

**Scotland Spring Meeting  
6 May 2022**

**Book of Abstracts**

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## Platform Presentations

Platform Presentation 6th May 14.00-14.15

CQ - Clinical Quality - CQ - Patient Centredness

1090 Improving the use of treatment escalation plans for elderly patients in a district general hospital

R Osborn; Dumfries and Galloway Royal Infirmary

### Introduction

Treatment escalation plans (TEPs) help define goals of care and encourage a holistic approach with involvement of patients and/or their loved ones. This is important for both patients for full escalation and with treatment limitations and has taken on increasing importance during the COVID-19 pandemic. In a Geriatric ward, there appeared to be a lack of TEPs despite a high proportion of DNACPR forms. This project aimed to identify and improve the prevalence of TEPs in patients over 65, their association with DNACPR forms and involvement of patients/relatives in the decision-making process.

### Methods

Using quality improvement methodology, interventions included (i) a new TEP form rolled out in five medical wards; (ii) posters distributed throughout the wards highlighting the importance of TEPs; (iii) email correspondence to all medical staff regarding the proposed form and (iv) discussion with consultants at their weekly meeting. Two rounds of 'snapshot' data collection occurred four weeks apart, before and after changes were made.

### Results

In cycle 1, 40% (34/85) patients had a valid TEP in place whereas in cycle 2 this increased to 49/88 (56%). 50% of those in cycle 1 were completed within 3 days of admission and this increased to 61% in cycle 2. Documentation of patient or relative involvement/understanding of the decisions occurred in 62% in cycle 1 and 78% in cycle 2. When assessing the relationship between DNACPR and TEPs, 60% of DNACPR forms in cycle 1 had an accompanying TEP and this increased to 74% in cycle 2.

### Conclusion

Following changes TEP completion rates improved and this was primarily in those patients with a DNACPR decision. Escalation decisions tended to occur earlier in admission and there was improved communication with patients/relatives. Overall, this suggests a greater awareness of TEPs and their importance in providing holistic and patient-centred care.

# Improving the use of treatment escalation plans in a district general hospital



Dumfries and Galloway Royal Infirmary  
Dr Robert Osborn, Dr Sarah Pickstock



## Introduction

- Treatment escalation plans (TEPs) describe the overarching goals of treatment and appropriate level of medical intervention in event of patient deterioration.
- Clear documentation contributes to individualised care for patients, and is particularly useful in the on-call/out-of-hours setting.
- On a Geriatric ward, it was noted that there were relatively few TEPs despite a high proportion of DNACPR forms.

## Aims

- Identify the prevalence of TEPs in patients 65 years and over, and implement changes to improve this aspect of patient care.
- Assess the relationship between TEPs and DNACPRs, as well as documented discussions with patients or relatives.

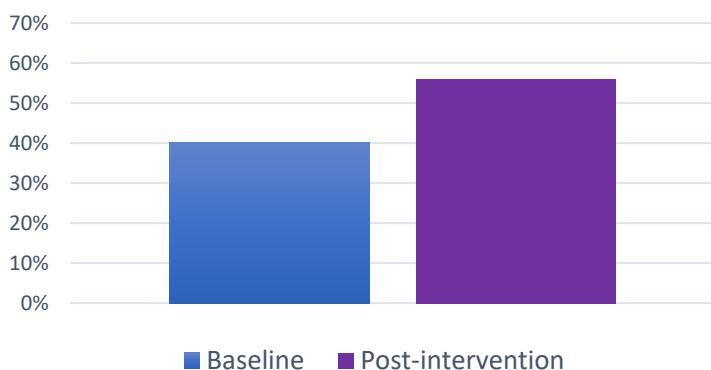
## Methods

- A new deteriorating patient form was rolled out in five wards, and posters were distributed to alert people to the use of TEPs.
- Correspondence was made with medical staff via email and at the consultant meeting.
- Two rounds of data collection occurred, before and after the above changes.

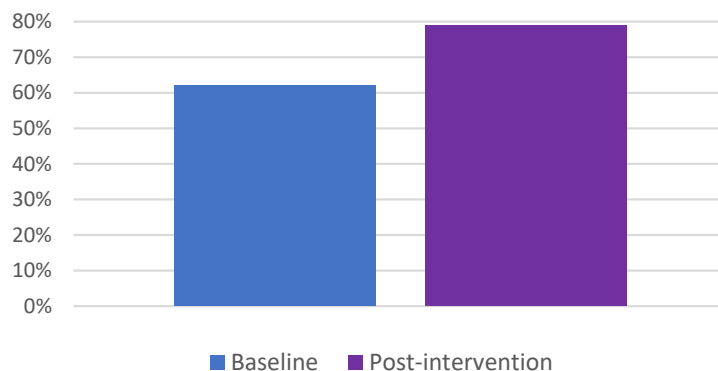
## Results

- Prior to intervention, 40% (34/85) patients had a valid TEP in place whereas following changes this increased to 49/88 (56%).
- Of the 34 completed in the baseline data, 50% were done within 3 days of admission and 53% used the up-to-date form at that time.
- Following changes, 61% were done within 3 days of admission and 67% used the most up-to-date form (accounting for the date of its implementation).
- Before changes, 62% forms had a documented discussion with patient or family. This improved to 78% following changes.

