Development and Validation of a Training Curriculum for Peripherally Inserted Central Catheter (PICC) Use Among Sudanese Health Professionals

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Introduction

Peripherally inserted central catheters (PICCs) play a critical role in modern clinical practice, particularly in the administration of long-term intravenous treatments. Their benefits include reduced risk of complications compared to traditional central venous catheters and the ability to provide sustained vascular access. However, the effective utilization and adoption of PICCs rely heavily on the training and perceptions of healthcare professionals.

In Sudan, understanding the extent of PICC usage and the perspectives of health professionals towards their implementation is essential for improving patient care and optimizing medical procedures. This study aims to explore how Sudanese healthcare professionals perceive PICCs, their level of training, and the factors that influence their utilization in clinical settings.

Methods

A cross-sectional study was conducted to develop a training curriculum. Curriculum design followed Kern's six-step model, supplemented by Caffarella's adult learning framework, and was benchmarked against international case studies (Figure 1). Problem identification and general needs assessment were undertaken through semi-structured interviews, while a targeted needs assessment was conducted using questionnaires to evaluate knowledge, skills, and training requirements among health professionals. Validation was carried out through expert review, using structured questionnaires and one-to-one interviews.

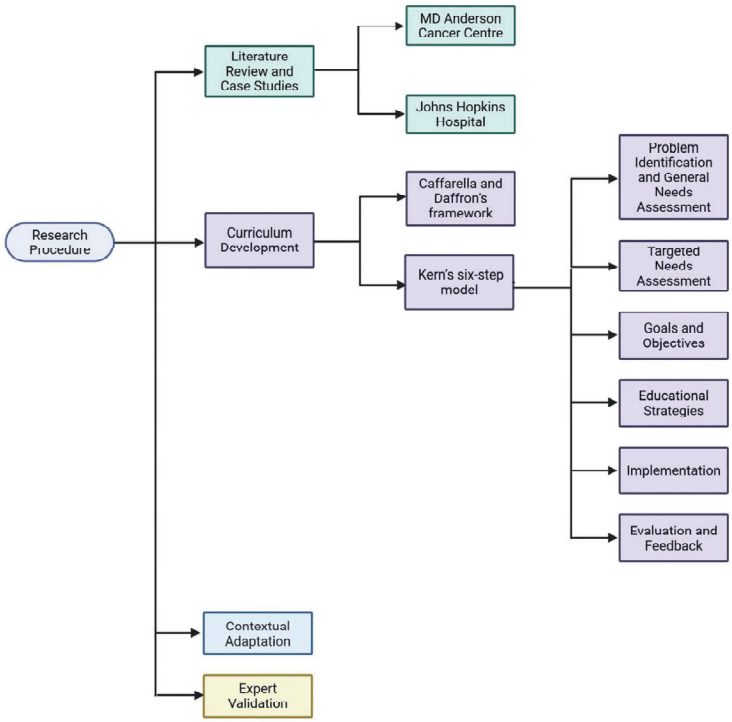

Figure (1): Curriculum development process for PICC training in Sudan.

Results

Fifty-one health professionals participated in the needs assessment. Knowledge and skills were generally poor, with significant associations between knowledge deficits and fear of insertion ($P = 0.007$). Fear levels were higher among females ($P < 0.05$), varied by occupation ($P = 0.002$), and were influenced by years of experience ($P < 0.05$).

Participants strongly preferred blended learning, with simulation and supervised practice rated highest. Seven field experts validated the curriculum and recommended shortening the timetable, enhancing infection prevention modules, and extending supervised practice requirements. The final curriculum comprised three days of lectures and clinical stations, followed by a six-month logbook for supervised insertions.

Conclusions

This study developed and validated Sudan's first PICC training curriculum (Table 1). The program combines theoretical instruction, simulation, and supervised practice, with contextual adaptations for feasibility. Implementation could improve patient safety, reduce complications, and strengthen national capacity in vascular access care.

Day	Key activities	Time allocation
Day 1	Anatomy, vascular devices, patient selection; ultrasound guidance; tip positioning; securement; infection prevention (with breaks)	7.5 hrs
Day 2	Post-insertion care; complication management; catheter function; hub disinfection; role-play scenarios	7.5 hrs
Day 3	Patient demonstrations; small-group practice; theory and skills assessments; wrap-up (with breaks)	8 hrs
Follow-up	Logbook of ≥5 supervised patient insertions	6 months

Table (1): Summary of the final PICC three-day curriculum outcome timetable

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A Breath of Fresh Air: Foundation Doctors Improving Oxygen Prescription on Respiratory Wards at a Tertiary Centre

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Introduction

A large percentage of patients on the respiratory wards at HRI do not have oxygen prescribed. 100% of patients receiving supplementary oxygen should have this prescribed as per *BTS guidelines*[1].

This QIP aimed to increase the percentage of patients with oxygen prescriptions, improving patient care and safety, and staff efficiency. We aimed for a 50% increase from baseline measured before March 2026.

Methods

Used the "BTS Emergency Oxygen Audit 2015 – PATIENT DATA Collection Sheet" and completed one form for each patient who is on supplementary oxygen. Recorded:

- Oxygen status of the patient
- Number of drug rounds in the past 24 hours
- How many times has the drug chart has been signed for oxygen, in the last 24 hours
- Whether the SpO2 was within the target range at the last assessment

Actions

- Cycle 1: oxygen tags were attached to every oxygen cylinder on the ward to remind clinical staff of the importance of oxygen prescription.
- Cycle 2: two Resident Doctors were designated oxygen prescribers and were focussed on promoting oxygen prescription among colleagues and identifying at risk patients without oxygen prescribed, for a period of one month.

Discussion

This QIP demonstrated sustained improvement in oxygen prescribing through simple, low-cost interventions. Both PDSA cycles achieved and maintained a greater than 50% relative increase from baseline, addressing a key patient safety issue.

The British Thoracic Society emphasises that oxygen is a drug and should be prescribed for all patients receiving supplemental oxygen, with documented target saturation ranges[1]. Failure to do so risks both over-oxygenation, which may precipitate hypercapnic respiratory failure, and under-oxygenation, which can result in tissue hypoxia.

Despite improved prescribing, achievement of target oxygen saturations was more variable, particularly during Cycle 2. This likely reflects increased patient acuity and higher oxygen requirements, and the use of single time-point audit measurements that do not fully capture dynamic clinical change

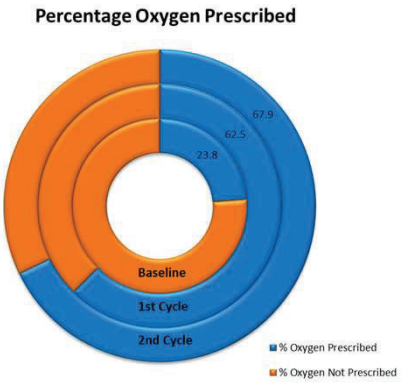

Fig 1

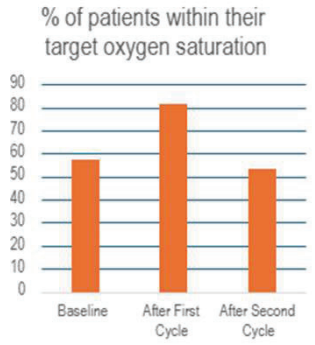

Fig 2

Results

Baseline oxygen prescribing was 23.8% (n=21), with 57.1% of patients within target saturations.

After PDSA Cycle 1, prescribing increased to 62.5%, and 81.3% of patients were within target saturations (n=16). During PDSA Cycle 2, prescribing was sustained at 67.9%, while the proportion within target saturations decreased to 53.6% (n=28).

Prescribing improved significantly from baseline to Cycle 1 (23.8% vs 62.5%, p≈0.01) and Cycle 2 (23.8% vs 67.9%, p<0.01), with no difference between Cycles 1 and 2 (p≈0.7).

Improvement in target saturations from baseline to Cycle 1 (57.1% vs 81.3%) did not reach significance (p≈0.18), and the decrease in Cycle 2 versus baseline was also non-significant (57.1% vs 53.6%, p≈0.80). Analysis was post-hoc and data were not randomised.

Fig.1 Patient Run Chart highlighting sustained improvement across 2 PDSA cycles
Fig 2. Percentage Oxygen Prescribed in Cycle 2 (outer ring), compared to Cycle 1 (middle ring) and baseline (inner ring)
Fig 3. Percentage of patients with SpO2 within the target range at the time of last assessment
Fig 4. Oxygen tags used on oxygen cylinders as a reminder to staff

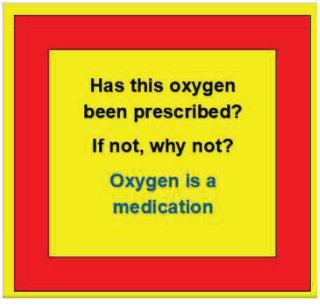

Fig 3

Lessons learnt

- Difficulties arise when patients arrive to the ward already on oxygen.
- Nervecentre and Lorenzo don't easily allow for other oxygen saturation targets (<88%). This leads to reluctance to prescribe for patients in a respiratory setting who may have lower target sats.
- **Recommendations:** dedicated resident doctor prescribers for respiratory rotations.
- **Possible future cycles:** education for colleagues; an improved online system/prompts for prescribing; implementation in ED/AMU

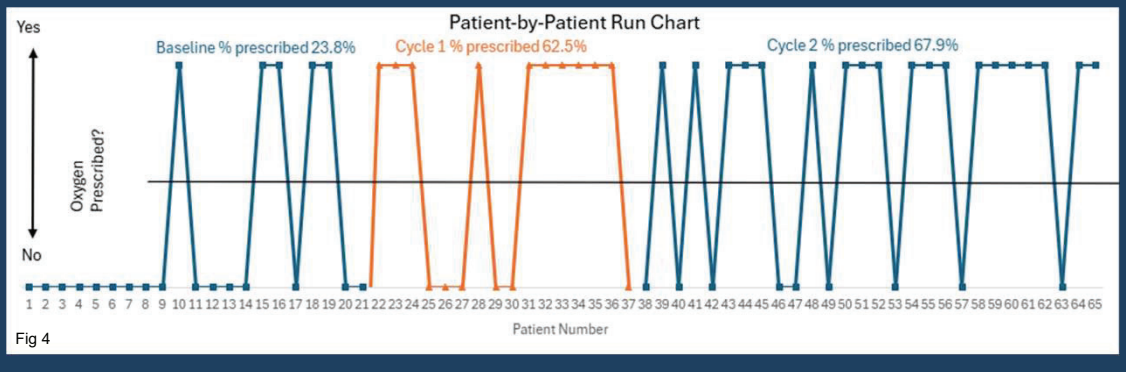

Fig 4

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Optimising Lumbar Puncture Practice: A Quality Improvement Project

Dr Mohammed Awadh (ST1), Dr Joanna Gerstmar (Specialty Doctor), Nikhil Venugopal (ST2), Dr Rama Varadan (Consultant)

Introduction

Lumbar puncture is diagnostic for IIH.
Local data: LP 100% performed under general anaesthesia (GA).
Key questions to answer:
- Are all LPs clinically necessary?
- Is this a training or confidence issue?
- Do anxiety and non-compliance contribute to failed attempts?

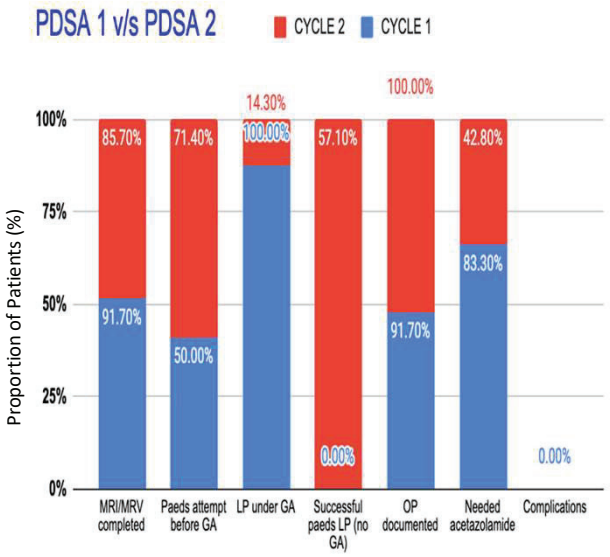
Methods

- Cycle 1 (Jan–May 2025):
Retrospective review (n=12)
Outcomes: GA use, number of attempts, success rate, documentation quality, treatment, complications

Interventions:
- LP teaching sessions;
- Improved anaesthetic team communication;
- Drafts GA guidance;
- Emphasis on documenting attempts and operator grade.

- Cycle 2 (Jul–Sep 2025):
Retrospective re-audit (n=7)
Same outcome measures

Results



Overall: Major reduction in GA use with improved bedside LP success and minimal complications.

Discussion and Conclusions

- Contributing factors included **limited structured training**, **absence of clear guidance**, and inconsistent documentation.
- Documentation quality and paediatric led pre GA attempts improved following simple, low-cost interventions, structured training, clear guidance, and improved multidisciplinary communication — can safely reduce unnecessary GA use and increase bedside LP success in paediatric patients.

Acknowledgments

Dr Rama Varadan - (Consultant paediatrician)

Scunthorpe Anaesthetic Team

Embedding Conscious Inclusion in Clinical Education

NHS England North East and Yorkshire

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1. INTRODUCTION

Clinicians often balance direct patient care with responsibilities for supporting colleagues, trainees, and multidisciplinary teams. Although equality, diversity and inclusion (EDI) are widely discussed across the NHS, conversations relating to unconscious bias, privilege, hierarchy and microaggressions may still feel difficult in practice.

Without psychologically safe opportunities for reflection, inclusive intentions may not consistently translate into everyday behaviours.

The Conscious Inclusion workshop was developed within Yorkshire and Humber Deanery to support clinicians in reflecting on bias and embedding practical inclusive behaviours into routine clinical and educational practice.

2. METHODS

A structured workshop was delivered to separate groups of trainers, consultants, leadership fellows, and postgraduate doctors and dentists in training.

PRE- LEARNING

Participants completed online pre-learning covering:

- Unconscious bias
- Privilege
- Microaggressions
- Cultural Intelligence framework
- Systems 1 and Systems 2 thinking

INTERACTIVE WORKSHOP

Workshop themes included:

- Bias, hierarchy and power
- Lived experience
- Micro-affirmations
- Reflective dialogue
- Practical workplace application

Anonymous post-session feedback was collected using Likert-scale evaluation forms and free-text comments.

3. RESULTS

Quantitative Outcomes (Feedback Form Scores)

Recommendation Score	9.0 / 10
Facilitator encouraged participation	9.3 / 10
Confidence applying learning in practice	8.5 / 10
Content relevance to learning/developmental needs	8.8 / 10
Knowledge/ Skills gained	9.2 / 10

Qualitative Outcomes (Participant Feedback Themes)

Psychological Safety
Participants valued a safe space for open, honest discussion.

Behaviour Change
Participants reported greater confidence in inclusive practice.

Practical Relevance
Strategies were viewed as immediately usable in workplace settings.

Reflection
The workshop enabled discussion of difficult issues rarely explored openly.

4.DISCUSSION

A single-session reflective workshop can support clinicians in translating inclusion from policy into practical behaviour.

Protected facilitated dialogues appear to strengthen confidence, encourage reflection, and increase readiness to apply inclusive behaviours across clinical and educational responsibilities.

This is particularly relevant within complex healthcare systems where everyday interactions can shape belonging, wellbeing, learning, and progression.

5.CONCLUSION

Embedding structured inclusion training within faculty development and trainee education may support more inclusive workplace cultures, psychologically safer learning environments, and more equitable training experiences.

UPCOMING WORKSHOPS

Scan the QR code to visit the Learner Support & Faculty Development webpage and register for upcoming courses.

Educators & Trainers

Trainees

6.ACKNOWLEDGEMENTS

The workshop was developed and delivered in collaboration with Goss Consultancy and NHS England Workforce, Training and Education, Yorkshire and Humber Deanery.

Anatomical Variations of the Bifurcation Levels of the Common Carotid Artery and Superior Thyroid Artery

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Introduction

Atherosclerosis is a major health concern affecting millions globally and is a leading cause of complications such as stroke. The common carotid artery (CCA) bifurcation and the origin of the superior thyroid artery (STA) are crucial anatomical landmarks due to their clinical relevance in procedures such as carotid endarterectomy. Previous research has identified anatomical variations in these areas, but sex-based studies remain limited. This study aimed to observe bifurcation levels of the CCA and the STA's origin in Sudanese cadavers to improve surgical outcomes and understand variation in a clinical context.

Methods

An observational cross-sectional study was conducted in June 2021 using 32 cadavers from Khartoum medical institutions. The study included properly preserved cadavers with intact carotid structures. Measurements focused on the bifurcation levels of the CCA, the origin of the STA, and bilateral symmetry. Anatomical landmarks such as the thyroid cartilage and the hyoid bone were used for reference. Data analysis was performed with IBM SPSS Statistics, and significance was set at $P < 0.05$.

Results

Out of 64 carotid arteries examined, the CCA bifurcation most commonly occurred at the superior border of the thyroid cartilage (Table 1). The STA origin correlated with the CCA bifurcation level: high bifurcations often showed the STA branching from the bifurcation site, while lower bifurcations showed the STA originating from the external carotid artery (ECA). One cadaver presented an atypical case where the STA originated directly from the CCA. Bilateral asymmetry was noted but was not statistically significant.

Level of CCA Bifurcation	Origin of STA			p-value
	CCA, n (%)	Bifurcation of Carotid Artery, n (%)	ECA, n (%)	
Body of hyoid (n=26)	0 (0%)	12 (46.2%)*	14 (53.8%)**	.136
Superior thyroid cartilage (n=30)	1 (3.3%)	7 (23.3%)	22 (73.3%)	.203
Body of thyroid cartilage (n=8)	0 (0%)	2 (25.0%)	6 (75.0%)	.804

Table (1): Relationship between the origin of the STA and the level of the CCA bifurcation

Conclusions

This study found that the primary location of the CCA bifurcation was at the level of the superior border of the thyroid cartilage. The origin of the STA is related to the level of the CCA bifurcation; a high bifurcation level of the CCA is associated with the STA branching off from the CCA bifurcation site, while a lower CCA bifurcation is associated with the STA originating from the ECA. Anatomical high bifurcations should alert specialists to the possibility of the STA branching from the CCA bifurcation, or, as found in one cadaver, from the CCA itself.

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Detection of Anatomical Variations and Pathological Findings of Coronary Arteries Using CT Coronary Angiography (CTCA) in Sudanese Adults in a Tertiary Hospital

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Introduction

Ischemic heart disease (IHD) is a leading cause of morbidity and mortality worldwide. Traditional diagnostic methods relied on electrocardiography (ECG) and cardiac enzyme testing, with limited accuracy. With advances in imaging, ECG-gated CT coronary angiography (CTCA) has become a reliable, non-invasive tool for risk assessment and diagnosis of coronary artery disease (CAD).

