Medicine 2026

Competition winners

Royal College of Physicians

MED26

Best overall presentation

Stefan Sepamalai

Bacterial myocarditis mimicking acute coronary syndrome in the setting of necrotising fasciitis

BACTERIAL MYOCARDITIS MIMICKING ACUTE CORONARY SYNDROME IN THE SETTING OF NECROTISING FASCIITIS

Stefan Sepamalai[1], Okkar Myint Zaw[1], Eaint Kay Khine Thein[1], Thulasi Ramachandran[2], Hareshwaran Anpalagan[2]

[1] Buckinghamshire Healthcare NHS Trust | [2] Imperial College London

Introduction

- Necrotising fasciitis requires urgent surgical source control[1]
- Troponin elevation in sepsis often reflects non-ischaemic myocardial injury[2]
- Troponin elevation + dynamic ECG changes can mimic ACS
- Bacterial myocarditis may present as ACS despite unobstructed coronaries[3]

Key Investigations

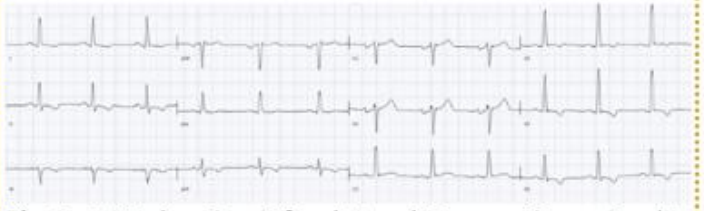


Fig 1 -ECG showing inferolateral T-wave inversion (II, III, aVF, V4–V6)

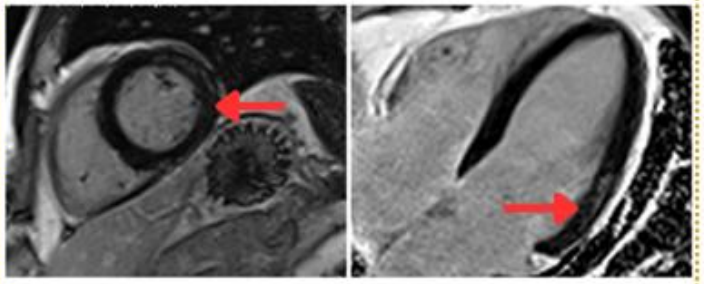


Fig 2 - Cardiac MRI (CMR) showing subepicardial late gadolinium enhancement in the lateral wall (arrow), consistent with myocarditis

CASE & CLINICAL DILEMMA

1 Initial Presentation
- Previously well man in his mid-40s
- Blunt calf trauma → deep haematoma → managed conservatively

2 Clinical Progression
- Progressive leg pain/swelling → treated as cellulitis → worsening pain and reduced distal sensation

3 Clinical Dilemma: ACS vs Necrotising Fasciitis

ACS Features
- Central chest pain radiating to left arm
- **Troponin >20,000 | CRP 291 | BNP 1248**
- ECG: **inferolateral T-wave inversion**

Necrotising Fasciitis Features
- Severe limb pain
- Rapidly progressive + skin changes
- Tense limb with blistering
- Reduced distal sensation

4 Clinical Decision
- Dual concern: ACS vs necrotising fasciitis
- Risk of delay if prioritising cardiac angiography
- **Decision: Urgent surgical debridement prioritised over angiography**

5 Post operative outcome and Diagnosis
- Debridement → Staphylococcus aureus
- Initially treated as ACS → DAPT discontinued after **normal angiography**
- Troponin downtrending
- **CMR: subepicardial LGE consistent with myocarditis**

Final Diagnosis → Necrotising fasciitis complicated by bacterial myocarditis

Diagnostic Pitfalls

- Marked troponin elevation + dynamic ECG raise the suspicion of ACS
- Sepsis-related myocardial injury and bacterial myocarditis can mimic ACS[2,3]
- Bacterial myocarditis is rare but clinically deceptive[3]
- Diagnosis often requires multimodality imaging (echo, angiography, CMR)
- Prioritising angiography may delay life-saving surgery

Differentials for Troponin Elevation[2]

- **ACS**
  - Plaque rupture / thrombosis
- **Non-ACS**
  - Supply–demand mismatch (e.g. sepsis)
  - Myocarditis
  - Critical illness
  - Other cardiac stress (Takotsubo, PE)

Clinical Message

- In suspected necrotising fasciitis with ACS features, **early MDT input** is critical to guide management
- Misinterpretation of troponin elevation and ECG changes may lead to inappropriate ACS management
- **Urgent surgical debridement must not be delayed**

Patient consent obtained.

References → **1.** Wallace HA, Perera TB. Necrotizing fasciitis. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025
2. Korff S, Katus HA, Giannitsis E. Differential diagnosis of elevated troponins. Heart. 2006;92(7):987-993 .
3. Ferrero P, Piazza I, Et al. Epidemiologic and clinical profiles of bacterial myocarditis: report of two cases and data from a pooled analysis. Indian Heart J 2020;72:82-92.

Best presentation in the health services and sustainability, policy and workforce development category

Ayah Abdalla

Reduce 30-day hospital readmissions from skilled nursing facilities: a systematic review of transitional care

Reduce 30-Day Hospital Readmissions from Skilled Nursing Facilities: A Systematic Review of Transitional Care

Mohamed, Almar; Khalifa, Alaa; Ali, Sondos; Mahmoud, Noura; Abdalla, Ayah; Bessassi, Rim; Ali, Hadeel; Abdelrahman, Nadir
Tele Geriatric Research fellowship, Okemos, Michigan, USA.

