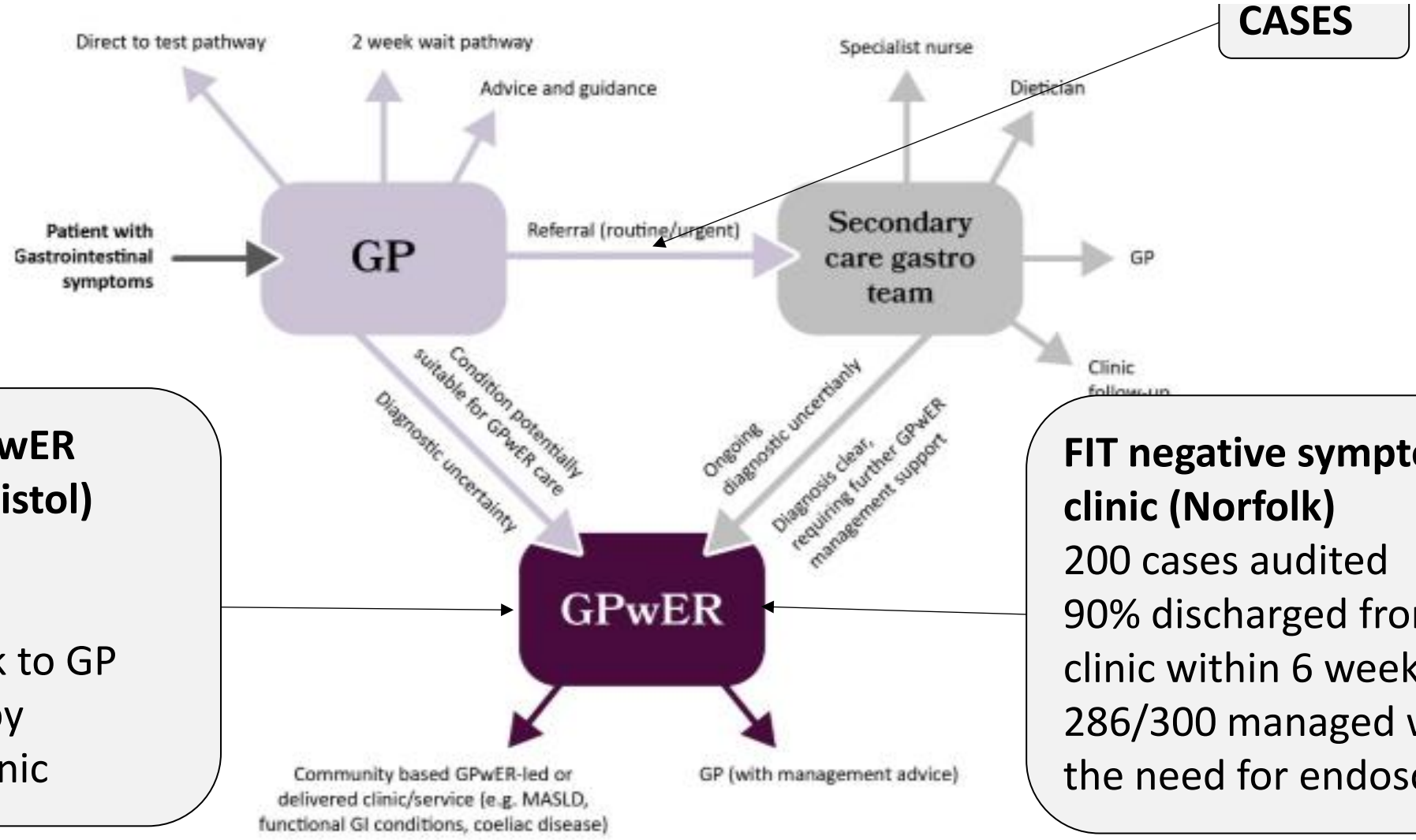
www.pcsg.org.uk/gpwer-training-programme-evaluation/

Formative process evaluation of training programme

- 4 GPs have completed year 1 of programme
- Oversubscribed
- 100% found online portal easy to use and the course to be well organised
- 100% increased knowledge/confidence
- 100% increased motivation for GP
- All GPs felt they would be equipped to work independently
- Feedback from GPs and clinical supervisors has been extremely positive

MODULE	Pre-module score	Post module score	Paired T-Test
Upper Gastrointestinal	49%	82%	t=4.6, p<0.01, df=4
Lower Gastrointestinal	63%	86%	t=3.5, p<0.05, df=3

Impact evaluation of pre-existing GP-led community Gastro services



Community GPwER gastro clinic (Bristol)
850 patients
>50% seen and discharged back to GP
25% - endoscopy
13% - repeat clinic

FIT negative symptomatic clinic (Norfolk)
200 cases audited
90% discharged from GPwER clinic within 6 weeks
286/300 managed without the need for endoscopy

South West

Economic evaluation

	Regional programme	National programme
GPs trained (5 yrs)	16	112
Discounted total cost of training	£375,000	£1,898,000
Discounted cost per GP	£23,440	£16,950
Minimum required OP referrals avoided over 5 year period	58.92 (annually) 1.37 (weekly)	36.45 (annually) 0.85 (weekly)

The above is based on 4 GPs training per year (regional programme). Scaled to 4 GPs across each of the 7 English NHS regions, ie. 28 GPs per year (national programme).

Sustainability of the GPwER

Sustainability

Is the GPwER a cost-effective addition to the GI healthcare system?

Potential cost-saving per GPwER per year:

GPwER referral triage – 21% OP appointment avoidance, 30 referrals per session cost saving per year per GP : **£33,538.52**

GPwER community clinic - 6 new patients per session (258 patients managed in the community per year) : **£30,571.52**

**Based on the 25/26 national outpatient tariff for a gastroenterology appointment (£230 new)*

***Cost per session of £28,768.45 (including GPwER cost of £15,352.48 + clinic overheads £13,416)*

ICB case study

750 general gastroenterology referrals are received per month (+ 250 endoscopy)

GPwER can triage 30 referrals per session worked = 300 sessions per year

The total cost of running 300 clinics per year = £200,710.32

The total saving to the system = £434,700

Yearly total cost saving = £233,989.68

*based on a 21% rate of referrals being returned to GP

Sustainability and service output

Job plan:

- **1x clinical triage session per week**
- **1x GPwER-run community clinic per week**

Number of fully trained GPwER over 5 year period	Total cost saving per year (£)	Number of referrals avoided	Number of patients seen in community clinic
20 (regional)	1,282,200 *	5,418	5,160
140 (national)	8,975,495 *	37,926	36,120

*Based on cost saving of **£33,538.52 (triage clinic session) and £30,571.52 (outpatient clinic session)**

NHS South West

The Primary Care Society for Gastroenterology PCSG

Why now?

