






Appendices

Appendix 1: The Rockwood Frailty Scale

CLINICAL FRAILTY SCALE

	1	VERY FIT	People who are robust, active, energetic and motivated. They tend to exercise regularly and are among the fittest for their age.
	2	FIT	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 , even if occasionally symptomatic, but often are not regularly active beyond routine walking.
	4	LIVING WITH VERY MILD FRAILTY	Previously "vulnerable," this category marks early transition from complete independence. 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	LIVING WITH MILD FRAILTY	People who often have more evident slowing , and need help with high order instrumental activities of daily living (finances, transportation, heavy housework). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation, medications and begins to restrict light housework.

	6	LIVING WITH MODERATE FRAILTY	People who 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	LIVING WITH SEVERE FRAILTY	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	LIVING WITH VERY SEVERE FRAILTY	Completely dependent for personal care and approaching end of life. Typically, they could not recover even from a minor illness.
	9	TERMINALLY ILL	Approaching the end of life. This category applies to people with a life expectancy <6 months , who are not otherwise living with severe frailty . (Many terminally ill people can still exercise until very close to death.)

SCORING FRAILTY IN PEOPLE WITH DEMENTIA

The degree of frailty generally 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. In **very severe dementia** they are often bedfast. Many are virtually mute.

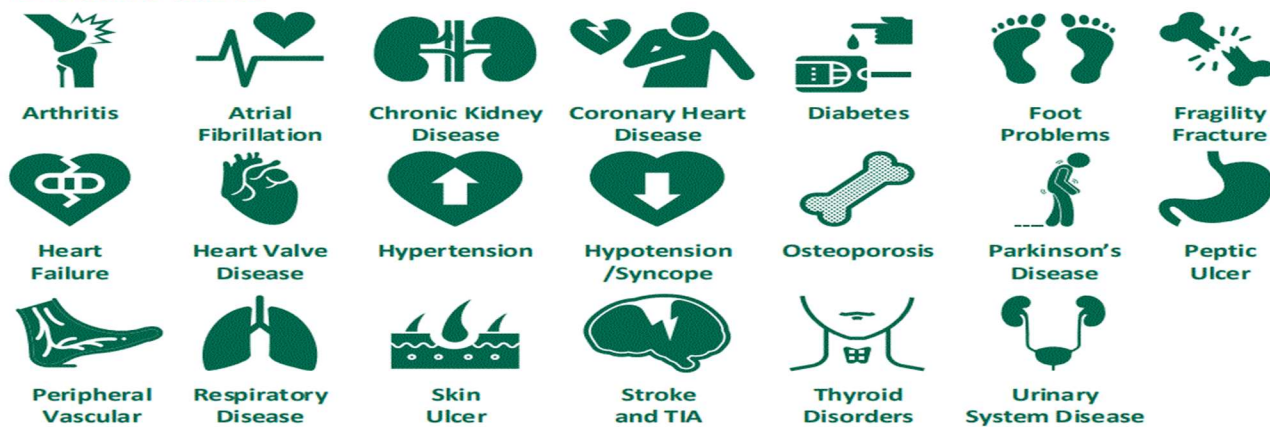


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Rockwood K et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489–495.

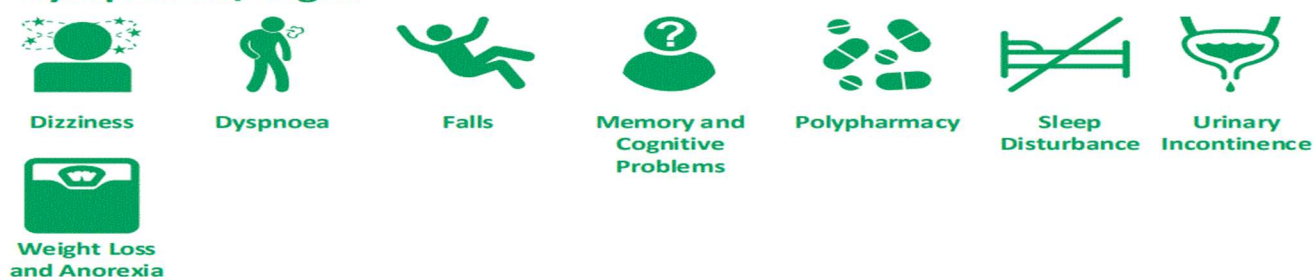
Rockwood K et Al. A Global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495

