# When Do Guidelines Fail The Elderly?

## Top ~~10~~ 7 Things That Make a Geriatrician Twitch

Lindy Romanovsky MD, MSc(HQ)

# Objectives

- To better understand the guidelines and evidence to manage common comorbidities in elderly patients.
- Appreciate the complexity of treating common comorbidities in elderly patients.
- Learn how to critically appraise a clinical situation and make a patient centered decision.

# Let's meet our patient…..

- 88-year-old gentleman
- PMHx: HTN, DLD, DM (A1C 7.8%), Moderate Mixed Dementia, depression, history of stroke, hypothyroidism
- Functional status: Independent BADLS. Dependent for driving/finances and assistances for cooking/cleaning/laundry/medications
- Gait aid: Single point cane
- Social history: Lives with his wife in a bungalow and has PSW support 2 times a week.

https://www.gettyimages.ca/detail/photo/happy-senior-man-sitting-at-home-royalty-free-image/912073272?adppopup=true

Healthy Ageing
and Geriatrics

# 1. Diabetes

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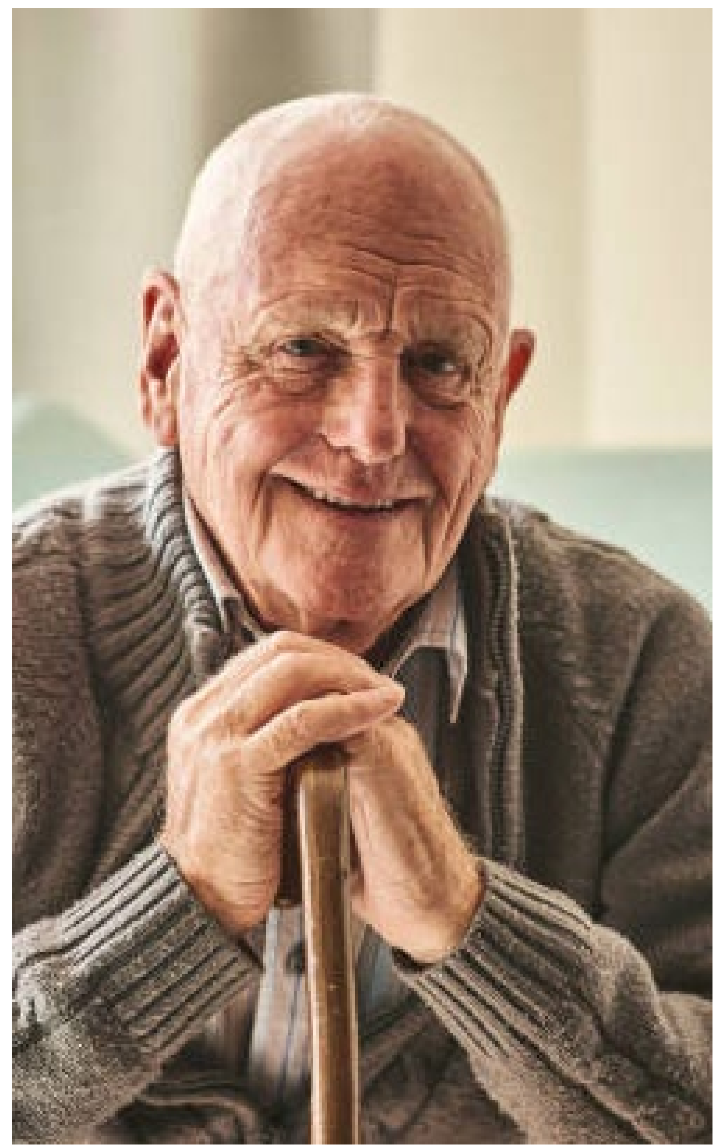

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# 1. Diabetes

**Things we need to consider:**

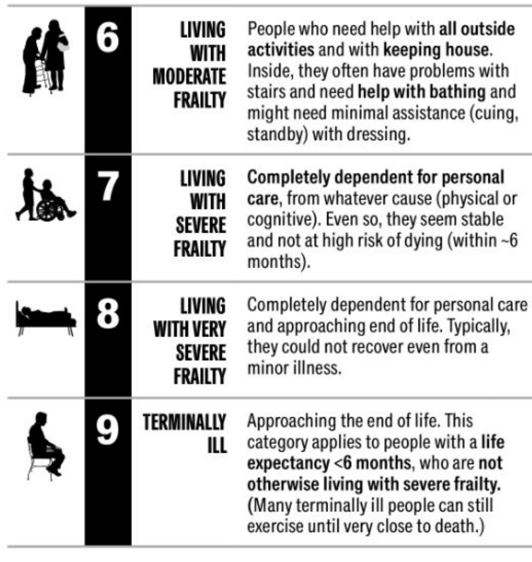
1. Frailty
2. Functional status
3. Goals of care
4. Polypharmacy

**QUESTION:** What is our goal A1C for our patient?

# Frailty – Rockwood Clinical Frailty Scale

## CLINICAL FRAILTY SCALE

| | Category | Description |
|---|---|---|
| 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. |




### 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.

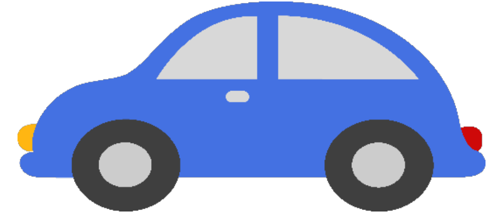
In **very severe dementia** they are often bedfast. Many are virtually mute.