Introduction

Hospital readmissions from skilled nursing facilities (SNFs) significantly drive healthcare costs and patient morbidity. Often linked to fragmented care and medication discrepancies, these readmissions are frequently preventable. This systematic review evaluates multidisciplinary interventions designed to reduce 30-day readmissions and improve safety in post-acute settings.

Methods

Following PRISMA 2020 guidelines, we searched major databases (PubMed, Embase, CINAHL, Cochrane) through March 2026 for SNF-based clinical, telehealth, and policy interventions. Outcomes included 30-day readmissions, ED transfers, and cost. Study quality was assessed using Newcastle-Ottawa and Cochrane tools. Due to methodological heterogeneity across RCTs and quality improvement initiatives, results were synthesized narratively.

Results

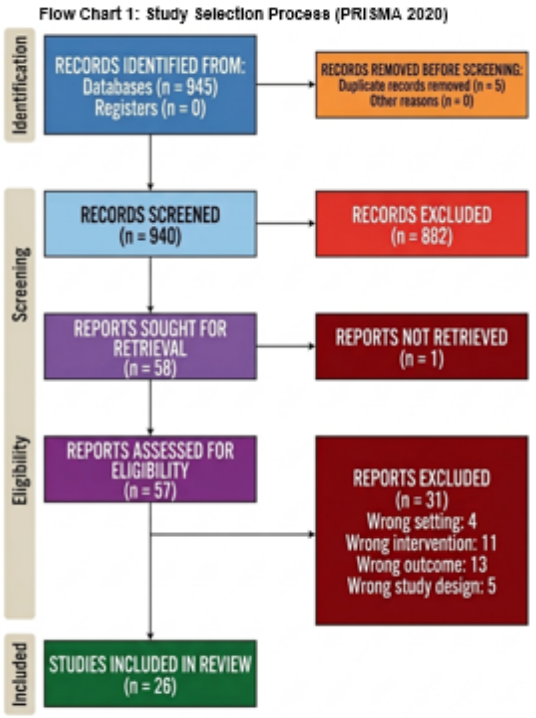
Twenty-six studies published between 2017 and 2026 were included. Among the seventeen studies providing individual participant counts, the total sample size was 23,191 residents. The remaining nine studies reported data at the facility level, accounting for 119 SNFs. Implementation barriers emerged as a formal theme across the literature, specifically highlighting workforce capacity limitations and inconsistent protocol adoption as significant hurdles to success.

Within clinical models, pharmacist-led medication reconciliation produced a 29.8% relative reduction in readmissions. Additionally, nurse practitioner-led models showed reported reductions in readmission rates generally ranging from 5% to 15%.

Table 1: Efficacy and Cost Outcomes of Highest-Impact Interventions

Intervention Model	Key Component	Effect on Readmissions	Cost Impact
Tele-MOD	Telehealth-supported care transitions	54.9% reduction (P<.001)	Saved $45,538 per patient
REAP	Coordinated specialist geriatrician/NP	Two-thirds reduction (P=.03)	50% total cost reduction

Key Takeaway: > Telehealth-supported care transitions and coordinated specialist assessments represent the most effective interventions analyzed, draastically cutting both readmission rates and associated healthcare costs.



Conclusions

- **Impact:** Multidisciplinary transitional care significantly reduces 30-day readmissions and liberates acute-care bed capacity. Interventions integrating telehealth and early follow-up by advanced practice providers are the most effective.
- **Requirements:** Dedicated workforce capacity and structured communication systems are strictly essential for successful implementation.
- **Future Directions:** Healthcare systems must prioritize high-quality, scalable models to improve post-acute "Value" (Outcome/Cost) and patient safety.

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Best presentation in the research (including clinical, digital health, translational and innovation) category

Abhinav Sathyamurthy

Exploration into the adoption of the NHS app in a socio-economically deprived area: an observational study

Exploration into the adoption of the NHS app in a socio-economically deprived area: an observational study

Author: Abhinav Sathyamurthy

Background

The 10-year Health plan for England states the need to shift from an analogue to digital NHS, delivering a step change in the way the NHS cares for citizens.[1]

By 2028 the NHS App will be the first point of access for patients, empowering them to book appointments, communicate with professionals, receive advice, draft or view their care plan, and self-refer to local tests and services. [1]

However, in areas of higher social deprivation, practices have 25% less registration of the NHS app compared to more affluent areas.[2]

Aims

Evaluate the digital accessibility and adoption of the NHS app in an area of higher social deprivation.

Identify the factors that affect the use of the NHS app.