Appendix 2: The Electronic Frailty Index

Disease State



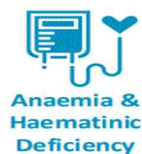
Symptoms / Signs



Disability



Abnormal laboratory value



Deficits included in the eFI. Available at <https://ihub.scot/media/6442/20190705-efi-read-codes-guide-v10.pdf>

Appendix 3: Helpful Resources

Using eFI in primary care: <https://vimeo.com/328412937>

6CIT: The Six Item Cognitive Impairment Test (6CIT) comprises six simple questions that screen for cognitive impairment. The test has been revalidated and simplified for UK use. The website for this test became inactive as this module was in production. See youtube for demonstrations of its use. The [NICE guideline on dementia](#) gives further details of the test and others on its webpages.

Association for Elderly Medical Education (AEME) Mini Gem: Atypical presentations in older patients: things are not always what they seem <https://youtu.be/6oEFtzdoiRM>.

[Comprehensive Geriatric Assessment Toolkit for Primary Care Practitioners](#). Published by the British Geriatric Society in 2019:

Appendix 4: Anticholinergic Burden

Source: [Polypharmacy-Guidance-2018.pdf \(scot.nhs.uk\)](https://www.scot.nhs.uk/polypharmacy-guidance-2018.pdf)

How to assess and reduce the anticholinergic burden

Not all drugs with anticholinergic properties may individually put patients at risk of severe adverse effects, however when used in combination, effects may accumulate. Reducing the anticholinergic burden may result in improvements in short term memory, confusion, behaviours and delirium.

A scale or table that assigns a cumulative anticholinergic score to a patient's prescribed medication can be used to assess *Anticholinergic Burden*. A number of these scoring systems are available. While this approach is valid, the overall aim is to reduce overall anticholinergic exposure as much as possible. The table below is intended to be a guide as to which areas anticholinergic burden is likely to be the highest.

Table 3B Reducing Anticholinergic Burden

AVOID IF POSSIBLE Highly anticholinergic drugs	CAUTION Drugs with some anticholinergic activity	Alternatives and general notes
Antidepressants		
Tricyclic antidepressants	SSRIs* Mirtazapine	Venlafaxine, trazodone and duloxetine have low anticholinergic activity *SSRIs, Sertraline best choice. Avoid paroxetine
Antipsychotics		
Fluphenazine Chlorpromazine Clozapine Doxepin Levomepromazine	Olanzapine Quetiapine Risperidone Haloperidol	Aripiprazole is an acceptable choice Trifluoperazine and perphenazine have unknown activity (conflicting data)
Nausea and vertigo		
	Prochlorperazine	Metoclopramide has unknown activity (conflicting data). However, carries specific MHRA caution regarding parkinsonian and cognitive side effects Domperidone does not usually penetrate the CNS, but caution is required for QT prolongation Nausea treatments all cause potential problems. Keep courses as short as possible
Urinary antispasmodics		
Oxybutynin Tolterodine Fesoterodine Flavoxate Darifenacin Solifenacin Propiverine	Dosulepin	Mirabegron has no recorded anticholinergic activity and may be an option It is essential to ensure that medication is effective and stop if not
Sedatives		
		Zolpidem and zopiclone no anticholinergic activity but falls risk Avoid sedative antihistamines Non-drug measures are preferred