Methods

A retrospective, cross-sectional study was conducted in the radiology department of Ahmed Gasim Hospital, Sudan. Data were extracted from 95 CTCA reports between January 2020 and June 2022 using a structured 14-item questionnaire. Patient demographics, calcium scores, coronary stenosis/occlusion, congenital anomalies, and anatomical variations were analysed.

Results

The mean patient age was 51 years (range: 20-87), with male patients comprising 56.8%. Most patients (63.2%) had a calcium score of zero. Among positive scores, 17.9% were <100, 13.7% were 100-500, 2.1% were 500-1000, and 3.2% were >1000. The left anterior descending artery (LAD) was the most frequently affected artery (20.0%), followed by the right coronary artery (RCA) (13.7%), and left circumflex artery (LCX) (10.5%); left main coronary artery (LMCA) showed no stenosis. Proximal severe stenosis was the predominant pattern (Table 1). Congenital anomalies were detected in six patients (6.3%), most commonly myocardial bridging. Anatomical variations were also found in five patients (5.3%), with malignant RCA origin from the left cusp being the most frequent.

Table (1): Coronary artery stenosis patterns (N = 95)
RCA: right coronary artery; LAD: left anterior descending artery; LCX: left circumflex artery; LMCA: left main coronary artery

Vessel	Normal, n (%)	Stenosis, n (%)	Predominant Pattern
RCA	82 (86.3)	13 (13.7)	Proximal severe
LAD	76 (80.0)	19 (20.0)	Proximal severe
LCX	85 (89.5)	10 (10.5)	Proximal/whole
LMCA	95 (100)	0 (0.0)	–

Conclusions

CTCA effectively identified calcium scores, stenosis, congenital anomalies, and anatomical variations in Sudanese patients. Findings highlight a predominance of proximal severe stenosis in LAD and RCA, with myocardial bridging as the most frequent congenital anomaly and malignant RCA origin as the most common variation.

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……Full references available upon request.

Audit of Congenital Hypothyroidism

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Introduction

Congenital hypothyroidism (CHT) is a condition that presents at birth resulting from an absent/underdeveloped thyroid gland or due to dyshormonogenesis. Incidence of primary CHT is between 1:3000 to 1:2000[1]. Babies with congenital hypothyroidism cannot produce enough thyroid hormone for the body's needs and this causes issues such as poor growth and neurological problems[2]. The newborn blood spot test does include congenital hypothyroidism as one of the screening tests with thyroid stimulating hormone (TSH) level cut off above 8 mU/l[3]. A follow up venous blood test will be undertaken if there is abnormality with the result[4]. 10% of all cases for primary CHT are transient[3].

Aims & Objectives

- To compare our clinical practice in diagnosing and managing CHT, with the published guidance criteria produced by the ENDO-European Reference Network.
- To look at the incidence of transient hypothyroidism in our cohort of babies with CHT.

Methods

Data collection from the local paediatric endocrine patient list with congenital hypothyroidism (provided by the Neonatal Screening Laboratory, Leeds) who were born between 2020-2025. Using Lorenzo system, retrospective and prospective data are collected with a time frame between 22-OCT-2025 to 28-JAN-2026.

Demographics

20 paediatric patients with initial diagnosis of suspected CHT.

Gender ratio 7 : 13

16 patients were born at term; 1 patient born at very-preterm (30+2); 3 patients with no recorded gestation on system.

Age range between 11 months to 5 years old.

Results

15 out of 20 patients are still currently on Levothyroxine

- 10 patients with initial high sample results.
- 4 patients with initial borderline samples and repeat high borderline results.
- 1 preterm patient with repeat high sample result at Day 28 of age.

3 patients with borderline results at both initial and repeat samples.

- 1 patient stopped Levothyroxine at 2 years 7 months age.
- 1 patient had side effects from Amiodarone received at birth.
- 1 patient did not require treatment at all.
- **They are diagnosed with transient hypothyroidism after a period of monitoring.**

Comparing our findings with 11 listed criteria from the ENDO-European Reference Network GUIDANCE[1], 90% and above results were achieved on following 7 criteria:

- An abnormal screening result should be followed by confirmatory testing consisting of measurement of serum free T4 (fT4) and TSH.
- If the serum fT4 concentration is below and TSH clearly above the age-specific reference interval, then levothyroxine treatment should be started immediately.
- If the serum TSH concentration is >20 mU/L at confirmatory testing (approximately in the second week of life), treatment should be started, even if fT4 is normal.
- An abnormal neonatal screening result should be communicated by an experienced professional.
- Levothyroxine should be administered orally once daily.
- Starting dose of levothyroxine should be up to 15 micrograms/kg/day, based on initial TSH and fT4 levels (dose range recommended 5-15 micrograms/kg/day).
- When no definitive diagnosis of permanent CHT was made in the first weeks or months of life, then re-evaluation of the HPT axis after the age of 2 to 3 years is indicated, particularly in children with a gland in situ (GIS), and in those with presumed isolated central CHT.

Discussion/Conclusion

Only 15 HUTH paediatric patients are still undergoing Levothyroxine treatment. 3 paediatric patients have a diagnosis of transient hypothyroidism. There is also a finding of abnormal TFTs suspected from side effect of Amiodarone. Based on local clinical practice, 7 criteria were achieved based on the ENDO-European Reference Network GUIDANCE.

Recommendation

- Clinicians to continue adhering to weight based starting doses of Levothyroxine
- Thyroid imaging should be done ideally within 1st 3-6 months of diagnosis (decision making regarding transient hypothyroidism)
- Follow up 1-2 weeks after commencing on Levothyroxine.

Acknowledgements

Special thanks to Dr Sanjay Gupta for mentoring the project.

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A Rare Case of Advanced Cervical Cancer in Pregnancy: Clinical Presentation, Diagnostic Challenges, and Multidisciplinary Management

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Introduction

• Cervical cancer is one of the most commonly diagnosed malignancies during pregnancy or within one year postpartum.

• Incidence ranges from 1.6–11.1 per 100,000 pregnancies, with approximately 3% of cases diagnosed during pregnancy.[1]

• Diagnosis and management are complex, requiring careful balance between maternal treatment and fetal safety.

• We report a rare case of stage IIIC cervical cancer diagnosed during pregnancy and its multidisciplinary management.

Case Presentation

A British woman in her early 30s with a BMI of 35 was referred to consultant-led care at booking. She was para 3 with two vaginal births (2015, 2020) and a C-section for FGR in 2022. She smoked 10 cigarettes daily and had asthma managed with an inhaler. Booking bloods, NT scan, and anatomy scan were all normal.

Smear:
• The patient had never undergone cervical screening.
• She missed smear appointments between 2017–2019 and subsequent screenings were deferred due to pregnancies in 2020 and 2022.
• She also did not attend the recommended postnatal cervical smear.

23+2 weeks: She presented to maternity triage with unprovoked bleeding PV. On speculum, an irregular, vascularized fibroid like growth was visualized on lower lip of cervix.

25+4 weeks, Consultant colposcopy clinic: 3x2 cm hard polypoid dense acetowhite fibroid like growth coming out of the posterior lip of cervix.

MRI scan of pelvis : cervical irregular soft tissue mass measuring 5.5 cm extending into lower endocervical canal and upper vagina with parametrial invasion with 18 mm left external iliac/ obturator lymph node; Stage 3C1

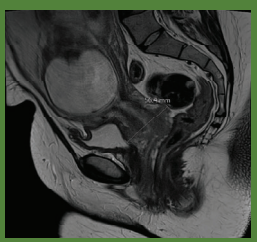

Fig 1: Cervical mass (sagittal view, MRI)

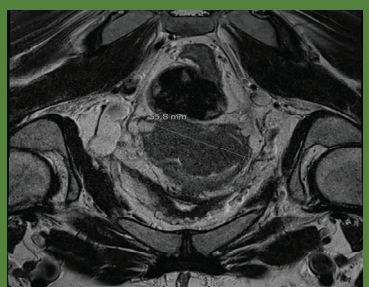

Fig 2: Cervical mass (coronal view, MRI)

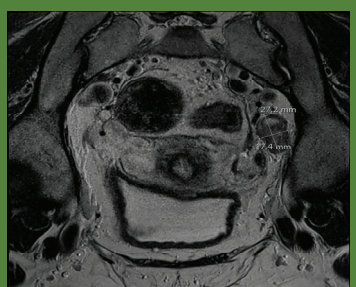

Fig 3: Left external iliac/ obturator lymph node (coronal view, MRI)

Examination Under Anesthesia and Cervical Biopsy (29+6):
- Friable cervical tumor replacing posterior lip
- Biopsy taken with diathermy loop and vaginal pack inserted

Biopsy: Moderately to poorly differentiated invasive squamous cell carcinoma
CTPA (30+1): No pulmonary embolism; No metastasis
MRI Abdomen (30+2): No metastatic disease
USS (30+1): Growth at 3rd centile, normal LV and doppler
Received antenatal steroids at 31+6 and 32 weeks
LSCS at 32+2 weeks: Uncomplicated lower segment caesarean section with tubal sterilization.

Postnatal: Clinical Oncology, plan:
- ❑Neoadjuvant chemotherapy with Paclitaxel/ Carboplatin weekly for 6 weeks
- ❑Radical chemoradiotherapy (50.4 Gy in 28 fractions)
- ❑Vault Brachytherapy (21 Gy in 3 fractions)
- ❑MRI (3 months post-brachytherapy): Excellent treatment response with resolution of cervical mass and reduction of left obturator lymph node.

Discussion

• Most cervical cancers diagnosed during pregnancy are early stage, with only 26% presenting as stage II–IV, compared with 52% in non-pregnant women.
• Pregnancy-related symptoms may mask malignancy, contributing to delayed diagnosis.
• A multicentre study reported diagnosis most commonly following vaginal bleeding (85.7%), with fewer detected by physical examination (7.6%) or abnormal screening (6.7%).[2]
• In our case, vaginal bleeding at triage prompted examination and diagnosis.
• Management is individualised, depending on cancer stage, gestational age, and maternal wishes.
• For advanced disease, neoadjuvant chemotherapy after 14 weeks is recommended with a 3-week interval before caesarean section.[3]
• In this case, the short interval before delivery precluded antenatal chemotherapy, so treatment was initiated postnatally

Learning Points

- This case highlights the complexities of managing advanced cervical cancer diagnosed during pregnancy involving **multidisciplinary teams**
- Tailored approach **balancing maternal prognosis with fetal considerations**
- Importance of **routine cervical screening**
- **Speculum examination** by experience clinician in pregnant women with bleeding, as pregnancy may mask critical symptoms.

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Project Title: Improving the quality of teaching the management of an acutely unwell patient for year 4 medical students on their child health block.

Dr Alexander Flach and Dr Anvarjon Seviour
Clinical Teaching Fellows

NHS Humber Health Partnership

Problem: HYMS 4th year medical students in the Child Health block only learn how to complete an ABCDE (airway, breathing, circulation, disability, exposure) assessment of acutely unwell children in theory and practice on patients on the wards. It is often inappropriate to take students to acutely unwell children, so students often only get to practice on children who are well, which means their learning is impacted.

Aim: To improve the experience and confidence of year 4 medical students in the Child Health block on training on the ABCDE assessment in children by the end of the academic year 2024/2025 (31/07/2025).

Changes

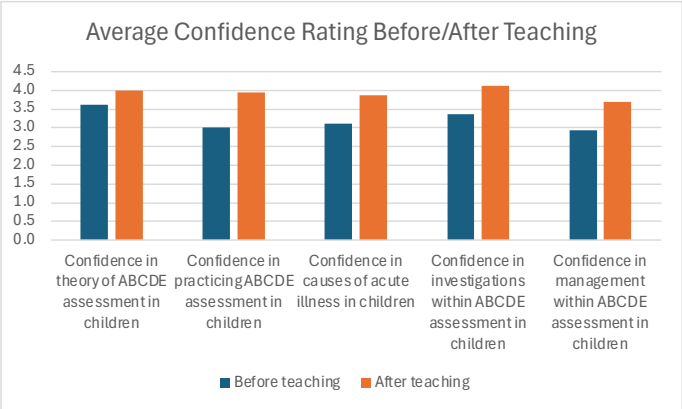
A new simulation teaching session was implemented in the child health block, using the Body Interact Digital Table. This is currently used in teaching adult ABCDE assessment in other blocks, however we were able to acquire four scenarios involving a paediatric patient. This session was added on top of existing theory-based teaching on the ABCDE assessment and practice on a real patient, but the idea was to show an example of what assessing an acutely unwell patient may be like, and for the students to experience clinical signs in an unwell patient.

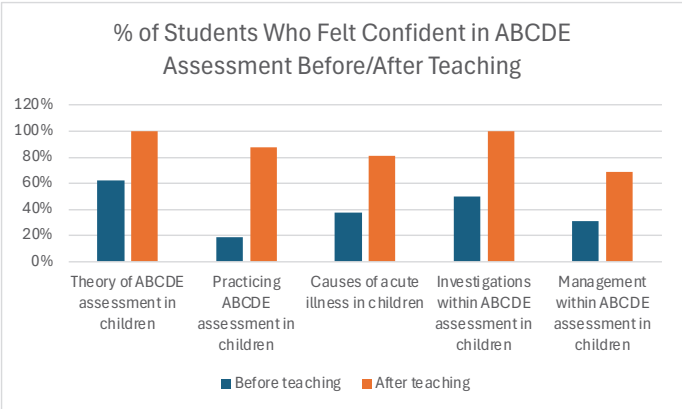
Measurement

Baseline data was collected via student surveys, which showed students felt they lacked confidence in applying the theory of ABCDE assessment in children to practice. They suggested simulation training may help with improving their confidence.

Post-implementation data was collected via student surveys, assessing confidence pre-and post-intervention, as well as satisfaction post-teaching session.

Data





Key data points:

- 94% of students found the teaching useful.
- Teaching improved average confidence rating before and after teaching in all five learning objectives; theory of ABCDE assessment in children, practicing ABCDE assessment in children, causes of acute illness in children, investigation within ABCDE assessment in children, and management within ABCDE assessment in children.
- The greatest increase in average confidence rating was in practicing ABCDE assessment in children.
- Narrative data showed that students particularly liked being able to see clinical signs on the simulated patient, which is often difficult to see in real patients. One student said, “it helps simulate the stressful environment without putting patients at risk”. Several students commented on the interactive nature of the Digital Table which they felt engaged them well.

Next Steps

Narrative data showed that students overall found this a useful addition to their learning, and it helped improve their confidence in ABCDE assessment in children. Two students suggested high fidelity mannequin-based simulation as an additional tool to help improve their learning. We have met with the trust’s simulation director and will be working on this for the next academic year. A few students commented on how the system uses American medication names and data units. We have changed these where possible and contacted the manufacturer to discuss changing this for the rest.

This teaching session will continue in the next academic year and be rolled out to all students doing their Year 4 Child Health block in Hull. Ongoing feedback will be collected to continually improve the session.

Biologic Therapy for Severe Asthma in Elderly Care Home Residents: A Case Series

Arif Manji, Helena Cummings, Charolette Riches, Sakshi Malik, Sean Ta Yi Xian and Shoaib Faruqi
Hull University Teaching Hospital, Respiratory Department

Background

Severe asthma in older adults is associated with increased morbidity, mortality, exacerbation burden, and healthcare utilisation. The use of biologic therapy in elderly patients, particularly those with frailty or living in care homes, remains underreported.

Older adults may also have additional factors influencing asthma management such as multimorbidity, polypharmacy, cognitive or functional impairment. This population is often excluded from clinical trials, meaning evidence to guide treatment decisions is limited.

Aim

To describe the real-world use of biologic therapy in elderly care home residents with severe asthma and evaluate its impact on asthma-related hospital admissions.

Methods

To describe the real-world use of biologic therapy in elderly care home residents with severe asthma and evaluate its impact on asthma-related hospital admissions.

Data collected included age, relevant comorbidities, biologic therapy used, duration of biologic treatment, asthma-related hospital admissions before and after biologic initiation, corticosteroid requirement, evidence of type 2 airway inflammation where documented

Discussion

This case series demonstrates that biologic therapy may be feasible and clinically beneficial in selected elderly care home residents with severe asthma. Despite advanced age, frailty, and comorbidities, all patients experienced a reduction in hospital admissions following biologic therapy.

Asthma related hospital admissions in elderly patients can lead to deconditioning, delirium, functional decline, and reduced quality of life. Biologic therapy also reduced maintenance oral corticosteroid exposure where documented, which is relevant given the risks of long-term steroid use in older patients.

These cases support an individualised, biomarker-guided approach to biologic therapy in elderly patients with severe asthma. Advanced age or care home residence should not automatically exclude patients from treatment, although larger studies are needed to confirm safety, effectiveness, and patient selection.

Treatment decisions in this population remains complex should consider frailty, multimorbidity, adherence, care home support, corticosteroid burden, and patient-centred goals of care.

Results

Table 1: Baseline Demographic and clinical characteristics

Case	Age	Sex	Residence	Asthma severity / phenotype	Relevant comorbidities	Baseline exacerbation burden
1	87	M	Care Home	Severe corticosteroid-dependent asthma	Type 2 diabetes mellitus; ischaemic heart disease; hypertension; previous perforated peptic ulcer, Dementia	4 asthma related hospital admission
2	91	M	Care Home	Severe Asthma	Hypertension; hypercholesterolaemia, Dementia	4 asthma related hospital admissions, 6 community asthma exacerbations
3	83	F	Care Home	Severe asthma with type 2 airway inflammation; corticosteroid-dependent	Hypertension; hypothyroidism, Dementia, TIA	4 asthma-related hospital admissions; FeNO 156 ppb; mean ACQ 3.29

Table 2. Maintenance oral steroid use and hospital admissions before and after biologic therapy

Case	Age	Biologic therapy	Maintenance steroid pre-biologic	Maintenance steroid post-biologic	Hospital admissions pre-biologic	Hospital admissions post-biologic
1	87	Mepolizumab	Prednisolone 7.5mg-10mg once daily	Nil	4	0
2	91	Mepolizumab/Benralizumab	N/A	N/A	4	0*
3	83	Mepolizumab	Prednisolone 10 mg once daily	Nil	4	0

*Case 2 continued to have asthma related admissions (3) while on mepolizumab after 12 months, switched to benralizumab had no further hospital admissions.

Safety and Limitations

No significant safety concerns were identified during follow-up in this small cohort.

This supports the potential tolerability of anti-IL-5 biologic therapy in selected elderly patients, although larger studies are required to confirm long-term safety in frail populations.

This study has several limitations:
- Small sample size
- Retrospective design
- Single-centre experience
- Limited generalisability
- Biomarker data were not consistently available
- Functional outcomes and quality-of-life measures were not systematically collected

Conclusion

Biologic therapy was associated with a sustained reduction in asthma-related hospital admissions in elderly care home residents with severe asthma.

These findings suggest that biologic therapy, particularly anti-IL-5 treatment, may be a safe and effective option in carefully selected elderly patients with severe asthma and type 2 airway inflammation.

Further research is required to define treatment-responsive phenotypes, safety, and long-term outcomes in this underrepresented population.

Key Take away

Biologic therapy may reduce hospital admissions and corticosteroid burden in carefully selected elderly care home residents with severe asthma, but larger studies are needed to guide treatment decisions in this frail and underrepresented population.