Methods

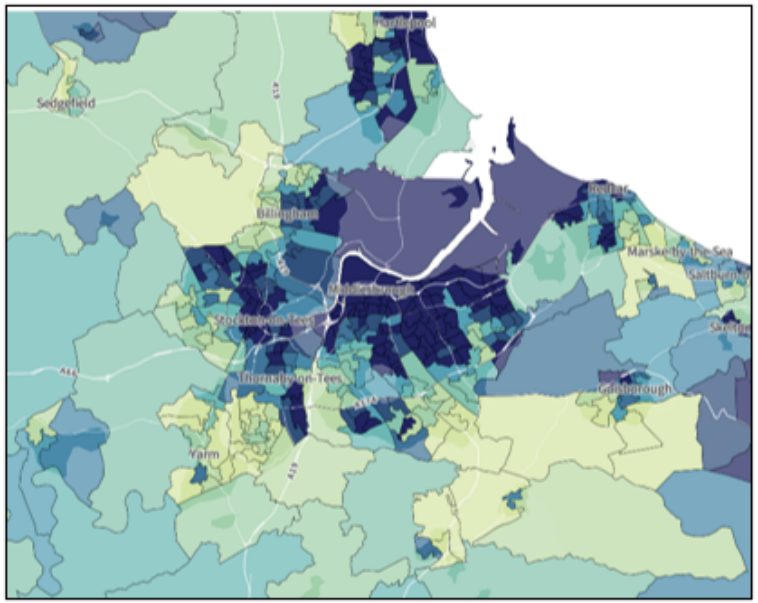
By opportunistic sampling, patients who attended for a GP consultation were interviewed about their digital accessibility and use of the NHS app. Their age, gender, ethnicity, smart phone access and use of social media platforms and the NHS app were collected. The patients were consented about the collection of data and the presentation of it in a conference. This study was conducted in a deep-end practice in Middlesbrough, serving a population of 7,000 patients.

Results

50 Patients were interviewed [20M:30F; age range 18 – 85 (median 50.5)]. 45/50 people had access to a personal smart phone. Out of these, only 48% (22/45) of people had downloaded and registered onto the NHS app; 7/22 used the NHS App on a regular basis.

Out of the 23 people who did not use the NHS app: 2 had difficulty in registering; 14 were not interested in using it or preferred calling the GP practice; 11 did not know about its features and 2 used alternative resources. 7/14 people who were not interested did not know about the NHS app features.

Significantly higher proportion 38/45 (84%) reported that they use social media apps on their phones.



Discussion

This study shows that in areas of higher social deprivation, 90% of patients have digital accessibility through their smartphones and are able to download and use the NHS app. In addition, 84% use social media platforms which shows that most people have the digital proficiency to use the app. Out of the 24 who downloaded the app, only 2 had difficulty in registering.

The main reason for the lack of adoption was the general disinterest because many of the patients were not completely aware of the functionalities of the NHS app: for example, many were unaware that they could request repeat prescriptions and book blood tests. Furthermore, GP practices and third-party companies have created alternative platforms which patients are already accustomed to.

Conclusion

To have a digital transformation of the NHS and empower patients to manage their health, there needs to be a focus on educating the public on the functionality of new digital products. In addition, discussion with stakeholders are needed for health services to promote the use of the NHS app over alternatives, thus reducing the choice burden for patients and create one uniform pathway to accessing the NHS.

Image reference: English Indices of Deprivation 2025 https://deprivation.communities.gov.uk/maps?type=imd&geog=lsoa#8.42/54.368/-1.455 [Accessed 20th April 2026]

References:

1. Fit for the future: 10 Year Health Plan for England - executive summary www.gov.uk/government/publications/10-year-health-plan-for-england-fit-for-the-future/fit-for-the-future-10-year-health-plan-for-england-executive-summary [Accessed 27 February 2026]
2. Sukriti KC, Tewolde S, Laverty AA et al. Uptake and adoption of the NHS App in England: an observational study. The British Journal of General Practice. 2023 Oct 3;73(737):e932.

Best presentation in the case reports category

Charlotte Buchalter

A case of thyrotoxic periodic paralysis complicated by electrocardiogram variability

A case of Thyrotoxic Periodic Paralysis complicated by Electrocardiogram Variability

Dr Charlotte Buchalter, Dr Apichaya Amrapala, Dr Hema Lata Veerasamy, Dr Asjid Qureshi
London North West University Healthcare NHS Trust

Introduction

Thyrotoxic Periodic Paralysis (TPP) is rare in the West and prevalent in East Asian males with undiagnosed or uncontrolled thyrotoxicosis of any aetiology. Patients present with acute flaccid paralysis affecting proximal muscles and hypokalaemia as the hallmark biochemical abnormality. Multiple electrocardiogram (ECG) changes are associated with TPP, including fatal arrhythmias[1].

Case summary

- 26M of Chinese ethnicity presented with sudden onset bilateral lower limb weakness ascending to upper limbs within 1hour – ED referred as Guillain-Barre syndrome
- No preceding illness, past medical/family history, or recreational drug use
- Large carbohydrate meal and alcohol intake preceding symptoms
- Noted to be hypokalaemic, tachycardic (HR 120bpm), 10kg unintentional weight loss over prior 3 months → prompted thyroid function test (TFTs) check

Initial work-up

Investigations	Results	Normal Range	Action
Potassium	2.3 >> 4.3	3.5-5.3 mmol/L	IV 40mmol KCL in 1L 0.9% NaCL
Thyroid Function Tests	TSH <0.01 Free T4 87 Free T3 34.8	0.27-4.2 mIU/L 12-22.0 pmol/L 3.8-6.8 pmol/L	Carbimazole 40mg OD (titrated) Propranolol 20mg BD