Clinical Frailty Scale ©2005–2020 Rockwood, Version 2.0 (EN). All rights reserved. For permission: www.geriatricmedicineresearch.ca
Rockwood K et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489–495.

Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, Mitnitski A. A global clinical measure of fitness and frailty in elderly people. *CMAJ.* 2005;173(5):489-495.

# Functional Status

| ADL | IADL |
| --- | --- |
| Ambulation | Managing finances |
| Feeding | Managing transportation |
| Toileting | Grocery shopping and meal preparation |
| Bathing | Laundry |
| Dressing | Medications |
| Transfers | Telephone |



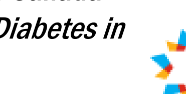
# 1. Diabetes – Diabetes Canada Guidelines

**Table 1**
Glycemic targets in older people with diabetes

| Status | Functionally independent | Functionally dependent | Frail and/or with dementia | End of life |
|---|---|---|---|---|
| **Clinical Frailty Index*** | 1–3 | 4–5 | 6–8 | 9 |
| **A1C target** *Low-risk hypoglycemia* (i.e. therapy does **not** include insulin or SU) | ≤7.0% | <8.0% | <8.5% | A1C measurement not recommended. Avoid symptomatic hyperglycemia or any hypoglycemia. |
| **A1C target** *Higher-risk hypoglycemia* (i.e. therapy includes insulin or SU) | | 7.1–8.0% | 7.1–8.5% | |
| **CBGM** | | | | |
| Preprandial | 4–7 mmol/L | 5–8 mmol/L | 6–9 mmol/L | Individualized |
| Postprandial | 5–10 mmol/L | <12 mmol/L | <14 mmol/L | |

*A1C*, glycated hemoglobin; *CBGM*, capillary blood glucose monitoring; *SU*, sulfonylurea.
*Clinical Frailty Score (1 - very fit to 9 - terminally ill). Please see Figure 1.

Diabetes Canada Clinical Practice Guidelines Expert Committee. *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada*. Can J Diabetes. 2018;42(Suppl 1):S1-S325.




Healthy Ageing and Geriatrics

# 1. Diabetes

- Goals should be to prevent hypoglycemia and aim for less tightly controlled HbA1C.
- Consider DDP-4 inhibitors over sulphonylureas (high risk of hypoglycemia).
- Long-acting insulin over intermediate acting or premixed insulin.
- Individualized care plans incorporating a patient's frailty, cognition, functional status and goals of care.

# 2. Hypertension

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- Social history: Lives with his wife in a bungalow and has PSW support 2 times a week.

# 2. Hypertension

**Things we need to consider:**

1. Frailty
2. Functional status
3. Goals of care
4. Polypharmacy
5. Comorbidities

**Question:** What is our goal blood pressure for this patient?

# 2. Hypertension

YOU ARE GOING TO

SPRINT TRIAL

HYVET TRIAL

ACCORD TRIAL

JNC 8 Guidelines

2017 ACC/AHA Guidelines

MAKE MY HEAD EXPLODE!

# 2. Hypertension

- SPRINT:
  - Bottom Line: Patients at high risk for CVD but who do not have a history of stroke or diabetes, intensive BP control (target SBP <120) improved CV outcomes and overall survival compared to standard therapy (target SBP 135-139), while modestly increasing the risk of some serious adverse events.
- ACCORD:
  - BP 140/90
  - Bottom Line: Patients with T2DM at high risk for CV events, targeting SBP <120 did not reduce rates of nonfatal MI, nonfatal stroke, or CV mortality when compared to a target SBP <140.
  - Caveat: Patients > 80 years old excluded
- HYVET:
  - > 80 years old BP Goal 150/90
  - Bottom Line: Patients ≥80 years HTN goal of 150/90 reduced rates of fatal and nonfatal stroke and reduction in the secondary outcomes of fatal stroke, all-cause mortality, and CV outcomes
- JNC 8:
  - > 60 Years Old BP Goal < 150/90
  - <60 Years Old BP Goal < 140/90
- 2017 ACC/AHA Guidelines:
  - Among community-dwelling adults age ≥65 - SBP to <130
  - ≥65 with a high burden of comorbidities and limited life expectancy - Consider patient preference and use a team-based approach

References in notes below.