System-wide need

The changing NHS landscape

Policy alignment

A framework and training programme

Clinician interest

A more collaborative future

- **Better management** of gastroenterology waiting lists
- **Improved communication** between primary and secondary care
- **Greater gastroenterology expertise** within the community
- **GP recruitment and retention**

Thank you for listening

Charles.andrews@nhs.net

Keynote Presentation

Dr Marion Sloan
Partner, Sloan Medical Centre
NHS

PCS Primary Care Sheffield

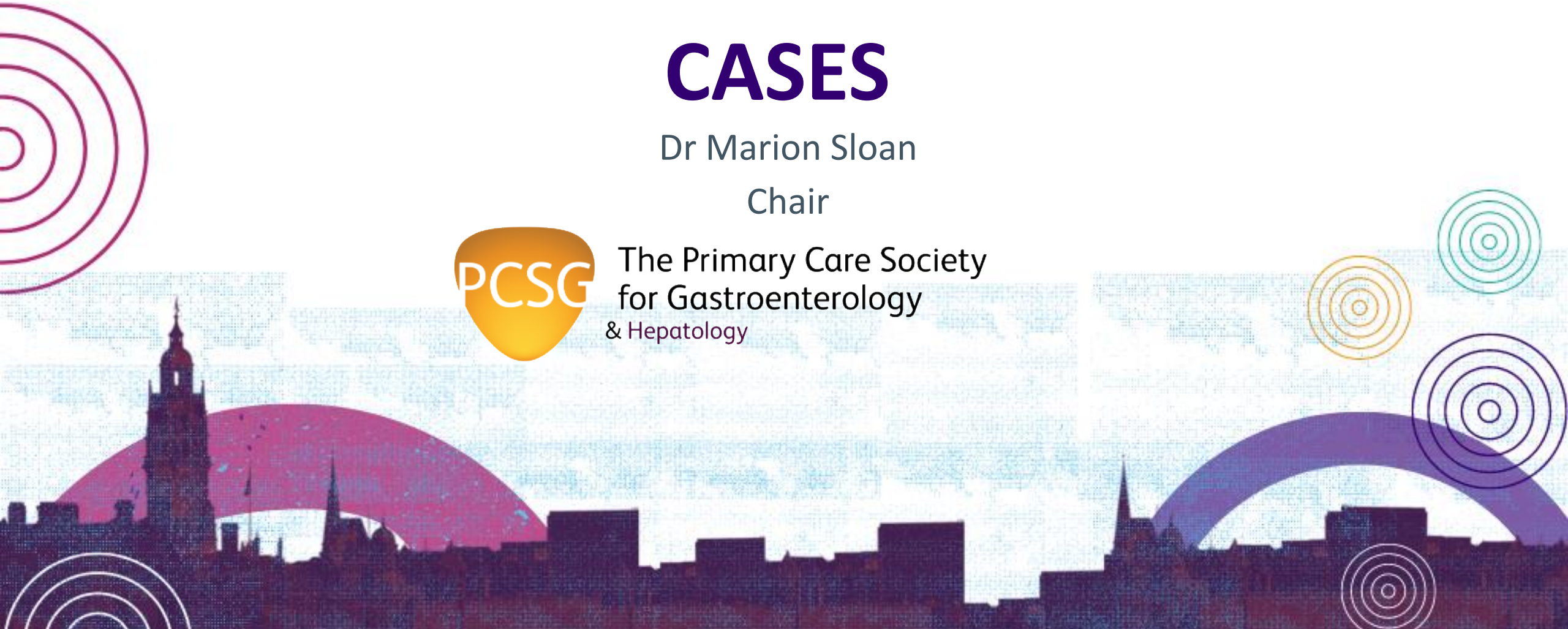
NHS

CASES

Dr Marion Sloan

Chair

PCSG The Primary Care Society for Gastroenterology & Hepatology

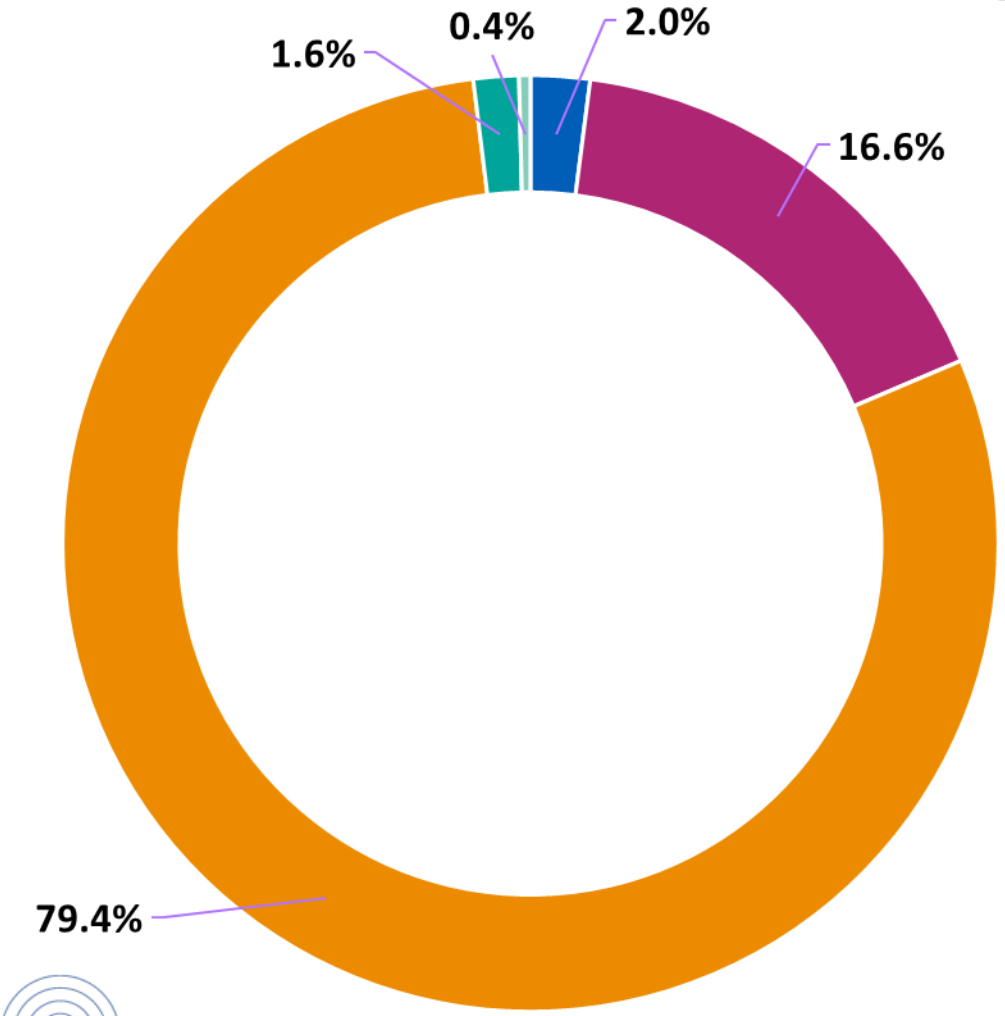


Introduction to CASES

- A GP led pre-referral triage service to enhance referral quality whilst upskilling referrers and improving the patient journey