### TEPs in place

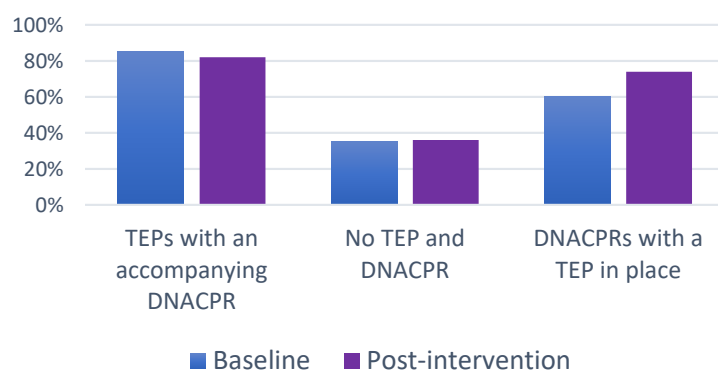


### Discussion with patient/family



- Of the baseline cohort, 60% of patients with a DNACPR decision had a TEP; this increased to 74% following interventions.
- Of those with a TEP form, 85% before and 82% after changes had a corresponding DNACPR.
- Of people without a TEP in place, a DNACPR form existed in 35% of the baseline cohort and 36% in those after changes were made.

### Association between TEPs and CPR decisions



## Discussion

- With changes made, improvement in TEP completion was seen, and escalation decisions tended to be made earlier in admission.
- There was an improvement in communication with patients/relatives, where indicated.
- A TEP, if completed, was much more likely to be accompanied by a DNACPR. Patients with no TEP were much less likely to have a DNACPR.
- For those patients with DNACPRs, an increase in TEP completion was seen following interventions and so it is in this cohort of patients where there has been greatest improvement.
- There is a much higher proportion of TEP completion in people who have a DNACPR than in those who don't.
- Challenges included the short timeframe available to collect data as well as maintaining accessibility of the new deteriorating patient form. Furthermore, it was challenging to ensure communication of changes reached all staff, when considering the varying commitments and shift patterns.

Platform Presentation 6th May 14.15-14.30

SP - Scientific Presentation - SP - Other (Other medical condition)

### 1111 Characteristics of frail elderly patients referred for Covid-19 home assessment 29/3/20 to 30/5/20

J Bishop-Miller; S Henderson; E Millar; Department of Ageing and Health; Forth Valley Royal Hospital

#### Introduction

In NHS Forth Valley patients with possible Covid-19 were triaged by the assessment centre to advice only, attendance at an assessment centre or home assessment by the Enhanced Community Team (ECT) for frail elderly housebound patients. In the period 29/3/20 to 30/5/20 118 patients were referred to ECT for Covid-19 assessment.

#### Methods

A retrospective review of the characteristics of all 118 patients in the period 29/3/20 to 30/5/20 was performed. Cases were characterised as Covid-19 likely, possible or unlikely on a clinical basis. Generally only patients admitted to hospital had Covid swabs performed as community testing was not routinely available during this time. Data was analysed and 30 day mortality noted.

#### Results

117/118 patients received a home visit (1 patient admitted directly to hospital after telephone consultation by ECT). 28 patients thought likely to have Covid-19, 32 patients thought to have possible Covid-19, 58 patients thought unlikely to have Covid-19. Of those who had swabs performed positive swabs occurred in 13/14 of those thought likely to have Covid, 1/17 thought to have possible Covid and 0/13 thought unlikely to have Covid. 30 day mortality was 61% in the likely Covid group, 12.5% in the possible Covid group and 12% in those thought unlikely to have Covid. Clinical primary diagnosis was Covid-19 in 30 patients, there was a wide range of other diagnoses the most common being pneumonia, heart failure, COPD and other respiratory problems.

#### Conclusions

Only 25% of patients assessed were thought likely to have Covid-19. After face-to-face assessment many alternative diagnoses were made. In a group of frail elderly patients with multiple co-morbidities face-to-face assessment is necessary to make an accurate diagnosis and treat the patient appropriately.

# Characteristics of frail elderly patients referred for Covid-19 home assessment 29/3/20 to 30/5/20

J Bishop-Miller, S Henderson, E Millar and the Forth Valley Enhanced Community Team

## Introduction

In NHS Forth Valley patients with possible Covid-19 were triaged by the assessment centre to advice only, F2F at the centre or home assessment by the Enhanced Community Team (ECT). In the 2 months 29/3-30/5/20 118 patients were seen and assessed by ECT

## Methods

A retrospective review of the characteristics of all 118 patients was performed. Cases were characterised as Covid likely, possible or unlikely on a clinical basis. Generally only patients admitted to hospital had PCRs performed as community testing was not available at this time. Diagnosis and 30 day mortality was noted.

## Results

Table 1: Characteristics of patients assessed by ECT for Covid-19

Covid group	N (%)	Mean age (range)	Male (%)	PCR Done (%)	PCR +ve (%)	Admitted (%)	30 day mortality (%)	Covid on death cert (%)
Likely	28 (24)	81.4 (54-96)	14 (50)	14 (50)	13 (93)	10 (36)	17 (61)	16 (94)
Possible	32 (27)	79.2 (60-96)	18 (56)	17 (53)	1 (6)	14 (44)	4 (12)	3 (75)
Unlikely	58 (49)	83.1 (61-100)	21 (36)	13 (22)	0 (0)	9 (16)	7 (12)	0 (0)
Total	118 (100)	81.6 (54-100)	53 (45)	44 (37)	14 (32)	33 (28)	28 (24)	19 (68)

Table 2: Primary ECT diagnosis

Primary ECT diagnosis	Number (%)	Primary ECT diagnosis	Number (%)	Primary ECT diagnosis	Number (%)
Covid-19	30 (25)	COPD/asthma/bronchiectasis	11 (9)	GI issues/melaena	3 (3)
Pneumonia	22 (17)	UTI	8 (7)	Other viral illness	3(3)
Heart failure	14 (12)	Delirium	4(3)	Chest pain	2 (2)

Other diagnoses included non-specifically unwell, cellulitis, dementia, urinary retention, drug side-effects, flare up of vasculitis, possible MND, frailty, accidental paracetamol overdose, palliative care, cold house due to boiler turned off.

## Conclusions:

- Only 25% of patients assessed were thought to have Covid-19, 30 day mortality for this group was 61%
- After F2F assessment many other diagnoses were made.