# 2. Hypertension

| | HYVET | ACCORD | SPRINT |
|---|---|---|---|
| Sample Size | 3845 | 4200 | 9361 |
| Age | 83.6 +/- 3.2 | 62.2±6.9 | 67.9±9.4 |
| Inclusion | > 80 yo with HTN (SBP 160) | DM 2, A1C 7.5% >, 40 yo w/ CVD or 55 yo w/albuminuria, LVH, or 2 RF (HLD, HTN, smoking, obesity) | > 50yo, SBP 130-180, inc risk for CVD, clinical or subclinical CVD |
| Exclusion | CI to trial meds, accelerated HTN, secondary HTN, hemorrhagic CVA (6 m), CHF on HTN med, Cr >1.7, K <3.5 or >5.5, gout, dementia, nursing care | BMI >45, Cr>1.5, other serious illness | Limited life expectancy, dementia, NH, unintentional wt loss, DM, Proteinuria, unable to stand, Standing BP <110, CVA, CHF |
| Duration of Follow Up | 1.8 years | 4.7 years | 3.26 years |

Age >75 yo
Intrventio n size: 1317
Control size: 1319
Interventi on age: 79.8±3.9
Control age 79.9±4.1

# 2. Hypertension

- Guidelines and trials might not be relevant to your patient.
- Important to take an individual approach and have a thorough discussion with patient and caregivers.
- Consider polypharmacy and risk of adding additional medications.
- Before renewing medication consider has my blood pressure goal changed?

# 3. Dislipidemia

# 3. Dislipidemia

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# 3. Dislipidemia

**Things we need to consider:**

1. Frailty
2. Functional status
3. Goals of care
4. Polypharmacy
5. Comorbidities

**Question:** Should our patient be managed on a statin?

# 3. Dislipidemia – Canadian Cardiovascular Society Dislipidemia Guidelines

## WHO TO SCREEN

**Men ≥40 years of age; women ≥40 years of age (or postmenopausal)**

Consider earlier in ethnic groups at increased risk such as South Asian or First Nations individuals

**All patients with the following conditions regardless of age:**

- Clinical evidence of atherosclerosis
- Abdominal aortic aneurysm
- Diabetes
- Arterial hypertension
- Current cigarette smoking
- Stigmata of dyslipidemia (arcus cornea, xanthelasma or xanthoma)
- Family history of premature CVD*
- Family history of dyslipidemia
- Chronic kidney disease
- Obesity (BMI ≥30 kg/m²)
- Inflammatory disease
- HIV infection
- Erectile dysfuntion
- Chronic obstructive pulmonary disease
- Hypertensive diseases of pregnancy

## HOW TO SCREEN

**For all:**

- History and physical examination
- Standard lipid panel (TC, LDL-C, HDL-C, TG)
- Non-HDL-C (will be calculated from profile)
- Glucose
- eGFR

**Optional:**

- ApoB
- Urine albumin:creatinine ratio (if eGFR <60 mL/min/1.73m², hypertension or diabetes)

**NON-FASTING LIPID TESTING IS ACCEPTABLE**

## RISK ASSESSMENT, STRATIFICATION & TREATMENT CONSIDERATION

Calculate risk (unless statin-indicated condition) using the Framingham Risk Score (FRS)† or Cardiovascular Life Expectancy Model (CLEM)†

Repeat screening every 5 years for FRS <5% or every year for FRS ≥5%

| No Pharmacotherapy | Primary Prevention Conditions | | Statin-indicated Conditions† | |
|---|---|---|---|---|
| **Low Risk**<br>FRS <10% | **Intermediate Risk**<br>FRS 10-19%<br>and<br>LDL-C ≥3.5 mmol/L<br>or<br>Non-HDL-C ≥4.3 mmol/L<br>or<br>ApoB ≥1.2 g/L<br>or<br>Men ≥50 and women ≥60 with one additional risk factor: low HDL-C, impaired fasting glucose, high waist circumference, smoker, hypertension | **High Risk**<br>FRS ≥20%<br>or<br>alternative method | • **Clinical atherosclerosis**<br>• **Abdominal aortic aneurysm**<br>• **Most diabetes including:**<br>• Age ≥40y<br>• Age ≥30y & 15y duration (type 1 DM)<br>• Microvascular disease<br>• **Chronic kidney disease** | **LDL-C ≥5mmol/L**<br>(genetic dyslipidemia) |

# 3. Dislipidemia

Discuss behavioural modifications

**Health Behavioural Modifications**

- Smoking cessation
- Diet: It is recommended all individuals adopt a health dietary pattern.[‡]
- Exercise: It is recommended adults should accumulate at least 150 minutes per week of moderate-vigorous intensity aerobic physical activity

**Initiate Statin Treatment: Treat to Target Approach**
Confirm adherence and barriers to use

| LDL-C <2.0 mmol/L or >50% reduction or apoB <0.8 g/L or non-HDL-C <2.6 mmol/L | LDL-C >50% reduction |
|---|---|

Target achieved on maximally tolerated dose?