- GPs with special interest triage routine referrals directed by Primary Care to 10 secondary care specialties; Cardiology, Dermatology, Ear, Nose and Throat, Gastroenterology, General Surgery, Gynaecology, Haematology, Neurology, Respiratory and Urology.
- CASES GPs receive mentorship from secondary care specialists.
- CASES is contracted to triage referrals within 2-3 working days (98% in 2 days, 100% in 3 days)
- Data collected to inform referrer education, pathway improvement and service development

PCSG The Primary Care Society for Gastroenterology & Hepatology

CASES Gastroenterology outcomes



- refer back to GP for the following additional information
- refer back to GP with the following advice/guidance
- refer onto Secondary Care
- return to GP (incorrect speciality)
- return to GP 2 week wait referral required

Data Feb 24 to Jan 25

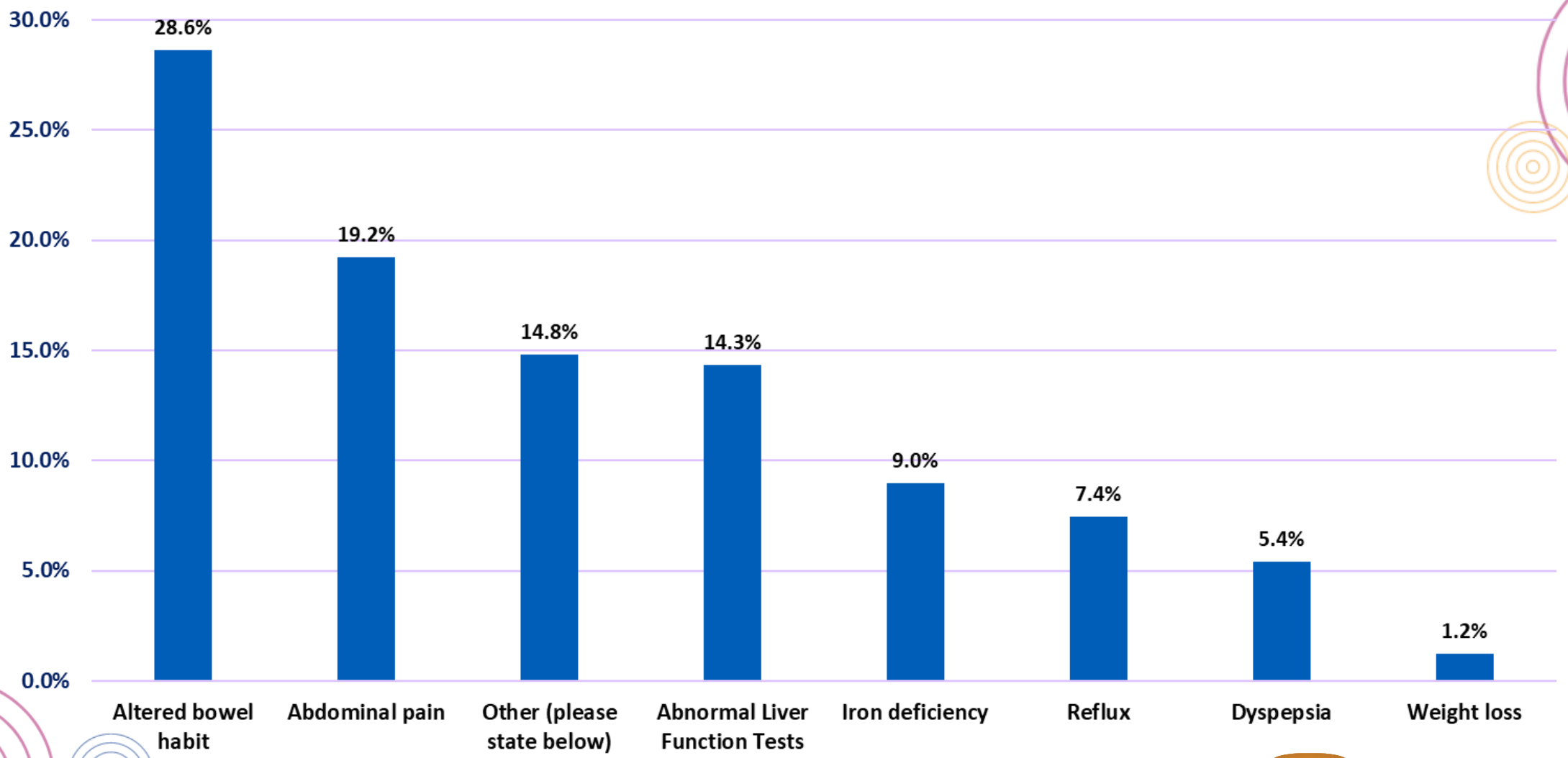
The Primary Care Society for Gastroenterology & Hepatology