Although a small study this demonstrates the need for adequate (probably F2F) assessment of frail elderly people with multiple co-morbidities to make an accurate diagnosis and start appropriate treatment.

Platform Presentation 6th May 14.30-14.45

SP - Scientific Presentation - SP - HSR (Health Service Research)

### 1112 The Effect of Deprivation on Geriatric Medicine Outcomes in Scotland

M Pritchard 1; R Soiza: University of Aberdeen; 2. Consultant Physician - NHS Grampian, Honorary Clinical Senior Lecturer, Ageing Clinical & Experimental Research - University of Aberdeen

#### Introduction

Deprivation is directly linked to excess morbidity and mortality. The last Scottish Care of Older People (SCoOP) report “highlights significant variation in outcomes across the country and provides potential benchmarks for future quality improvement and greater consistency in outcomes.” This report will explore if deprivation accounts for any of this variation in outcomes, and to what degree.

#### Methodology

The data analysed in this project was from the SCoOP database. A deprivation index for patients admitted to each of the twenty Scottish geriatric medicine units was calculated. The association between deprivation and seven different outcome measures was analysed using simple correlation and multiple regression to correct for age and sex.

#### Results

There was a significant positive relationship between deprivation index and proportion of over 65s admitted to a geriatrics unit ( $R = .488$ ;  $p\text{-value} = .048$ ). There was a negative correlation between deprivation index and mortality rates at both 30 ( $R = -.507$ ;  $p\text{-value} = .023$ ) and 60 days ( $R = -.450$ ;  $p\text{-value} = .047$ ) post admission. Multiple regression analysis showed these associations were non-significant after correcting for age and sex.

#### Conclusion

Although deprivation was associated with increased admissions, there was no significant negative impact on outcomes. This suggests that hospitals caring for more deprived populations have developed services to overcome this adversity. This may offer opportunities to learn how to improve patient care and public health.



# The Effect of Deprivation on Geriatric Medicine Outcomes in Scotland

Miss Maddie Pritchard and Dr Roy Soiza

Ageing Clinical and Experimental Research, University of Aberdeen

## Introduction

Deprivation is directly linked to excess morbidity and mortality<sup>[1]</sup>. The last Scottish Care of Older People (SCoOP) report “highlights significant variation in outcomes across the country, and provides potential benchmarks for future quality improvement and greater consistency in outcomes.”<sup>[2]</sup> This project explored if deprivation accounted for any of this variation in geriatric medicine outcomes, and to what degree.

## Methodology

The data analysed in this project was from the SCoOP database. A deprivation index for patients admitted to each of the twenty Scottish geriatric medicine units was calculated. The association between deprivation and seven different outcome measures was analysed using simple correlation and multiple regression to correct for age and sex.

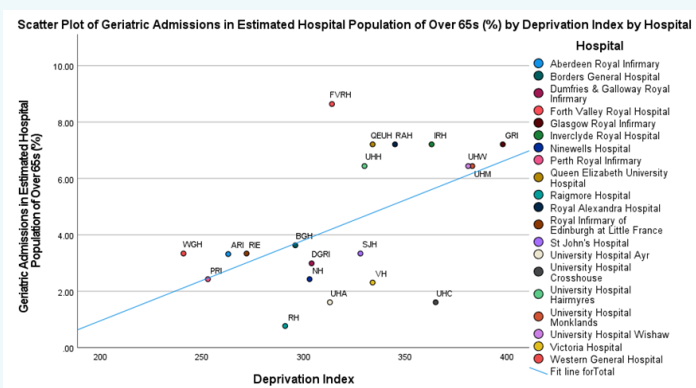


Figure 1: Scatter Plot of Geriatric Admissions in Estimated Hospital Population of Over 65s (%) by Deprivation Index by Hospital

## References:

1. Impact of deprivation on health [Internet]. Public Health Scotland. 2021 [cited January 2022]. Available from: <http://www.healthscotland.scot/health@inequalities/impact-of-ill-health/impact-of-deprivation-on-health>
2. SCoOP Acute Hospital Outcomes Report 2018-2019 [Internet]. SCoOP; 2019 [cited January 2022]. Available from: <https://www.bgs.org.uk/sites/default/files/content/attachment/2021-02-24/SCoOP%20Acute%20Hospitals%20Outcome%20Report%202018-2019.pdf>

With thanks to the University of Aberdeen for providing funding support to purchase data from Public Health Scotland.

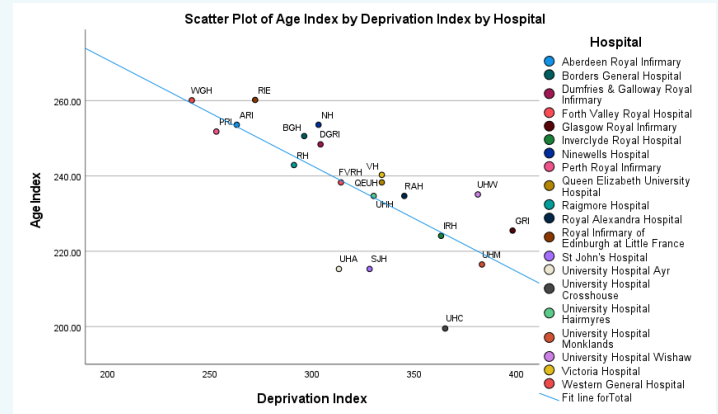


Figure 2: Scatter Plot of Age Index by Deprivation Index by Hospital

## Results

There was a significant positive relationship between deprivation index and proportion of over 65s admitted to a geriatrics unit ( $R = .488$ ;  $p$ -value = .048) (see Figure 1). There was a negative correlation between deprivation index and mortality rates at both 30 ( $R = -.507$ ;  $p$ -value = .023) and 60 days ( $R = -.450$ ;  $p$ -value = .047) post admission. Multiple regression analysis showed these associations were non-significant after correcting for age and sex, as age significantly influenced outcomes (see Figure 2).

