Elderly

CFPC Priority Topics and Key Features

1	**In the elderly patient taking multiple medications, avoid polypharmacy by:** **- monitoring side effects.** **- periodically reviewing medication (e.g., is the medication still indicated, is the dosage appropriate).** **- monitoring for interactions.**
2	**the elderly patient, actively inquire about non-prescription medication use (e.g., herbal medicines, cough drops, over-the-counter drugs, vitamins).**

n.b.: combined response to 1 & 2:

Assessment of inappropriate drug prescribing: use **STOPP criteria** (more sensitive than Revised BEERS criteria) which is a list of 65 drugs and when to avoid them (available online at http://www.biomedcentral.com/content/supplementary/1471-2318-9-5-S1.doc)

Assessing Care of Vulnerable Elders (ACOVE-3) recommendations:
- Maintain a list of Rx
- Include OTC Rx and herbals in that list
- Annually review medication
- Assess for duplication
- Assess for interactions (including drug-drug, or drug-disease)
- Assess for adherence & affordability
- Assess for specific classes of Rx assoc with common adverse events:
  - warfarin
  - analgesic esp. narcoids & NSAIDs
  - anti-HTN esp. ace and diuretics
  - insulin and hypoglycemic agents
  - psychotropics
- Minimize/avoid anticholinergic use

Age Ageing 2008; 37:673.
J Am Geriatr Soc 2007; 55 Suppl 2:S373.

3	**In the elderly patient, screen for modifiable risk factors (e.g., visual disturbance, impaired hearing) to promote safety and prolong independence**

Primary prevention in elderly (averting development of disease)		
Condition	**Details**	**Screen / Intervention**
Smoking	To reduce fractures, mortality from Lung Ca, CVD, and COPD, and all-cause mortality	Recommend quitting, provide formal counselling, pharmacotherapy (not studied in elderly but may be reasonable)
EtOH	Risk factors include bereavement, depression, anxiety, pain, disability, and prior EtOH use	Screen using CAGE questionnaire
Immuni-zations	Tetanus occurs predominantly in unvaccinated / underimmunized older adults	Tdap - if uninmmunized and > 65 esp. if in contact with infants Td booster – q10yrs
	> 90% of Influenza deaths occur in patients >60 yrs. Imm decreases hospitalization, mortality	Influenza – annually
	Pneumococcus – vacc assoc with fewer bacteremic infections but no decrease in mortality	Pneumococcus - if first immunization > age 65: 1 dose - if first immunization < age 65: booster dose at 5 yrs
	HSV – For prevention (not treatment) of zoster / postherpetic neuralgia	HZV if > 60 and immunocompetent
Secondary prevention (screening, early detection, & treatment of asymptomatic disease)		
Cancer	Screening & treatment for elderly has been less rigorously evaluated .	Offer screening on an individual basis, providing risks/benefits and taking into account patient's values, preferences and life expectancy
Prostate Ca	indicate little benefit in prostate cancer specific mortality within 10 years of screening and no discernible benefit in overall mortality out to 14 years; high rates of side effects associated with treating potentially-inconsequential, screen-detected prostate cancer	**CDN Urol Assoc 2011 guidelines:** • Screen all men > 50* yrs q1yr, IF life exp > 10 yrs. Screening q1yr is standard but some studies show q2-4 yrs • *Start at 40 If FHx of PrCa or African descent • Initial screen: **DRE & PSA** *(note difference from US guidelines which say evidence is insufficient to recommend screen < 75 yrs, and recommend against screening > 75)* • May be benefit to offering baseline PSA between 40-49 • There is no strict PSA cut-off but the lowest cut-off demonstrating a benefit to screening was 2.5 ng/mL
Colon Ca	FOB testing = 15-20% reduction in Colon Ca mortalityn Effectiveness of sigmoidoscopy may be equal to colonoscopy; safety possibly better than colonoscopy in elderly	**CDN Assoc Gastro 2004 guidelines:** Individuals > 50 **–ve FH**: require 1 of: • FOBT q2yrs using guaiac or FIT *(note difference from US guidelines which suggest q1yr),* OR • Flex sig q5yrs; OR • Flex sig & FOBT q5yrs; OR • Double-contrast Ba enema q5yrs; OR • Colonoscopy q10yrs.

