Frail Elderly Assessment Team-how we got to where we are now… (FEAT)

Dr Jane Youde
On behalf of the Derby FEAT Team
Older People with Frailty
Background

• Specialty take system on MAU since the opening of the Royal Derby Hospital
• DME Consultants on MAU everyday seeing patients allocated to our specialty
• Challenged by other specialties perceptions of who should care for older people
Background

• Challenged by the numbers-first winter had over 100 outlying patients at Christmas

• Challenged by inappropriate admissions as jobs not completed after consultant review
Initial Innovation

• Developed the ACP post for DME on MAU
• Resulted in reduced admissions-up to 25% for medically stable patients
• Developed and reviewed the admission criteria
• Challenged the BGS about defining which patients we should care for
November 2013

• Part of a system wide transformation project including ED in response to winter pressures
• Asked to look at the care of older people in MAU
• Had senior executive level support and monitoring
November 2013

- Asked to create a frailty unit in response to previous winters challenge and ongoing pressures
- Supported by the Transformation Team-project lead and project support
- Developed a group with multi-professional representation and other care providers and commissioners
What did we do?

• Systems challenges
What happened?

• Met on a weekly basis
• Had Gant Charts and Action Plans
• Reviewed the current system, the evidence for delivering acute care to older people at risk of frailty, quantified the problem via audit and then developed our solution
System Challenges

• Bed rest can be associated with loss of 15% of muscle strength in 1 week-this happens three times faster in older people.

• Up to 50% of older people will loss function during admission to hospital-high risk if frail
System Challenges

- People only have one health problem
- 20% increase in admissions in people >90 years
System Challenges

• Frail older people are only cared for by Medicine for the Elderly
• There are limited evidence based interventions that improve outcomes for older people
• Older people present to all departments in adult care e.g. the average age of hip fracture patients is 81 years
DME Core Business

• Holistic assessment and treatment of older people with complex medical problems in the context of ageing
• Specialist knowledge in managing Falls, Delirium but not dementia and in Derby Parkinsons Disease
• Not a dementia or discharge specialty
• Frailty should be seen as a long term progressive condition NOT an adjective
What we decided

- Not a “Frailty Unit”
- Give all patients access to appropriate assessments and treatments
- MDT Approach
- Not Geriatrician led
What we decided

- Single Assessment Documentation
- Whole pathway
- Joint Vision “What good looks like”
- Developed Screening tool
Definition of Frailty
Definition of Frailty

Someone who is demonstrating reduced ability to independently perform the activities of daily living as a result of physical or mental illness or long term condition, combined with reduced resilience to life stresses. The person is likely to be over 65 years of age.
Identification of Frailty

- Everyone can do it
- Needs to be completed on admission
- Based on available frailty identification tools
- Completed a small audit to assess its sensitivity and specify
Criteria to flag frailty

- Over 65 and from a Care Home
- Over 75 and attending due to a fall
- Over 75 and attending due to delirium
- Over 85 with 4 or more co-morbidities
Initial Data

- Using markers of frailty there were 6,466 attendances in the previous year in ED.
- This accounted for approximately 42% of the attendees over the age of 75 years, higher than would be expected in this population.
Initial Data

• A spot audit using pragmatic indicators of frailty showed that 47% (22/46) and 39% (9/23) patients met the criteria.
• Only 7 had been identified as frail and allocated to DME.
• The proportion of patients being admitted > 75 years who were frail appeared to be around 40%.
Initial Data

• The percentage of these patients seen within 4 hours varied between 77-89%.
• There was a high admission rate, as expected, of 61%, which was static throughout the year.
• There was little variation in the day they attend with the time of presentation rising from 8am and falling at 10pm.
Transformed

Agreed principles for the approach to older people with Frailty:
CGA is core business
Parallel assessments
Assume the person is going home that day
Frailty is everyone's business
CGA

• Comprehensive Geriatric Assessment (CGA) in a hospital setting reduces mortality by 25%, improves morbidity and increases the likelihood of patients being at home 6 months later

• This requires a MDT which will include a geriatrician as well as a specialist nurse and rehabilitation specialist such as a physiotherapist and occupational therapist
CGA
FEAT Transformation