CASES Gastroenterology outcomes 2

Outcome	Percentage
Refer back to GP for the following additional information	2.0%
Refer back to GP with the following advice/guidance	16.6%
Refer onto Secondary Care	79.4%
Return to GP (incorrect speciality)	1.6%
Return to GP 2 week wait referral required	0.4%

The Primary Care Society for Gastroenterology & Hepatology

Primary Reason for Referral



Data Feb 24 to Jan 25

The Primary Care Society for Gastroenterology & Hepatology

Referral Outcomes – other specialties

Specialty	% referral returned by CASES with advice
Cardiology	17%
Dermatology	19%
ENT	15%
Gastroenterology	21%
General Surgery	24%
Gynaecology	20%
Haematology	30%
Neurology	11%
Respiratory	29%
Urology	13%

Data Feb 24 to Jan 25

Evaluation of CASES Service

CASES underwent a recent external evaluation and the highlights were as follows:

- Every referral passed through CASES, saves the NHS money on a cost of CASES review versus outpatient appointments saved basis.
- There are additional savings realised, based on less quantifiable areas, such as earlier cancer detection, patients attending with full work ups etc.
- The service has upskilled GPs and improved relations and understanding between primary and secondary care particularly in relation to pathway development and changes.

Keynote Presentation

Dr Ed Seward
Consultant Gastroenterologist and Divisional Clinical Director
University College London Hospital

Rewriting Pathways of Care

NHS Endoscopy Conference May 2025

Ed Seward

GI Divisional Clinical Director UCLH

NHS London Clinical Director for Endoscopy

Learning objectives

Why endoscopy lends itself to improvement

Learning from examples of improvement

The importance of the bigger picture in endoscopy improvement

Whipps Cross 2006

1994 JAG formed

2004 NCEPOD report

2004 GRS piloted

2006 Audit lead

2009 Endoscopy lead

Cullinane M, Gray AJG, Hargraves CMK et al. Scoping our practice: the 2004 report of the confidential enquiry into patient outcome and death.

Contents

Royal College of Physicians | JAG Joint Advisory Group on GI Endoscopy

JAG accreditation
Global rating scale (GRS) for UK services

Published: 2021

A **3.6:** The service is able to offer a full range of sedation techniques to maximise comfort, minimise patient anxiety and perform high technical endoscopy in line with nationally accepted guidelines.

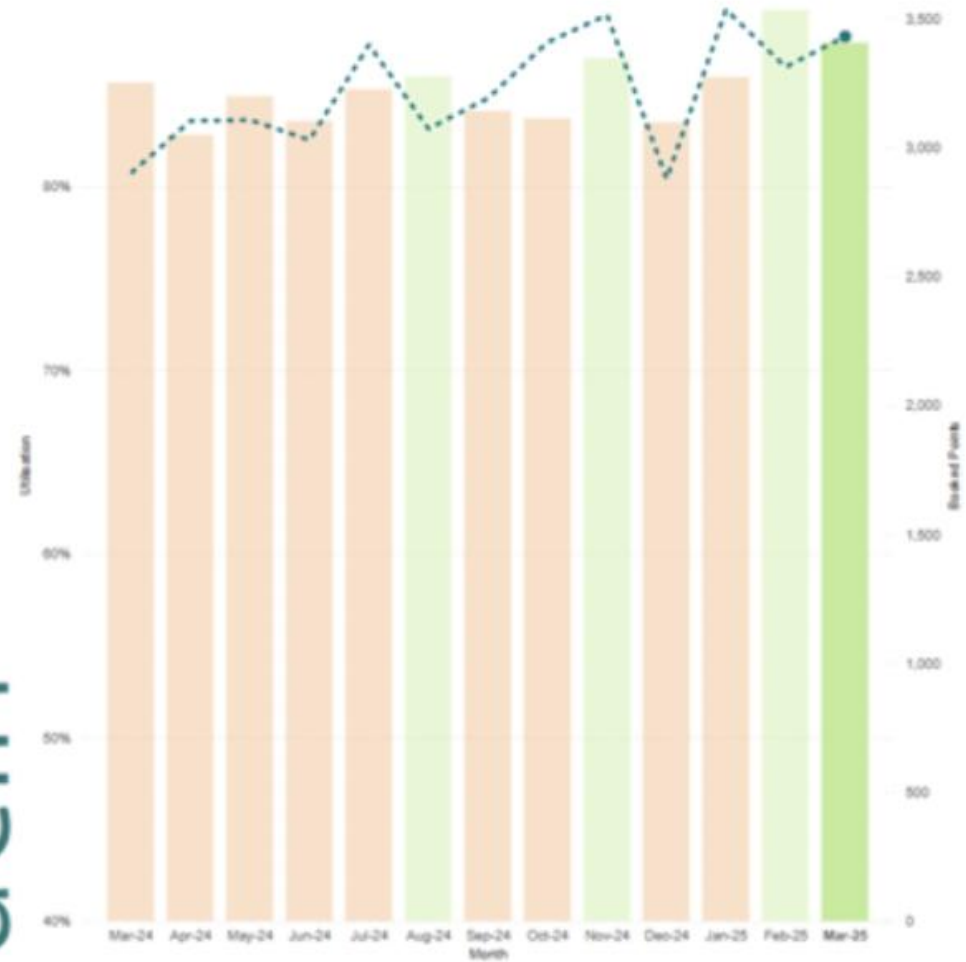
Guidance

A full range of sedation techniques means that the patient is aware of the full options available to them and what is safe and appropriate for that patients' needs.