Concurrent Biologic and Targeted Immunomodulatory Therapy in Severe Asthma with Comorbid Inflammatory or Malignant Disease: A Case Series

Arif Manji, Helena Cummings, Charolette Riches, Sakshi Malik, Sean Ta Yi Xian and Shoaib Faruqi
Hull University Teaching Hospital, Respiratory Department

Background

Biologic therapies have transformed the management of severe asthma and immune-mediated inflammatory diseases. However, some patients have multiple conditions requiring biologic or targeted immunomodulatory treatment at the same time.

Key concerns include potential drug interactions, additive immunosuppression, and increased risk of serious or opportunistic infections.

Aim

To describe the clinical outcomes and safety of concurrent asthma biologic therapy with a second biologic or targeted immunomodulatory treatment in patients with severe asthma and complex comorbid inflammatory or malignant disease.

Methods

We present a retrospective case series of patients receiving combination biologic therapy for severe asthma and a second immune-mediated condition. Demographic, diagnoses, biologic agents used, duration of combination therapy, asthma control, and serious adverse events were collected.

Discussion

This case series suggests that concurrent asthma biologic therapy with another biologic or targeted immunomodulatory treatment may be feasible in carefully selected patients with complex comorbid disease.

The observed improvements in asthma control, exacerbation frequency, corticosteroid exposure, and inflammatory biomarkers support the potential clinical benefit of maintaining asthma biologic therapy when another biologic or targeted treatment is required.

A key consideration is that these therapies targeted different inflammatory or disease pathways, which may reduce the theoretical risk of overlapping immunosuppression compared with combining drugs that act on the same pathway. Decisions should be individualized and made through multidisciplinary discussion.

Safety Outcomes

No serious infections, opportunistic infections, treatment-limiting adverse events were recorded during concurrent therapy or death attributable to concurrent biologic or Immunotherapy.

One patient receiving nivolumab for metastatic melanoma developed a grade 3 psoriasiform immune-related rash. This resolved with systemic corticosteroids and was clinically attributed to checkpoint inhibitor therapy rather than asthma biologic treatment. No therapy was discontinued because of safety concerns.

Clinical Implications

Concurrent biologic or targeted therapy may be considered when:
There is a clear indication for both treatments
Asthma remains severe or uncontrolled without biologic therapy
Comorbid inflammatory or malignant disease requires specialist treatment
Alternative steroid-sparing options are limited or poorly tolerated
Close monitoring is available
Multidisciplinary discussion

Results

Table 1: Summary of Clinical Cases

Age	Gender	Diagnosis	Biologic medication	Months on combination therapy	Serious adverse events	Asthma Control
63	F	Bronchial asthma EGPA IBD (Chron's)	Infliximab Mepolizumab	4 months	Nil	Good
77	F	RA Asthma	Abatacept/Adalimumab/Tocilizumab* Mepolizumab	96 months	Nil	Good
72	F	RA Asthma	Etanercept Mepolizumab	20 months	Nil	Good
57	F	Breast cancer Asthma	Densomab Omalizumab	38 months	Nil	Good
64	F	Malignant Melanoma Asthma	Nivolumab Benralizumab	14 months	Nil	Good

*Prior Biologic use

Table 2: Summary of Asthma Control

Case number	Follow-up (months)	ACQ6 (pre/post)	Exacerbation frequency (pre / post)	Maintenance OCS (pre/post)	FEV1% (pre / post)	FENO (pre/post)	Eosinophil count
1	4	1.66/0.83	10/0	10/0	63%/97%	69/33	3.82/0.13
2	96	2.4/0.8	10/0	5/0	69%/75%	53/33	0.47/0.0
3	20	0.5/0	3/0	0/0	90%/95%	98/30	2.47/0.10
4	38	2.8/1.33	6/2	0/0	65%/68%	10/18	0.27/0.01
5	14	3.3/1	5/0	0/0	44%/-	47/-	0.49/0.0

Conclusion

In this five-patient retrospective case series, concurrent asthma biologic therapy with biologic or targeted immunomodulatory treatment for comorbid inflammatory or malignant disease was feasible and was not associated with treatment-limiting serious infection.

Asthma control improved in all patients, with reductions in exacerbation frequency and oral corticosteroid exposure. These findings are consistent with emerging real-world evidence, but larger prospective studies and registry data are needed to better define long-term safety, efficacy, and appropriate patient selection.

Key Take Away

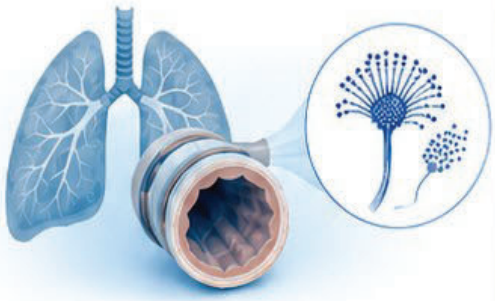
Concurrent biologic or targeted immunomodulatory therapy may be a feasible option for selected patients with severe asthma and complex comorbid disease, provided treatment is individualized, multidisciplinary, and closely monitored.

Clinical outcomes and management challenges treating complex allergic bronchopulmonary aspergillosis and severe asthma with biologic agents: a case series

Arif Manji, Helena Cummings, Charolette Riches, Sakshi Malik, Sean Ta Yi Xian and Shoaib Faruqi
Hull University Teaching Hospital, Respiratory Department

1) INTRODUCTION

- Allergic bronchopulmonary aspergillosis (ABPA) in patients with asthma is associated with recurrent exacerbations and/or need for maintenance oral corticosteroids.
- Biologic therapies may offer a steroid-sparing role and potential long-term disease modification.
- Current evidence remains limited.



2) METHODS

- Retrospective case series of patients with severe asthma and concomitant ABPA managed with biologic therapies.
- Collected variables: demographic data, biologic agent, treatment duration, oral corticosteroid use, asthma control, radiologic evolution, and ABPA biomarkers.

3) RESULTS

5 patients

Age range: 46–67 years

Benralizumab: n = 3

Tezepelumab: n = 2

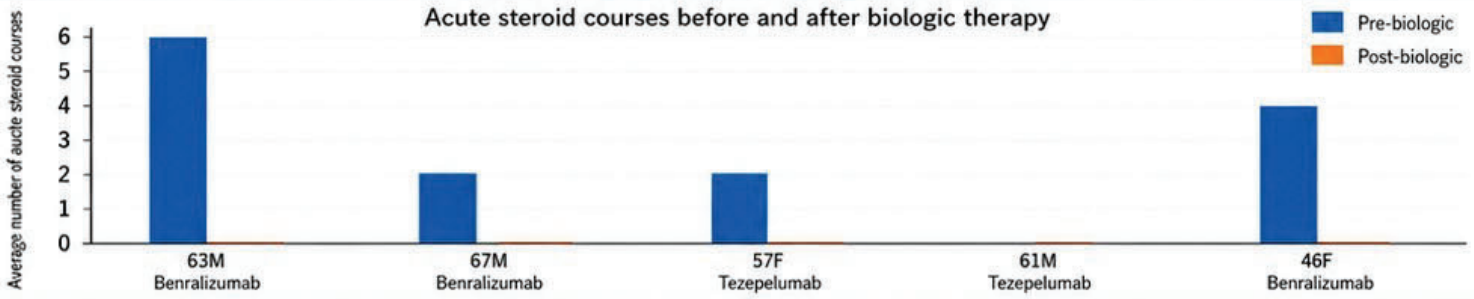
- One patient received tezepelumab following an inadequate response to benralizumab.
- All patients showed symptomatic improvement in asthma control.
- All patients exhibited reduced corticosteroid exposure.
- Radiologic responses were heterogeneous.
- One patient developed a new ABPA lesion despite better asthma control, remained on prednisolone 7.5 mg, and progressed to anti-fungal therapy.

4) CASE SUMMARY TABLE

Table 1. Summary of clinical cases

Age (years)	Gender	Biologic medication	Months on biologic	Change in maintenance prednisolone	Average number of acute steroid courses (pre/post)	Summary of clinical progression
63	M	Benralizumab	33	5 mg ↓	6/0	Marked improvement
67	M	Benralizumab	15	nil	2/0	Progressed to anti-fungal therapy
57	F	Tezepelumab	14	5 mg ↓	2/0	Marked improvement
61	M	Tezepelumab	7	5 mg ↓	0/0	Minimal response to benralizumab; improvement on Tezepelumab
46	F	Benralizumab	12	nil	4/0	Complete resolution of ABPA

5) ACUTE STEROID COURSES BEFORE AND AFTER BIOLOGIC THERAPY



6) CONCLUSION

Biologics improved asthma control in severe asthma with ABPA, though responses varied. Optimal biologic choice and long-term impact remain unclear, warranting larger prospective and randomized studies.

7) TAKE-HOME MESSAGE

Biologic therapy appears to reduce corticosteroid burden and improve symptoms in complex ABPA with severe asthma, but radiologic response is variable and treatment should be individualized.

Routine Preoperative Coagulation Screening at Hull University Teaching Hospitals (HUTH) – An Audit

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1 Hull University Teaching Hospitals NHS trust
2 Hull University Teaching Hospitals Haematology Laboratory

Haematology & Surgery

INTRODUCTION

NICE and BSH guidelines recommended that coagulation screen is only indicated for patients with chronic liver disease (CLD) and considerable risk of coagulopathy, and vitamin K deficiency before intermediate and major surgery [1,2]. Patients on anticoagulation should either have their anticoagulant omitted few hours to days before surgery or administration of reversal agents if applicable in very urgent situations [1,2]. The cost of a coagulation screen is £7.69. Coagulation screens are currently performed at HUTH for any type of surgery and minor procedures such as central line removal.

AIM

A) Audit current preoperative bleeding risk assessment practice against NICE and the British Society for Haematology (BSH) guidelines.

B) Improve compliance with evidence-based practice to strengthen preoperative bleeding risk assessment, reduce avoidable healthcare expenditure, and prevent patient harm.

C) Reduce unnecessary testing that leads to avoidable costs and potential harm, including inappropriate blood product transfusion and/or coagulation factor replacement.

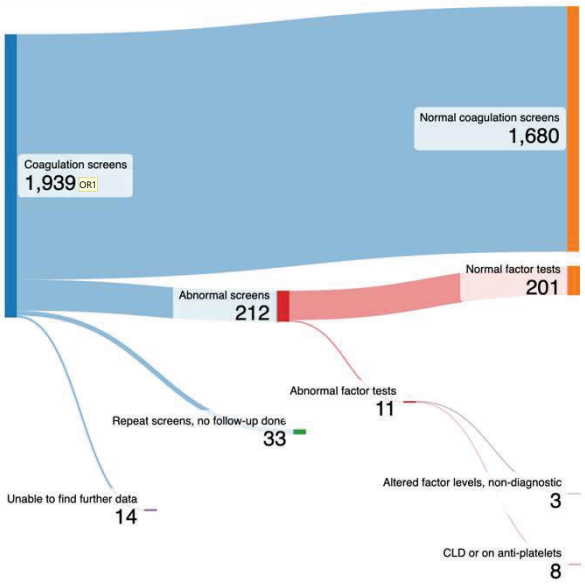
METHOD

A retrospective analysis of patients who underwent a procedure/surgery from July 2024 to July 2025 at Hull University Teaching Hospitals Trust and had a coagulation screen done using both haematology laboratory data and Lorenzo. We also reviewed the number of patients who had further tests, such as factor assay.

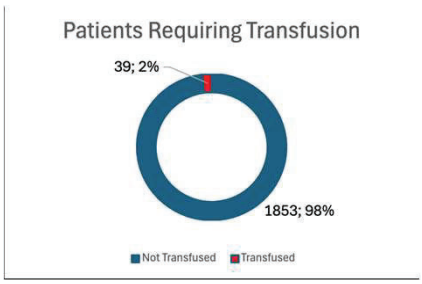
RESULTS

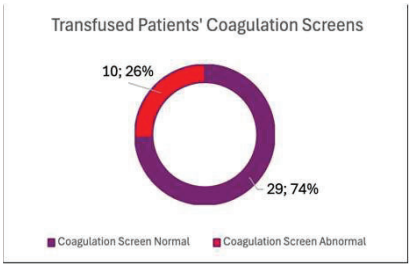
A total of 1939 patients were identified, with 33 patients undergoing repeat coagulation screening. 14 patients had coagulation screens performed but were unavailable to be found on the IT system. 212 patients had abnormal coagulation screen results and underwent factor assay tests. Of 212 patients, only 11 had abnormal results. Of these 11 patients, 3 showed mildly reduced factor levels (FVIII and FXI) which were insufficient to support diagnosis of haemophilia, while the remaining patients either have CLD or were on anticoagulants or antiplatetet agents.

Only 39 patients of 1939 required perioperative blood product transfusion, with 10 patients having abnormal coagulation screens, but none of these patients had low coagulation factor levels.



A breakdown of coagulation screen results, none of these patients were diagnosed with a new bleeding disorder.





Of patients that had coagulation tests done, 39 had significant perioperative bleeding, defined here as over or equal to 500ml blood loss that required transfusion post- operatively and 1853 did not (Top chart). Of the 39 patients that required transfusions only 10 had any abnormalities on their coagulation screen (bottom chart).

CONCLUSIONS

This audit demonstrates the overuse of coagulation screening preoperatively contrary to NICE and BSH guidelines, resulting in unnecessary factor assay investigations, surgical delays or cancellations, and avoidable financial burden for the NHS. An alternative to coagulation screens, as recommended by the BSH is the HEMSTOP questionnaire, which would improve patient flow, reduce costs and minimise harm from unnecessary investigations.

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ACKNOWLEDGEMENT

HUTH Haematology Laboratory

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Hull University Teaching Hospitals NHS Trust

An audit of the quality of Referapatient referrals to the Thoracic team at Castle Hill Hospital.

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1. ST3 Cardiothoracic Surgery
2. Consultant Thoracic Surgeon
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Background

- In the department for Cardiothoracic Surgery at Castle Hill Hospital, we receive over 100 referrals a month to Thoracic Surgery from HUTH, Scarborough, Scunthorpe, Grimsby and York Hospitals.
- These are received through the Referapatient online platform where referrers can write the details of the patient and the specific question for the Thoracic team.
- The GMC have outlined guidance in Good Medical Practice that referrals should contain key clinical information for the continued care of the patient (1).
- We conducted an audit on the quality of referrals to our tertiary service.

Method

- 50 referrals on the Referapatient platform were examined from 04/10/2025 to the 16/10/2025
- Referrals underwent a content analysis and were examined for the following information
  - History
  - Past Medical History
  - Drug History
  - Social History
  - Observations
  - Examination
  - Imaging report (if an external hospital).
- Standard was set at 100% compliance for all of these domains.

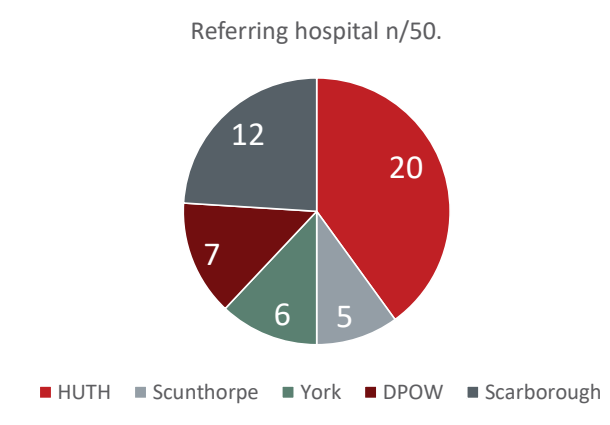
Results

- The average age of the patients referred was 69 years old with a range of 43-91 years.
- No domain except History fulfilled the set standard, though even History was of varying quality.

	History	PMH	DHx	SHx	Observations	Examination
Compliance	100%	34%	10%	14%	14%	28%
Notes	Range of length between 1 word and a full paragraph	20% full PMH. 14% ≥1 comorbidity	1 referral included full drugs list. 4 referrals mentioned anti-coagulation / antiplatelet medication	12% mentioned at least some social history. 2 referrals included a detailed social history (ages of patients 66 and 81 respectively).	14% included a full set of observations. 38% mentioned at least one observation (RR, O2, HR, BP, Temp) Of those with no observations 6 were Emergency.	28% included a detailed examination. 48% included at least one examination finding.

Discussion

- The quality of referrals sent to the Thoracic surgery service contain very minimal amounts of relevant clinical information.
- This can lead to delays in care and lead to a prolonged back and forth between referrers and our speciality.
- Thoracic surgery is a subspeciality of a tertiary speciality in which many healthcare professionals will not have any background or training.
- There is a need for education about the important elements relevant to thoracic surgery.
- A way to do this is to make the proforma for the referrals more proscriptive.
- This serves the dual purpose of ensuring key clinical information is inputted as well as providing education on what is deemed relevant by our subspeciality.



Improving the Quality and Completion of Stroke Clerking Documentation

Meryem Nursoy[a], Ali Tahir[a], Hnin Mon[a]
Institution: [a]*Hull University Teaching Hospitals NHS Trust, Hull Royal Infirmary, Stroke Medicine*

Introduction

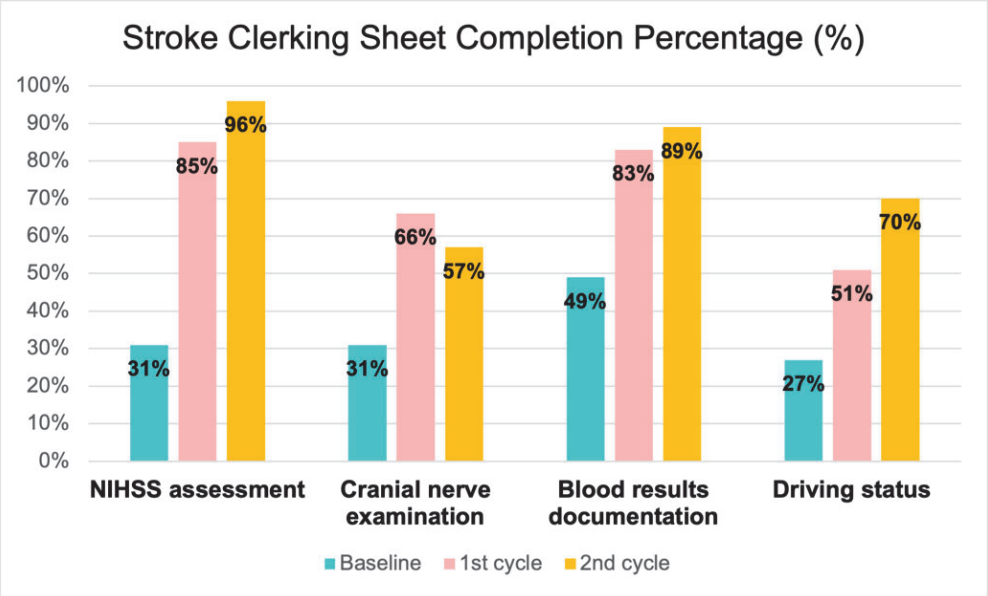
The stroke clerking proforma is a structured clinical document aimed at recording stroke-focused assessment, including the National Institute of Health Stroke Scale (NIHSS). It supports decisions on reperfusion treatment and secondary prophylaxis medications, identifies deterioration from the initial stroke or its treatment, and considers medico-legal perspectives. However, the documentation is not always completed. This project aimed to improve the quality of stroke clerking documentation to at least 70% of clerking sheets.