• Implemented new model scale
• Joint provider approach
• Changed Culture
• Strong Leadership
• Environment
FEAT Transformation

- Shared ownership
- Single assessment paperwork
- Defined outcomes and measures
FEAT Transformation

• All patients defined at risk of frailty are flagged in ED or MAU on the electronic patient system
• All have parallel assessments-don’t have to wait for medical review unless have defined criteria causing exclusion from this process e.g. ?NOF-no adverse events to date
Derbyshire House of Care

Andrew Muirhead, Senior Public Health Information Analyst

Source: NHS England
‘Case for Change’ – Gold Standard

• “To conduct a robust, dynamic population grouping exercise, a routinely updated patient-linked data set, including social care data, will provide the best data foundation for the analysis. The routinely updated and linked data will allow for dynamic segmentation, ensuring that HWBBs can update scheme offerings based on changing population needs.”

(NHS England)
Derbyshire Health & Care System

- Upper Tier LAs x2
- GEMCSU
- Commissioners x4
- Acute Trusts x2
- Community/MH Providers
  - DCHS
  - DHcFT
- Derbyshire Health United (DHU)
- EMAS
- VCS

12 collaborating organisations
What datasets are in it?

• Secondary Uses Service (SUS) datasets including inpatient, outpatient, A&E for DHFT, CRHFT, DHcFT and DCHS [where relevant]
• East Midlands Ambulance Service (EMAS)
• Derbyshire Health United (DHU) 111 telephone service and GP out-of-hours
• Social Care activity from both Derby City and Derbyshire County Councils
• DHcFT community mental health data
• Bespoke datasets:
  – Frail Elderly Assessment Team (FEAT)
  – Healthy Housing Service
What variables are in it?

- Pseudonymised record level data
- Diagnostic information, including ICD-10, Specialty and HRG
- OPCS Procedure/treatment information
- Activity dates and times, including lengths of stay
- Small geographies of residence – for spatial analysis
- GP Practices of registration
- Health costs
Two virtual Hubs of resource

• Coordinated by Public Health in the South, and Public Health and Social Care in the North
  – Specialist, independent expertise with good links across the sector
• An “expert resource” of information and intelligence officers
  – Superuser (x10) and user (x14) licence holders system-wide
• Using the PI Care & HealthTrak software to enhance our local knowledge, and feed into the JSNA process.
An integrated challenge.

FALLS
The Cost

Whilst the total acute health cost for some conditions, such as Cancer and COPD, remain relatively static across several 5-year age brackets, the financial cost of other conditions such as Hypertension, Stroke and Falls peak at a certain age.
Blue lights
Historically, Royal Derby Hospital has received proportionally more blue light attendances (approx. 33%) than compared with England and a comparator group of Trusts (approx. 25%).
Clinical audit

It is common for those who have fallen to present without fracture, but with Urinary Tract Infection, Senility and ‘Tendency to Fall’.
Care pathways

Multiple outpatient appointments account for the majority of health service contacts, though a combination of three outpatient appointments followed by an emergency admission via A&E comprise the most costly pathway.
Potential for prevention

For those with a tendency to fall, the most costly pathway is that where they are already known to outpatients, followed by an unplanned admission via A&E. Can anything be done to mitigate future emergency admissions within this setting.........
Falls pathways, audit and prevention
So – how do FEAT perform?

• Outcomes evaluated using the pi benchmarking dashboard data
• One year period Jan 30\textsuperscript{th} 2014 to Jan 30\textsuperscript{th} 2015
• 4358 FEAT patients (frailty criteria flag)
• 8136 controls
Control group selection

- Over 65 and registered address was a Care Home
- “falls flag” in ED, ICD10 codes for delirium
- Had used DHFT or CRHFT, other Derbyshire service
- No previous FEAT users
- Number of patient records not number of patients but initial checks suggest limited double counting
Results

- FEAT and control groups compared at one week, one month and six months
- The outcomes looked for:
  - 111 calls
  - Ambulance use
  - ED attendances
  - Inpatient stays
  - Any records of service use + Outpatients
## Service Usage:
**FEAT vs. Control 1 Week after intervention**