University College London Hospitals NHS
NHS Foundation Trust

Operational Performance Endoscopy Utilisation

Based on attended appointments in Rooms 1 – 8 only

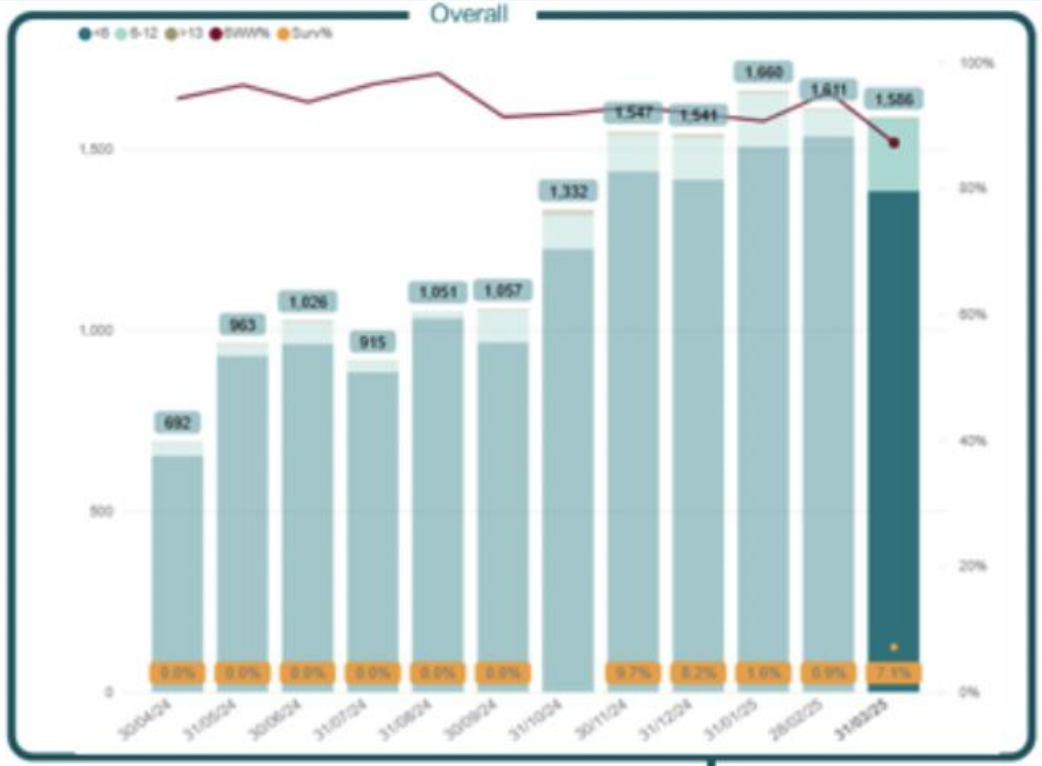


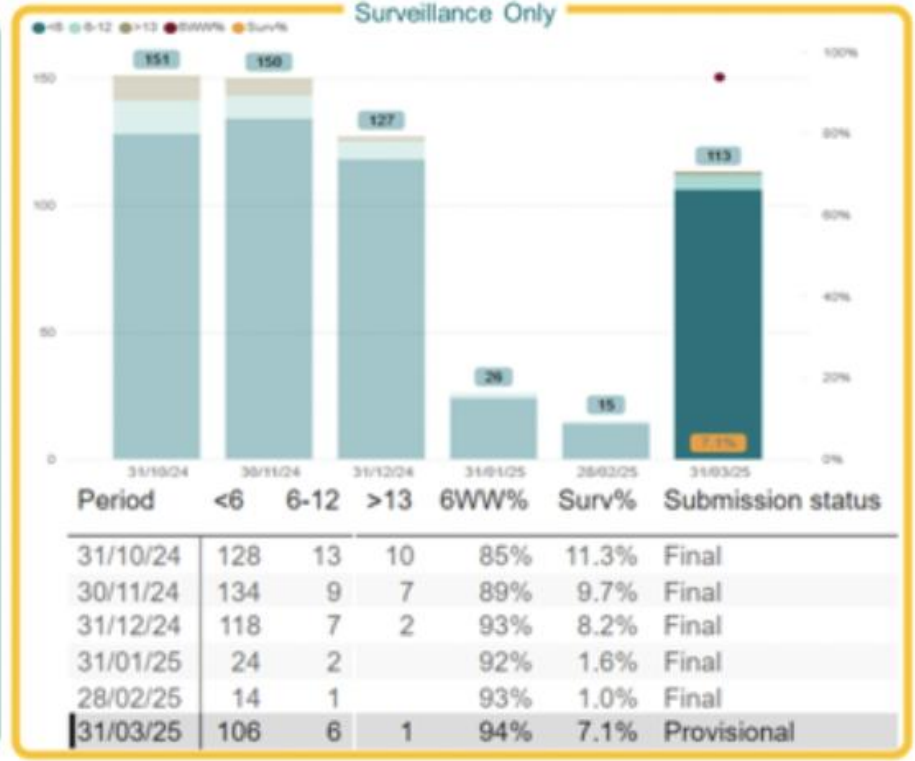
Month	Utilisation	Booked Points
Mar-24	85.7%	2,900
Apr-24	82.8%	3,103
May-24	84.9%	3,107
Jun-24	83.6%	3,029
Jul-24	85.3%	3,398
Aug-24	86.0%	3,073
Sep-24	84.1%	3,191
Oct-24	83.7%	3,408
Nov-24	87.0%	3,514
Dec-24	83.5%	2,878
Jan-25	86.0%	3,534
Feb-25	89.6%	3,312
Mar-25	87.8%	3,431

YTD (M1-12): 85.4%

University College London Hospitals NHS
NHS Foundation Trust

DM01 Performance





Period	<6	6-12	>13	6WW%	Surv%	Submission status
31/10/24	128	13	10	85%	11.3%	Final
30/11/24	134	9	7	89%	9.7%	Final
31/12/24	118	7	2	93%	8.2%	Final
31/01/25	24	2		92%	1.6%	Final
28/02/25	14	1		93%	1.0%	Final
31/03/25	106	6	1	94%	7.1%	Provisional

uclh

Modality	30/04/24	31/05/24	30/06/24	31/07/24	31/08/24	30/09/24	31/10/24	30/11/24	31/12/24	31/01/25	28/02/25	31/03/25
Colonoscopy	97%	99%	94%	97%	99%	90%	93%	94%	91%	92%	95%	87%
Flexi sigmoidoscopy	96%	97%	92%	99%	98%	95%	93%	93%	92%	89%	98%	85%
Gastroscopy	92%	94%	94%	96%	97%	92%	90%	91%	93%	90%	96%	88%
Non-obstetric ultrasound	88%	96%	72%	80%	96%	91%	94%	88%	85%	84%	85%	85%
Total	**94%**	**96%**	**94%**	**97%**	**98%**	**91%**	**92%**	**93%**	**92%**	**91%**	**95%**	**87%**