Methods

Baseline data were retrospectively collected from uploaded scanned clerking sheets for admissions in October 2024, and post-intervention data were collected in October 2025. The Plan-Do-Study-Act (PDSA) methodology was used. Interventions included developing a short video demonstrating how to complete the proforma and perform the NIHSS assessment. The QR code linking to the video was emailed to all resident doctors covering the stroke unit, in and out of hours. Departmental teaching sessions were conducted.

Results

The following results were obtained from review of clerking documentation for 53 patients at baseline, 49 in the first cycle, and 46 in the second cycle (Figure 1).



Discussion/Conclusion

The predefined 70% target was achieved across different elements of the proforma, including NIHSS assessment, blood results, and driving status documentation, except for cranial nerve examination. The challenges encountered during this project were maintaining sustainability, distributing resources among trainees, and communicating with a large audience. We overcame these barriers with mentorship, further interventions, and teamwork. Root cause analysis revealed that the lack of compliance with completion was due to limited familiarity with the NIHSS scoring system, which is not part of the medical school curriculum. In addition, there was a perception that completion of the clerking proforma duplicated routine admission documentation, driven by elements of normalcy bias. The educational video has now been uploaded to the health toolbox app; therefore, all resident doctors can access it. This will be included in the departmental induction to sustain good practice.

	Pre intervention	Post intervention
NIHSS assessment	31%	96%
Cranial nerve examination	31%	57%
Blood results documentation	49%	89%
Driving status	27%	70%

Acknowledgements

We acknowledge the support of the Quality Improvement team at Hull University Teaching Hospitals NHS Trust.

References

(1)Kwah LK, Diong J (2014) National Institutes of Health Stroke Scale (NIHSS). Journal of Physiotherapy 60:61. https://doi.org/10.1016/j.jphys.2013.12.012

Introducing a trust-wide standardised, pre-filled, naloxone infusion order on EPMA.

Produced by Matthew Curran (1), Sebastian Spencer (1) and Alan Webb (1)

1. Hull University NHS Foundation Trust, Hull, United Kingdom

Problem

1. Naloxone infusions are high risk medications[1]. Under correction can cause respiratory arrest and death[2] Overcorrection can cause agitation, acute withdrawal and tachycardia[2]
2. A significant proportion of Naloxone infusions were incorrectly prescribed creating significant risk to patient.
3. The current method for prescribing, manually creating an infusion, is difficult for prescribers and introduces the chance of error.

Data collection

Between September 2024 and September 2025, we analysed 68 Naloxone infusion prescriptions. Following our change in September 2025 we analysed 16 infusions between September 2025 and January 2026.

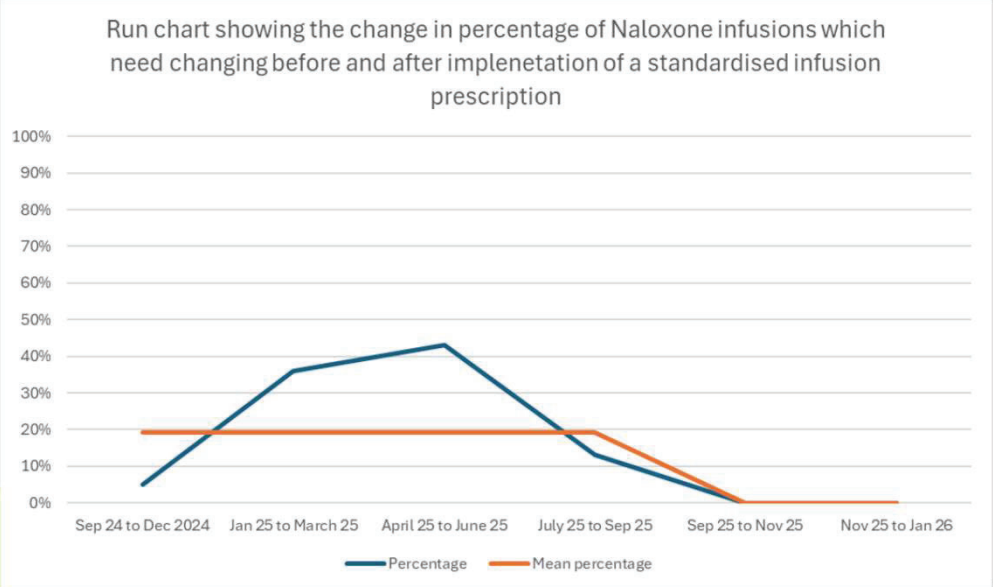
We collected data on the date of the Naloxone infusion, the infusion fluid, the added drug (naloxone), the infusion concentration, the infusion rate, any additional comments by the prescriber, the route and whether the prescription was correct.
We collected the same data both pre and post change implementation.

Changes

After consultation with the EPMA lead pharmacist and nurse prescribers, we created, using the trusts online prescribing system, a standardised template for naloxone infusions. This included a standard fluid (sodium chloride 0.9%) and a standard concentration (4mg/40ml) so the prescriber only has to calculate the infusion rate based on the doses of Naloxone boluses needed to wake to patient. This infusion was readily available when searching to prescribe “naloxone” on the system.

Findings

Before the introduction of a standardised Naloxone infusion 19% of Naloxone infusions were incorrectly prescribed. Post the introduction of the standardised infusion 0% of prescriptions were incorrectly prescribed.



Discussion / Implications

Multidisciplinary working allowed this project to progress rapidly within complex healthcare systems safely.

This project, except for staff time cost nothing, making similar projects highly attractive to trusts.

The integration of the order set into the existing EPMA means changes are long lasting and easy to audit in the future.

We advocate for a formal reporting structure to highlight high risk medications. These could be highlighted through suggestions/audit.

References

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2. Gonzalez Utrilla M, Chesney E, Neale J, et al. Naloxone dosing in the era of synthetic opioids: Applying the Goldilocks principle. Addiction. 2025;120(11):2165-2172. doi:10.1111/add.70060

REDUCING THE RISK OF VENOUS THROMBOEMBOLISM IN GENERAL SURGERY. A 2-YEAR AUDIT & QUALITY IMPROVEMENT PROGRAM

Authors: Val Revill, ACP & Joanne Norfolk, ACP

BACKGROUND & RATIONALE

- Hospital acquired venous thromboembolism (HA-VTE) causes approximately **25,000 UK deaths annually**. Sudden death is the first presentation for 25% of these cases.
- It is the **leading cause of hospital-associated death**, and it is estimated that **50–66% of cases are avoidable** ; VVAPPG 2024).
- **Missed inpatient prophylaxis doses** contribute significantly to preventable harm and are present in **20% of HA-VTE events** (GIRFT 2022).

THE PROBLEM

Our audits identified high rates **of missed prophylaxis doses**, incomplete risk assessments, minimal pre-discharge VTE reassessment and **higher VTE incidence in emergency cases.**

THE AIM

To improve the accuracy, completeness, and timeliness of VTE risk assessment and prophylaxis delivery across general and colorectal surgery, and to strengthen discharge safety through a structured 2-year audit and QIP

METHODOLOGY

Two retrospective audits (n = 770) of post-operative patients, split equally between elective and emergency cases.

Domains assessed (NICE NG89 & GIRFT):

Completion and timing of VTE risk assessments

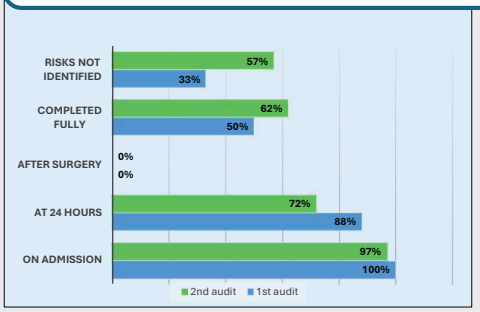
Accuracy and appropriateness of pharmacological & mechanical prophylaxis

Documentation quality and reassessment processes

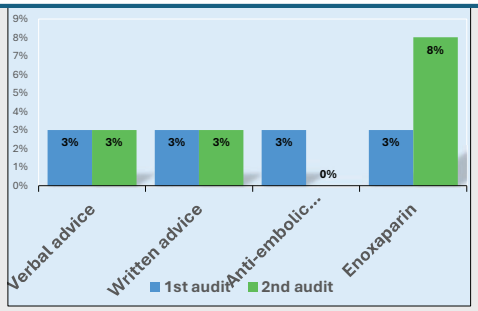
System enablers and barriers affecting compliance

AUDIT RESULTS

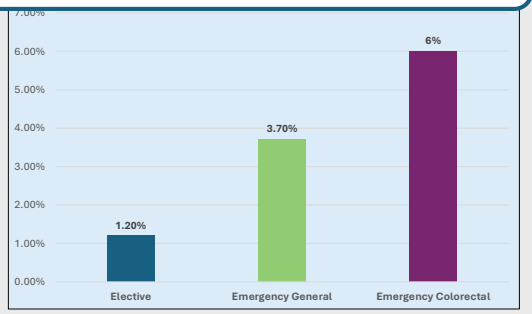
Risk Assessment



Emergencies on discharge



HA-VTE incidence



QUALITY IMPROVEMENT

Education

Training delivered to 120 nurses and resident doctors

Ongoing induction training for all new doctors

Standardisation

Standard EDS statement approved*

Flow diagrams for specific cohorts approved at Governance*

Posters and HUB resources created*

System Improvements

Focus on reducing missed doses and emergency presentations

Strengthening reassessment at 24 hours and pre-discharge

Improved documentation pathways

WHAT WE LEARNED

"Missed doses (47%), incomplete assessments, and minimal pre-discharge risk assessment" were significant concerns

Key Insights

In a team with rapid staff rotation, education alone is insufficient without system prompts.

Standardised discharge processes reduce variation in practice.

Emergency pathways require targeted support

Visual tools (flow diagrams) improved clinician confidence and compliance

Embedding standardised tools and continuous training supports sustained improvement.

There is more work to do!

*Follow the QR code to view the governance approved documents

All Party Parliamentary Group on Vascular & Venous Disease (2024) Tackling Venous Thromboembolism: Preventing the Preventable. Accessed on-line: VVAPPG-Tackling-Venous-Thromboembolism-Preventing-the-Preventable.pdf

NICE (2018) Recommendations | Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism | Guidance | NICE

Thrombosis UK (2021). TUK-GIRFT-REPORT.pdf Accessed on-line January 2026

Use of Low-Dose, High-Frequency Simulation to Improve Emergency Department Response to Paramedic Pre-Alerts

Introduction and Aims

In our Trust, data from DATIX and multiple structured case reviews have highlighted a variety of errors within the pre-alert process.
We used a low-dose, high-frequency model of in situ simulation to identify themes in the errors being made and provide immediate, personalised feedback to candidates to improve the overall effectiveness of the Emergency Department's response to paramedic pre-alert calls.
The low-dose, high-frequency simulation approach has been shown to be effective in improving performance of specific tasks, while causing minimal disruption to the working day.

We focused on adult and pediatric trauma cases as this is where the majority of errors had occurred.
We aimed to document the common errors being made during pre-alert call then after tailored debriefs, reassess candidates to show improvement in the pre-alert process.

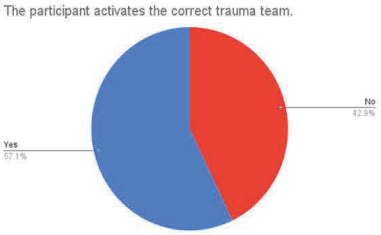
Method

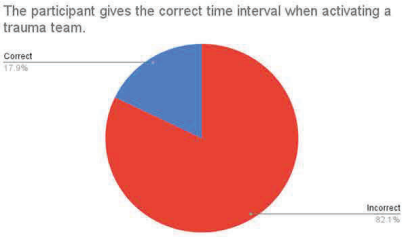
The low-dose, high-frequency simulation approach has been shown to be effective in improving performance of specific tasks, while causing minimal disruption to the working day. Candidates used the Trust pro-forma to document information and then took appropriate action based on the details.
Subsequently the candidates were debriefed and given personalized feedback. The simulations were performed regularly to cover most of the staff that answered pre-alerts within their role and were repeated with the same candidates to monitor for improvements.

Data was collected on the accuracy of information documented by staff as well as the actions taken based on the pre-alert. We also gather feedback from before and after each session on participants confidence in different aspects of the pre-alert process.

Results

There were two common errors found that were specific to trauma pre-alert calls: incorrect trauma team activation and incorrect ETA for trauma team arrival, both measured against Trust guidelines.
Of the 30 unique participants, 42.9% activated the incorrect trauma team and 82.1% gave the incorrect ETA for the trauma team . Based on the conversations in the post-simulation debriefs, the main reason for this was lack of knowledge of the guidelines and what each trauma call entails. This was the main focus point for most of the debrief sessions. The feedback gained before and after debrief sessions showed significant improvement in confidence around pre-alerts and trauma team activation. Pre-session only 30.0% of candidates were confident about activating the appropriate trauma team compared to 90.0% post-session and there was an increase from 30.0% to 86.7% in overall confidence in the pre-alert process.

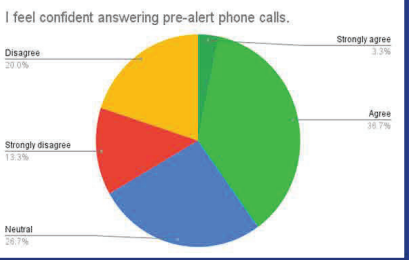


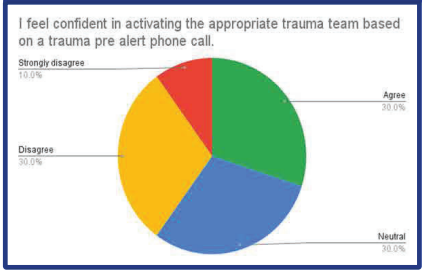


Feedback

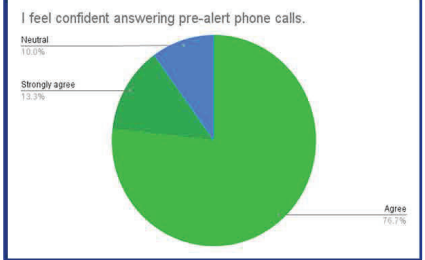
Feedback from participants was very complimentary. The nature of the simulations allowed them to be very close to real pre-alert phone calls with very few resources. The high fidelity of the simulations was mentioned often in and was seemingly a big factor in the educational value of the sessions. Participants also found the debrief sessions useful in removing uncertainty around the differing trauma team's components, attendees and indications.
Negative feedback varied but was themed around the nature of In-Situ Simulations. Busy Emergency Departments are noisy and distracting and as candidates were participating during their shift meaning its was difficult for them to focus on the simulation and debrief. This also effected enrolment in the simulations as it was not always practical for staff to leave their post for the time it took to perform the session.

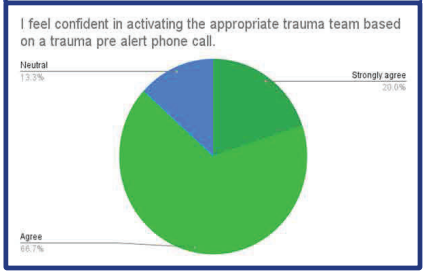
Pre-Session





Post-Session





AMBULANCE PRE-ALERT– TRAUMA AGE 16+

CODE RED TRAUMA CALL

- ☐ Administration of Prehospital Blood Products
- ☐ Prehospital Doctor/ Critical Care Team Request
- ☐ Traumatic Cardiac Arrest
- ☐ Heart Rate > Systolic BP (e.g HR 120, SBP 80)
- ☐ Sustained Systolic BP less than 90
- ☐ Trauma Team Leader Decision

HOSPITAL TRAUMA CALL

DERANGED VITAL SIGNS

- ☐ GCS 13 or less
- ☐ RR less than 10 or greater than 29

INJURY TYPE

- ☐ Penetrating trauma to torso/neck/axilla/groin
- ☐ Chest injury with altered physiology
- ☐ Traumatic Amputation
- ☐ Open/depressed skull fracture
- ☐ Pelvic fracture
- ☐ Spinal trauma with abnormal neurology
- ☐ Trauma with facial/circumferential burns
- ☐ Burns > 20% BSA
- ☐ Significant haemorrhage
- ☐ **ALL transfers from Trauma Units**

ED TRAUMA CALL

CONCERNING MECHANISM

- ☐ **Fall down/ found at bottom of stairs**
- ☐ **Age > 65 and injury to two body regions**
  E.g. head and torso
- ☐ Trapped in vehicle
- ☐ Death in same compartment
- ☐ Vehicle rollover
- ☐ Ejection from vehicle
- ☐ Bullseye windscreen
- ☐ Pedestrian or cyclist versus vehicle
- ☐ Significant fall (> 2 metres)
- ☐ Clinical suspicion/ other major mechanism

CALL 2222 to activate Trauma Teams

- ☐ **CODE RED CALL**– Immediately > ACTION CARD
- ☐ **HOSPITAL TRAUMA CALL**– 10 mins before ETA
- ☐ ED TRAUMA CALL– 5 mins before ETA

AMBULANCE CALL SIGN:

DATE: **TIME:**

AGE: **SEX:**

MECHANISM:

INJURIES:

SIGNS:		O_2 Sats			% on
HR		GCS	E		=
BP			V		
RR			M		

TREATMENT:

- ☐ Intubated
- ☐ Spinal Immobilisation
- ☐ Pelvic Binder
- ☐ TXA
- ☐ **BLOOD >> CODE RED**

ETA: :

Activation Time :

Person Taking Call

Name:

Signature:

THIS MUST BE FILED AND SCANNED INTO THE NOTES

Trauma Activation Tool v10 Review 01/10/2026

Conclusions

In conclusion, with strong positive feedback and strong evidence base, in-situ pre-alert simulations using a low-dose, high-frequency format is a promising method for reducing errors and increasing overall staff confidence in the pre-alert process, with subjective data showing a large improvement over all aspects of the pre-alert process.
Looking to the future, in-situ simulations such as these shows potential in ongoing education in the Emergency Department. However improvements could be made to ensure better enrolment into sessions and allow participants to get the best out of each session, such as protected time during shifts for these activities and dedicated areas in which to perform them.

Robotic Assisted Hysterectomy in a teaching hospital over last ten years: Trends, Outcomes, and Service Evolution

Hull University Teaching Hospitals NHS Trust

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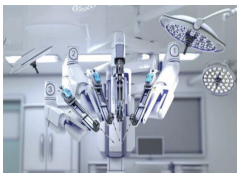


Introduction

Robotic-assisted hysterectomy is increasingly utilised in gynaecological practice, particularly in patients with obesity, significant medical comorbidities, and oncological indications. Compared with conventional laparoscopy or laparotomy, robotic surgery offers potential advantages including reduced blood loss, shorter hospital stay, and faster postoperative recovery.