<table>
<thead>
<tr>
<th>Service</th>
<th>FEAT record % (number of records)</th>
<th>Control group record % (number of records)</th>
<th>% difference in records in control compared to FEAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>No records</td>
<td>77% (3,356)</td>
<td>59% (4,821)</td>
<td>18%</td>
</tr>
<tr>
<td>A&amp;E attendance</td>
<td>3.1 % (136)</td>
<td>6.8% (559)</td>
<td>3.7%</td>
</tr>
<tr>
<td>Inpatient emergency admission</td>
<td>2.3% (101)</td>
<td>15.3% (1,250)</td>
<td>12.2%</td>
</tr>
<tr>
<td>Outpatient</td>
<td>7.5% (326)</td>
<td>12% (979)</td>
<td>4.5%</td>
</tr>
<tr>
<td>Ambulance Service Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Conveyed</td>
<td>2.1%</td>
<td>2.9%</td>
<td>0.8%</td>
</tr>
<tr>
<td>• Not conveyed</td>
<td>1.5% (65)</td>
<td>2.8% (230)</td>
<td>1.3%</td>
</tr>
<tr>
<td>• 0.6% (26)</td>
<td></td>
<td>1% (82)</td>
<td>0.4%</td>
</tr>
<tr>
<td>111 call</td>
<td>3.3% (145)</td>
<td>4.3% (354)</td>
<td>1%</td>
</tr>
</tbody>
</table>
Differences in service usage at 1 week after FEAT vs. Control

• 18% more patient records in control group
• 3.7% more A&E attendances in control group
• 12.2% more inpatient emergency admissions in control group
• 4.5% more Outpatient records
• Overall, increased service usage with no FEAT intervention
Service Usage: FEAT vs. Control 1 Month after intervention

<table>
<thead>
<tr>
<th>Service</th>
<th>FEAT record % (number of records)</th>
<th>Control group record % (number of records)</th>
<th>% difference in records in control compared to FEAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>No records</td>
<td>49% (2,138)</td>
<td>29% (2,404)</td>
<td>20%</td>
</tr>
<tr>
<td>A&amp;E attendance</td>
<td>10.7% (468)</td>
<td>19.3% (1,577)</td>
<td>8.6%</td>
</tr>
<tr>
<td>Inpatient emergency admission</td>
<td>9.8% (429)</td>
<td>26.3% (2,147)</td>
<td>16.5%</td>
</tr>
<tr>
<td>Outpatient</td>
<td>22.6% (989)</td>
<td>27.9% (2,275)</td>
<td>5.3%</td>
</tr>
<tr>
<td>Ambulance Service Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Conveyed</td>
<td>7.6%</td>
<td>12%</td>
<td>4.4%</td>
</tr>
<tr>
<td>• Not conveyed</td>
<td>5.4% (236)</td>
<td>8.8% (717)</td>
<td>3.4%</td>
</tr>
<tr>
<td>• Not conveyed</td>
<td>2.2% (96)</td>
<td>3.2% (264)</td>
<td>1%</td>
</tr>
<tr>
<td>111 call</td>
<td>11% (481)</td>
<td>16.8% (1,372)</td>
<td>5.8%</td>
</tr>
</tbody>
</table>
Differences in service usage at 1 month after FEAT vs. Control

- 20% more patient records in control group
- 8.6% more A&E attendances with in control group (3.7% at 1 week)
- 16.5% more inpatient emergency admissions with no FEAT intervention (12.2 % at 1 week)
- 5.3% more Outpatient records
- Overall, increased service usage with no FEAT intervention
- Increased % of A&E attendances and inpatient emergency attendances than at 1 week
## Service Usage:
**FEAT vs. Control 6 Months after intervention**

<table>
<thead>
<tr>
<th>Service</th>
<th>FEAT record % (number of records)</th>
<th>Control group record % (number of records)</th>
<th>% difference in records in control compared to FEAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>No records</td>
<td>30.6% (1,337)</td>
<td>10.3% (842)</td>
<td>20.3%</td>
</tr>
<tr>
<td>A&amp;E attendance</td>
<td>25.8% (1,125)</td>
<td>45% (3,713)</td>
<td>19.2%</td>
</tr>
<tr>
<td>Inpatient emergency admission</td>
<td>24.3% (1,059)</td>
<td>49.9% (4,064)</td>
<td>25.6%</td>
</tr>
<tr>
<td>Outpatient</td>
<td>42.7% (1,863)</td>
<td>52.6% (4,287)</td>
<td>9.9%</td>
</tr>
<tr>
<td>Ambulance Service Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Conveyed</td>
<td>23.6% 16% (697)</td>
<td>36.2% 25.7% (2089)</td>
<td>12.6% 9.7%</td>
</tr>
<tr>
<td>• Not conveyed</td>
<td>7.6% (333)</td>
<td>10.5% (862)</td>
<td>2.9%</td>
</tr>
<tr>
<td>111 call</td>
<td>24.5% (1,072)</td>
<td>38% (3,166)</td>
<td>13.5%</td>
</tr>
</tbody>
</table>
111 Use