Cancer Collaborative Endoscopy Unit Efficiency NCEL/WE

19 Jan 2017

2020 Report produced by 2020 Delivery - duncankemp@2020delivery.com

The UCLH Cancer Collaborative is a part of the national Cancer Vanguard, working with Greater Manchester Cancer Vanguard Innovation and RM Partners

www.uclh.nhs.uk/cancercollaborative #uclhcancer #cancervanguard

VANGUARD ENDOSCOPY QUALITY COLLABORATIVE

Ed Seward

Dec 2016

University College London Hospitals NHS
NHS Foundation Trust

uclh

Improving efficiency in endoscopy
Sept 2021

Dr Ed Seward
Endoscopy Clinical Lead UCLH

We are committed to delivering top-quality patient care, excellent education and world class research

Safety
Kindness
Teamwork
Improving

Barts Health NHS
NHS Trust

Making Endoscopy More Efficient
What has worked for us

Problem #1 – when a pathway isn't straight

Observation: all patients going through 2ww colorectal clinics ended up having a colonoscopy (>90% on audit), sometimes inappropriately

Idea: shouldn't we just go straight to a colonoscopy? What does the clinic add in terms of patient care?

Plan: Straight to test

When a pathway isn't straight…straight to test

Needed to address NPSA and JAG concerns over safety of prep

Allowed a more rational approach to investigation (eg CTC in ≥80s or performance score >1)

Nurse endoscopists trained and supported to make calls

Straight to test

2 weekly meetings to troubleshoot problems

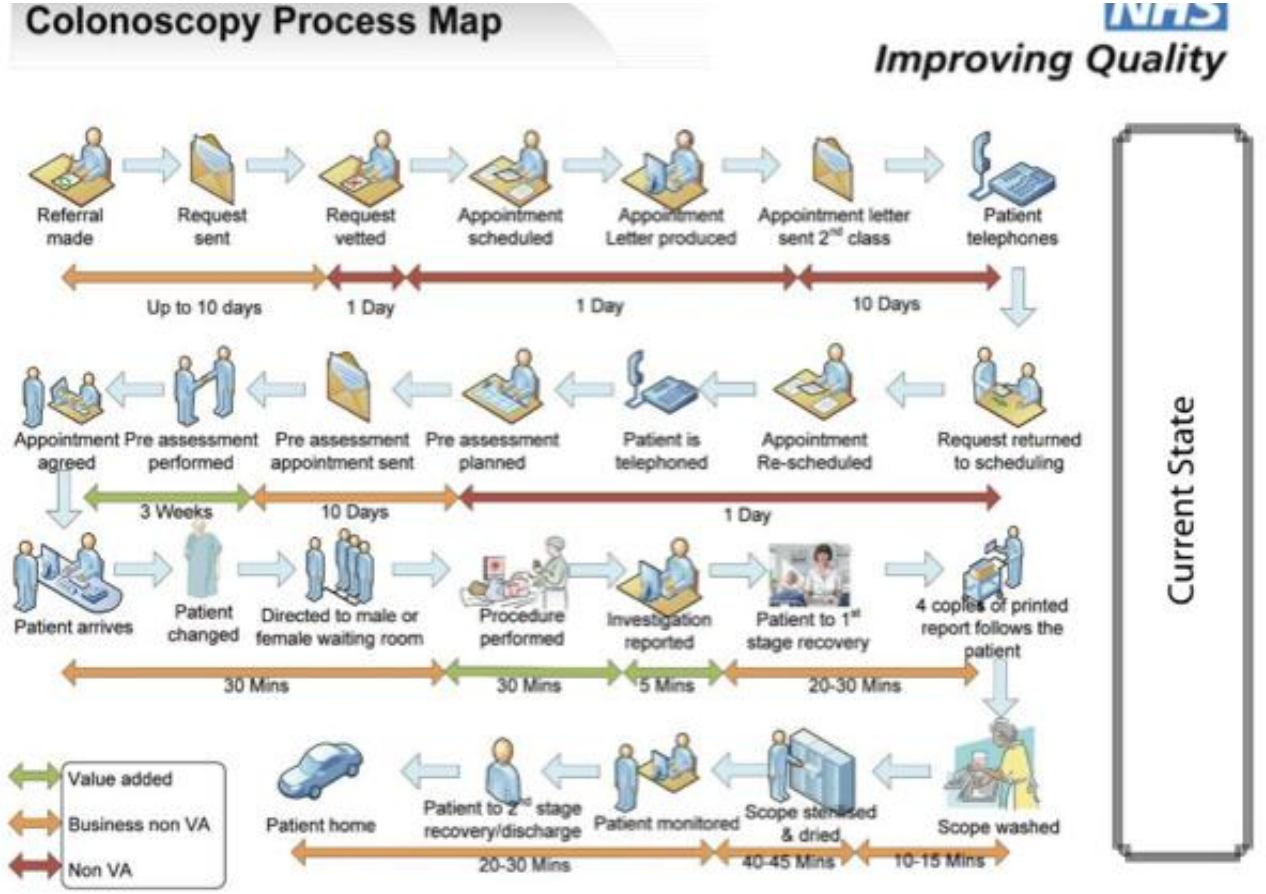
Stakeholder engagement sessions with patient groups, GPs and colorectal/endoscopy teams

Audit outcomes

BMJ Awards finalist

Taken up nationally by CRUK

Now standard of care



Learning points

Don’t tolerate a poor patient pathway, aim for best clinical outcomes

Approach it logically – process mapping is great for this

Hothouse your project, meet regularly

Consult everyone, it improves your idea and gets buy-in

UCLH 2014

Observation: Data from Dundee suggested a ‘negative’ FIT was 100% predictive of the absence of cancer

Idea: could we replicate this with local data, as a means of improving the 2ww pathway

Plan: Lever Cancer Alliance to fund a study across North London

Mowat C, Digby J, Strachan JA, Wilson R, Carey FA, Fraser CG, Steele RJ. Faecal haemoglobin and faecal calprotectin as indicators of bowel disease in patients presenting to primary care with bowel symptoms. Gut. 2016 Sep;65(9):1463-9. doi: 10.1136/gutjnl-2015-309579.

Problem #2 – is FIT fit?