The robotic hysterectomy service at Castle Hill Hospital was established in 2016. This study evaluates perioperative outcomes and longitudinal trends in operative efficiency over a 10-year period within a high-risk, complex patient cohort.

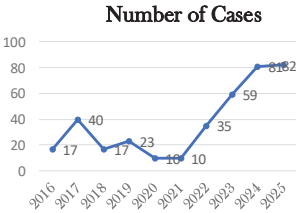
Aim & Objectives

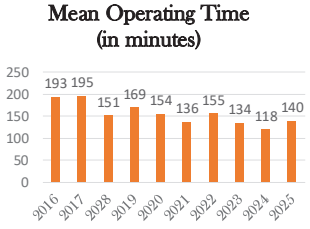
- Assess safety and outcomes of robotic-assisted hysterectomy (2016–2025)
- Review case volume trends and patient risk profile
- Evaluate key perioperative outcomes (operative time, blood loss, conversion rate, length of stay, complications)

Methodology

Retrospective audit of all robotic hysterectomies performed between 2016–2025 at a teaching hospital, using theatre logbooks and electronic records, analysed with descriptive statistics.

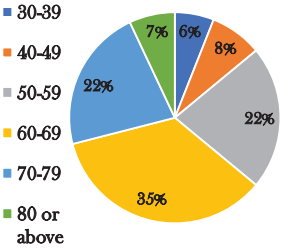
Results





Year wise analysis of case volume and mean operative times

- Retrospective review of 374 robotic hysterectomies (2016–2025)
- Progressive increase in annual case volume
- Mean operative time reduced from 193–195 minutes (2016–17) to 118 minutes (2024), demonstrating sustained improvement over time. A slight rise in 2025 likely reflects increasing case complexity; however, the overall trend shows a significant reduction in operative duration across the study period.



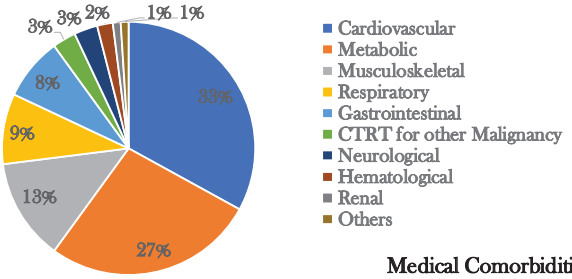
Age and BMI Distribution

BMI	Number of women	Percentage distribution
<30	70	18.72%
30-39.9	137	36.63%
40- 40.9	108	28.88%
≥50	59	15.77%

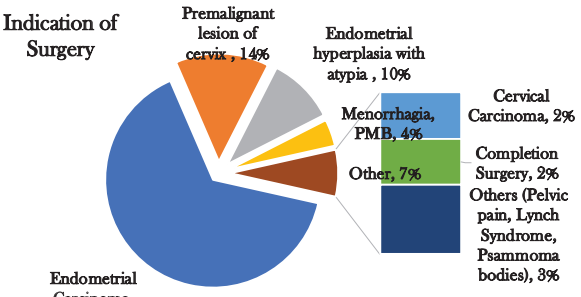
Previous Abdominal Surgery	Number	Percentage
Previous laparoscopy for upper abdominal pathology	42	26.42%
Previous laparoscopy for lower abdominal/ pelvic pathology	29	18.24%
Previous laparotomy including CS	88	55.34%

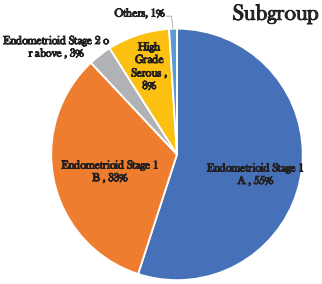
Patient Profile:

- Most common age group: 60-69 years
- 45% had BMI ≥40
- More than three fourth (76.7%) women had at least one medical comorbidity, of whom 93% (267/287) had multiple comorbidities.
- Cardiovascular disease most common
- 88 women had previous laparotomies



Medical Comorbidities

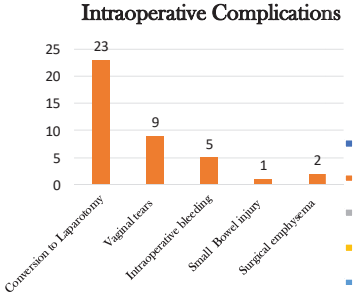


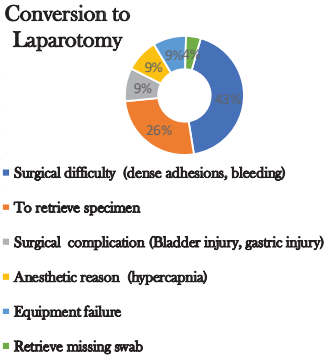


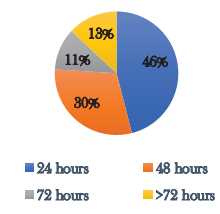
Endometrial Carcinoma: Subgroup analysis

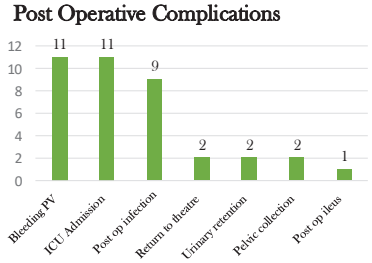
- Most common indication (60%): Endometrial carcinoma
- Followed by:
  - •Premalignant cervical lesions
  - •Atypical endometrial hyperplasia
- Out of Endometrial Carcinoma, Endometrioid subtype most common
- Stage IA predominant

The most common additional procedure was bilateral pelvic lymph node sampling (84 cases), followed by adhesiolysis (67 cases). Other procedures included colposcopy (29 cases), omentectomy (22 cases), omental biopsy (11 cases), cystoscopy with insertion of ureteric stents (5 cases), and appendectomy (4 cases).









Conclusion

Robotic hysterectomy is safe and effective in complex, high-risk population. Low complication and conversion rates, short hospital stays, and improved operative efficiency reflect increasing service maturity, reduced resource use, and potential cost-effectiveness.

A case report on a 70 year old female with an Actinomycosis tubo-ovarian abscess

By Dr Cottrell ST4 Obs and gynae; Dr Shonhiwa Fy2; Dr Ike FY1; Mrs Sivakumar Obs and gynae consultant.

Case Summary

70F presented with 7/10 right sided abdominal pain, green vaginal discharge, anorexia and lethargy which had started 2 weeks previously. The pain was crampy, intermittent, with no radiation. She had no fever, no nausea or vomiting and no vaginal bleeding. She was opening her bowels as normal and urinating as normal. She was not on any regular medications and had no allergies.

Past medical history of a cervical polyp excision 25 years previously and her smear tests programme was complete with all normal smears. She had been post-menopausal for 25 years. She had one regular long-term partner and no history of previous sexually transmitted infections.

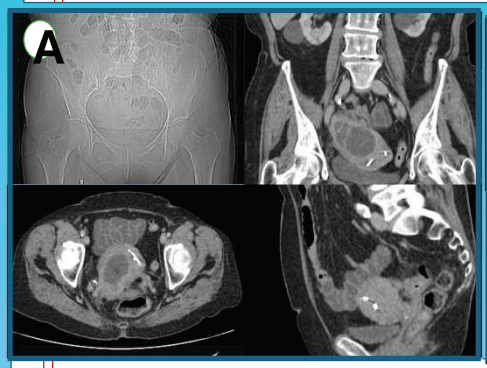
She had had a Mirena coil in situ for over 20 years.

Initial examination
Observations normal.
Abdomen soft, nontender.
vaginal speculum showed no abnormalities, coil threads seen protruding from her cervix.

Bloods
WCC - 19.8
ALP - 209
Amylase - 29
CRP – 152
CA125 - 38

A) CT scan:
"R adnexal cystic mass potentially right fallopian tube. ?tubo-ovarian abscess."

B) Trans vaginal USS:
"Fluid and echogenic material seen within the endometrial cavity. Cystic mass from right adnexa. Mirena coil not in correct position ?perforation.
Conclusion: *TOA extending into endometrial cavity secondary to perforated coil."*



Immediate management
She started on an IV antibiotics:
- Ceftriaxone 2g IV one dose
- Doxycycline 100mg BD
- Metronidazole 500mg IV BD

Her coil was removed and sent for microbiology. After 24 hours of IV antibiotics she was discharged with PO antibiotics -100mg BD Doxycycline and 400mg BD metronidazole.

Follow up
An MRI was booked as an outpatient, plus the plan made for a hysteroscopy to reassess her endometrial cavity. She did not attend these as she was claustrophobic. Her microbiology results showed:
- HVS - anaerobes
- Her **coil had grown anaerobes and actinomyces.**

Microbiology recommended Amoxycillin 1g QDS for 2 months and a review in the infectious diseases clinic

3 months after her initial presentation she had completed the course of antibiotics. Her blood tests showed resolution of her ongoing infection. A repeat CT AP scan showed: *"Significantly improved right tubal ovarian abscess with only small residual cystic component left."*
She was discharged from further follow up and remains well.

Pathophysiology

Definition of tuboovarian abscess (TOA): A mass involving the ovary or tube which is inflammatory in nature and involving pus. Normally as a consequence of pelvic inflammatory disease (PID), often from ascending infection and purulent material discharging from the fallopian tubes into the pelvic cavity[1].

PID can be caused by ascending infection from sexually transmitted infections or vaginal flora or secondary to appendicitis, diverticulitis or pyelonephritis. 12 – 35% of patients with PID will also be diagnosed with a TOA [1].

Risk factors for TOA:
- Reproductive-age
- Having an IUD or IUS in situ
- Previous PID
- Early age of first intercourse
- Immunocompromised
- Having multiple sexual partners.

Signs / symptoms of TOA:
Abdominal pain
Abnormal PV discharge
Adnexal pain + cervical excitation
Pyrexia, tachycardia
High WCC / CRP
Positive vaginal swab results
Palpable adnexal mass

TOA is a serious and potentially life-threatening condition and can result in sepsis with a mortality rate of 5-10%[1].

Microbiology
30–40% of cases PID is polymicrobial[1]. Common organisms include:
Chlamydia trachomatis
Neisseria gonorrhoeae
Escherichia coli
Bacteroides Anaerobe
Actinomyces
Pelvic tuberculosis

Imaging
A TOA on ultrasound often appears as a solid or cystic mass mass. A pyosalpinx is seen as a mass which is long, dilated and fluid-filled. On CT a TOA appears as a fluid filled mass in the pelvis often with thick walls and internal septations.

Management

If septic the 'sepsis six' protocol should be followed. If a ruptured abscess is suspected surgery might be needed. If the patient is clinically well and the abscess is small (<7cm) then initial treatment can be with IV antibiotics and delayed / avoided surgery[1].

Surgical methods depend on the case and can include laparoscopy or laparotomy, pelvic washout, incision and drainage, salpingectomy. Long term consequences of TOA can include[1]:
- Infertility (pregnancy rates range from 32 – 63%)[1]
- Increased ectopic pregnancy risk
- Chronic pelvic pain
- Pelvic adhesions

Conclusions

This patient presented with a TOA most likely from long term intra-uterine contraceptive use and possible recent uterine perforation from the device. It reminds us that it is important to think of PID and TOA as a differential whenever someone with female reproductive organs presents with signs or symptoms of PID, even if they do not fit the classical presentation.

It highlights that we should offer to remove intrauterine contraception from patients when it is no longer needed, as they are a potential locus for infection and perforation. The risk of PID from them is low – around 1%. [2] However Actinomycosis is associated with long term use and the FRSH recommends removal of devices when no longer needed[3].

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3) FSRH Guideline Intrauterine Contraception. *The faculty of sexual and reproductive health*. March 2023.

Streamlining the Management of Non-Cauda Equina Syndrome MRI Findings in the Emergency Department of a District General Hospital

H Sekhon[1], A Michie[1], E Hutchinson[1], H Tan[1]

1 Emergency Department, Diana Princess of Wales Hospital, Grimsby, Northern Lincolnshire and Goole NHS Foundation Trust

NHS Humber Health Partnership

1. Background

- In ED, patients with positive spinal MRI findings are routinely discussed with the regional neurosurgical centre to identify cases of CES, requiring urgent intervention.
- However, few scans confirm CES, leading to two main problems:
  1. Treatment delays
  2. Unnecessary referrals.

2. Aim

- To identify the most common non-CES MRI findings and develop a standardised, streamlined pathway for their management in our ED.

3. Method and design

- Included all spinal MRIs requested by ED from June to October 2025
- Collected data on:
  - Patient demographics
  - MRI reports (categorised as in figure 1 below)
  - Neurosurgical referral outcome

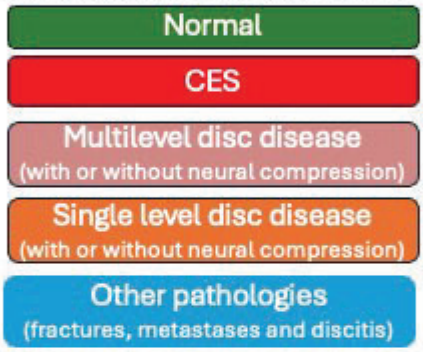

Figure 1 – A flowchart to show the categories of spinal MRI findings.

4. Results

- In total, of the 223 patients included:
  - 43% (96/223) were male and,
  - 57% (127/223) were female.
- Median age – 60.9 years (IQR 42.5 – 71.9 (range 23.0-97.0)

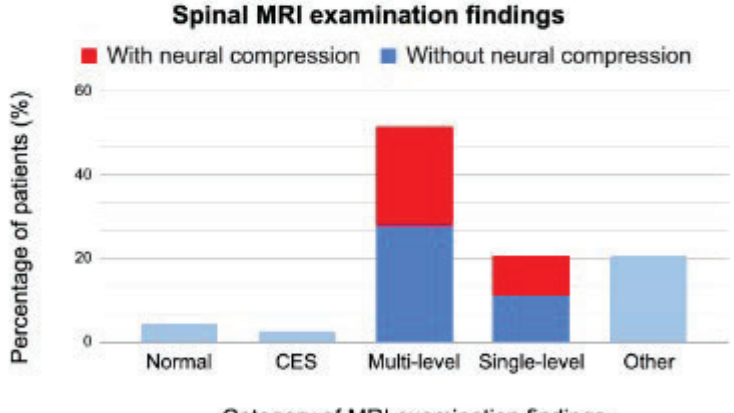

Figure 2 – A stacked chart to show the percentage of patients with each of type of MRI spinal examination category.

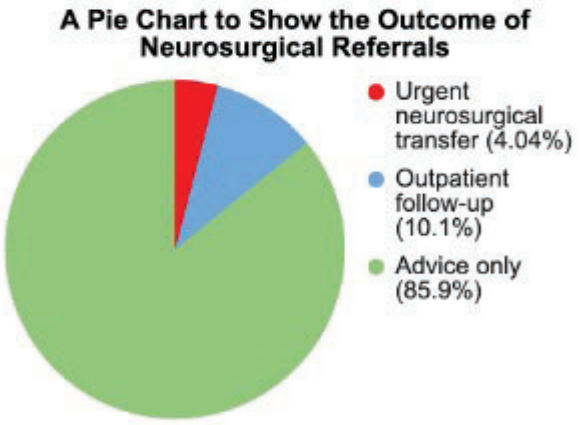

Figure 3 – A pie chart to show the percentage of patients managed by each type of neurosurgical referral outcome.

Median time for **initial** response
31 minutes
(IQR 10-70 (range 1-295))

Median time for **final** outcome
152 minutes
(IQR 31-989 (range 4-324.7))

5. Conclusion

Over 98% of patients managed without admission → Supports the development of a locally agreed, evidence-based pathway – co-designed with radiology and neurosurgery → This will help:
1. Optimise patient flow
2. Reduce unnecessary referrals
3. Enhance the efficiency of spinal imaging utilisation

Thematic Analysis of Qualitative Student Feedback

Dr Patrick Martin MBBS BSc (Hons) PGCert FHEA

Hull University Teaching Hospitals NHS Trust

NHS Humber Health Partnership

Introduction

Free-text student feedback can offer rich insight into educational experience and direct improvements, yet institutions often prioritise quantitative metrics over qualitative analysis. This can be driven by justifiable concerns over resource utilisation in analysing data or by perceptions of quantitative data as more specific and therefore actionable. These concerns can be further compounded as the utility of narrative feedback depends not only on content but on its specificity, which may be lacking. However, as institutions set the parameters in quantitative feedback, this may restrict the scope to solely the institution's priorities and partially exclude the primary stakeholders in improving education experience, the students themselves. Reflexive thematic analysis may help address these concerns. This study undertook thematic analysis of four years of medical student comments, specifically those responding to a question asking for suggested improvements to their clinical placement, to identify and quantify dominant and underrepresented themes, and to examine the structural quality of feedback itself.

Objectives

- To identify dominant and repeated themes in student feedback that may drive systemic improvements in clinical placement organisation and delivery
- To identify under-represented issues that may not be readily prioritised with traditional feedback reviews
- To assess the quality of feedback provided by students and assess the need for student education in providing feedback
- To trial the use of thematic analysis to quantify shifts in student concerns and perceptions over time for the purpose of measuring outcomes future of interventions

Methods

376 free-text responses from undergraduate medical students on full-time clinical placement were analysed using a reflexive thematic approach informed by Braun and Clarke's six-phase framework. Comments were categorised within a four-level hierarchical structure, progressing from broad domains to narrower subthemes.

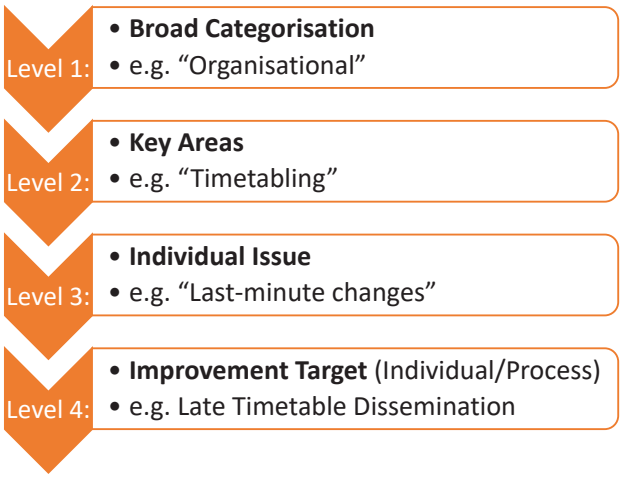

Fig. 1: Illustration of each categorisation level used for the feedback comments.

Results

Most comments focused on Learning Opportunities (n=161) and Organisational factors (n=135). Within Organisational themes, timetabling accounted for 84% (n=114), particularly last-minute changes and delayed release. Within Learning Opportunities, clinical teaching dominated (n=139), suggesting that variability in experiential learning, rather than classroom teaching, drives student evaluation. In contrast, pastoral concerns (n=23) and structural equity issues (e.g., transport, financial burden, navigation) were less frequently reported.

Only 22% of comments specified the relevant specialty or placement, limiting block-level actionability, while 9% were uncategorisable due to low specificity.