## Conclusion

Although deprivation was associated with increased admissions, there was no significant negative impact on outcomes. This suggests that hospitals caring for more deprived populations have developed services to overcome this adversity. This may offer opportunities to learn how to improve patient care and public health.



**Platform Presentation 6th May 14.45-15.00**  
**CQ - Clinical Quality - CQ - Improved Access to Service**

1117 Management of Frailty Through Early Identification and Intervention to Improve Patient Outcome

K Frew<sup>1</sup>; J Wylie<sup>1</sup>; G Shevlin<sup>1</sup>: 1. Care of the Elderly Department, University Hospital Wishaw, NHS Lanarkshire

**Introduction**

With an ageing population and over 500,000 people in Scotland with frailty, the impact on healthcare services is significant. Management of frailty through this pilot seeks to implement early identification and intervention to help improve patient outcome and prevent further decline.

**Methods**

Pilot over 20 weeks, undertaking frailty screens, using the Rockwood Clinical Frailty Score, on all patients over 65 attending the Emergency Department. Case note review of patients with frailty scores 4-6 undertaken by the Care of the Elderly team and intervention by way of a telephone consultation and signposting to multidisciplinary colleagues including Physiotherapy, Occupational Therapy, Social Work and outpatient medical review.

**Results**

62 patients attended ED who had a frailty score of 4-6. Presentation reasons included falls (61.3%), joint pain (14.5%), urinary (8.1%), respiratory (6.5%), TIA (3.2%), chest pain (3.2%) and other (3.2%). 9 (14.5%) patients were re-admitted within 30 days, with the re-admission reason related to the original presentation, 7 of which were related to falls. The length of stay ranged from 0-101 days with the median length of stay 7 days.

**Conclusion**

This pilot has demonstrated the benefits of collaborative multidisciplinary working in supporting the management of frailty and preventing further decline. This has been achieved through early identification of frailty and intervention through the telephone consultation and signposting to relevant agencies. This initiative has helped reduce re-admission rates, enabling patients to be managed at home/in the community rather than in hospital where it is known that up to 50% of elderly patients can experience a further decline in function as inpatients. Next steps include a qualitative approach in the form of a patient/family satisfaction survey to allow us to develop the frailty service to best support patients.

**References** 1. Healthcare Improvement Scotland, 2019, Frailty at the Front Door Collaborative.

# Management of Frailty Through Early Identification & Intervention to Improve Patient Outcome

K Frew, E Forrest, E Burnett, J Burton, J Wylie, G Shevlin, J Morley  
University Hospital Wishaw

## INTRODUCTION

- **Frailty** affects > 500, 000 people in Scotland and with an **ageing population** this will increase
- Significant impact on Health Service with the **over 65 age group accounting for over 60% of hospital beds in Scottish hospitals.**
- **Hospital admissions** can have a **significant impact on frail & elderly** patients: HAI, Delirium, Cognitive Impairment, Increased Mortality Rates
- **During Covid19** we saw patients presenting **deconditioned & multiple ED presentations**
- **Early Identification** is essential at point of access to service
- Enables **Comprehensive Geriatric Assessment (CGA)** – holistic, person centred, individualised interventions and support



## METHODS

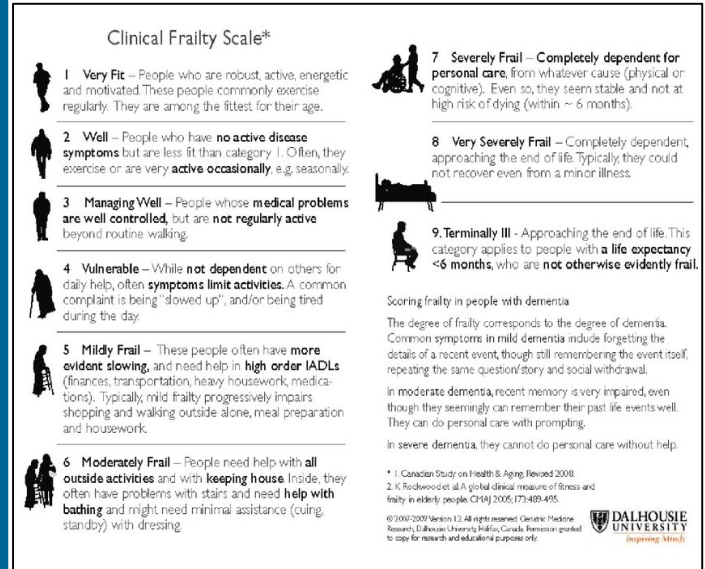
### Early Identification

- Rockwood Clinical Frailty Scale completed in the Emergency Department for all patients > 65
- Care of the Elderly Team informed of patients with a Clinical Frailty Score of 4-6 (vulnerable, mildly frail, moderately frail)

### Early Intervention

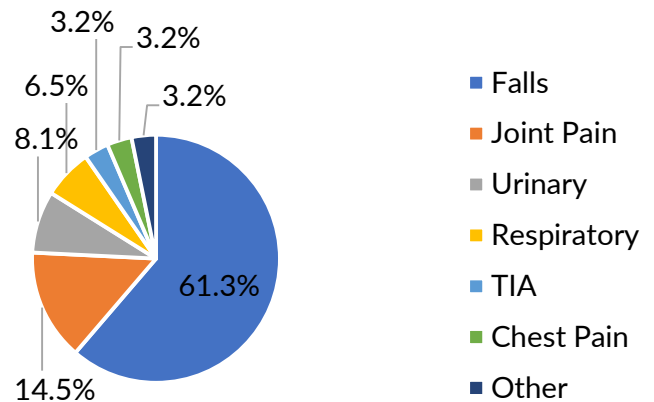
- Comprehensive Geriatric Assessment
- Case note review undertaken by Care of the Elderly Physician on every patient with a frailty score 4-6
- Telephone Consultation with patient/carer – holistic, person centred approach
- Signposting/Referral to multidisciplinary team, partnership agencies