YES → Monitor

NO | NO | NO

Discuss add-on therapy with patient:[¶]
Evaluate reduction in CVD risk vs. additional cost & side effects

NO ADD-ON → Monitor

ADD-ON | ADD-ON | ADD-ON

**Add-on Therapy**

| Ezetimibe as 1st line (BAS as alternative) | Ezetimibe 1st line (BAS as alternative) PCSK9 inhibitors as 2nd line (add on to other drugs)** | Ezetimibe (or BAS) or PCSK9 inhibitors |
|---|---|---|

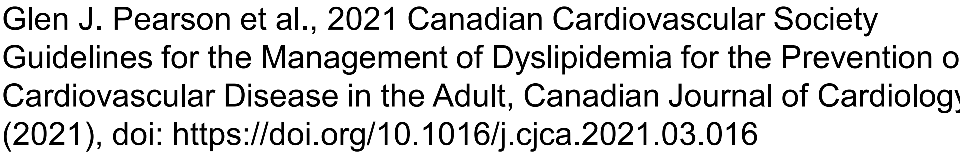
**Monitor**

- Response to statin Rx
- Health behaviours

*Men <55 and women <65 yrs of age in first degree relative.
†http://ccs.ca
‡Statins are first line therapy but add-on or alternative therapy may be required as per the algorithm.
§Anderson et al. 2016 Update of the Canadian Cardiovascular Society guidelines for the management of dyslipidemia for the prevention of cardiovascular disease in the adult (publication pending).
¶Consider more aggressive targets for recent ACS patients.
**PCSK9 inhibitors have not been adequately studied as add-on to statins for patients with diabetes and other co-morbidities.
apoB: apolipoprotein B; BAS: bile acid sequestrants; BMI: body mass index; CVD: cardiovascular disease; HDL-C: high-density lipoprotein cholesterol; HIV:

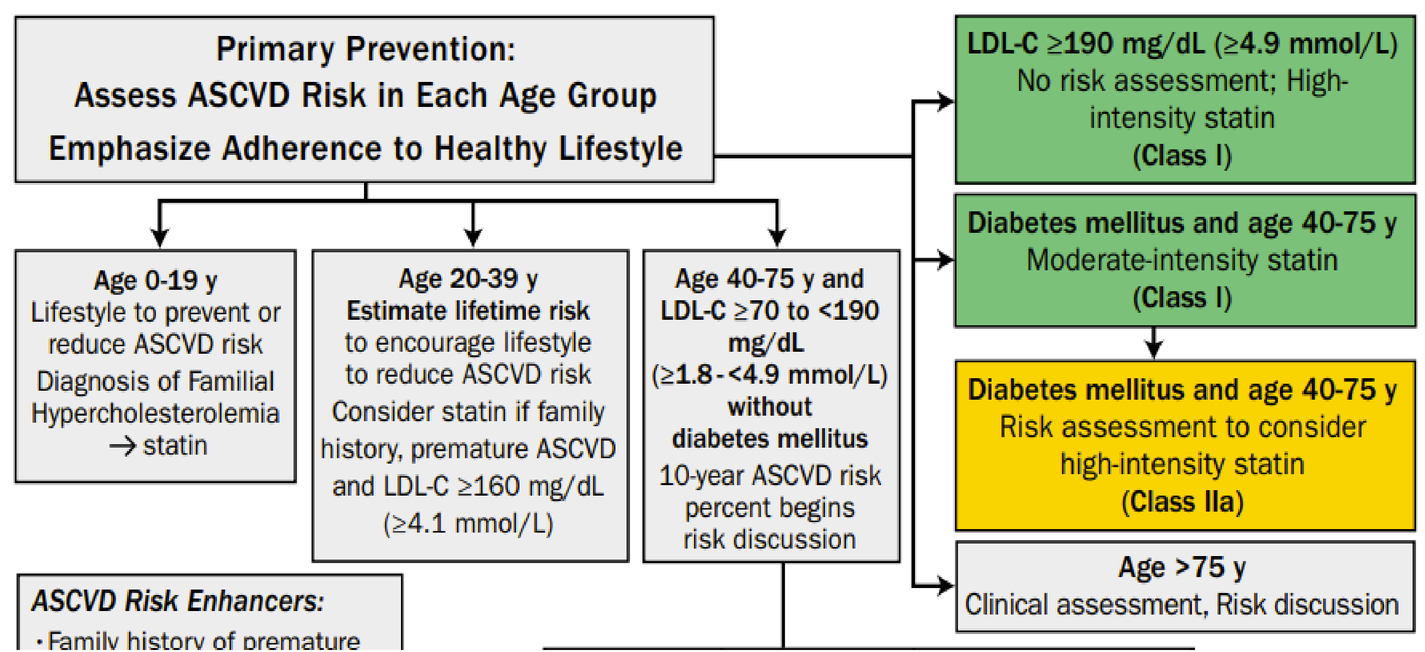
# 3. Dislipidemia

treatment approach recommended for primary prevention patients. Finally, evidence continues to demonstrate the benefits of maintaining low levels of atherogenic lipoproteins throughout life and at any age and any level of risk. Even among primary prevention individuals at low 10-year risk, the benefit of lipid-lowering can be substantial, especially when LDL-C ≥ 3.5 mmol/L.[17] In addition, accumulating evidence suggests continued benefits of lipid-lowering for primary prevention in older adults (> 75 years).[18]


Glen J. Pearson et al., 2021 Canadian Cardiovascular Society Guidelines for the Management of Dyslipidemia for the Prevention of Cardiovascular Disease in the Adult, Canadian Journal of Cardiology (2021), doi: https://doi.org/10.1016/j.cjca.2021.03.016

# 3. Dislipidemia

- The 2018 American College of Cardiology and American Heart Association (ACC/AHA) cholesterol guidelines




2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

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# 3. Dislipidemia

- The European Society of Cardiology and European Atherosclerosis Society (2019) dislipidaemia guidelines endorse treating older adults, but recommend to assess comorbidities before initiating treatment.
  - In older adults (especially males), will have a 10 year cumulative CV death risk > 5-10%, simply based on age.
  - Evaluate patients carefully before starting treatment to prevent polypharmacy

ESC Scientific Document Group, 2019 ESC/EAS Guidelines for the management of dyslipidaemias: *lipid modification to reduce cardiovascular risk*: The Task Force for the management of dyslipidaemias of the European Society of Cardiology (ESC) and European Atherosclerosis Society (EAS), *European Heart Journal*, Volume 41, Issue 1, 1 January 2020, Pages 111–188, https://doi.org/10.1093/eurheartj/ehz455

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# 3. Dislipidemia

Lancet. Author manuscript; available in PMC 2021 Nov 21.
PMCID: PMC8015314
*Published in final edited form as:*
NIHMSID: NIHMS1684687
Lancet. 2020 Nov 21; 396(10263): 1637–1643.
PMID: 33186535
Published online 2020 Nov 10. doi: 10.1016/S0140-6736(20)32332-1

## Efficacy and safety of lowering LDL cholesterol in older patients: a systematic review and meta-analysis of randomised controlled trials

Baris Gencer, Nicholas A Marston, KyungAh Im, Christopher P Cannon, Peter Sever, Anthony Keech, Eugene Braunwald, Robert P Giugliano, and Marc S Sabatine

▸ Author information ▸ Copyright and License information Disclaimer

# 3. Dislipidemia

- Guidelines and recommendations from different jurisdictions vary.
- More research including older adults (> 75 years old).
- When deciding to treat or not to treat need to consider patient frailty, functional status, cognition, comorbidities, life expectancy, and goals of care.

# 4. Falls and Anticoagulation

# 4. Falls and Anticoagulation

- 88-year-old gentleman
- PMHx: HTN, DLD, DM (A1C 7.8%), Moderate Mixed Dementia, depression, history of stroke, hypothyroidism, a fib

Has been falling….

- Functional status: Independent BADLS. Dependent for driving/finances and assistances for cooking/cleaning/laundry/medications
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# 4. Falls and Anticoagulation

**Things we need to consider:**

1. Stroke risk
2. Bleeding risk
3. Goals of care

**Question:** Do we continue his anticoagulation?

# 4. Falls and Anticoagulation

- Guidelines for a fib recommend anticoagulation for most patients > 65 years old.
  - ~50% of older adults do not receive anticoagulation due to being high risk of falls.

- Balance of risk versus benefit

- Stroke risk: CHADS2 score
- Bleeding risk: HAS-BLED score
  - Caveat: Don't include medications which could increase risk of bleeding.
  - Caveat: Created for warfarin

Fall risk and anticoagulation for atrial fibrillation in the elderly: A delicate balance. Tracy Hagerty, Michael W. Rich. Cleveland Clinic Journal of Medicine Jan 2017, 84 (1) 35-40; **DOI:** 10.3949/ccjm.84a.16016

# 4. Falls and Anticoagulation

- The Loire Valley Atrial Fibrillation Project (Lip et. al.) (2014)
  - 8962 patients with a fib – 4130 patients > 75 years old
  - Take home: Oldest patients had the greatest benefit from anticoagulation.

- The Registry of the Canadian Stroke Network (2012)
  - 3197 patients – mean age 79 years old
  - Take home: Older age more strongly associated with ischemic stroke than hemorrhagic stroke.