This was a big ask

Study performed and data collected and written up

FIT < 10 = 0.5% CRC risk, FIT $\geq$ 10 = 10% CRC risk
80% of 2ww referrals are FIT < 10

What do we do with this?

Laszlo, H. E., Seward, E., Ayling, R. M., et al. (2022). Faecal immunochemical test for patients with 'high-risk'bowel symptoms: a large prospective cohort study and updated literature review. British Journal of Cancer, 126(5), 736-743.

Problem #2 – is FIT fit?

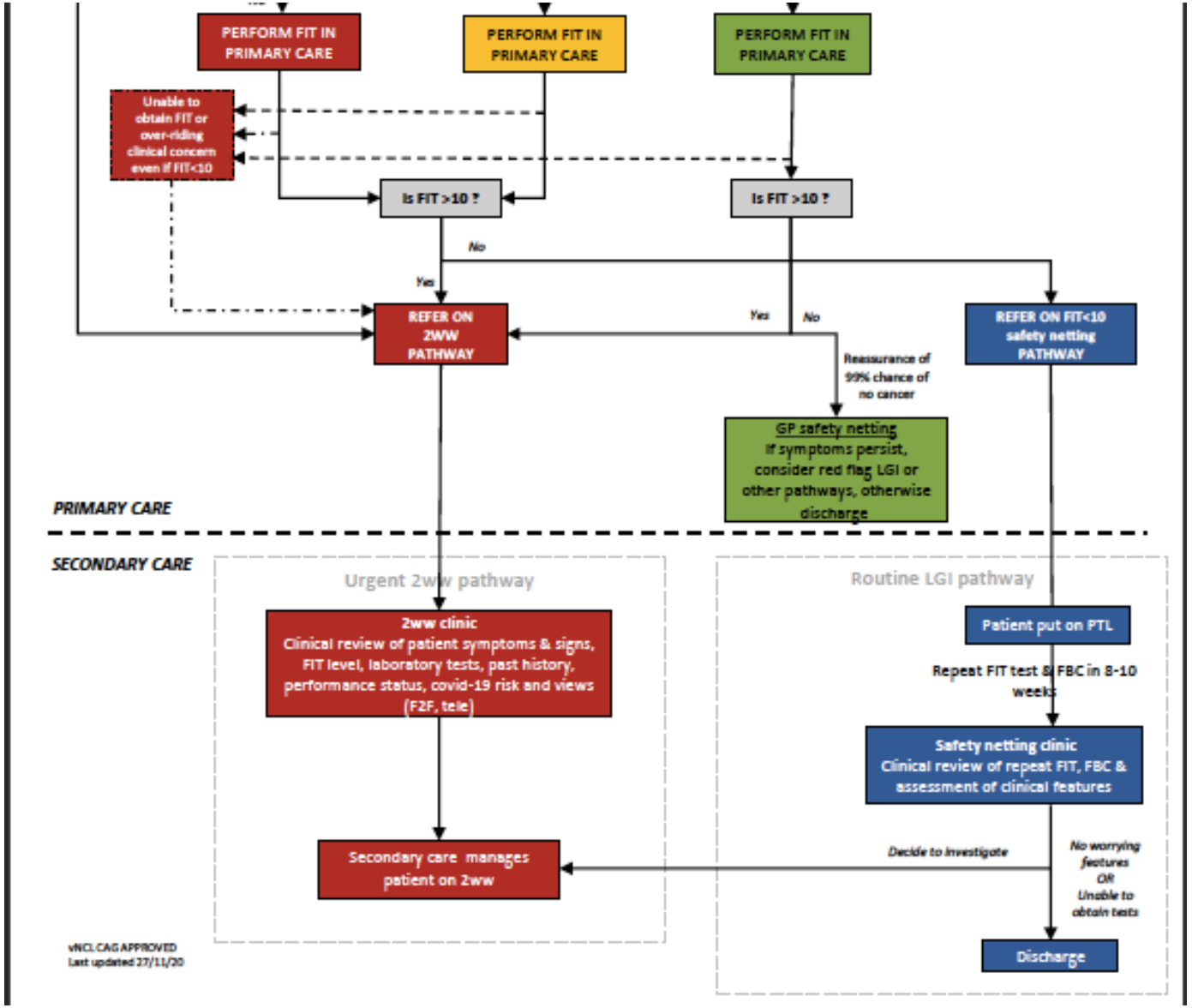
Initially rejected for clinical use

Then came Covid – overnight accepted as triage tool

Meta-analysis confirmed efficacy of FIT

Booth, R., Carten, R., D'Souza, N., et al (2022). Role of the faecal immunochemical test in patients with risk-stratified suspected colorectal cancer symptoms: A systematic review and meta-analysis to inform the ACPGBI/BSG guidelines. The Lancet Regional Health–Europe, 23.

But what about ‘FIT negatives’?


PERFORM FIT IN PRIMARY CARE
PERFORM FIT IN PRIMARY CARE
PERFORM FIT IN PRIMARY CARE
Unable to obtain FIT or over-riding clinical concern even if FIT<10
Is FIT >10 ?
Is FIT >10 ?
No
Yes
Yes
No
REFER ON 2WW PATHWAY
REFER ON FIT<10 safety netting PATHWAY
Reassurance of 99% chance of no cancer
GP safety netting
If symptoms persist, consider red flag LGI or other pathways, otherwise discharge
PRIMARY CARE
SECONDARY CARE
Urgent 2ww pathway
Routine LGI pathway
2ww clinic
Clinical review of patient symptoms & signs, FIT level, laboratory tests, past history, performance status, covid-19 risk and views (F2F, tele)
Patient put on PTL
Repeat FIT test & FBC in 8-10 weeks
Safety netting clinic
Clinical review of repeat FIT, FBC & assessment of clinical features
Decide to investigate
No worrying features OR Unable to obtain tests
Secondary care manages patient on 2ww
Discharge
vNCL CAG APPROVED
Last updated 27/11/20

Problem #2 – is FIT fit?