Figure 1 – Rockwood Clinical Frailty Scale



## RESULTS

Figure 2 – ED Presentations Over 65 with CFS 4-6 (N = 62)



**9 (14.5%) patients re-presented to ED within a month; 7 due to falls**

**Median Length of Stay for those re-presented = 7**

## CONCLUSION

- Benefits of collaborative MDT working to support frailty and reduce further decline
- Support management of patients in right place – it is known that 50% of patients can experience further decline as inpatients

## REFERENCES

1. Healthcare Improvement Scotland, 2019, Frailty at the Front Door Collaborative

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## Poster and Lightning Round

SP - Scientific Presentation - SP - Other (Other medical condition)

### 1113 Diagnostic Test Accuracy of Frailty Screening Tools Using Data in Electronic Primary Care Records

S Makin<sup>1</sup>; C Brack<sup>1</sup>; M Kynn<sup>2</sup>; P Murchie<sup>3</sup>: 1. Centre for Rural Health, University of Aberdeen 2. Institute of Applied Health Sciences, University of Aberdeen 3. Academic Primary Care Group, University of Aberdeen

#### Introduction

Targeted interventions aimed at people living with frailty key to NHS Strategy and is incentivised in the NHS England GP contract. eFrailty, and similar risk prediction tools aim to detect frail people automatically from their electronic primary care health-records and can predict mortality and hospital admission. We carried out a systematic review of currently available risk prediction tools to assess frailty using primary care data.

#### Methods

We searched Medline, Pubmed, CENTRAL, CINAHL and Embase to identify studies comparing a frailty assessment utilising primary care records with face-to-face assessment with a healthcare professional. Studies were quality assessed using QUADAS-2. Sensitivity and specificity values were extracted directly or calculated and pooled using StatsDirect.

#### Results

The initial search generated 2245 titles with 10 studies remaining for review after screening. This described 3 different index tests (electronic frailty index (eFI), claims-based frailty index (cFI), and polypharmacy. Frailty Phenotype was the reference standard in each study. 1 study of 60 patients, average age 80.2 examined eFI, with a pooled sensitivity of 0.84 (95% CI 0.55,0.98), and specificity of 0.78 (0.64,0.89). 2 studies of 7679 patients, average age 75.5, examined cFI, with a pooled sensitivity of 0.84 (95% CI 0.55,0.98), and specificity of 0.78 (0.64,0.89). 7 studies of 34,328 patients, average age 77.4, examined a polypharmacy as a screening tool (defined as  $\geq 5$  medications) with a pooled sensitivity of 0.84 (95% CI 0.55,0.98), and specificity of 0.78 (0.64,0.89).

#### Conclusions

eFI performed best however, for an average UK GP practice with a list size of 10,000, 18% of patients aged over 65, of which 20% were frail, eFI would flag 597 as frail, of which 272 would be actually frail, and an additional 51 frail patients would be missed. In conclusion existing frailty risk prediction tools would have strictly limited value in UK primary care currently.



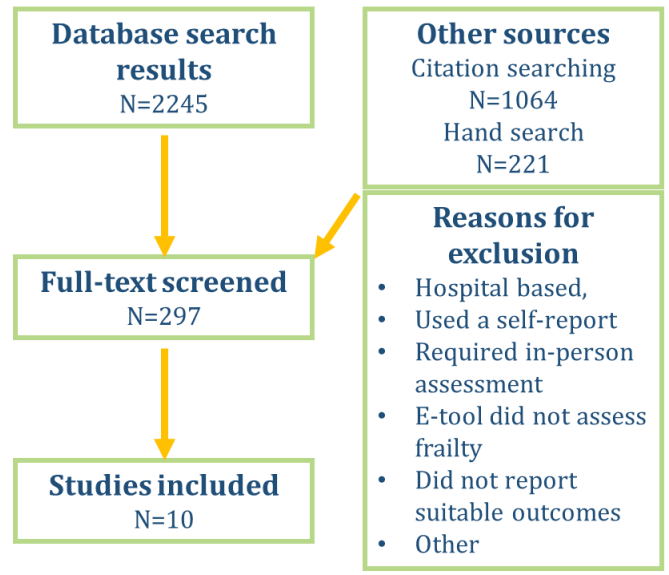
# Diagnostic Test Accuracy of Frailty Screening Tools Using Data in Electronic Primary Care Records

## Background

Frailty screening in general practice has the potential to significantly improve outcomes. We carried out a systematic review to **establish the sensitivity and specificity** of the available tools compared to an in-person assessment.

## Search

We searched MEDLINE, Embase, Cochrane Register of controlled trials, CINHAL, hand searched references from other studies, and carried out a google scholar forward search.



### Inclusion

Data is available to primary care  
 'gold-standard' in-person comparator  
 Reports on sensitivity and specificity or enough data to calculate

### Exclusion

Hospital based  
 Test doesn't diagnose frailty  
 Upper age limit

## Results

### 3 index tests were identified:

1. electronic frailty index (eFI)
  2. claims-based frailty index (cFI)
  3. polypharmacy
- the gold-standard for all was the **Frailty Phenotype**.

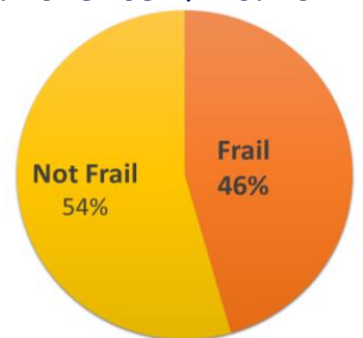
Index Test	Cut-off	Sensitivity (95%CI)	Specificity (95%CI)
Claims-Based (Pooled)	0.2	0.48 (0.23,0.74)	0.80 (0.53,0.98)
Polypharmacy (Pooled)	≥5 medications	0.61 (0.50,0.72)	0.66 (0.58,0.73)
<b>Electronic Frailty Index</b>	<b>0.21</b>	<b>0.84 (0.55,0.98)</b>	<b>0.78 (0.64,0.89)</b>

We modelled the eFI (**best performing**) on an average practice with: a list of 10,000 → 18% over 65 → 20% of those frail

**325 / 597 are false positives**

**AND**

**51 frail patients would be missed.**



## Conclusions

- The eFI is the best performing tool.
- Practical use is limited by both high false positive and false negative rates.
- There has been limited assessment of specificity of frailty tools.