- Man-Son-Hing et al. 1999
  - Patient would need to fall 295 times in a year for the risk of fall related major bleeding to outweigh the benefit of warfarin in reducing stroke risk.

References in notes below.

# 4. Falls and Anticoagulation

- If a patient is falling, do NOT simply stop their anticoagulation. Evidence shows that the benefit outweighs the risk.

- Apixaban dose reduction criteria (2/3 criteria):
  - >80 years old
  - Weight < 60 kg
  - Serum creatinine > 133 umol/L

# 5. Vitamin D

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Has been falling….

# 5. Vitamin D

**Question:** Do we start vitamin D to prevent falls?

# 5. Vitamin D

Original Research | February 2021

The Effects of Four Doses of Vitamin D Supplements on Falls in Older Adults

A Response-Adaptive, Randomized Clinical Trial

Lawrence J. Appel, MD, MPH, Erin D. Michos, MD, MHS, Christine M. Mitchell, ScM, ... View all authors +

Author, Article, and Disclosure Information

https://doi.org/10.7326/M20-3812

Eligible for CME Point-of-Care

VISUAL ABSTRACT | Abstract | PDF | Tools | Share

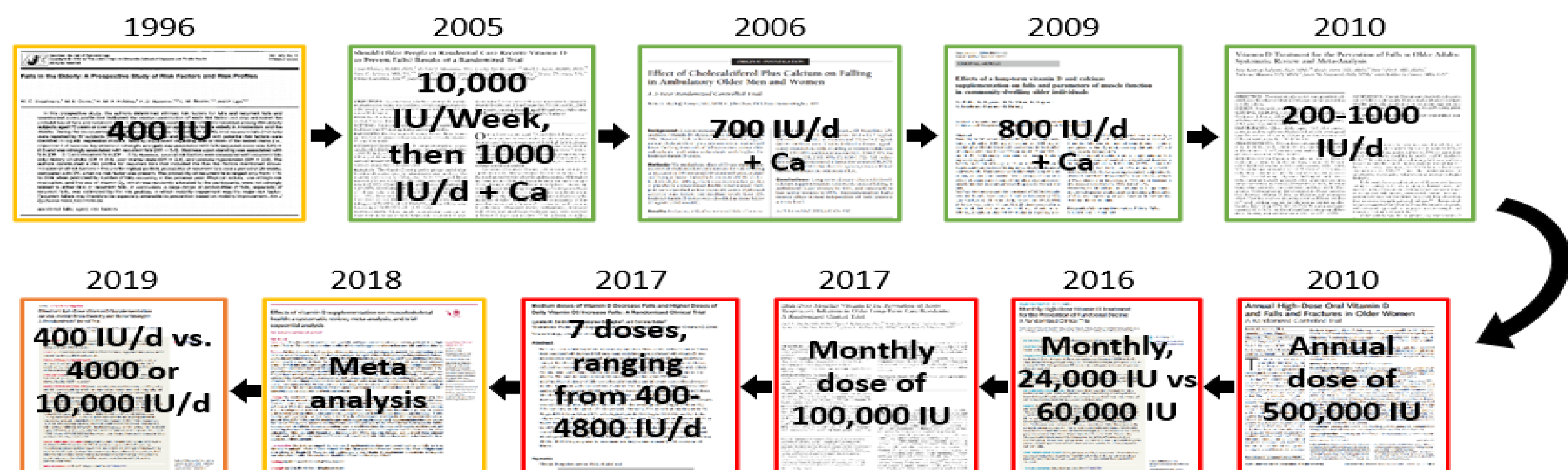
In older adults (70 yo >) with reduced serum vitamin D levels (25 to 72.5 nmol/L), what is the optimal dose of supplemental vitamin D for falls prevention?

Is the optimal dose of vitamin D effective in preventing falls?

# 5. Vitamin D

- **Take home:** Older adults with increased risk of falls and low vitamin D who received 1000 IU Vitamin D did not prevent falls.

- Canadian Osteoporosis Guidelines:
  - *Fracture PREVENTION
  - 800- 1000 IU per day Vitamin D for adults > 50 years old




Slide adapted from Dr. Dena Sommers

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# 6. Urinary Tract Infections

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His daughter is concerned that his urine smells and he is more "confused"

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# 6. Urinary Tract Infections

## UA Diagnostic Algorithm

Fever on 2 occasions over 12 hours

- **YES** → 2 or more symptoms/signs of **other infection**
  - **YES** → Do NOT order UA
  - **NO** → Obtain UA if **1** of the following
    - Urgency
    - Frequency
    - Hematuria
    - Suprapubic pain
    - Urinary Incontinence
    - Dysuria
    - Hematuria
    - Flank Pain
    - Shaking chills
- **NO** → Urinary Catheter
  - **YES** → Obtain UA if **1** of the following
    - New CVA tenderness
    - Shaking chills
    - New onset delirium
  - **NO** → Obtain UA if **2** of the following
    - Urgency
    - Frequency
    - Hematuria
    - Suprapubic pain
    - Urinary Incontinence
    - Dysuria
    - Hematuria
    - Flank Pain
    - Shaking chills

