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'Understanding deconditioning and the need for prehabilitation and rehabilitation in the elective surgery waiting list population, using the electronic frailty index and complexity case finder.'

This work was based around the AHP resource required for our planned National Treatment Centre in Ayrshire and Arran.

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Elective surgery waiting times have increased due to the covid pandemic.

The National Treatment Centre Programme in Scotland aims to

- increase the ability of patients to access treatment
- increase flexibility for patients accessing treatment
- support regional working across territorial NHS health boards

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### Using eFI (electronic frailty index) and complexity case finder tool

eFrailty Index Report



The electronic frailty index (eFI) is a severity grading of frailty of older patients based on patterns of frailty coded in your clinical system. This report provides an overview of the patients in each eFI category in your practice, and highlights those whose eFI has increased over the past six months.

A full list of older (65+) patients and their eFI can be accessed here.

		eFrailty Ind	ex Grouping						
Severe		Moderate	Mild 490	Not frail					
Severe	Moderate	Mild		Not frail					
0%	20%	40% % of patie	60%	80%	100%				

High Priority Patients								
Increasing severe	Escalation to severe	Moderate but increasing	Escalation to moderate					
3	8	2	22					

Waiting List Priority	Waiting List Patient Type	Not Avail	3%	6%	8%	11%	14%	17%	19%	22%	25%	28%	31%	33%	36%	39%	42%	44%	47%	50%	Total
Routine	Day Case	568	258	222	209	166	109	80	57	45	23	22	14	12	3	3	1		2	1	1795
Routine	Inpatient	204	104	144	138	114	108	89	66	- 54	23	18	20	6	4		2	1			1095
Urgent	Day Case	74	27	21	30	13	18	5	6	11	5	4	1	2							217
Urgent	Inpatient	30	21	17	20	19	31	12	6	15	3	1		1							176
X Priority 2 (Urgent admission in 4 weeks/Urgent in 4-6 weeks)	Day Case	1					1														2
X Priority 2 (Urgent admission in 4 weeks/Urgent in 4-6 weeks)	Inpatient		1			1	1		1												4
X Priority 3 (Semi Urgent admission in 12 weeks/Urgent in 4-6 weeks)	Day Case	3	1			1															5
X Priority 3 (Semi Urgent admission in 12 weeks/Urgent in 4-6 weeks)	Inpatient																				0
X Priority 4 (Routine admission)	Day Case	2	4	2	4		3		1	3	1										20
X Priority 4 (Routine admission)	Inpatient			1				1													2
Grand Total		882	416	407	401	314	271	187	137	128	55	45	35	21	7	3	3	1	2	1	3316
				1	538	8 723				15	6		17								

- The eFrailty tool pulls coded data from the GP record to create a frailty score.
- The Complexity Case Finder uses a data set which uses Age, Care Home, Active Repeat Medication, Frailty Score, A&E Attendances (12m), Emergency Admissions (12m), Bed Days (12m) and OOH Contacts (12m)
- These scores give a detailed analysis of the individual's level of frailty and complexity and an indication of the level of input they may require pre and post operatively.

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- Using workforce calculator tools and frailty and complexity scoring for likely suitability for levels of support required, we predict that 7% of patients will require Specialist Prehabilitation the cost of this is outlined in the table below.
- There has been a slight increase of 2% in frailty and complexity since the beginning of 2019 which is likely due to the direct and indirect impact of the pandemic.
- This increase is likely to be higher as people have not been accessing their GP practices in the usual way, this may have limited diagnosis of conditions and coding of frailty markers.

AHP Group	WTE	AFC Band	Future Investment
Physiotherapy	1.0	6	£45,345
Occupational Therapy	1.0	6	£45,345
Dietetics	0.6	6	£27,207
Podiatry	0.4	6	£18,138
HCSW	2.0	4	£67,374
Admin	0.5	3	£30,606
Total	5.5		£234,015

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### Clinical Frailty Scale\*

I Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.

**4** Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up", and/or being tired during the day.

5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.



7 Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

**8 Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



**9. Terminally III** - Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

#### Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In severe dementia, they cannot do personal care without help.

\* I. Canadian Study on Health & Aging, Revised 2008.

2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

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# #Actiononfalls



Figure 4: Physical activity for muscle and bone strength across the life course (7, 8)

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## **Rehabilitation in Health Framework**

#### SPECIALIZED, HIGH-INTENSITY REHABILITATION

Predominantly tertiary care for people with complex rehabilitation needs during the acute and sub-acute phase of care. Commonly occurs in longer-stay rehabilitation hospitals, centres, units and departments.

#### REHABILITATION INTEGRATED INTO MEDICAL SPECIALTIES IN TERTIARY AND SECONDARY HEALTH CARE

For people with less complex rehabilitation needs and often for a short period during the acute and sub-acute phase of care. Commonly occurs in tertiary and secondary level hospitals and clinics.

#### REHABILITATION INTEGRATED INTO PRIMARY HEALTH CARE

Delivered within the context of primary health care, which includes the services and professionals that act as a first point of contact into the health system. Commonly occurs in primary health care centres, practices and may include community settings.

#### COMMUNITY-DELIVERED REHABILITATION

Predominantly secondary care delivered in community settings during the sub-acute and long-term phases of care. Commonly through multiple programmes that provide care in homes, schools, workplaces and other community settings.

#### INFORMAL AND SELF-DIRECTED CARE

This form of care, not rehabilitation service, occurs where no rehabilitation or health personnel are present. Commonly occurs in homes, schools, parks, health club or resorts, community centres and long-term care facilities.

### Source: WHO, 2019

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- A tiered model of prehabilitation options was proposed using a "Specialist, Targeted and Universal" model of care to give the best value for money with the greatest impact for delivery of a post-operative Enhanced Recovery After Surgery (ERAS) model.
- To further improve patient outcomes by reducing BMI and increasing activity, function and food, fluid, and nutritional status before surgery, we propose the use of an assessment matrix to match patients to the level of prehabilitation they would benefit from, using frailty and complexity scoring tools alongside telephone triage where appropriate.

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# Major surgery is like running a marathon - both require training......