References:  
 Electronic Frailty Index  
 Ambegodhen RC, Bellay J, Dabrowska J et al. Application of an electronic frailty index in Australian primary care: data quality and feasibility assessment. *Ageing Clin Exp Res* 2019;31:653-60.  
 Claims Based Frailty Index  
 Fassio M, Soti MA, Kivimaki M. Accuracy of diagnosis and health service codes in identifying frailty in Medicare data. *BMC geriatr* 2020;20:229.  
 Segal JB, Huang J, Roth DL et al. External validation of the claims-based frailty index in the national health and aging trends study cohort. *Am J Epidemiol* 2017;186:745-7.  
 Polypharmacy  
 Ananthakrishnan R, Viswanathan K, Dent E et al. Commonly Used Screening Instruments to Identify Frailty Among Community-Dwelling Older People in a General Practice (Primary Care) Setting: A Study of Diagnostic Test Accuracy. *Newman A* (ed.). *The Journals of Gerontology: Series A* 2020;75:1134-42.  
 Herr M, Robine JM, Pinel J et al. Polypharmacy and frailty: prevalence, relationship, and impact on mortality in a French sample of 2500 old people. *Pharmacopsychiatry Drug Saf* 2015;24:637-46.  
 Haraguchi TD, van der Horst HE, Zheng Q et al. The implementation of frailty index in primary care: comparing the accuracy of two simple instruments. *Age Ageing* 2013;42:262-5.  
 Jung H, Kim M, Lee Y et al. Prevalence of Physical Frailty and Its Multidimensional Risk Factors in Korean Community-Dwelling Older Adults: Findings from Korean Frailty and Aging Cohort Study. *Int Environ Res Public Health* 2020;17. DOI: 10.3390/ijerph17113983.  
 Makin S, Brack C, Ainsworth J et al. Frailty Status and Polypharmacy Predict All-Cause Mortality in Community-Dwelling Older Adults in Europe. *International Journal of Environmental Research and Public Health* 2021;18:3080.  
 Realoni E, Chavert S, Gervais F et al. Medication exposure and frailty in older community-dwelling patients: a cross-sectional study. *PLoS One* 2020;15:e0242508-14.  
 Saam KJ, Schmitter B, Meier AD et al. Polypharmacy Associated with Frailty in Older People? Results from the ESTHER Cohort Study. *J Am Geriatr Soc* 2017;65:e17-32.  
 Other:  
 Fried LP, Tangen CM, Walston J et al. Frailty in older adults: evidence for a phenotype. *J Gerontol A Biol Sci Med Sci* 2001;56:M46-56.  
 Whiting PJ, Cochrane D. A Revised Tool for the Quality Assessment of Diagnostic Accuracy Studies. *Ann Intern Med* 2011;155:524-32.  
 Makin S, Murrin M, Murrin D, Thomas S et al. Preferred Reporting Items for a Systematic Review and Meta-analysis of Diagnostic Test Accuracy Studies: The PRISMA-DT.  
 Fleming C, Campbell M, Aravalo-Rodriguez J, Chandler J, Deeks J. Chapter 2. Planning a Cochrane Review of diagnostic test accuracy. Draft version (15 November 2021) for inclusion in: *Deeks JG, Batty PD, Leung FMA, Takwoy S, editors. Cochrane handbook for systematic reviews of diagnostic test accuracy. Version 2. London: Cochrane, 16 November 2021. JAMA. 2022;326(4):369-395.*

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**Poster and Lightning Round**  
**CQ - Clinical Quality - CQ - Clinical Effectiveness**

1116 Presentation of an exceptionally rare case of TCC-associated paraneoplastic limbic encephalitis in an elderly patient.

L Green<sup>1</sup>; K Frew<sup>2</sup>: Forth Valley Royal Hospital, NHS Forth Valley, Larbert

**Introduction**

Paraneoplastic neurological syndromes (PNS) are rare disorders resulting from an immune response to underlying malignancy. These are characterised by focal or multifocal inflammation of the peripheral or central nervous systems. These are most commonly associated with small cell lung cancers, although rarer cases have involved tumours of the breast, skin, gastrointestinal and genitourinary systems. Bladder cancers are rarely associated with PNS.

**Methods**

We describe the case of a 68-year-old male who presented with fluctuating confusion and psychosis three months following resection of a transitional cell carcinoma (TCC) of the bladder. Differential diagnoses included psychiatric conditions, dementia, delirium, space occupying lesions, cerebral infection/inflammation.

**Results**

MR brain imaging showed hyperintensity of the right hippocampus, thalamus, insula and anteromedial temporal lobe, which gradually resolved over time. All other investigations, including autoantibody screens, electroencephalography (EEG) and CSF analyses were negative. Following clinical confirmation of his diagnosis of TCC-related paraneoplastic limbic encephalitis at an MDT meeting, he was treated with a five-day course of oral methylprednisolone. This had good clinical effect, resolving his psychosis completely. The patient was continuing with chemotherapy for his TCC and reported no further seizures or memory concerns at review 8 months following admission.

**Conclusion**

This is an extremely rare disorder, but one which once identified by the MDT and managed appropriately completely resolved in this case with no further recurrences. Although initial considerations were of delirium/dementia/cognitive impairment, it is important to be mindful of rarer conditions particularly in patients with underlying co-morbidities such as malignancy.