- Positive TSH receptor antibodies (7.76u/L) revealed Grave's disease as the cause
- Other differentials excluded: Guillain-Barre syndrome, Familial Hypokalaemic Periodic Paralysis, Gitelman syndrome, Bartter syndrome, Liddle syndrome
- Admission ECG showed sinus tachycardia, T wave flattening in AVL/V1/V2, biphasic T waves in V3, U waves in II/III and prolonged QTc (493ms) – ***Figure 1***
- Subsequent ECGs showed variable changes up to discharge – ***Figure 2,*** leading to cardiac monitoring, troponins and echocardiogram, all unremarkable

Follow up

- The patient made a rapid and complete neurological recovery and was discharged with outpatient endocrinology follow up
- 6 months later – TFTs normalised but developed Grave's ophthalmopathy requiring IV methylprednisolone – under regular ophthalmology follow up

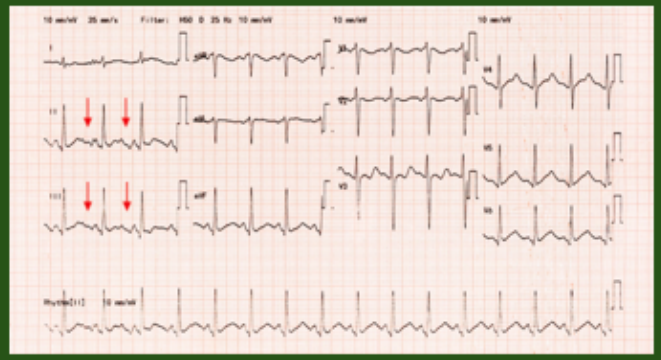


Figure 1 – Admission ECG. Red arrows: U waves. K^+ level 2.3 mmol/L

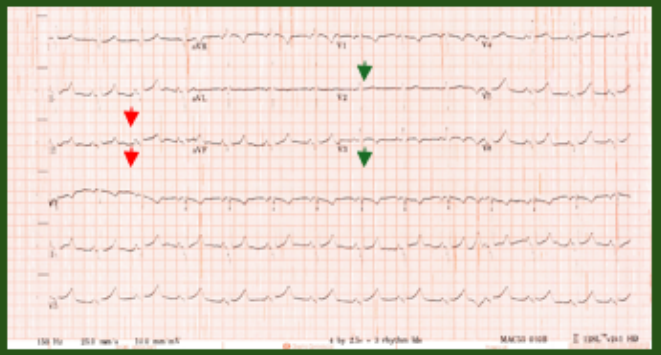


Figure 2 – Discharge ECG. Green arrows: T-wave inversion, Red arrows: U waves. K^+ 4.0 mmol/L

Discussion

- Clinician awareness of TPP and prompt thyroid function testing can prevent misdiagnosis and unnecessary investigations such as cranial imaging and lumbar puncture
- Excess thyroid hormones increase skeletal muscle Na^+/K^+-ATPase pump activity, driving potassium into cells, causing hyperpolarisation and resulting in muscle paralysis[1]
- Na^+/K^+-ATPase pumps are present in cardiomyocytes and ECG rhythm disturbances are common in TPP[2]. Our case demonstrates that dynamic ECG changes can occur and may persist despite potassium normalisation
- Patients with ECG changes should be closely monitored[3] and an individualised cardiac risk stratification may be required

References

1. Hsieh CH, Kuo SW, Pei D, Hung YJ, Chyi-Fan S, Wu LI, et al. Thyrotoxic periodic paralysis: an overview. Annals of Saudi Medicine. 2004 Nov;24(6):418–22.
2. Suhail M. Na, K-ATPase: Ubiquitous Multifunctional Transmembrane Protein and its Relevance to Various Pathophysiological Conditions. J Clin Med Res. 2010 Feb;2(1):1-17.
3. Boccalandro C, Lopez L, Boccalandro F, Lavis V. Electrocardiographic changes in thyrotoxic periodic paralysis. The American Journal of Cardiology. 2003 Mar;91(6):775–7.

*Patient consent obtained

Best presentation (joint) in the quality improvement and patient safety, audit category

Thahaseen Basheer

Embedding routine quality of life assessment in geriatric cancer patients receiving chemotherapy: a quality improvement initiative

Embedding Routine Quality of Life Assessment in Geriatric Cancer Patients Receiving Chemotherapy: A Quality Improvement Initiative

Basheer, Thahaseen[1]; Warrier, Arun[2]; Vallathol, Dilip[2]
[1],[2]Aster Medcity, Kochi, India

INTRODUCTION

- Geriatric oncology patients face significant symptom burden, psychological distress and functional decline during chemotherapy
- Routine QOL assessment using patient-reported outcome measures (PROMs) improves symptom detection, communication and clinical outcomes[1–3]
- Despite this evidence, QOL assessment remains under-utilised in routine oncology practice
- At our centre, baseline QOL documentation in geriatric patients receiving chemotherapy was **0%**
- **Aim:** Increase routine QOL assessment from 0% to ≥50% within six months

MATERIALS AND METHODS

- **Six-month QIP** (2025), medical oncology department, tertiary care centre.
- **SMART aim:** QOL assessment in geriatric patients (≥65 years) on chemotherapy from 0% → 50% by December 2025
- **Baseline data** plotted on run chart; progress tracked weekly. (Figures 1 & 2)

- **Sequential PDSA interventions:**

1. Validated QOL tool distributed in infusion therapy unit.
2. Intern assigned to collect completed forms.
3. QOL documentation integrated into EMR.
4. Junior resident allocated for daily data collection.
5. Onco-psychologist appointed for data entry, monitoring and monthly reporting.