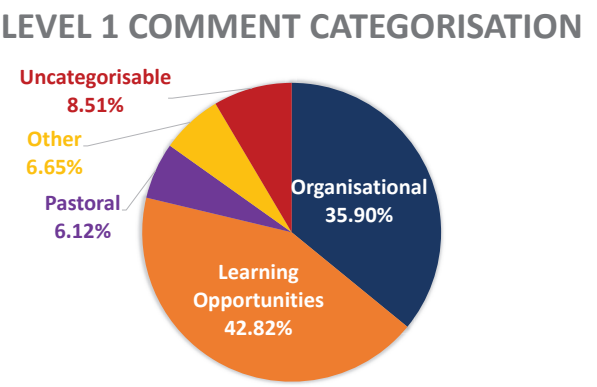

Fig. 2: Pie chart illustrating proportions of comments by category.

Discussion

Student dissatisfaction appears driven more by perceived structural instability and inconsistent clinical learning opportunities than by teaching quality, suggesting that improving administrative processes could significantly enhance satisfaction. However, low contextual specificity limits the ability to implement targeted improvements. Strengthening institutional reliability, timetabling, and feedback literacy, alongside more structured prompting, may improve both educational stability and the usefulness of feedback. Systematic thematic analysis thus highlights not only student concerns, but also the need to redesign feedback systems themselves.

Recommendations

1. Optimise timetabling and placement coordination to minimise student dissatisfaction
2. Develop student feedback literacy to enhance the value and actionability of responses
3. Use the extracted quantitative data to guide and evaluate improvement projects

References

Mohsen Tavakol & John Sandars (2014) Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part II, Medical Teacher, 36:10, 838-848

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. Sage.

Acknowledgements

Raw survey data was kindly provided by Dr Robert Desborough and originally collected by Hull York Medical School.

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Reducing cost through smarter prescribing:
Implementing Kidzmed to improve tablet uptake in children

Dr R Jhamba, Dr S Gupta

Hull University Teaching Hospital

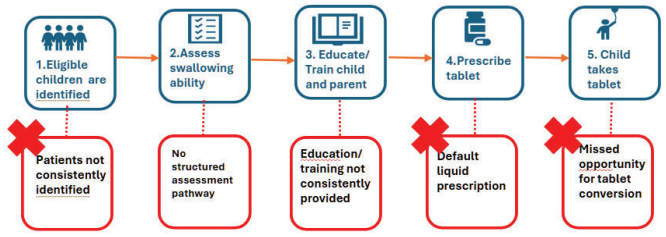
BACKGROUND

Liquid medications are often prescribed in paediatrics despite higher costs and increased complexity compared to tablet formulations.

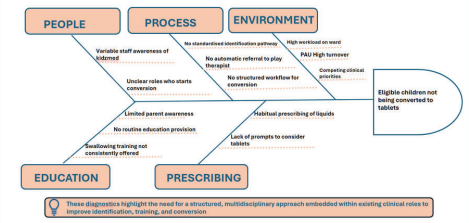
Previous Kidzmed cycles proved that children can be safely transitioned to tablets and no safety concerns.

However, uptake remained inconsistent and embedded into routine clinical workflow.

PROCESS MAP



FISHBONE DIAGRAM



AIM and MEASUREMENT DEFINITION

AIM

Increase the proportion of eligible children (>5years) converted from liquid to tablet formulations to 25% by 31st August 2026

OUTCOME MEASURE

- Percentage of eligible children (5yrs) converted to tablets)

PROCESS MEASURE

- Percentage of eligible children assessed for swallowing ability
- Percentage of children or parents receiving education about tablets

BALANCING MEASURE

- Adverse events related to tablet medications
- Refusal or intolerance to tablets

These measures will help us to understand if our changes are leading to improvement while ensuring safety and acceptability

CHANGE IDEAS

Phase 2 focussed on REINFORCING and EMBEDDING previously successful interventions into routine clinical practice

1.STAFF PROMPTS AND AWARENESS

AIM: Improve identification of eligible children

- Regular reminders at handover
- Reinforcement during daily clinical discussions

Improves staff awareness and supports early identification

2.PARENT AND PATIENT EDUCATION

AIM: Improve acceptance and engagement

- Fliers distributed to parents on the ward
- Ongoing education by play specialists

Empowers families and supports acceptance of tablet formulations

3.MULTIDISCIPLINARY ENGAGEMENT

AIM: Improve consistency of practice

- Meetings with specialist nurses to reinforce kidzmed process
- Teamwide responsibility for identifying and converting eligible children

Builds ownership across the team and encourages consistent practice

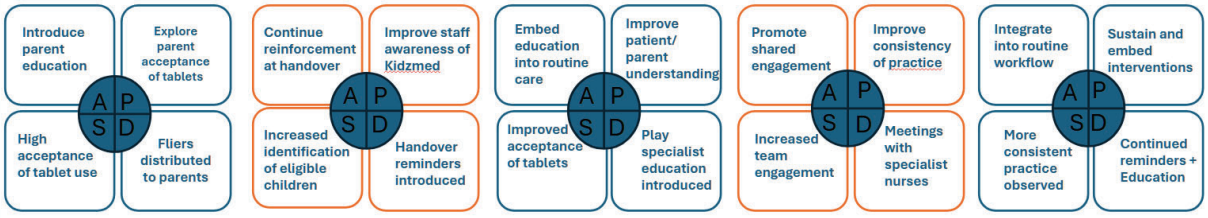
4. ONGOING REINFORCEMENT

AIM: Sustain change and embed into routine.

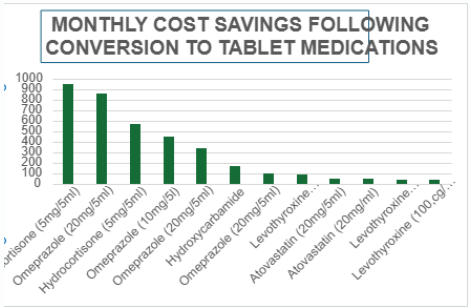
- Continued reinforcement by key messages.
- Embedding Kidzmed into routine workflows.

Supports sustainability and reliance on individual staff

PDSA Cycles



Results



Medication	Cost Before (£)	Cost after (£)	Saving(£)
Hydrocortisone	1516.74	2.55	1514.19
Omeprazole	1818	52.47	1765.53
Hydroxycarbamide	180	8.5	171.5
Levothyroxine	180	0.82	179.18
Atovastatin	98	0.58	97.42
Co-trimoxazole	19.92	0.7	19.22
Itraconazole	27.58	9.14	18.44
Aciclovir	6.6	1.71	4.89
Phenoxymethylpenicillin	4.8	2.6	2.2
Ondansetron	2	0.85	1.15
Total			**3773.72**

CONCLUSION AND LEARNING

Kidzmed can be safely implemented in routine practic e leading to significant costs savings.
Simple measures such as staff prompts and patient education help improve uptake

Learning points

- Many children can safely take tablets
- Idenrification and awareness are key barriers
- Reinforcement and MDT involvement sdustain change

Future work

- Expansion to NLAG and SGH to scale and sustain improvemnet

Acknowledgements:

To Dr Sadia Ishad, Paula Tran and Maisie Beedle (Pharmacists), Specialist nurses, Hannah and Gina (Play

From Contraception to Clot: Extensive Upper Limb Venous Thrombosis in a 15-Year-Old

Authors: Dr Srishti Jain, Dr Millie Warsop, Dr Remy Toko (supervisor)

BACKGROUND

Venous thromboembolism (VTE) in children is rare, with an estimated incidence of 0.07–0.14 per 10,000 children annually[1]. Upper extremity deep vein thromboses (UEDVT) account for approximately 10% of all DVT cases and are most commonly secondary to central venous catheterisation[2,3]. Combined hormonal contraception is an established risk factor for VTE however progesterone only contraception (POC) is considered low risk[4,5,6]. We present a case of extensive UEDVT in an adolescent following recent initiation of desogestrel (a POC).

CASE PRESENTATION

A 15 year-old female presented with 1 day history of left upper arm swelling. Examination revealed superficial venous distention and mild swelling of the left upper limb without erythema or pain. Initially she was discharged with safety-netting, however she re-presented later the same day to A&E with new left-sided neck pain. When re-assessed, there was progressive venous prominence of the left anterior chest wall and neck and a palpable swelling in the left supraclavicular region. She was admitted to the paediatric ward for further investigations.

Background:

- Previously fit & well
- Commenced on desogestrel 75micrograms OD 1 month prior for birth control purposes
- No personal or family history of thromboembolism or hereditary thrombophilia
- Recent heavy upper limb resistance training at the gym
- No recent central venous catheter, surgery, trauma, prolonged travel or systemic illness

Figure 1: Left arm swelling, superficial venous distention (Obtained with consent)

INVESTIGATIONS

- **Chest radiograph:** Normal
- **Duplex ultrasonography:** Acute thrombosis of the left basilic vein extending proximally into the axillary vein and left subclavian vein causing near-complete luminal occlusion

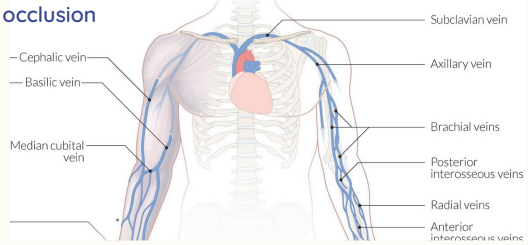


Figure 2: Upper Limb Venous System (Source: MBF Bioscience, n.d)[12]

MANAGEMENT

Treatment was discussed and agreed with the local tertiary paediatric haematology team and involved:

1. Intravenous unfractionated heparin (UFH) loading dose & infusion
2. Transition to therapeutic low molecular weight heparin (LMWH) - enoxaparin
3. Transition to tinzaparin with anti-FXa monitoring,
4. Transition to a direct oral anticoagulant (DOAC) - rivaroxaban 20mg OD for 6 months

Clinical improvement in swelling was observed within 48-72hrs of therapeutic anticoagulation. A repeat duplex ultrasound was scheduled for 3 months time. The patient was discharged on rivaroxaban after undergoing anticoagulation counselling.

DISCUSSION

This case is likely of multifactorial aetiology. In the absence of one clear provoking factor, a yet unidentified inherited thrombophilia could be present especially in a paediatric patient[1,3]. Recent initiation of desogestrel could have also contributed, although current research reveals no significantly increased VTE risk with POC[4,5,6]. This suggests its role in this case is possibly minimal but cannot be entirely excluded. A potential contributing factor is effort induced thrombosis (Paget–Schrötter syndrome) particularly as up to 80% of patients with primary UEDVT report preceding strenuous upper limb activity[7]. This is in keeping with our patient's history.

Management of paediatric VTE is guided by extrapolation from adult data[8,9]. The Einstein-Jr trial demonstrated the safety and efficacy of rivaroxaban for VTE treatment in children aged 0-18 following initial parental anticoagulation as well as reduced rates of VTE recurrence[10,11]. The management in this case therefore, corresponds to the current evidence-based practice.

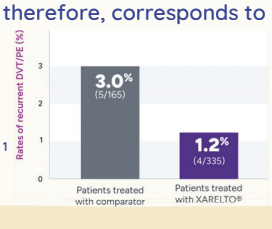


Figure 3. Rates of recurrence of VTE in Xarelto (rivaroxaban) vs comparator (Source: XARELTO® (rivaroxaban) healthcare professional website, n.d.)[13]

CONCLUSION

- UEDVT should be considered in adolescents presenting with unilateral upper limb swelling and superficial venous distention
- POC is lower risk than COCP but does not eliminate VTE risk
- Effort-related thrombosis should be considered in physically active adolescents
- Early therapeutic anticoagulation is critical to prevent pulmonary embolism and post-thrombotic syndrome.
- DOACs are now evidence-supported options in paediatric VTE management

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12. MBF Bioscience. Left upper limb venous system image [Internet]. Available from: https://media-us.mbscf.com/media/thumbs/big_.5cb4a7bbcc19d.jpg [Accessed 2026 Apr 23].
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Awareness of Emergency Equipment and Drug Locations Among Anaesthetic Medical Staff

Yew Wen Chieng[1] ,Benjamin Sykes[1]
[1] Hull University Teaching Hospitals NHS Trust

NHS Hull University Teaching Hospitals NHS Trust

Background

Rapid access to emergency equipment and drugs is essential for the safe management of anaesthetic emergencies. Delays in locating critical items can result in significant patient harm. The main theatre complex is a high-pressure environment with frequent staff rotation, which may affect staff familiarity with equipment locations. This audit assesses anaesthetic medical staff awareness to identify potential patient safety risks.

Methodology

A prospective audit was conducted in the main theatre complex at Hull Royal Infrimary to assess anaesthetic medical staff awareness of the location of key emergency equipment and emergency drugs. Anaesthetic medical staff of all grades working within the theatre complex were invited to participate. Data were collected using a structured, anonymized electronic questionnaire which was accessed via smartphone. Responses were scored using a predefined system, with one point awarded for a correct response, half a point for a partially correct response, and zero points for an incorrect response. Data were collected over 2 weeks period and analysed descriptively.

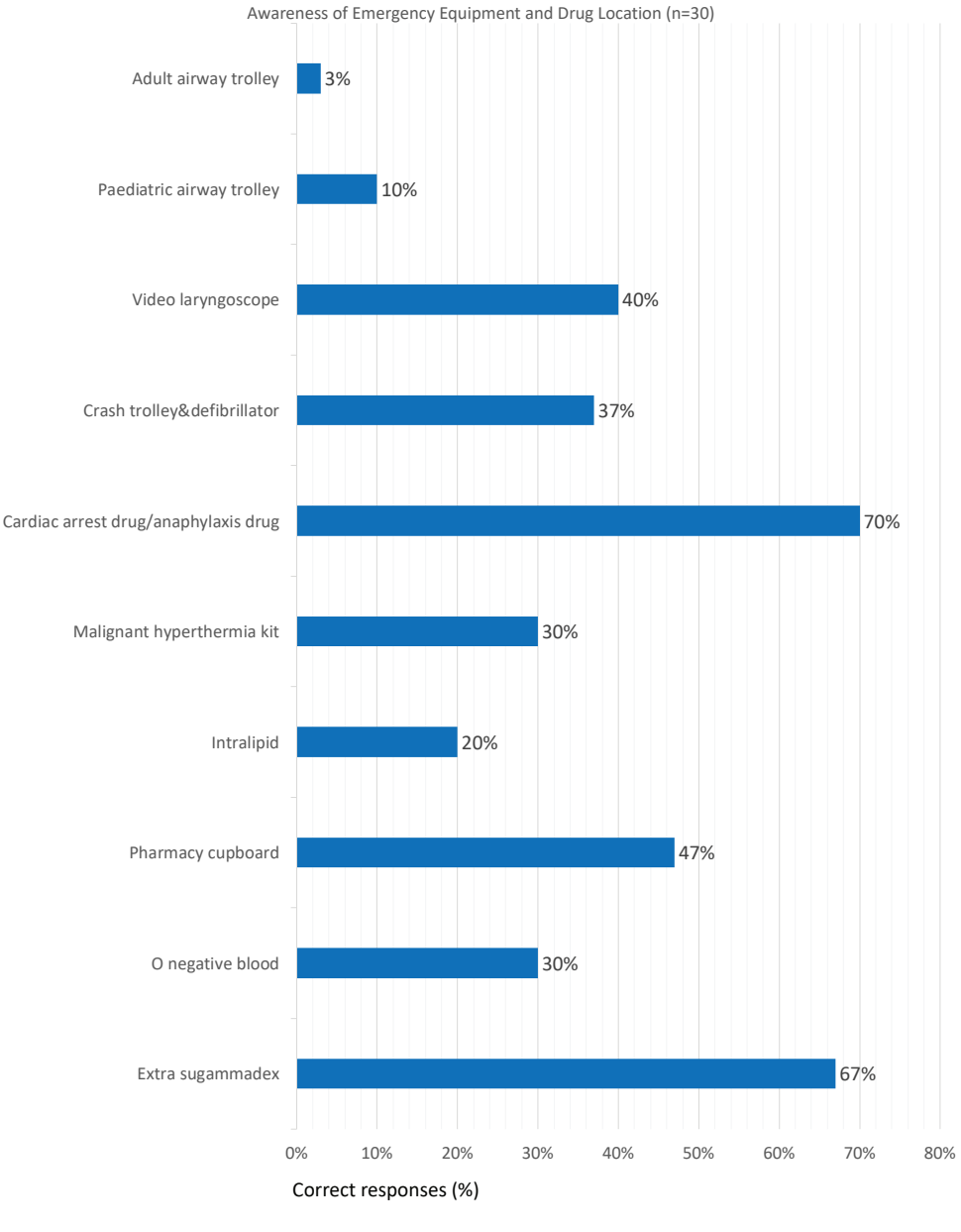
Aim

To assess staff awareness of emergency equipment and drug locations

Standards

100% of the anaesthetic medical workforce should be able to correctly identify the location of essential emergency equipment and drugs in their working areas.

Results



Actions to improve outcomes

A theatre layout map outlining the main theatre complex and locations of key emergency equipment locations will be incorporated into anaesthetic induction, with improved signage introduces across theatres. Where possible, emergency equipment storage will be standardized to reduce variation. A re-audit in planned following implementation to assess improvement in staff awareness.

Conclusion

This audit identified significant variation in anaesthetic medical staff awareness of the location of emergency equipment and drugs within the main theatre complex. No item met the expected standard of awareness, highlighting multiple latent patient safety risks. Targeted interventions focusing on induction, signage and standardization are required to improve preparedness for anaesthetic emergencies.

Key Findings

- No emergency equipment or drug achieved the expected awareness standard of ≥80%
- Knowledge of adult and paediatric difficult airway trolley locations was critically low (3% and 10%)
- Awareness of commonly used emergency drugs was inconsistent

References:

1.Royal College of Anaesthetists. Guidelines for the Provision of Anaesthetic Services (GPAS), Chapter 1: induction should include familiarization with layout and emergency equipment location. London: RCoA; 2024

2. AAGBI Emergency Anaesthesia: Standards and Recommended Practice – equipment and drug location familiarity section.

Quality Improvement Project - A Poster

NHS Humber Health Partnership

Project Title: Assessing and Improving Clinicians' Knowledge of DVLA Guidelines on Blackouts, Syncope, and Transient Loss of Consciousness in Group 1 License Holders: A Quality Improvement Project at Scunthorpe General Hospital (NLaG)

Problem: A significant number of patients presenting with syncope, blackouts, or transient loss of consciousness are reviewed in the acute care setting. It is essential that, upon discharge, these patients receive appropriate safety-netting advice regarding their fitness to drive in accordance with DVLA guidelines and we support legal and clinical aspects of safe patient discharge.

AIM

Increase the knowledge of DVLA fitness-to-drive standards for patients discharged with blackouts, syncope, or transient loss of consciousness, from acute medical wards at SGH, from a baseline of 9.7% with high knowledge to at least 80% by the 31st March 2026.

