

3.8 Medication in the frailest adults

There are some frequently asked questions that come up in discussions around what medications to prescribe and which to withhold in the frailest group of adults. These adults are at high risk of medication side effects due to reduced physiological reserve, and with a limited lifespan are unlikely to derive any of the intended long term benefits. Treatment targets should also be reviewed and the following targets are believed to be more appropriate:

- Blood pressure - **avoid blood pressure < 130 systolic and or < 65 diastolic**
- Blood sugar control - **avoid lowering HbA_{1c} < 65**
- Treatments to maintain renal function and avoid progression of proteinuria - **avoid treating unless considered to have sufficient life expectancy to see benefit**
- Use of blood thinners - **avoid the use of combination blood thinners**
- Heart rate control - **reduce or stop heart rate limiting medication if pulse < 60**

As with all targets an individualised approach should be adopted to include giving clear information to allow an informed decision.

Blood pressure

Lowering blood pressure is an effective strategy to reduce the risk of cardiovascular events across a range of ages including the elderly. The benefits are greatest with reduction from very high blood pressure, and less impact from reducing moderately raised blood pressure. There is increased risk of harm when reducing blood pressure to very low levels in the frail elderly.²⁸ Study evidence demonstrated an increase in mortality for nursing home residents (mean age 87.5 years) when blood pressure ran at <130 with two or more antihypertensives. The number needed to harm was 10. It is important to note that antihypertensives may be prescribed for another condition, most notably left ventricular systolic dysfunction, which should influence deprescribing decisions

Blood sugar control

Tight glycaemic control takes a long time (10 years) to derive positive outcomes, and there is increased risk of harm below an HbA_{1c} of 65, especially in the frail elderly. Having recognised these facts, the overriding principle is to individualise targets for each patient.

Treatments to preserve renal function

ACE inhibitors and A2R blockers have an established role in slowing the progression of albuminuria to proteinuria to end stage renal failure. This progression takes time (years) even untreated. This is a treatment target that is hard to achieve within the lifespan of a frail adult. Unrealistic benefits of treatment are compounded by increased risk of acute kidney injury with intercurrent illness.

Blood thinners

Anticoagulants and antiplatelets to reduce the risk of stroke are effective even in the very frail. Caution is needed to avoid combining blood thinners. There are few long term indications for this and prescribing > 1 agent in observational studies in the non-frail increase bleeding rates steeply. The risk of bleeding with combination anticoagulants in adults discharge from hospital with atrial fibrillation, taking **warfarin** as baseline (ie 1) risk of bleeding

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|------------------------------------|------|----------------|--------------------------------|
| • Aspirin | 0.93 | [0.88 - 0.98] | |
| • Clopidogrel | 1.06 | [0.87 - 1.29] | |
| • Aspirin + Clopidogrel | 1.66 | [1.34 -2.04] | |
| • Warfarin + Aspirin | 1.83 | [1.72-1.96] | |
| • Warfarin + Clopidogrel | 3.08 | [2.32 - 3.91] | 13.9% bleed risk /patient year |
| • Warfarin + Aspirin + Clopidogrel | 3.7 | [2.89 - 4.76] | 15.7% bleed risk /patient year |

It should be noted that the lowest stroke risk was in the warfarin group.³⁰

Heart rate control

Drugs to lower heart rate are commonly prescribed, and as an adult gets frailer the clearance of many of these medications reduces leading to an increase in the heart rate lowering effect. This can often allow them to be steadily reduced or stopped. In particular if heart rate < 60 BPM serious consideration should be given to reducing or stopping.