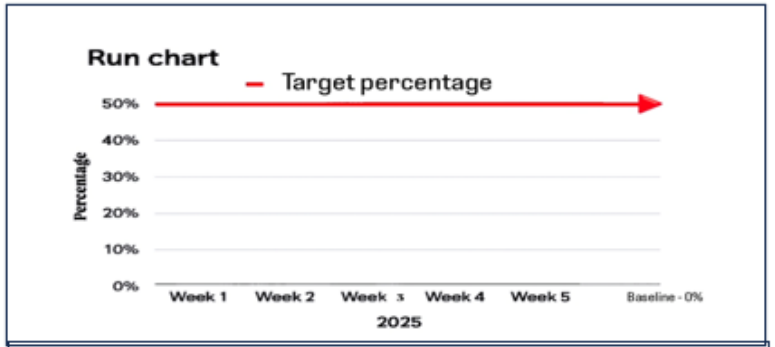


Figure 1. Baseline run chart demonstrating 0% QOL assessment rate prior to intervention.

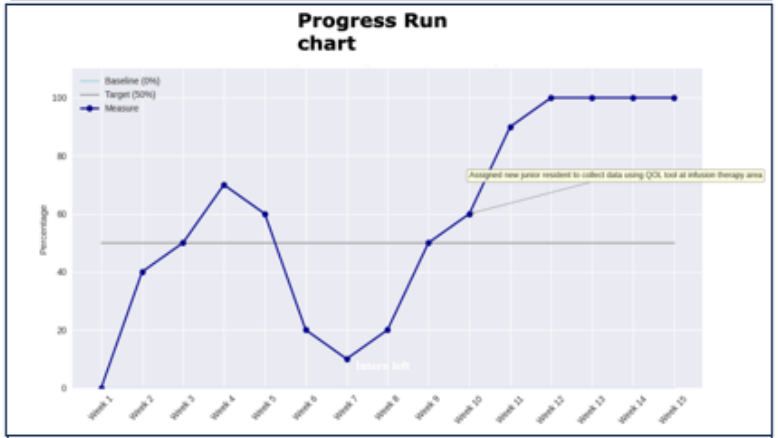


Figure 2. Progress run chart demonstrating improvement to sustained 100% compliance following workflow redesign and role allocation.

RESULTS AND DISCUSSION

- QOL assessment rates increased from **0% at baseline → 50% by Week 3.**
- **Temporary decline** following intern turnover — highlighting system vulnerability to personnel changes.
- Following junior resident allocation and workflow strengthening: compliance improved steadily.
- **100% compliance achieved by Week 12; sustained through project completion.**
- Structured workflow redesign and clear accountability are key drivers of sustained improvement.
- Findings align with evidence that PROMs improve survival and symptom control[1–3]

CONCLUSION

- Routine QOL assessment in geriatric cancer patients is feasible, scalable and sustainable within structured clinical workflows.
- Clear role allocation and EMR integration were pivotal to achieving and sustaining improvement.
- Systematic QI methodology can successfully embed PROMs into routine oncology practice, strengthening holistic care[4].

References:

1.Basch E et al. *JAMA.* 2017;318:197–8. 2. Denis F et al. *J Natl Cancer Inst.* 2019;111:1–8. 3.Kotronoulas G et al. *J Clin Oncol.* 2014;32:1480–501. 4.WHO. Global report on cancer. Geneva: WHO, 2020.

Best presentation (joint) in the quality improvement and patient safety, audit category

Áine Corry

‘About time’: improving use of the 6-hour decompensated cirrhosis care bundle

‘About Time’ : Improving use of the 6-hour Decompensated Cirrhosis Care Bundle

Western Health and Social Care Trust

Á. Corry[1], S. Gilmour[2], H. Sheikh[2], R. O’Kane[2].

INTRODUCTION

The British Society of Gastroenterology (BSG)/British Association for the Study of the Liver (BASL) introduced the **Decompensated Cirrhosis Care Bundle (DCCB)** as a guideline for clinical assessment, investigation and management within the first 24 hours.

Usage of the bundle was 11.4% on a national audit which prompted the development of **minimum audit standards** alongside an **updated 6-hour bundle**, by the BSG, BASL and the Society for Acute Medicine in 2025.