Loeb M et al. J. BMC Health Service Res. 2002: 2(17)

# 6. Urinary Tract Infections

- The development of a decision tool for the empiric treatment of suspect urinary tract infections in frail older adults: a Delphi consensus procedure. Van Buul et al. 2018. JAMDA
  - Expert panel (Delphi consensus procedure) on which signs and symptoms should be used to prescribe antibiotics in frail older adults.
  - Expert panel agreed that most nonspecific signs and symptoms should be evaluated for other causes instead of being attributed to UTI.
  - Urinalysis should **not** influence treatment decisions unless both nitrite and leukocyte esterase are negative.

van Buul LW, Vreeken HL, Bradley SF, et al. The Development of a Decision Tool for the Empiric Treatment of Suspected Urinary Tract Infection in Frail Older Adults: A Delphi Consensus Procedure. *J Am Med Dir Assoc*. 2018;19(9):757-764.

# 6. Urinary Tract Infections

Change in resident condition ...

Negative leukocyte esterase & negative nitrates?
Yes → Unlikely a UTI
No → Painful or difficult urination?

Painful or difficult urination?
Yes → ≥ 99.5° F / 37.5° C fever?
No → New or worsening frequency of urination?

≥ 99.5° F / 37.5° C fever?
Yes → Likely a UTI
No → Costovertebral angle tenderness or normal physical exam?

Costovertebral angle tenderness or normal physical exam?
Yes → Likely a UTI
No → Unlikely a UTI

New or worsening frequency of urination?
Yes → ≥ 99.5° F / 37.5° C fever?
No → Indwelling catheter?

Indwelling catheter?
Yes → Costovertebral angle tenderness?
No → Costovertebral angle tenderness?

Costovertebral angle tenderness?
Yes → Likely a UTI
No → ≥ 99.5° F / 37.5° C fever?

Costovertebral angle tenderness?
Yes → ≥ 99.5° F / 37.5° C fever?
No → Unlikely a UTI

≥ 99.5° F / 37.5° C fever?
Yes → Likely a UTI
No → Unlikely a UTI

van Buul LW, Vreeken HL, Bradley SF, et al. The Development of a Decision Tool for the Empiric Treatment of Suspected Urinary Tract Infection in Frail Older Adults: A Delphi Consensus Procedure. *J Am Med Dir Assoc*. 2018;19(9):757-764. doi:10.1016/j.jamda.2018.05.001

Healthy Ageing and Geriatrics

# 6. Urinary Tract Infections

- Overdiagnosis of urinary tract infections by nursing home clinicians versus a clinical guideline. Kistler et al. 2022. JAGS.
  - Cross-sectional web-based survey of nursing home clinicians.
  - Discrete choice experiment with 19 randomly selected clinical scenarios of nursing home patients with possible UTIs.
  - For each scenario – asked if they thought a UTI was likely.
  - Responses were compared to the guidelines (previous slide).
  - Clinicians over diagnose UTIs.
    - Misinterpretation of nonspecific symptoms.
  - ? Role for electronic decision support tool for UTI

Kistler CE, Wretman CJ, Zimmerman S, et al. Overdiagnosis of urinary tract infections by nursing home clinicians versus a clinical guideline. *J Am Geriatr Soc*. 2022;70(4):1070-1081. doi:10.1111/jgs.17638

# 6. Urinary Tract Infections

- UTIs over diagnosed resulting in over prescribing of antibiotics.

- Consider differential (atrophic vaginitis) when patient endorsing nonspecific symptoms.

- Do not reflexively obtain a UA.

# 7. Insomnia

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- Functional status: Independent BADLS. Dependent for driving/finances and assistances for cooking/cleaning/laundry/medications
- Gait aid: Single point cane
- Social history: Lives with his wife in a bungalow and has PSW support 2 times a week.

He would like his lorazepam refilled to help with his chronic insomnia

# 7. Insomnia

**Things we need to consider:**

1. Frailty
2. Functional status
3. Goals of care
4. Falls history

**Question:** What is the best medication for sleep in older adults?

# 7. Insomnia

- Older adults compared to younger adults:
  - Sleep fewer hours
  - Take longer to fall asleep
  - Wake up more often during the night
  - Spend less time in deep sleep

# 7. Insomnia

- Approach to treatment:
  - Nonpharmacological
    - Good sleep hygiene
    - Assess caffeine intake and timing
    - Medications and timing of medications
    - Cognitive behavioral therapy
      - Improving sleep-onset latency & total sleep time
      - Efficacy of CBT = benzodiazepines or zopiclone at 6 months
      - Benefits sustained for up to 2 years compared to pharmacotherapy where benefit is lost after medication is stopped.