**References**

1. Didelot A and Honnorat J. (2014): Handbook of Clinical Neurology. Paraneoplastic disorders of the central and peripheral nervous system. 121; 1159-1179.
2. Thanarajasingam G, Milone M, Kohli M. (2015): Paraneoplastic encephalopathy: an unusual presenting feature of bladder cancer metastasis. BMJ Case Reports: BCR2014208913. doi:10.1136/bcr-2014-208913

# Dementia? Delirium? Paraneoplastic Encephalitis?

Presentation of an exceptionally rare case of bladder cancer associated paraneoplastic limbic encephalitis in an elderly patient

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## Introduction:

- Paraneoplastic neurological syndromes (PNS) are rare, resulting from focal/multifocal inflammation related to nervous system **immune response** to an **underlying malignancy**
- Bladder cancers are **rarely** associated with PNS.

## Case:

- 68 year old male**, presented three months following resection of a bladder malignancy (TCC) with **fluctuating confusion and psychosis**
- Significant history:** undergoing chemotherapy, previous stroke.
- Key differentials:** delirium, dementia, psychiatric condition, space-occupying lesion, cerebral infection or inflammation

## Results:

- Key investigations:
  - Sequential MRI brains** (see right)
  - All other investigations unremarkable** (including serum auto-antibodies, CSF, FBC, U+Es, LFTs, CRP, ECG)
- Diagnosis:** TCC-related paraneoplastic limbic encephalitis
- Management:** 5 day course methylprednisolone



Fig1: MRI brain prior to TCC resection

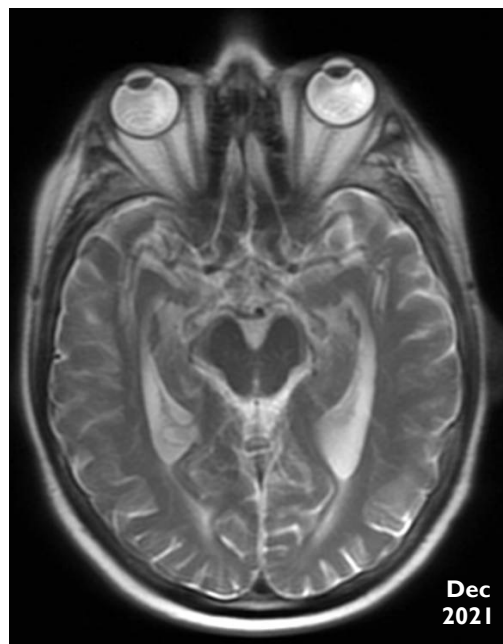


Fig2: MRI brain following TCC resection

## Timeline:

Nov 2020	<b>MRI Brain</b> (following stroke)	<ul style="list-style-type: none"> <li>T2/FLAIR hyperintensity in right hippocampus, thalamus and insula.</li> <li>Low density change in right medial temporal lobe.</li> <li>Repeat scan 1 week later unchanged.</li> </ul>
Dec 2020	<b>TCC resected</b>	
Jan 2021	<b>ED Presentation/Admission</b>	<ul style="list-style-type: none"> <li>Confused, hallucinating, seizure two days prior</li> <li>Started levetiracetam and aciclovir</li> <li>Continued fluctuation during admission</li> <li>Neurological examination unremarkable.</li> <li>ACE-III 71, deficits in all 5 domains.</li> </ul>
Jan 2021	<b>CT Brain</b>	<ul style="list-style-type: none"> <li>No acute pathology</li> <li>Persisting right medial temporal lobe abnormality</li> </ul>
Feb 2021	<b>CT CAP</b> (chest, abdomen, pelvis)	<ul style="list-style-type: none"> <li>No evidence of any further malignancy</li> </ul>
Feb 2021	<b>Gadolinium MRI Brain</b>	<ul style="list-style-type: none"> <li>Persistent, but improved T2 signal in right hypothalamus, thalamus and insula</li> <li>Some residual hyperintensity in anteromedial temporal lobe (entorhinal and temporopolar cortices). No progression, no gliosis.</li> <li>Markedly improved following TCC resection 3mths prior. Unknown aetiology.</li> </ul>
Feb 2021	<b>Neurooncology MDT</b>	<ul style="list-style-type: none"> <li>Diagnosis confirmed</li> </ul>

## Discussion:

- Exceptionally rare** presentation, initially misdiagnosed as delirium.
- Once identified, **resolved with treatment**, with no further recurrences
- Important to be mindful of **rare conditions** associated with complications in patients with underlying comorbidities

## References:

- Didelot A and Honnorat J. (2014): Handbook of Clinical Neurology. Paraneoplastic disorders of the central and peripheral nervous system. 121; 1159-1179.
- Thanarajasingam G, Milone M, Kohli M. (2015): Paraneoplastic encephalopathy: an unusual presenting feature of bladder cancer metastasis. BMJ Case Reports: BCR2014208913. doi:10.1136/bcr-2014-208913

**Poster and Lightning Round**  
**CQ - Clinical Quality - CQ - Patient Safety**

1121 Improving staff awareness of frailty in the emergency department: a multi-disciplinary quality improvement project.

GP May<sup>1</sup>; LA Bennett<sup>1</sup>; JP Loughrey<sup>1</sup>; N Littlewood<sup>1</sup>; L Mitchell<sup>2</sup>: 1. Accident and Emergency Department, Queen Elizabeth University Hospital (QEUEH), Glasgow; 2. Department of Medicine for the Elderly, QEUEH, Glasgow.

**Introduction**

Comprehensive Geriatric Assessment (CGA) improves outcomes for frail older adults in acute hospitals. Patients aged 75 and over admitted into Accident and Emergency (A&E) at the QEUEH will automatically generate a “frailty icon” on their electronic record. The number of frail people accessing emergency care is increasing. This Healthcare Improvement Scotland (HIS) frailty tool prompts staff to assess for frailty and refer to the local Frailty Pathway if appropriate. We designed a multidisciplinary quality improvement project (QIP) to increase completion of the frailty icon and the number of referrals to the frailty service from the A&E.