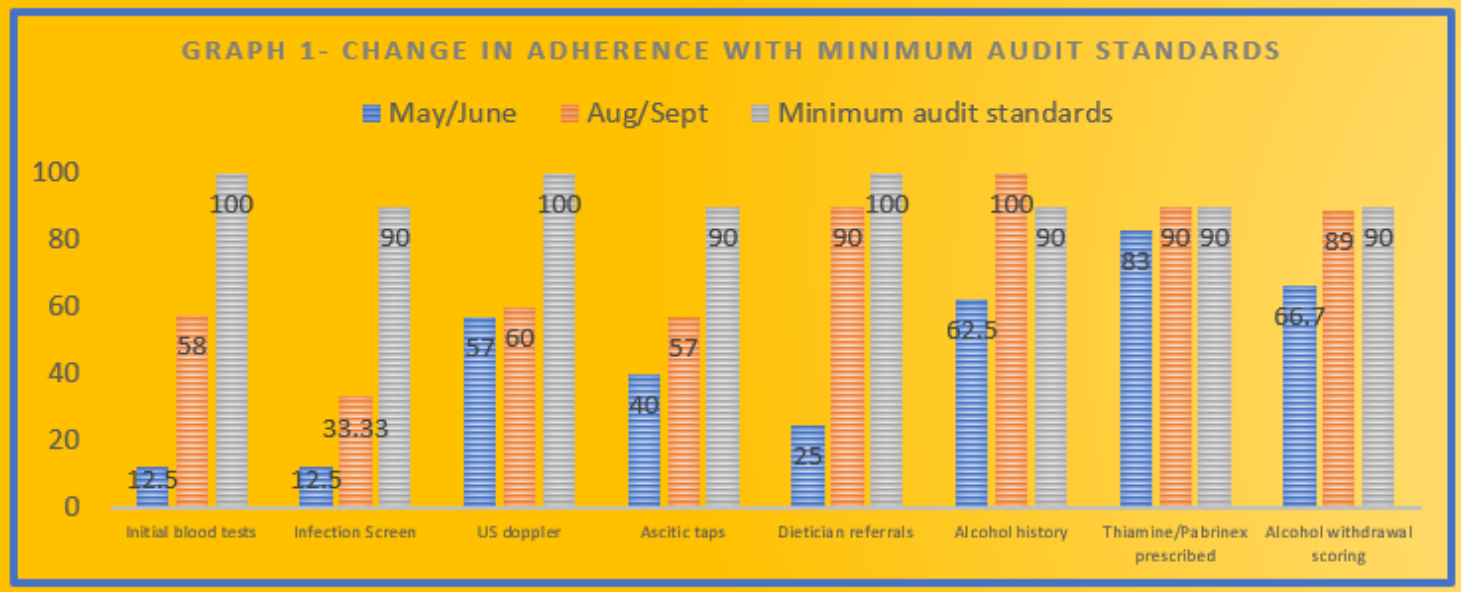
Our **aim** was to establish if Altnagelvin Area Hospital was meeting these minimum audit standards and undertake a Quality Improvement Project **to improve our adherence with the new 6-hour bundle and audit standards.**

MATERIALS AND METHODS

We audited **all admissions of acute decompensated cirrhosis** from **early May until the end of June 2025.**

We created laminated posters of the new 6-hour DCCB and displayed these around the Emergency Department. We sent communication regarding the new bundle and the required initial investigations and management to medical and emergency medicine colleagues.

Following this we **re-audited admissions during August and September.**



RESULTS, DISCUSSION AND CONCLUSION

We found a **number of areas where we were meeting audit standards,** including early specialist GI / Hepatology review and the initial management of acute kidney injury, upper gastrointestinal and variceal bleed, and spontaneous bacterial peritonitis.

As seen in Graph 1, while we **have improved the use of the 6- hour DCCB and compliance with minimum audit standards,** there remains **areas where we are not meeting these standards** particularly initial blood tests, infection screening, ascitic taps and US doppler requests.

We are **planning to complete a further intervention and then re-audit** with the hope that there will be a further and sustained improvement.

References: 1. McPherson, S. *et al.* (2025) *Decompensated cirrhosis: an update of the BSG/BASL admission care bundle*, *BMJ Journals Frontline Gastroenterology* . Available at: https://fg.bmj.com/content/flgastro/16/e1/e3.full.pdf (Accessed: 18 February 2026). 2. *Decompensated cirrhosis: an update of the BSG/BASL admission care bundle* (2025) *British Society of Gastroenterology*. Available at: https://www.bsg.org.uk/clinical-resource/new-decompensated-cirrhosis-admission-care-bundle (Accessed: 18 February 2026).

Best presentation education, training and medical professionalism category

Helen Addington

Prospective development of a Delphi questionnaire to assess clinical abbreviation use in past medical and family history documentation in a secondary healthcare system in the UK

Prospective Development of a Delphi Questionnaire to Assess Clinical Abbreviation Use in Past Medical and Family History Documentation in a Secondary Healthcare System in The United Kingdom (UK).

Conducted as Part of the Royal College of Physicians Peer Support Network Project (October 2025– April 2026).

Dr Helen ADDINGTON

Introduction

Clinical abbreviations in secondary care in the United Kingdom (UK), especially in Past Medical History and Family History continuous to cause:

- Ambiguity, misinterpretation [1].
- Patient safety concerns [1].

Methodology

10 stake holders in the UK secondary healthcare Trust.

Conducted over 4 weeks (March 2026).
Responses analysed for clarity, communication, safety, and training themes.

Stakeholder Groups

UK Non-consultant locum doctors (Foundation/SHO level)

UK Healthcare Professionals

Round 1 (Input) → **Round 2** (Rating) → **Round 3** (Consensus)

Delphi Process [2,3] – An iterative data process

Overarching Findings From Delphi Questionnaire

Examples of High-Risk Abbreviations:

MS:
? Multiple sclerosis.
? Mitral stenosis

PE:
?Pulmonary embolism
? Pleural effusion
? Pulmonary Oedema

Multiple meanings increase the risk of clinical misunderstanding.

DM
CVA
ICD

Frequency of Abbreviations use

A wide range of abbreviations being are being used across specialities.