Concentration of ‘FIT negatives’ in secondary care allowed collection of data

Outcomes collected for 600 patients across NCL

No missed cancers, very low pathology rate, very high investigation rate

= FIT <10 a reliable predictor of the absence of pathology

Seward et al BSG 2025

Learning points

Embrace innovation

Don’t be afraid to push back if you think you’re right

Surround yourself with good people

See an idea through

Collect data, and more data, and then more data

Problem #3 – outpatients out of control

Observation: Massive and increasing demand for gastroenterology outpatients

Idea: can we look at other models of care to fix our problem?

Plan: outpatient transformation programme to introduce improvement bundle to NCL outpatients

Problem #3 – outpatients out of control

Out Patient Bundle

GP	update pathways of care
	FIT/FCP
	advice and guidance
Hospital	RAS
	‘School of IBS’
Chronic care	Reducing F2F (this was pre-Covid!)
	Patient portal

Problem #3 – outpatients out of control

Out Patient Bundle

GP	update pathways of care
	FIT/FCP
	advice and guidance
Hospital	RAS
	‘School of IBS’
Chronic care	Reducing F2F
	Patient portal

NORTH LONDON PARTNERS in health and care
North Central London's sustainability and transformation partnership

NCL Gastroenterology: Constipation Primary Care Protocol

Version 8.0: January 2020
Review Date: January 2021

Definition

Symptom based disorder which describes defecation that is unsatisfactory because of infrequent stools, difficulty passing stools or the sensation of incomplete emptying. Constipation is a passage of stools less frequent than a person's normal pattern. Associated symptoms include: excessive straining, lower abdominal pain/discomfort and bloating.

Patient history and examination

- Clarify what patient "means by constipation" and their normal pattern of defecation
- Duration of constipation; frequency and consistency of stools.
- Is the patient on any drugs (see overleaf) that causes constipation?
- Any nocturnal symptoms or associated symptoms (rectal discomfort, excessive straining, feeling of incomplete evacuation, rectal bleeding, abdominal pain or distension.)
- Any associated urinary symptoms or incontinence, and dyspareunia.
- Any FH colorectal cancer or IBD - *if appropriate increased risk thresholds met, refer for screening colonoscopy (refer to Gastroenterology via RMS)*
- Assess patient's diet – fibre and fluid intake
- Assess patient's toileting habits
- Any associated psychological or mental health conditions
- Any underlying systemic illness causing constipation
- Measure weight – any unexplained weight loss
- Examine for abdominal mass
- Digital rectal examination
- Recognise and actively treat patients with learning disabilities and ensure carers are informed to monitor stools using Bristol Stool Chart

Remember: abdominal pain may be due to constipation and diarrhoea may be overflow

Key

- "Must do" actions for GP's / (Triaged by RMS where available)
- Recommendations for Primary Care
- Red flag / urgent referral
- Routine referral
- Public health intervention
- Audio-visual aids for patients and GP
- Click icon for clinical evidence

Are there any alarm symptoms?

No

Yes

Lifestyle Advice

* Healthy balanced diet with regular meals (https://patient.info/health/constipation-in-adults-leaflet)
* Diet high in fibre and fluids – adults should aim to consume 30g fibre per day
* Increase activity and exercise levels
* Helpful toileting routines (regular, unhurried routine, respond immediately to sensation to defecate)
* Optimal toileting position

FBC , TFT, Calcium, Coeliac screen

- Consider CA125 / US pelvis test for female patients over 50 with suspected cancer.
- FIT test if appropriate (see FIT Test Pathway)

Short duration constipation (< 3 months)
Stepped approach to oral laxatives
1) bulk-forming laxative e.g. Isphagula (must drink adequate fluids)
2) add/switch to osmotic laxative e.g. macrogol

Opioid-induced constipation:
1) Macrogol AND Bisocodyl (avoid bulk-forming laxatives)

Symptoms / signs of OBSTRUCTION (absolute constipation, vomiting, abdominal pain and bloating) require urgent same day admission.

Refer under 2-week wait pathway to colorectal team if 2-week waits symptoms criteria met:

- Any age with suspicious abdominal/ rectal mass or unexplained anal mass/ulceration
- > or equal to 40 years with unexplained abdominal pain AND weight loss
- > or equal to 40 years with unexplained iron deficiency anaemia
- < or equal to 50 years with rectal bleeding AND any of the following UNEXPLAINED symptoms: abdominal pain, change in bowel habit, weight loss or iron deficiency anaemia
- > or equal to 50 years with UNEXPLAINED rectal bleeding or abdominal pain or weight loss or change in bowel habit
- > or equal to 60 years with unexplained anaemia, even in the absence of iron deficiency
- raised / positive FIT* test suggestive of cancer

Yes

Wolverhampton idea

Patients get pre-assessed and managed virtually

UCLH data: slashed wait times for new OPD

Upfront investigations = early diagnosis, good for patients

Shifted problem to follow-ups

= further improvement cycle…

Yeo JH, Graham D, Seward E, et al
P247 Rapid access service – is it an efficient way of triaging gastroenterology referrals?
*Gut 2022;**71:**A160-A161.*

Learning points

Try and think outside the box

Do not reinvent the wheel, borrow (and also share!)

Don’t be afraid to fail – not everything is achievable

Relentlessly pursue your improvement cycles

Summary

You are surrounded by endoscopy improvement experts

Scrutinise your pathways

Relentless scrutiny is the only way to maintain improvement

Endoscopy transformation does not stop in endoscopy

Any questions?

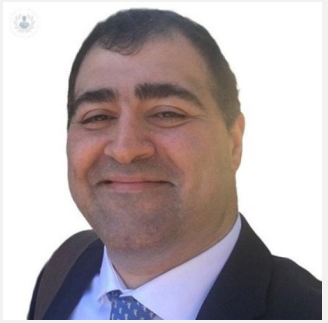
edward.seward1@nhs.net

Slido

Please scan the QR Code on the screen. This will take you through to Slido, where you can interact with us.

SCAN ME

Panel Discussion



Professor Reza Nouraei
Consultant Airway and Laryngeal Surgeon, The Loxley Centre for Airway Voice and Swallowing, Queen's Medical Centre, Nottingham, UK | The Clinical Informatics Research Unit, Southampton University, UK

Dr Ed Seward
Consultant Gastroenterologist and Divisional Clinical Director, University College London Hospital

Mr Simon Parsons
Consultant Oesophago Gastric surgeon and honorary Professor
Nottingham University Hospitals NHS Trust

Food, Drinks & Networking