Measurement

To get **baseline data** a questionnaire was completed by 41 colleagues working in acute medicine at SGH to asses their knowledge of DVLA guidelines, among the participants:

- 73% (30) reported having only minimal knowledge
- 17% (7) rated their knowledge as moderate
- Only 9.7% (4) considered themselves knowledgeable

Importantly, none of the respondents expressed confidence in their knowledge or ability to advise patients appropriately according to DVLA.

Post change a total of 41 participants were surveyed:

- 17% (7) reported having only minimal knowledge
- 29% (12) rated their knowledge as moderate
- 37% (15) considered themselves knowledgeable
- 17% (7) felt confident in their knowledge and ability

Changes

- **Regular Teaching Sessions**: Incorporate DVLA guidance on syncope and transient loss of consciousness into departmental teaching programmes to regularly refresh clinicians' knowledge and awareness.
- **Induction Training**: Ensure that DVLA guidelines form a core part of the induction policy for all new doctors joining the trust, to promote consistent practice from the outset.

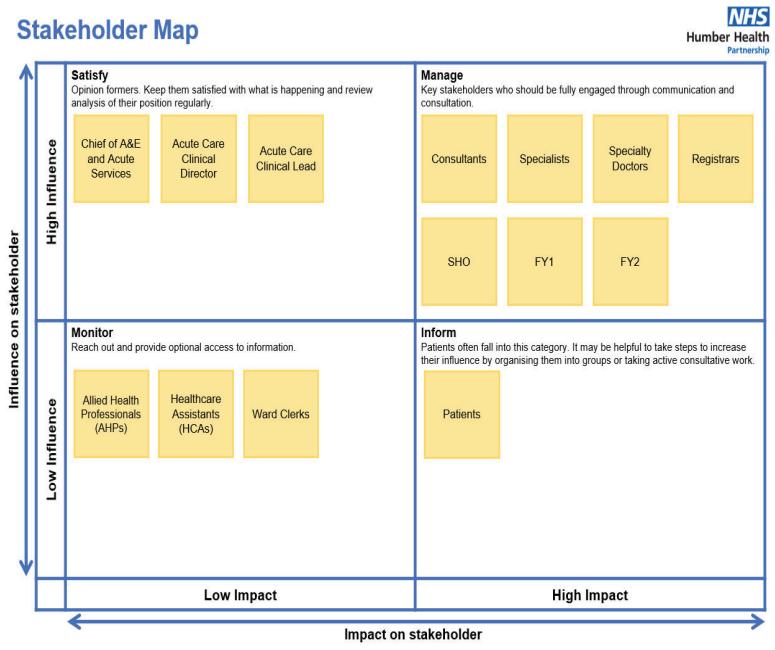
Next Steps/In my words…

The findings from the initial audit/data collection highlighted a significant knowledge gap among clinicians regarding DVLA guidance, particularly in an area with important patient safety and medicolegal implications. We wanted to ensure that all eligible patients receive accurate and documented driving advice in line with DVLA standards on discharge.

Name: Saqib Ameer
Ikram Ullah Khan, Mahboob Rahman, Muhammad Sohail Muhammadi, Zahid Ashraf

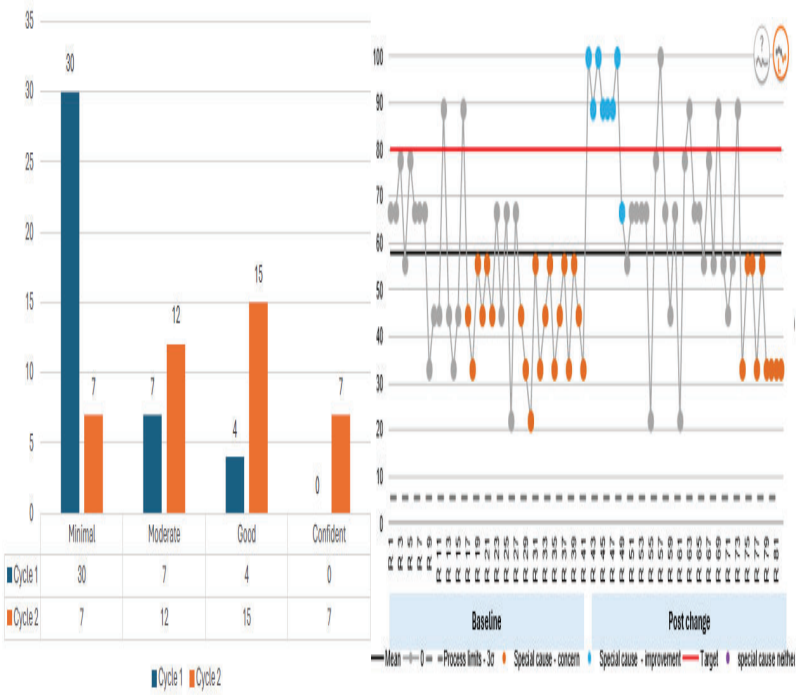
Acknowledgement:
Emergency and Acute care Chief of services
Acute Care Clinical Lead
Departments of A&E, Acute Care, Stroke At SGH

QI Tools



Data

Knowledge of DVLA guidelines for assessing driving fitness – acute medicine SGH



Quality Improvement Project on Emergency Medicine management of Upper Gastrointestinal Bleeding (UGIB) in patients aged 16 years and over

NHS Humber Health Partnership

Authors: Dr Meenakshy Ajith, Dr. Mustafha Mortadha, Dr. Hannah-Foster Rain, Dr. Mohammad Mehdi, Dr. Sudipta Barua

QI Coach/ EM Consultants: Dr. Ellen McCourt, Dr. Sina Askari-Jirhandeh, Dr. Esam Akoud.

BACKGROUND

- No standardised ED pathway for UGIB management
- The British Society of Gastroenterology (BSG) introduced the Acute Upper GI Bleed (AUGIB) Care Bundle in 2019 to guide management in the first 24 hours of presentation

AIM

To increase compliance in our Emergency department with the British Society of Gastroenterology (BSG) 2019 Acute Upper Gastrointestinal Bleeding (AUGIB) in key standards of care through education, audit and pathway redesign by June 2026.

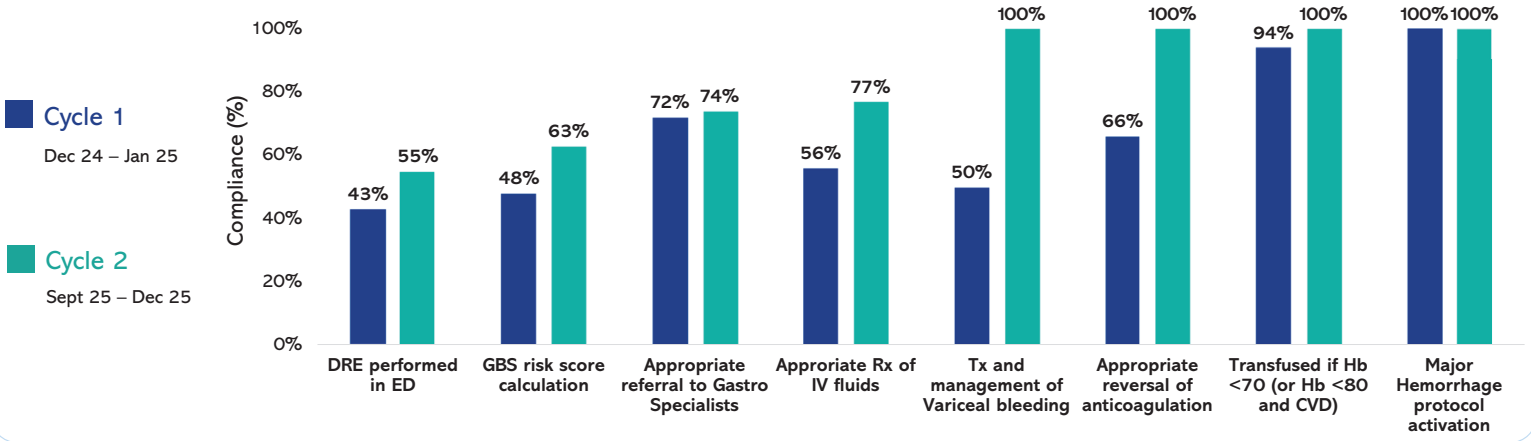
MEASUREMENT

- **Pilot Audit** of 22 patients with UGIB done in April 2025 – identified scope for project.
- **Cycle 1** data collection initiated between Aug- Sept 2025; Continuous data of 100 patients with UGIB who presented via ED between Dec 2024 and Jan 2025 obtained.
- **Key parameters** audited include:
  - Activation of the Major Haemorrhage Protocol in haemodynamically unstable patients
  - Appropriate transfusion thresholds (Hb <70 g/L, or <80 g/L with cardiovascular disease)
  - Reversal of anticoagulation
  - Early Terlipressin and antibiotic use in variceal bleeding;
  - Glasgow Blatchford Score (GBS) calculation
  - Digital rectal examination (DRE)
  - Timely referral to Gastroenterology
- **Cycle 2** initiated in October 2025. Reaudited in January 2026: continuous data of 100 patients presented with UGIB who presented via ED between Sept 2025 and December 2025.

INTERVENTION

- Teachings for Resident doctors in ED –sessions held for FY2s, CT1-3 and Registrars
- Liaison with Gastroenterology - clarified main aspects of UGIB management in ED, agreed on an UGIB Proforma for ED use, & formalised a pathway for discharge of low risk UGIB patients (GBS 0-1) in ED with follow up OGD by Gastro team.
- Departmental email dissemination of essential aspects of UGIB management in ED
- Presentation in departmental Audit/ QI Meetings.

RESULTS - COMPARISON OF CYCLES 1 & 2



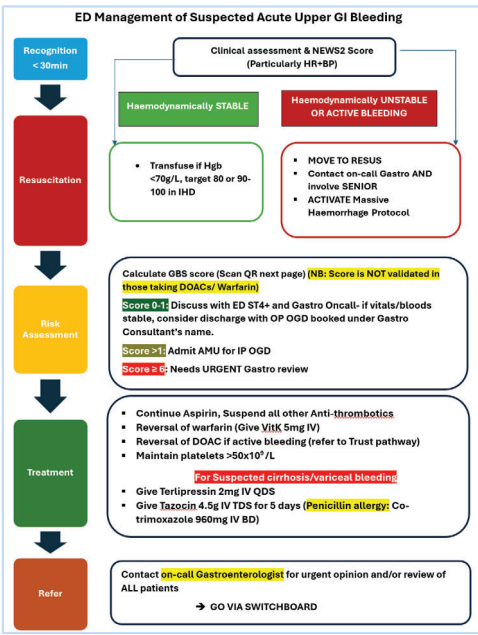
KEY FINDINGS

- Improvement in adherence across all audited parameters
- Major improvement in anticoagulation reversal (66%→100%) and variceal bleed management (50%→100%)
- GBS calculation and DRE metrics showed meaningful improvement with further scope
- Early activation of Major Haemorrhage Protocol and transfusion practices maintained 100% compliance
- Appropriate referral to Gastroenterology maintained high compliance

PDSA Cycle 1		PDSA Cycle 2
Pilot Audit showed scope for QIP	PLAN	Conduct departmental teaching, liaise with Gastro, Proforma creation
Continuous data of 100 patients Dec 2024 – Jan 2025	DO	Gain support of ED Clinicians (primary stakeholders), Email Gastro Leads (secondary stakeholders), discuss changes to existing pathway, Delivering departmental teaching
Findings showed improvements required in management of low-moderate risk UGIB and other parameters	STUDY	2nd data set – improvement across all parameters but further scope for more
Liaison with Gastroenterology, Departmental Teaching, QI Meeting to discuss findings, Send out departmental emails with results	ACT	To further improve standards, formalize UGIB proforma and upload to Trust intranet, re-disseminate info via departmental email and ED Shop floor board rounds

NEXT STEPS

1. Roll out of our UGIB Proforma with plans for safe discharge for low risk UGIB patients (GBS 0-1 and no additional risk factors).
2. Spreading the word on the new proforma - via reminders by team at Board Rounds and morning/evening huddles.
3. Re-auditing (as part of cycle 3)



Steroid-Induced Hyperglycaemia/Diabetes

Improving risk assessment, CBG monitoring, escalation and discharge planning (Ward-based)

NHS
Hull University Teaching Hospitals
NHS Trust

Introduction

Systemic glucocorticoids are frequently used in hospital inpatients and can cause steroid-induced hyperglycaemia or diabetes. JBDS and local HUTH guidance recommend early identification, appropriate CBG monitoring, timely escalation, and safe discharge planning.

Objectives

1) Improve earlier detection of steroid-induced hyperglycaemia/diabetes through consistent risk assessment
2) Improve adherence to recommended CBG monitoring for patients on systemic steroids.
3) No prior diagnosis of diabetes: Improve escalation (QDS monitoring and clinical action) when CBG >12 mmol/L
4) Improve discharge safety: clear monitoring/titration advice and appropriate follow-up.

Methods

A Retrospective audit of non-diabetic adult inpatients receiving systemic supra-physiological steroids for ≥5 days from August 2025 to December 2025.

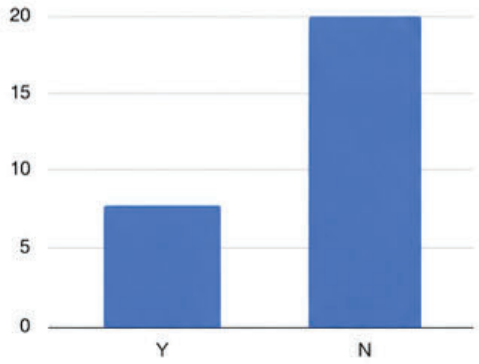
Data source: Lorenzo electronic record (prescribing, CBG results, clinical notes, discharge summary).

Sample size: 28

Measures: Risk assessment, CBG monitoring frequency, escalation when >12 mmol/L, discharge documentation.

Results (Non-diabetic Pathway)

How many patients had HbA1c tested prior to steroid

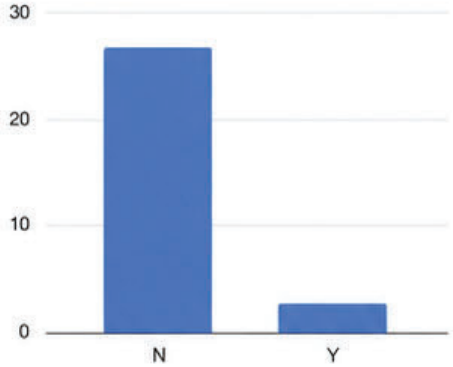


Count of was HbA1c tested prior to starting steroids Y/N (gphosphat) - 2 months

How many of these patients were previously prediabetic/ currently prediabetic?

- **10/28** (35.7%)
- **2/28** (7.1%) **never had HbA1c tested throughout their lifespan**

CBG monitoring (Done OD pre-lunch/pre-evening meal or 1-2 hours postmeal



Count of has CBG been done OD pre-lunch/pre-evening meal or 1-2 hours postmeal (Y/N)

- **10/28 patients never had their BMs checked (35.7%) during inpatient stay**
- **3/28 were out of target range (10.7%)**

- **3/28 (10.7%) patients had BMs out of target range, of which:**
  - ½ escalated OD CBG monitoring to QDS monitoring appropriately
  - ½ did not escalate OD CBG monitoring to QDS monitoring
- **3/28 (10.7%) patients had BMs out of target range:**
  3/3 patients did not have any form of discharge advice mentioned, including:
  GP to monitor glucose levels
  Informing the patient that glucose levels were out of range and to monitor their CBG
- **22/28 (78.6%) patients were discharged on steroids:**
  - No discharge advice was mentioned on the IDL to the GP to repeat HbA1c levels at least 6 weeks following the cessation of steroids

Discussion & Key findings

Baseline audit suggests gaps in daily CBG monitoring, adequate risk assessment (HbA1c levels) and discharge planning documentation

Key opportunities:

- Ensure HbA1c is checked prior to commencement on steroids (If not done within the past 2-3 months)
- Ensure CBG monitoring starts promptly after steroids and is recorded in the correct timing window
- Escalate to QDS when CBG >12 mmol/L and document action plan
- Strengthen discharge communication: monitoring plan and GP/community follow-up.

Conclusion & Next steps

Standardising practice to JBDS/HUTH guidance should reduce missed hyperglycaemia and improve patient safety.

Next: implement interventions/QIP, re-measure the same indicators, and complete the improvement cycle (re-audit)

Escalation triggers (all patients)

GREEN — CBG ≤12 mmol/L → continue planned monitoring

AMBER — CBG >12 mmol/L → escalate to QDS (pre-meals + bedtime) and document plan

RED — CBG ≥20 mmol/L OR unwell → urgent review; T1DM: check ketones

Quick guide: Risk • Monitor • Escalate • Discharge (JBDS + HUTH)

1. Risk assessment (Day 1 / Start of Steroids)

- Pre-existing T1 or T2 DM
- Increased risk of DM e.g. obesity, family history, previous gestational diabetes, ethnicity, polycystic ovaries
- Impaired fasting glucose or impaired glucose tolerance or A1c 42-47mmol/mol – **Check HbA1c if not done within the past 2 months**
- Those identified to be at risk of diabetes (see riskscore.diabetes.org.uk)

2. Glucose Monitoring: NO diabetes

- Start CBG once daily (prefer pre-lunch or pre-evening meal, or 1-2h post-meal)
- If any CBG >12 mmol/L → escalate monitoring to QDS (pre-meals + bedtime)
- If CBG persistently >12 mmol/L (i.e. on >2 occasions in 24 hour period) → follow guideline pathway / seek DSN advice

3. Glucose Monitoring: KNOWN diabetes

- Test CBG QDS pre-meals and bedtime
- If CBG persistently >12 mmol/L → adjust treatment as per guidelines

5. Discharge planning

- If steroids continue: document monitoring plan + who to contact if high
- No prior diabetes + hyperglycaemia: plan follow-up diabetes testing (HbA1c ~ atleast 6 weeks after stopping), if community follow up by DSN required, if daily CBG monitoring required in community

References: JBDS 08 Management of Hyperglycaemia and Steroid Therapy (Jan 2023);

Co-leads: Dr. Souzan Al Bitar and Dr. Haroon Aslamlam

Quality Improvement Project

Improving Staff Awareness and Compliance with ReSPECT Form Accessibility on H70 (Rheumatology/General Medicine)

Dr Becky Leung, Dr Edward Olufunmilayo, Dr Boluwatiwi Sivebukola, Dr Deepti Gowda
Supervisor: Dr Radhika Raghunath

PROBLEM:
ReSPECT (Recommended Summary Plan for Emergency Care and Treatment) forms record patients' care preferences to support person-centred decisions and escalation plans. Although available electronically on LORENZO, many staff are unaware or do not routinely check them, risking missed or outdated information and compromising communication and decision-making.

AIM:
To increase staff awareness and compliance with checking electronically uploaded ReSPECT forms over a 4-6 week period on H70.

TARGET: Achieve at least a 30% increase in awareness and compliance from baseline.