AVOID IF POSSIBLE Highly anticholinergic drugs	CAUTION Drugs with some anticholinergic activity	Alternatives and general notes
Antihistamines		
Chlorphenamine Promethazine Hydroxyzine Clemastine Cyproheptadine	Cetirizine Loratadine Fexofenadine	Consider locally acting products for hayfever symptoms If taken for seasonal conditions check this is happening
H2-receptor antagonists		
	Ranitidine Cimetidine	PPIs have no anticholinergic burden. Prescribe at the lowest dose to control symptoms Omeprazole or pantoprazole may be preferred over lansoprazole . Caution with increased risk of <i>Clostridium difficile</i> infection
Drugs used in Parkinson's Disease		
Procyclidine Trihexiphenidyl (benzhexol) Orphenadrine	Amantadine Bromocriptine	Entacapone has small potential for anticholinergic activity Co-careldopa, pramipexole, ropinirole and selegiline have no significant anticholinergic activity
Spasticity		
Tizanidine	Baclofen Diazepam Methocarbamol	
Analgesia		
	Opiates	Paracetamol and NSAIDs are not thought to have anticholinergic activity Gabapentin has minimal anticholinergic activity
Others		
Atropine Hyoscine Propantheline Dicycloverine Ipratropium	Loperamide Carbamazepine Theophylline Lithium	Furosemide and digoxin have unknown anticholinergic activity. The following have no or negligible anticholinergic activity: Corticosteroids, statins, beta-blockers, ACE inhibitors, calcium channel blockers, triptans, valproate, phenytoin, phenobarbitone, topiramate.

Notes: This is a developing area with disagreements between different sources. Some of this table is based on incomplete or poor evidence, or on expert opinion. The anticholinergic effects of drugs may become better understood with time. Some of these therapeutic areas are highly specialised (for example Parkinson's disease) and would require expert advice before considering a change. As noted here less anticholinergic alternatives often have other concerns. If an anticholinergic agent must be used, consider reducing the dose. ¹⁵⁻²¹

Appendix 5 - Target setting, recommended interventions and treatment goals according to frailty in older adults with diabetes:

(adapted from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8099963>)

Level of frailty	Status	Treatment goals	Recommended interventions	Recommended targets
Healthy/pre-frail/mild frailty	<ul style="list-style-type: none"> • Functional and independent • Life expectancy of > 10 years 	<ul style="list-style-type: none"> • Reverse frailty or limit its progression • Maintain functional status, independence and QoL • Prevent or delay macro/microvascular complications 	<ul style="list-style-type: none"> • Tight glycaemic control • Resistance exercise and nutritional interventions • Statin therapy unless contraindicated/not tolerated 	<ul style="list-style-type: none"> • HbA1c < 58 mmol/mol (< 7.5%), but ≥ 42 mmol/mol (≥ 6%) • FPG 5.0–7.2 mmol/L • BP < 140/90 mmHg
	<ul style="list-style-type: none"> • > 2 comorbidities • Reduced life expectancy 	<ul style="list-style-type: none"> • Prevent decline in QoL • Limit the progression of microvascular complications • Avoid metabolic emergencies such as hypoglycaemia 	<ul style="list-style-type: none"> • Glycaemic control • Assess and reduce cognitive decline • Statin therapy unless contraindicated/not tolerated 	<ul style="list-style-type: none"> • HbA1c < 64 mmol/mol (< 8.0%) • FPG 6.0–8.3 mmol/L • BP < 140/90 mmHg
Severe frailty	<ul style="list-style-type: none"> • Significant comorbidity and functional deficits, and limited independence • Markedly reduced life expectancy 	<ul style="list-style-type: none"> • Improve QoL by reducing symptoms or hospitalisations • Maintain functional status, preventing further lower limb dysfunction, preventing significant disability 	<ul style="list-style-type: none"> • Less aggressive glycaemic targets but avoid hypoglycaemia and be aware that hyperglycaemia can increase risk of infections and cause urinary incontinence, thirst and dehydration • Consider whether statin therapy is beneficial 	<ul style="list-style-type: none"> • HbA1c < 69 mmol/mol (< 8.5%) • FPG 7.0–10.0 mmol/L • BP < 150/90 mmHg

A significant part of clinical decision making in older people with diabetes involves consideration of their frailty status, but this will vary in importance depending on the presence of other factors including severe comorbidity, vascular complications and cognitive impairment. Note of abbreviations: *BP* Blood pressure, *FPG* fasting plasma glucose, *QoL* quality of life