		For **+ve FH**: Depends on type of FH *(AP = Adenomatous polyp)* • One 1° relative with Ca or AP at age <60 = Colonoscopy q5yrs, after 40 yrs or 10 yrs prior to the age of 1st family member's Ca diagnosis • 2 or more 1° relative with Ca or AP at any age = Colonoscopy q5yrs, after 40 yrs or 10 yrs prior to the age of 1st family member's Ca diagnosis • One 1° relative with Ca or AP at age >60 = Avg risk screening after age 40 • 2 or more **2°** relative with Ca or AP at any age = Avg risk screening after age 40 • One 2° or 3° relative = Avg risk screening after age 50 • Polyps at colonoscopy = Depends on polyp type • HNPCC - Genetic counselling, colonoscopy q1-2yrs after > 20 yrs • FAP – Flex sig annually, after 10 yrs • AAPC – Colonoscopy q1y, after 16 yrs
Breast Ca	Studies excluded women over age 70-74; guidelines are vague	**CDN task force 2011 guidelines:** • Age 50-69: routine screening with mammography q 2 to 3 years (Weak recommendation; mod qual evidence) • Age 70 – 74: routine screening with mammography q 2 to 3 years. (Weak recommendation; low qual evidence).
Cervical Ca		**Canadian guidelines** : Discontinue after age 70 if 2 normal paps AND no abnormalities over last 9 yrs
HTN	60-80% of elderly have HTN, the leading risk factor for IHD & stroke In older adults, BP treatment results in decreased all-cause mortality, cardiovascular events, stroke, and chronic kidney disease. In adults > 80, BP treatment results in reductions in stroke, congestive heart failure, and major cardiovascular events with treatment	**CDN CHEP HTN 2011 guidelines** **Specific to elderly:** • Anti-HTN Rx should be considered in ALL adult patients with HTN, regardless of age • Caution in frail elderly • When diagnosing HTN in elderly or pts with DM, may use supine BP readings • Consider 2 first-line anti-HTN Rx as first-line therapy in adults whose SBP 20>target or DBP 10>target; use caution in elderly • Consider renovascular HTN in patients > 55 with sudden onset or worsening of HTN • Don't use beta-blockers as 1st line for UNCOMPLICATED HTN if patients are > 60 • For prevention of HTN, limit salt intake to 1200 mg/day in patients age > 70 and 1300 mg for patients 51-70. **General Diagnosis CDN guidelines for all pts:** • "assess BP in all adult patients at all appropriate visits" • Automated measurements are OK. • Automated office BP of 135/85 is analgous to mean awake ambulatory 138/85 • If BP is 130-139 / 85-99: annual follow-up • If BP is ≥ 140/90: specific HTN visit • At specific HTN visit: ≥3 readings. Discard first; avg the latter 2. **At visit 2:** • if there is macrovascular target organ damage OR DM OR CKD, DIAGNOSE HTN if BP is ≥ 140/90. • If none of these, DIAGNOSE HTN if BP is ≥ 180/110

		• If none of these and bp < 180/110, re-evaluate with 3 serial office visits OR 24 hr ambulatory monitoring OR home BP measurement. Risks of treatment: orthostatic hypotension, falls, renal dysfunction, electrolyte disturbance, and, in small studies, increased mortality Benefits of treatment: likely outweigh risks Treatment: nonpharm (decrease salt, weight loss, decrease NSAIDS and other HTN-inducing Rx). If not effective, pharm at low doses. Monitor prescription adherence, renal function, electrolytes, orthostatic blood pressure and pulse, and assess for gait instability and falls. Indapamide sustained-release has been tested in pts >80 (with add-on perindopril if ineffective) – reduces risk of death from stroke, any cause, and CHF incidence (NEJM 2008;358(18):1887-98).
Lipids	Lipid lowering therapy clearly benefits older adults at high risk of coronary events Primary prevention for low-risk older adults – benefit is unclear	**CDN Cardiovasc Society 2009 Guidelines:** Screen Men ≥40 years of age, and women ≥50 years of age or postmenopausal, or all patients with risk factors regardless of age Treat if high risk (ie. CHD risk > 10% over 10 yrs)