MEASUREMENTS
Over week 0 and week 4-6:

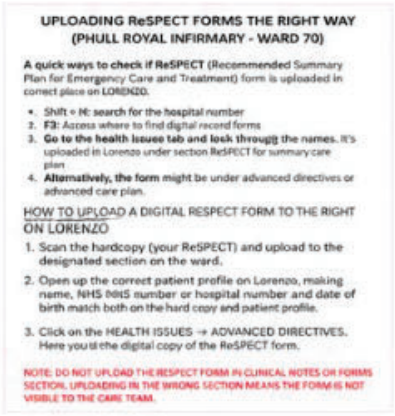
Part A – Staff Survey
Ask a sample of staff members (including doctors, nurses, ward clerk, health care professionals) the following question:

1) **Do you know where to find the patient's physical ReSPECT form?**
2) **Do you know where to find digital ReSPECT form?**
3) **After a ReSPECT form is completed, do you ensure it is uploaded on Lorenzo?**
4) **Do you know how to upload ReSPECT form on Lorenzo?**
5) **Do you routinely check for a ReSPECT form when reviewing a patient?**

Part B – Digital Form Audit
Renew Lorenzo records for 25 patients and record how many have an up-to-date digital ReSPECT form corresponding to a physical form and if this is uploaded in correct place under 'health issues' and under 'advanced directives'.

INTERVENTION:

- Shared baseline findings with the ward team during handovers and meetings
- Displayed awareness posters on the ward
- Reminders given during handovers
- Engaged ward champions (resident doctor) to promote best practice
- Encouraged routine checking of ReSPECT forms on Lorenzo during ward rounds



UPLOADING ReSPECT FORMS THE RIGHT WAY (PHULL ROYAL INFIRMARY - WARD 70)

A quick ways to check if ReSPECT (Recommended Summary Plan for Emergency Care and Treatment) form is uploaded in correct place on LORENZO.

1. Shift + H: search for the hospital number
2. **F3:** Access where to find digital record forms
3. **Go to the health issues tab and look through the names.** It's uploaded in Lorenzo under section ReSPECT for summary care plan
4. **Alternatively, the form** might be under advanced directives or advanced care plan.

HOW TO UPLOAD A DIGITAL RESPECT FORM TO THE RIGHT ON LORENZO

1. Scan the hardcopy (your ReSPECT) and upload to the designated section on the ward.
2. Open up the correct patient profile on Lorenzo, making name, NHS NHS number or hospital number and date of birth match both on the hard copy and patient profile.
3. Click on the HEALTH ISSUES → ADVANCED DIRECTIVES. Here you'll the digital copy of the ReSPECT form.

NOTE: DO NOT UPLOAD THE RESPECT FORM IN CLINICAL NOTES OR FORMS SECTION. UPLOADING IN THE WRONG SECTION MEANS THE FORM IS NOT VISIBLE TO THE CARE TEAM.

DATA

Part A – Staff Survey	Week 0	Week 4-6	Percentage increase post intervention
Knew where to find physical ReSPECT form	100%	100%	-
Knew where to find digital ReSPECT form	16.7%	100%	+83.3%
Knew to ensure upload on Lorenzo after completion	16.7%	80%	+63.3%
Knew how to upload a ReSPECT form	50%	80%	+30%
Routinely check for a ReSPECT form when reviewing a patient	66.7%	90%	+23.3%

Part B – Digital Form Audit	Week 0	Week 4-6	Percentage increase post intervention
Digital ReSPECT form present for each latest physical ReSPECT form AND most up to date	12.5%	77.7%	+65.2%
Digital ReSPECT form uploaded in correct place	50%	100%	+50%

CONCLUSION
Overall improvement: Marked increase in staff awareness, confidence, and compliance with checking and uploading ReSPECT forms. Clinical impact: More patients now have accurate, up-to-date digital ReSPECT forms accessible to all staff.

Awareness of digital forms rose from 16.7% to 100% and routine checking increased from 66.7% to 90%. The digital form audit showed substantial increase in the number of patients with correctly uploaded, up-to-date ReSPECT forms.

NEXT STEPS

- Incorporate a ReSPECT form check into regular handover checklists
- Include ReSPECT training in new staff induction packs
- Repeat QIP in 3-6 months to ensure sustained improvement
- Share this initiative across other wards to standardise best practice.

Intravenous Iron in stable COPD: Effects on Exercise Capacity and Quality of Life – A Systematic Review

Rabbani Daoud; Abdulrahman Alsunaid; Jennifer Jefimova; Sebastian Spencer; Sunil Bhandari

Hull University Teaching Hospitals | HEAT Poster Presentation, 8 May 2026

TAKE-HOME MESSAGE

IV ferric carboxymaltose shows a promising short-term signal for improved exercise tolerance in stable COPD, but the evidence base remains small and heterogeneous.

BACKGROUND

Chronic obstructive pulmonary disease (COPD) is associated with reduced exercise capacity and quality of life (QoL). Iron deficiency may worsen these outcomes through impaired oxygen transport and skeletal-muscle metabolism. Prior studies show that increasing iron availability modulates cardiorespiratory function and improves exercise tolerance in heart failure patients.

To date, no systematic review has evaluated the effects of IV iron in patients with COPD. The existing evidence is scattered across small studies, limiting clear conclusions. This review seeks to synthesise and critically appraise available data on IV iron therapy in patients with stable COPD, irrespective of anaemia or iron deficiency status. By clarifying the clinical utility of IV iron, the findings aim to inform future research priorities and trial design, while determining whether IV iron supplementation could serve as a beneficial adjunct in the holistic management of COPD.

METHODS

- Systematic review of adults with stable, GOLD-defined COPD receiving IV iron.
- Searched Medline, Embase, Scopus, Cochrane, PubMed and ClinicalTrials.gov.
- Primary outcome: exercise capacity; secondary outcomes: QoL and dyspnea measures.
- Risk of bias assessed with RoB-2 for RCTs and JBI checklist for cohort evidence.

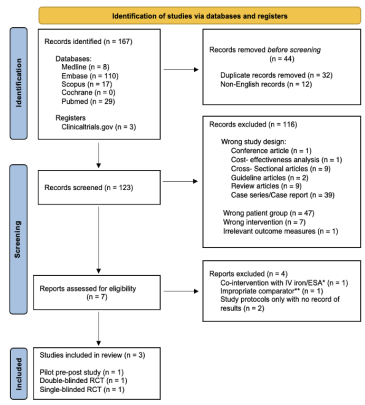


Figure 1. PRISMA 2020 screening and selection process.

INCLUDED EVIDENCE

167
records identified across databases and registers

3
studies included in final synthesis

125
participants across included studies

2 RCTs
1 PRE-POST COHORT

KEY RESULTS

- Constant work-rate cycle endurance improved with FCM: median +119.5 s vs -8.0 s with placebo.
- Responder rates were higher with FCM: 52.3% vs 18.2%; RR 3.12, 95% CI 1.19-8.12.
- 6-minute walk distance improved modestly in the double-blind RCT: +12.6 m at 8 weeks.
- The pre-post cohort reported gains in 6MWD, VO2max and SGRQ, but without a control group.
- Oxygenation showed no clear benefit, with no meaningful difference in resting SpO_2 at 1 week.
- Patient-reported outcomes were mixed, although SGRQ score improved in the cohort (−7.56±6.12; p=0.004).
- Both RCTs demonstrated marked biochemical iron repletion, while hemoglobin changes were modest or absent

Interpretation

The most consistent signal was in cycle-endurance among iron-deficient participants. Variation in baseline iron status, blinding and outcome selection likely explains the mixed effects on walking distance and health status.

Safety

IV FCM was generally well tolerated, and serious adverse events were uncommon. Hypophosphatemia was frequent in one trial, mostly asymptomatic.

EVIDENCE SUMMARY

Study design	Exercise	QoL / dyspnea	Safety
Single-blind RCT	Endurance time +119.5 s vs -8.0 s; p=0.010	Responder rate 52.3% vs 18.2%	Well tolerated
Double-blind RCT	6MWD +12.6 m at 8 weeks	mMRC improved; CAT no difference	Hypophosphatemia frequent, mostly asymptomatic
Pre-post cohort	6MWD +34.7 m; VO2max +1.87	SGRQ -7.56; p=0.004	No major signal reported

DISCUSSION

- Findings support a potential short-term benefit of IV iron on exercise performance in stable COPD.
- Clinically meaningful cycle-endurance and dyspnea improvements were more evident than QoL gains.
- Evidence remains limited by small samples, short follow-up and heterogeneous outcomes.
- Larger, longer-duration randomized trials using standardized endpoints are needed before firm recommendations.

REFERENCES & DECLARATIONS

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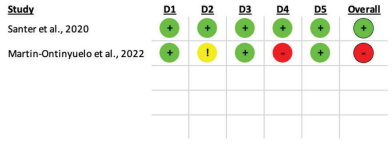
Acknowledgements: N/A

- Conflicts of interest: SS has received honorarium from Pharmacosmos. SB has received honorarium from Vifor CSL, MEDICE, Bayer, Boehringer Ingelheim, Pharmacosmos, GSK, and Astellas for lectures. RD, AA, and JJ have no conflicts to declare.
- Funding: No funding was received for this research.
- This systematic review followed a prespecified protocol registered on PROSPERO (CRD-420251110151) and was conducted in accordance with PRISMA 2020.
- Main manuscript currently under review in Respiratory Medicine



ROB-2 Risk of Bias for RCTs

CONCLUSION

IV iron appears to produce short-term, clinically meaningful gains in cycle-endurance and dyspnea in stable COPD, with more modest improvements in 6-minute walk distance. The current evidence is encouraging but not yet definitive.

What this adds

- Evidence signal favors endurance-based outcomes.
- Benefits may be strongest in iron-deficient COPD.
- Serious adverse events were uncommon in available studies.

Main limitations

- Only three studies and 125 participants.
- Short follow-up and mixed blinding approaches.
- Heterogeneous outcome measures limit pooling.

Next research step

- Larger randomized trials with standardized endpoints.
- Clear iron-deficiency phenotyping at baseline.
- Routine phosphate monitoring after IV FCM.

Corresponding author: Rabbani Daoud | Hull University Teaching Hospitals

HEAT 2026
HEALTHCARE EDUCATION AND TRAINING EVENT

JARISCH–HERXHEIMER REACTION FOLLOWING ARTEMETHER/LUMEFANTRINE IN FALCIPARUM MALARIA: A CASE REPORT

NHS
Hull University Teaching Hospitals
NHS Trust

Niam Adam Abubakr Mahdi
Hull University Teaching Hospitals
Corresponding author: niam.mahdi1@nhs.net

BACKGROUND

The Jarisch–Herxheimer reaction (JHR) is an acute inflammatory response classically associated with antimicrobial treatment of spirochaetal infections such as syphilis and Lyme disease.

Although well described in bacterial infections, reports following antimalarial therapy are rare.

Recognition of this phenomenon is important to avoid misdiagnosis as treatment failure or drug resistance.

METHODS

A retrospective descriptive review was conducted of a single adult patient with confirmed *Plasmodium falciparum* malaria.

Clinical observations, laboratory parameters, timing of symptom onset, treatment course, supportive management, and outcomes were analysed from medical records.

DISCUSSION

The temporal relationship between treatment initiation and biphasic fever pattern is consistent with a Jarisch–Herxheimer reaction.

The presentation aligns with cytokine-mediated inflammatory responses described in spirochaetal infections.

Recognition of this phenomenon in malaria is important to avoid mis-interpretation as treatment failure or resistance.

Early supportive management and close observation during the first 24 hours of therapy are essential.

CASE REPORT

A 27-year-old previously healthy male with hyperparasitaemia (>10%) developed acute systemic inflammatory symptoms following initiation of oral artemether/lumefantrine.

0 HOURS
Artemether/ lumefantrine commenced

~8 HOURS
Second febrile spike (39.4°C) with chills, tachycardia (103 bpm), myalgia, tachypnoea and worsening systemic symptoms

LABORATORY FINDINGS
- Leukocytosis
- Lymphopenia
- Granulocyte left shift

Concern for treatment failure or sepsis was considered; however, the close temporal relationship to treatment initiation raised suspicion of a Jarisch–Herxheimer reaction.

RESULTS

Supportive treatment commenced → Symptoms resolved within 23 hours → Antimalarial therapy restarted without recurrence → Day 3 blood smear negative for parasitaemia → Full clinical recovery and discharged well

Key Clinical and Laboratory Findings

Time Point	Temperature (°C)	Heart Rate (bpm)	Respiratory Rate (rpm)	WCC (x10⁹/L)	Parasitaemia
At presentation	38.6	98	20	6.2	>10%
~8 hours after treatment	39.4	103	24	13.1	Not repeated
Day 3	36.8	76	18	7.8	Negative

WCC: White Cell Count

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ACKNOWLEDGEMENTS

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No external funding was received.

The author declares no conflicts of interest.

The author acknowledges the original co-authors of the published case report for their contribution to the initial work on which this poster is based.

“Mind the Gap”
Improving Transition From Paediatric To Adult Care For Young People With Coeliac Disease
A quality improvement project

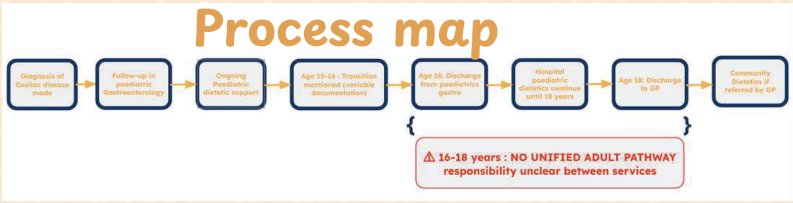
Aim:To identify and address gaps in the transition process for young people with coeliac disease, focussing on timing of transition discussions and continuity of care between paediatric and adult services.

Background

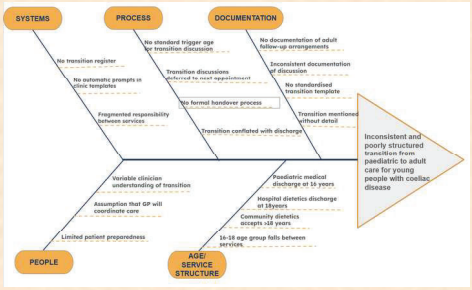
- Coeliac disease requires lifelong dietary and medical follow up
- Effective transition from paediatric to adult care is essential to support adherence and continuity.
- Locally transition processes appeared variable and inconsistently documented.
- Paediatrics gastroenterology discharges patients at 16years, hospital dietetics at 18years and community dietetic services accepts patients from 18years onwards.
- This age misalignment creates a potential gap in coordinated care for 16-18 year old patients.
- Review of clinic documentation suggested that transition was often managed as discharge rather than as a structured documented process.

Diagnostics

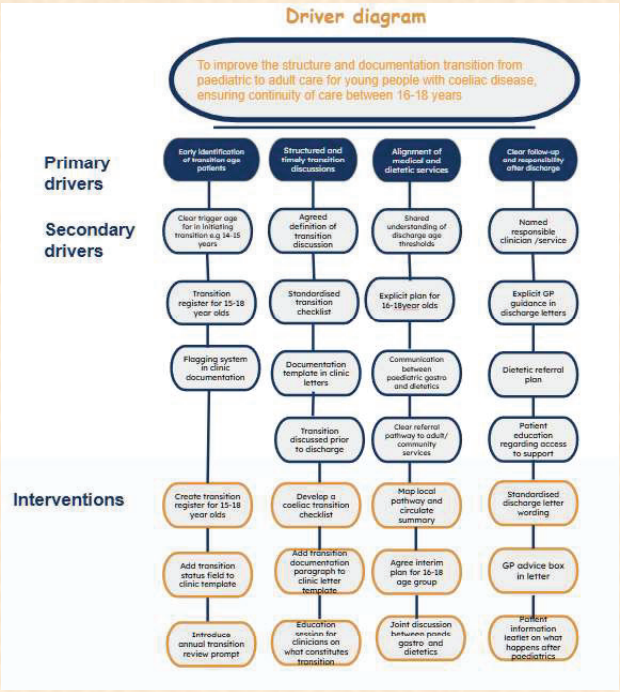
Process map



Fishbone diagram



Driver diagram



Methods or change ideas tested

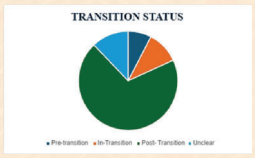
PDSA Cycles

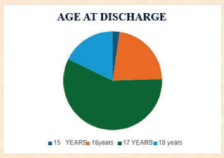
PDSA Test	Plan	Do	Study	Act
1. Baseline Documentation Review	To Review clinic documentation of young people with coeliac disease to assess timing and quality of transition discussions	Retrospective review of clinic letters (pre and post transition patients)	Identified: • Transition often mentioned but not structured • Discussions frequently deferred • Discharge at 16 years without clear adult pathway • Misalignment between medical and dietetic discharge ages	Developed operational definition of transition and generated structured change ideas
2. Patient experience survey	To gather feedback from recently transitioned young people regarding their understanding of follow up and responsibility of care	Contacted eligible patients and administered a short structured survey	Explored: • Understanding of follow up plan • Awareness of responsible service • Access to dietetic support • Perceived preparedness for transition	Refined proposed transition checklist and discharge documentation framework based on patient feedback
3. Structured transition intervention (Planned)	Introduce standardised coeliac transition checklist	Pilot checklist in paediatric gastro clinic for transition age patients	Assess: • Documentation consistency • Clinician usability • Patient understanding	Refine checklist and integrate into clinic template

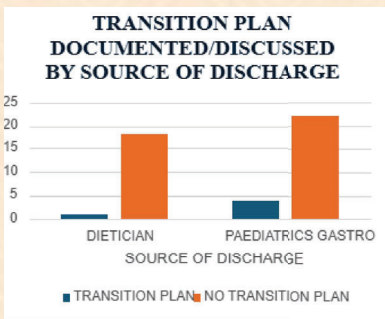
Results

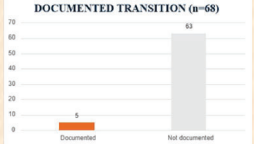
Key Summary Text

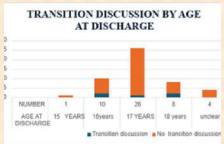
- Baseline review of 68 young people with coeliac disease demonstrated significant variability in transition documentation.
- Only 7% (5/68) had documented transition discussions, while 93% had no recorded structured transition
- 16% (11/68) were discharged from paediatrics gastroenterology at age age 16. Of these:
  1. 82% (9/11) had no documented transition discussion
  2. 91% (10/11) were discharged directly to GP care
  3. Only 9% (1/11) had continued access to dietetic follow up
- These findings highlight a lack of structured transition planning and an apparent service gap between 16-18 years.











Next steps

- Implement structured transition checklist
- Integrate documentation template into clkinic letters
- Establish transition tracking register 15-18 years
- Re-measure outcomes after 6months
- Work with adult gastroenterology to dewfine unifioed pathway

Conclusion

- Transition from paediatric to Adult care for young people with coeliac disease is often treated as an event rather than a process.
- Most young people were discharged without documented planning or clear follow up pathway
- The 16 - 18year age window represents a vulnerable period with unclear service responsibility
- Standardisation of transition documentation offers a practical opportunity to improve safety and contunuation of care