**Methods**

Both medical and nursing staff in A&E were targeted for intervention. Weekly data was collected on the percentage of patients aged 75 and above who were discharged from A&E with a “frailty icon” completed over a 3-month period. Our main intervention was to hold a frailty awareness month. This involved multiple sub-interventions such as; announcements at handovers, e-mails, word-of-mouth, and posters.

**Results**

The weekly percentage of completed “frailty icons” increased from 28% 2 weeks pre-intervention (n = 283) to 48% in 1 month (n = 258). A peak of 57% (n = 293) completed icons was achieved immediately after our intervention. These increases were then sustained for a further 6 weeks with a weekly average baseline of 45.2% completion (average n = 281). Increased “frailty icon” completion in A&E led to a 100% increase in referrals to the frailty pathway.

**Conclusion**

Increasing awareness of frailty amongst A&E staff results in increased front door assessment for frailty, and subsequent referral to the frailty team. This allows for more patients to receive a CGA. Multidisciplinary QIPs utilise the skills of diverse staff groups to best achieve sustainable change.

# Improving Staff Awareness Of Frailty In The Emergency Department: A Multi-Disciplinary Quality Improvement Project.

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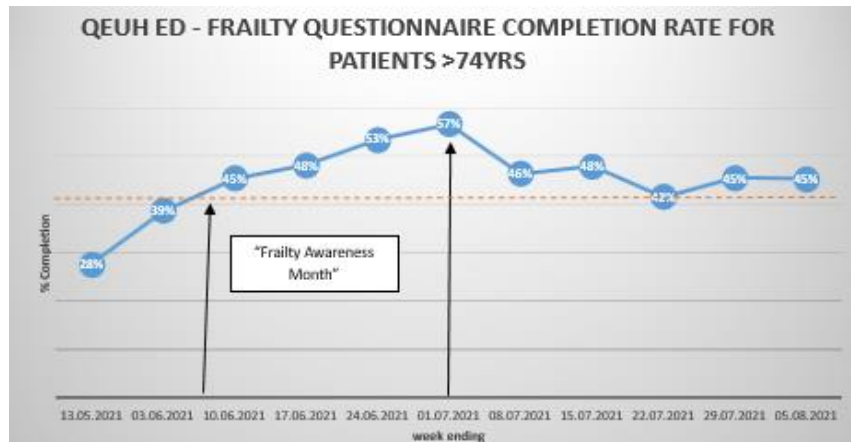
## Background

Comprehensive Geriatric Assessment (CGA) improves outcomes for frail older adults in acute hospitals<sup>1</sup>.

CGAs are performed by the Acute Frailty Team in the QEUP on all new admissions identified as frail.

Patients aged 75 and above admitted into the Emergency Department at the QEUP will automatically generate a "frailty icon" ● on their electronic record.

This icon prompts ED staff to assess for frailty and refer to the local Frailty Pathway if appropriate.



**Royal College of Physicians & Society of Acute Medicine 2020**  
*guidance on acute care for older people living with frailty.*  
**Recommendation:** ensure a system is in place to identify older people with frailty as they attend hospital<sup>2</sup>.

## Results

Weekly percentage of completed frailty icons ● pre-ED discharge rose from **28% (n = 283)** pre-intervention **to 48% (n = 258)**.

**Peak of 57% completed frailty icons in 1 week** for all adults aged 75 and above pre-ED discharge.

Baseline 45.2% (average n = 281) per week ● completion **sustained for 6 weeks post-intervention.**

## Aim

To use quality improvement methodology to increase the number of completed frailty icons for patients aged 75 and above before discharge from the ED.

## Importance

The Healthcare Improvement Scotland frailty icon tool ● allows for quick and **easy assessment of frailty at the front door.**

If the patient is for admission and identified as frail in the ED, they are **prioritised for a Medicine for the Elderly bed, frailty team review, and a CGA.**

Early CGA can lead to a **reduced length of in-patient stay** and more likely to **be living independent at home**<sup>3</sup>.

ED staff have an important role to play **in ensuring frailty is identified** and patients are promptly referred to the frailty team.

Frailty icon completion can be improved by using QI methodology to **raise departmental awareness** of this important issue.

## Method

### PLAN

- Will raising ED staff awareness of frailty increase frailty icon completion pre-discharge?
- Inaugural QEUP ED Frailty Awareness Month June 2021
- Weekly percentage of completed frailty icons collected

### DO

- ED medic and nurse ran frailty awareness tests together
- Baseline 28% completion of frailty icons pre-discharge
- Initial barrier to change as perceived "not ED work"

### STUDY

(see results section for run chart)

- As awareness of frailty increased, so did frailty icon completion pre-ED discharge
- Results sustained for a further 6 weeks

### ACT

- Awareness not sustainable in long term as requires regular interventions
- Next PDSA cycle to focus on education, "myth-busting" and understanding importance of frailty, CGAs and role of ED staff

## Future Direction

A 2<sup>nd</sup> PDSA cycle involving education sessions on acute frailty with geriatricians and flow coordinators was planned, but unfortunately due to staff rotation was not implemented.

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### References:

- Healthcare Improvement Scotland. Ihub: Improving acute care for people living with frailty. Accessed 20 Apr 2022. [Improving acute care for people living with frailty - Improving acute care for people living with frailty \(Ihub.scot\)](#).
- Royal College of Physicians. Acute care toolkit 3: Acute care for older people living with frailty. Accessed 20 Apr 2022. [Acute care toolkit 3: Acute care for older people living with frailty | RCP London](#)
- Ellis G, Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, et al. Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database of Systematic Reviews 2017, Issue 9. Art. No.: CD006211. DOI: 10.1002/14651858.CD006211.pub3