Top of the POPS: improving clinical frailty scoring accuracy and confidence in managing geriatric syndromes on a vascular unit

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Improving healthcare for older people

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Background

Perioperative Medicine for Older People Undergoing Surgery

Increasingly, patients over 65 years old with frailty, multimorbidity and cognitive impairment are undergoing surgery[1] with **higher mortality rates** and **post-operative medical complications**, such as pneumonia and delirium[2]. Recovery is slower and often incomplete, leading to **deconditioning**[3].

- Some institutions have established Perioperative Medicine for Older People undergoing Surgery **(POPS)** services, demonstrating **clinical and economical benefits**, such as fewer cardiac complications[4].

Local Referral Criteria

- As part of a national upscale (POPS-SUp), University Hospitals of Leicester geriatricians piloted a vascular-liaison service, delivering **comprehensive geriatric assessment** (CGA) for patients with…
  - Aged 65+ years / complex geriatric syndrome
  - CFS ≥ 5
  - > 48 hour admission
  - Lower limb vascular pathology

Aims

- To evaluate and **improve CFS accuracy** by the Vascular MDT compared to geriatricians, enabling appropriate referrals.
- To improve confidence in **identifying and managing geriatric syndromes** amongst the Vascular MDT.

Methods

PDSA Cycles

Cycle One

Six-week Teaching Programme

1. Rockwood Clinical Frailty Score
2. Peri-operative Delirium
3. Post-operative Medical Complications
4. Preventing & Managing Falls
5. Polypharmacy & Deprescribing
6. Advanced Care Planning

Cycle Two

Frailty Network CFS App

Staff were encouraged to use the clinical frailty network mobile application[5], endorsed by the BGS and RCP, to assess CFS on admission.

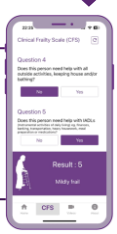

Figure 1: The clinical frailty network mobile application.

Mixed-Methods Evaluation

Quantitative

- **Bland-Altman analysis** to assess a mean bias in CFS scores by the vascular MDT compared to geriatricians.
- **% accuracy** for concordance of identical CFS scores.
- **5-point Likert scale** for pre- and post-teaching confidence.

Qualitative

- Reflexive **thematic analysis** of free-text, qualitative feedback provided on post-teaching questionnaires, using Braun and Clarke's six-phase framework.
- **Word cloud** generation, with font size representing prevalence of each theme.

Results

Bland-Altman

Table 1: Bland-Altman analysis of CFS assigned by the vascular MDT compared to geriatricians

Stage	N	Bias	LoA
Baseline	104	- 0.7	-2.7 – 1.6
Cycle 1	48	0.2	-2.5 – 2.9
Cycle 2	26	0.3	-1.6 – 1.0

Abbreviations: CFS = Clinical Frailty Score; LoA = 95% Limits of Agreement

% CFS Accuracy

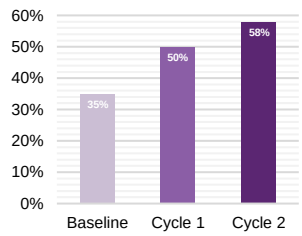

Figure 2: % CFS accuracy between the vascular MDT and geriatricians at baseline and after each cycle.

Confidence Ratings

Figure 3: Average confidence ratings on a 5-point Likert scale for each geriatric syndrome topic reported by members of the vascular MDT before and after the teaching programme; ACP = Advanced Care Planning.

Thematic Analysis

Figure 4: Word cloud of the three most prevalent themes.

> *Neil has gone **above and beyond** teaching the surgical team. The programme has been hugely beneficial to the MDT and has directly contributed to **better patient safety** and outcomes* --- *FY1*

Discussion

Strengths & Limitations

Objective measures of CFS accuracy demonstrate **improved competence**, as well as confidence.

Mixed-methods design provides **deeper understanding** of impact.

Long-term impact of a **short-term intervention** is unclear, particularly for rotational training.

Lack of measure for **CFS app compliance** by staff limits interpretation of its efficacy.

Conclusion

- Teaching **refined CFS accuracy** by non-geriatricians on the vascular ward, improving **accurate identification** of patients to refer to the POPS service for CGA. This may have **clinical significance** in improving perioperative outcomes, which are now being determined.
- Training and **education within host surgical teams is imperative** for POPS service development.

Future Work

Webinars with NHS elect for future cohorts → Evaluate clinical outcomes → Service implementation

References

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POPS-SUp Study