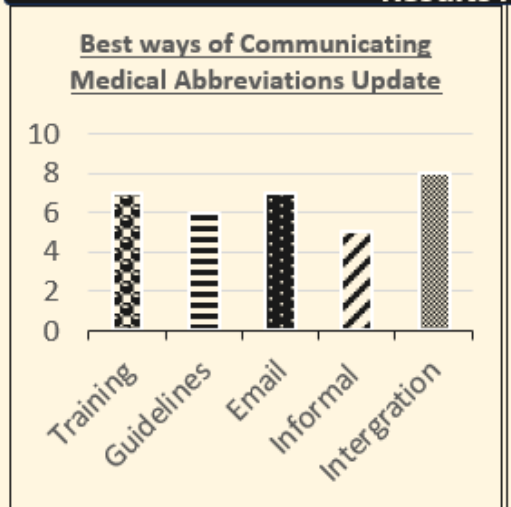
Memorability

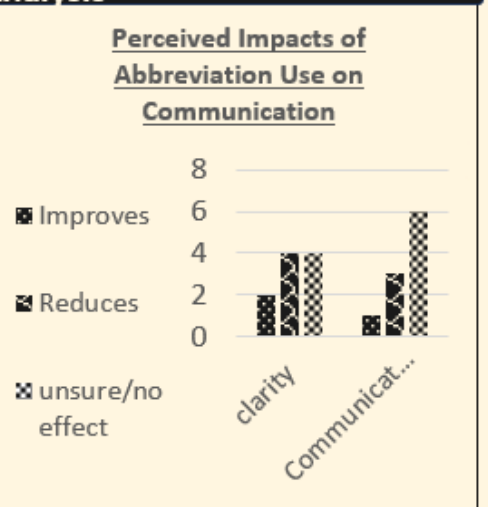
Some abbreviations are easier to recall but not always clearly understood.

Variations in Training

Variation exists in whether clinicians receive formal training.

Results Analysis





Conclusion

- ✓ Safer documentation.
- ✓ Improved patient safety.
- ✓ Improved clarity.
- ✓ Better communication.

Next step

- ✓ **Refine Delphi questionnaire**
- ✓ **Extend Delphi rounds (Socratic model [5], larger sample)**
- ✓ **Create standardised abbreviation guide**

Reference:

1. Jayatilake DC, Oyibo SO. Interpretation and misinterpretation of medical abbreviations found in patient medical records: a cross-sectional survey. *Cureus*. 2023;15(9).
2. Linstone HA, Turoff M. The Delphi method: *Addison-Wesley Reading*, MA; 1975.
3. Homberg A. Conducting Delphi surveys in medical education research. *GMS Journal for Medical Education*. 2026;43(1):Doc6.
4. Paul, R., & Elder, L. (2007). Critical thinking: The art of Socratic questioning. *Journal of developmental education*, 31(1), 36.

Disclaimer & Acknowledgement
The authors declare no competing interests. Patient informed consent was not required for data collection or presentation. I would like to offer my sincere gratitude to the medical and healthcare team at **WhippsCross Hospital, Barts NHS Health Trust** for assistance with data collation.

Best poster – winner

Pharveen Jaspal

A family affair: recognising food-borne botulism as a rare cause of acute neurological deterioration

A Family Affair: Recognising Food-Borne Botulism as a Rare Cause of Acute Neurological Deterioration

Pharveen Jaspal[1] & Eliza Griffiths[2]

[1]Resident in Internal Medicine, [2]Consultant Geriatrician

NHS South Warwickshire University NHS Foundation Trust

The Prodrome:

- Mother and son present to ED with a 24-hour history of dizziness, diplopia and vomiting.
- Initial bloods and assessment unremarkable.
- Son suffered respiratory arrest and was admitted to the ITU.

Respiratory Failure: Progression to Type 2 respiratory failure necessitated emergency intubation and ITU transfer.

The Critical Nadir:

- Sudden development of new oxygen requirement and type 2 respiratory failure.
- Emergency intubation and transfer to the ITU.
- Lumbar punctures for both patients unremarkable.

Exclusionary Testing: Unremarkable CSF results from lumbar puncture shifted the focus away from inflammatory or infectious polyneuropathies.

Microbiological Confirmation:

- Stool samples return positive for *Clostridium botulinum* neurotoxin gene A.
- Food-borne botulism is officially confirmed.

Did you know?

There are 3 forms of botulism: food-borne, wound and intestinal. In the UK, food-borne botulism is extremely rare, with only **13 confirmed cases from 1992 to 2019** [1].

24 hours | 48 hours | Day 8 | Day 12

Descending Paralysis:

- Mother developed bilateral ptosis, horizontal gaze palsy, and dysarthria.
- The ED team and medical consultants' working diagnosis was botulism.
- Expert opinion favours excluding mimics such as Myasthenia Gravis & Miller Fisher Variant of Guillain-Barré Syndrome via CT head and lumbar puncture.

Clinical Intervention:

- Public Health England releases the botulism antitoxin.
- Decision made to treat empirically prior to microbiological confirmation.

Recovery:

- Following 12 days of invasive ventilation, the patient undergoes a surgical tracheostomy.
- Transferred to a specialist neuro-rehabilitation unit to begin recovery.
- The patient subsequently made a full neurological recovery and returned to functional baseline.

Key Turning Points

The 'Power of Two': The simultaneous neurological decline of two household members became the definitive red flag for toxin-induced pathology.