1 Week
1 Month
6 Months

FEAT
NON-FEAT
ED Attendances

- **1 Week**: FEAT 0, NON-FEAT 5
- **1 Month**: FEAT 10, NON-FEAT 15
- **6 Months**: FEAT 25, NON-FEAT 40
In-Patient Stays

![Bar chart showing in-patient stays over 1 week, 1 month, and 6 months for FEAT and NON-FEAT categories.](chart.png)
Differences in service usage at 6 months after FEAT vs. Control

- 20.3% more patient records in control group
- 19.2% more A&E attendances in control group (3.7% at 1 week and 8.6% at 1 month)
- 25.6% more inpatient emergency admissions with no FEAT intervention (12.2% at 1 week, 16.5% at 1 month)
- 9.9% more Outpatient records
- Overall, increased service usage with no FEAT intervention
- Increased % of A&E attendances and inpatient emergency attendances than at 1 week and 1 month
Summary

• Service usage increases for both FEAT and control patients over 6 months, however…
• Data analysis suggests that FEAT maintains a reduction in service use up to 6 months post intervention
• Data suggests that service usage increases particularly for A&E attendances and emergency inpatient admissions in the control group compared to FEAT patients
Next steps

• Full evaluation report, including mortality data and LOS and cost analysis from the team
• Roll out of FEAT phase 2, including continuity into the community setting
• Combining Public Health, FEAT and falls data for targeted interventions
• Outpatient screening opportunities e.g. ophthalmology and T&O.
"Clear vision and commitment to developing service further" – ECIST Feb 2104

Best part of experience... "The amount of people who are here to help me to get back home again".

FEAT Patient

Re the whole FEAT service "... better than it used to be, received a lot more attention". "I have been seen much quicker and by a lot more staff members than previously" – Patient Feedback on service

'The FEAT Team successfully ensures local health services are always on hand for frail elderly people putting their safety, care and experience at the forefront of the service we provide. The team’s impressive impact on patient experience and bed utilisation and the collaborative work with staff has improved the pathway for patients‘ - The Special Chief Executive’s Award

“I don't think the Queen could have had better treatment than I'm having“ – FEAT Patient

“We felt that the FEAT model was an example of good practice for the assessment and management of frail patients. It encompasses recognised good practice” – ECIST Feb 2104
MAU Activity Room
Reflection-things you really need

- Senior support
- Clinical leadership across all participating partners
- Data collection and analysis
- A strong nerve and clear vision....
Virtual ward

• Enhanced discharge from hospital – up to 60 patients
• Rehabilitation in the patients own home
  – Physio
  – Occupational therapy
• Early supported discharge
  – Carers and voluntary support
• Increased medical support
  – Geriatrician supported case management meetings

In the future models of care like this will be able to rehabilitate and treat more patients in their own home. Bringing the best of the hospital to the patient.
Community Opportunities

• Consultants are part of several community projects which include reviewing people in care homes and GP practices as well as working closely with DCHS.

• This offers an opportunity to develop screening for frailty and falls in these settings to try and reduce attendances and improve outcomes.
Comments … questions?
Response to Nicholson Comments on Frail Elderly

• The problem is not with our patients, the problem is with our health systems. Let's fix our health care system to make it responsive to the needs of the patients who require it. Let's change training and education to ensure that its staff possess the skills to manage people with multimorbidity, including older people. Let's enable prompt diagnosis and invest more in downstream systems designed to allow old people to leave hospital when ready to do so. Let's have equity of access for all patients who require it, and begin the overhaul of the NHS to make it fit for the 21st century.