# 7. Insomnia

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## Comparative effects of pharmacological interventions for the acute and long-term management of insomnia disorder in adults: a systematic review and network meta-analysis

Franco De Crescenzo, MD • Gian Loreto D'Alò, MD † • Edoardo G Ostinelli, MD † • Marco Ciabattini, MD • Valeria Di Franco, MD • Norio Watanabe, PhD • et al. Show all authors • Show footnotes

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# 7. Insomnia

- Benzodiazepines, doxylamine, eszopiclone, lemborexant, seltorexant, zolpidem, and zopiclone were more efficacious than placebo.
- Benzodiazepines, eszopiclone, zolpidem, and zopiclone were more efficacious than melatonin/ramelteon.
- Zopiclone and zolpidem caused more discontinuation due to adverse events than placebo.
- For the number of older adults with side-effects: benzodiazepines, eszopiclone, zolpidem, and zopiclone were worse than placebo, doxepin, seltorexant, and zaleplon.
- Long-term treatment:
  - Eszopiclone and lemborexant were more effective than placebo.
  - Eszopiclone was more effective than ramelteon and zolpidem.
  - Zolpidem was associated with a more discontinuation due to side-effects.

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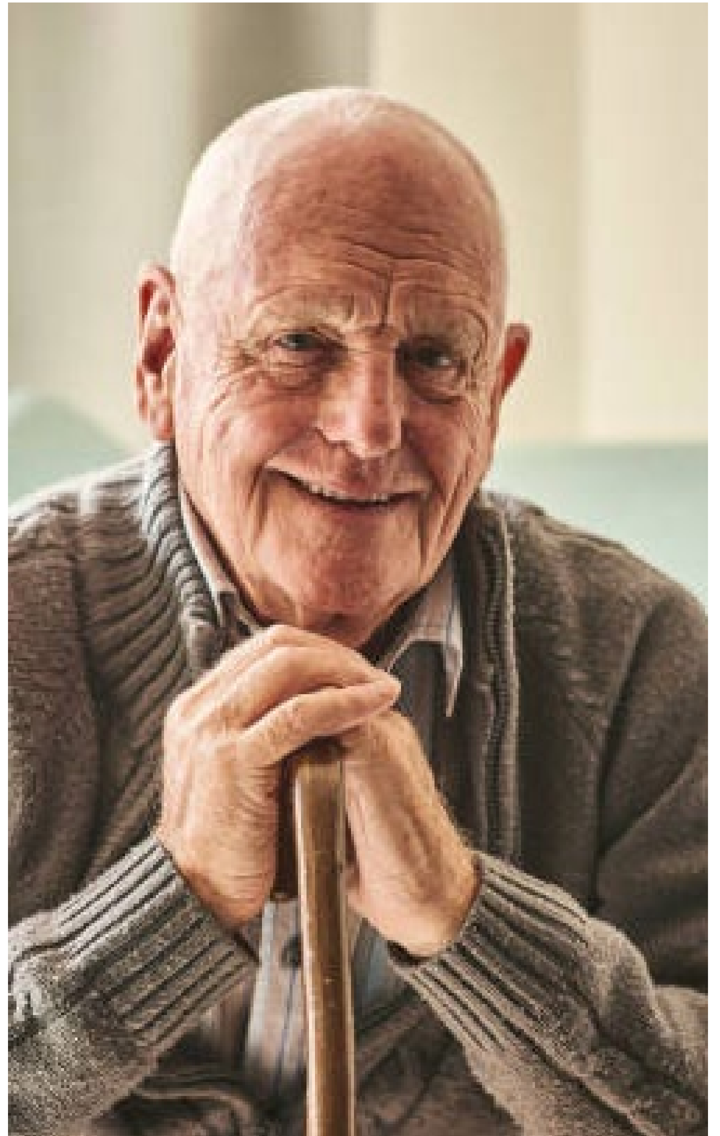
# 7. Insomnia

- Eszopiclone and lemborexant had a favorable profile for treatment of insomnia.
- Eszopiclone can have side effects and safety data on lemborexant was not conclusive.
- Doxepin, seltorexant, and zaleplon had lower side effects, but data on efficacy and other outcomes were limited.
  - Making it difficult to make a strong recommendation

- **TAKE HOME**: Many medications for insomnia can be effective for short periods but are not well tolerated and data on long term use is limited. Consider nonpharmacological measures first before starting medication and aim to use medications for short duration.

- Caring for older adults is complex and requires critical assessment of the clinical picture.
- Guidelines are “nice” but do not always consider the complexity of the situation.
- Important to consider the patient in front of you when making decisions.



Healthy Ageing and Geriatrics

# When Do Guidelines Fail The Elderly?

## Top ~~10~~ 7 Things That Make a Geriatrician Twitch

Lindy Romanovsky MD, MSc(HQ)