Learning Points

- **Clinical over Confirmation:** Do not wait for lab results; antitoxin should be administered based on clinical suspicion to improve outcomes.
- **Household Red Flags:** Multiple patients from one household with descending paralysis must be treated as an environmental/foodborne toxin emergency.
- **Addressing inequality:** Highlights the need for targeted food safety education and healthcare access for vulnerable populations.

1. Botulism | Health Knowledge [Internet]. Healthknowledge.org.uk (2025).

Consent has been obtained from the patient for the purposes of this presentation and associated publication.

Best poster – runner up

Alice Ditchfield

Vaccination against shingles and prevention of long-term ocular morbidity – a retrospective study of cost implications to the NHS

Vaccination against shingles and prevention of long-term ocular morbidity - a retrospective study of cost implications to the NHS

Alice Ditchfield, Mana Rahimzadeh & Bita Manzouri - Barking, Havering and Redbridge University Hospitals NHS Trust

Barking, Havering and Redbridge University Hospitals NHS Trust

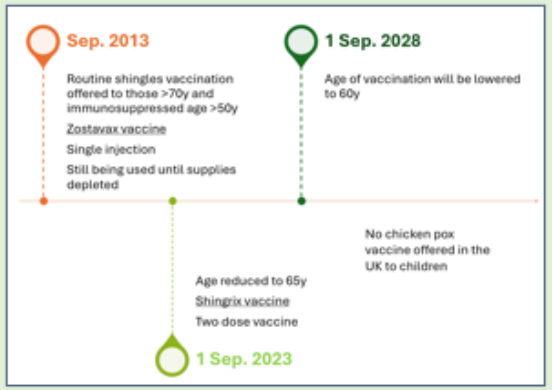
Background

Shingles:

- Caused by reactivation of Herpes Zoster Virus (HZV)
- Initial infection causes chicken pox (children) → virus remains dormant in sensory ganglia of the cranial nerve or dorsal root ganglia
- Reactivation of HZV occurs due to failure of immune defence systems to control the latent replication of the virus
- Incidence related to immune status of individual

Ophthalmic Shingles (Herpes Zoster Ophthalmicus, HZO):

- V1 is the commonest involved branch, affecting skin of forehead, upper eyelid and the orbit
- HZO accounts for 10-20% of all shingles cases
- 10-25% present with keratitis/uveitis/optic nerve palsies
- **Complications**: chronic ocular inflammation, loss of vision, debilitating pain, scarring, secondary bacterial infection



Aim

We undertook a retrospective study determining the number of patients aged 50 - 69y who had attended our hospital with HZO. We determined how many were affected with long term ocular sequelae of this infection and the subsequent costs to the NHS.

Methods

Undertaken at Queen's Hospital, Romford, UK
Retrospective case note analysis of patients who attended eye casualty / main casualty with HZO
Patients aged >50y but below eligible age for NHS vaccination
Excluded patients who were immunosuppressed and therefore eligible for shingles vaccination based on immunosuppression irrespective of age
Data collection between 1st April 2022 – 31st July 2024 (28 months)
We calculated the total cost to the NHS of these patients' investigations and treatment

Vaccination costs

Zostavax: £99.96 for one dose (used until 31st August 2023)
Shingrix: £320 for two doses (introduced from 1st Sept 2023)

Costs to the NHS per patient

Attendance type	Cost
Eye casualty	£192
Main casualty	£250
Clinic appointment as a new patient	£175
Clinic appointment as a follow-up	£76

Medication costs

- NHS indicative prices listed in the BNF
- Total cost of different eye drops used by each patient added = total eye drop cost per patient
- **BUT** only cost of ONE bottle of eyedrops per patient included
- Oral aciclovir: 800mg x 5 per day for 7 days = £3.30
- BNF **cheapest cost** used if multiple brands

Imaging costs

- For patients requiring follow up in medical retina clinic, cost of **ONE** OCT image x number of MR clinic attendances
- OCT costs: £100 per pair of images
- OCT taken for every patient in medical retina clinic
- Excluded imaging in eye casualty or elsewhere

10 long-term complications affecting **9 patients** → 1 in 5 patients in this study
(Post-herpetic neuralgia, corneal scarring, CNIII palsy, ectropion)

Results

- 48 cases of HZO which met inclusion criteria
- **162 total** hospital attendances; average 3.8, range 1 – 23
- 9 out of 48 patients on long term medications

Total cost of investigation and management of 48 cases = **£42,981.98**

For this same cost, a total of **350 individuals** aged >50y could have been vaccinated

	Attendance costs	Medication costs	Imaging costs	Total costs	
Group 1	£29,544.00	£925.81	£900.00	£31,369.81	314 people
Group 2	£10,827.00	£385.17	£400.00	£11,612.27	36 people
			Overall total	£42,981.98	350 people

NUMBER NEEDED TO VACCINATE (NNV)

- Based on an annual incidence of shingles after age 50 being 0.7 – 0.8%
- NNV = **9-10** to prevent one case of shingles
- 350 vaccinations could prevent approximately **35 cases of shingles**

- It would be recommended, based on this small study at a secondary referral centre, that the **age for shingles vaccination in the UK be lowered to 50 years**, in line with many other countries of the world
- Our HZO study demonstrates cost savings to the NHS, noting that HZO accounts for only 10-20% of all shingles cases
- Long term morbidity to young working age patients can be avoided