Osteo-porosis		**CDN 2010 Osteoporosis Guidelines:**
		• Assess BMD in all pts ≥65
		• Assess BMD in pts >50 with fragility # or other high-risk features
		• All pts, annually: Measure height & assess the hx of falls
		If osteoporosis diagnosed:
		• R/O 2ary osteoporosis (iCa, CBC, Cr, Alk Phos, TSH, SPEP if vertebral #, 25-OH Vit D after 3/12 of adequate supplementation). Do not repeat if value is adequate
		• (Do NOT order Vit D tests in healthy adults with lo risk of Vit D deficiency – they will be low and virtually all Canadian adults need 400-1000 IU / day supplementation, not testing)
		Therapeutic options:
		• Exercise – resistance, core stability, balance
		• Hip protectors in pts in LTC facility with hi fracture risk
		• Calcium – total daily intake 1200 mg > age 50
		• For menopausal WOMEN requiring treatment of osteoporosis:
		  ○ alendronate, risedronate, zoledronic acid and denosumab can be used as first-line therapies for prevention of **hip, nonvertebral and vertebral #**
		  ○ raloxifene can be used for prevention of **vertebral #**
		  ○ HRT can be used to prevent **hip, nonvertebral and vertebral #** in patients **with vasomotor sx**
		• If intolerant of 1st line tx, menopausal women can use calcitonin or etidronate to prevent **vertebral #**
		• For MEN requiring treatment of osteoporosis:
		  ○ alendronate, risedronate, zoledronic acid **(and NOT denosumab)** can be used as first-line therapies for prevention of **hip, nonvertebral and vertebral #**
		  ○ **Testosterone** is **NOT recommended**

		For ALL PTS > 50: • Exercise – weight-bearing, resistance, core stability, balance • Calcium – total daily intake 1200 mg • Vit D 800-2000 IU/day • Fall prevention
AAA	Increased risk in smokers	**CDN Society for Vascular Surgery recommendation** • Screen men 65-75 who want to be screened & could/would go ahead with surgery • No benefit in screening men 75-80 yrs old • Not recommended for population-based screening of women >65 yrs; instead, individualize screening may be beneficial if risk fx (smoker, CVD, FHx of AAA) • U/S is effective screening modality. If AAA found and < 3cm, no f/u in 3-5 yrs. If 3-4.4cm, U/S annually. • No need to screen if <65. *(Note difference from USA guidelines recommend one-time abd u/s screening in all US men age 60-75 who have ever smoked)*
- Tertiary prevention (screening for established conditions to prevent further morbidity , functional decline, promote safety and prolong independence)		
Functional assessment (see objective #3)	Impairment in activities of daily living is associated with an increased risk of falls, depression, institutionalization, and death in the affected older adult	Obtain history (see objective #3) Focus on problem areas Measure gait speed: < 1 m/s identifies adults with below -avg life exp
Key components of Comprehensive Geriatric Assessment		
Cognitive Assessment	Early/mild dementia remains undetected unless screened for (but screening for early/mild dementia is not shown to improve clinical outcomes) After age 85, prevalence of dementia is 20-50%	**CDN Consensus Conference on Dx/Tx of Dementia 2007:** Relevant objectives (of the 146 recommendations in the guideline): • No specific mention of screening asymptomatic patients • If MCI is suspected, MoCA and DemTect are recommended (more sensitive than MMSE) **As part of initial workup:** • Fair evidence to support use of CT or MRI in select cases • Serum Cbl levels should be checked in ALL pts suspected of MCI; if low, treat (PO or parenteral). Testing Folic acid or RBC folate is optional in these patients; consider if high-risk for low folate (celiac, poor nutrition etc.) • Biological markers for the diagnosis of AD should not, at this juncture, be included in the battery of tests routinely used by primary care physicians to evaluate subjects with memory loss. • Genetic screening for APOE is not recommended in

		asymptomatic pts (Low sens/spec/PPV/NPV). • There is fair evidence to suggest avoidance NSAIDS, HRT, Ginkgo, and Vit E in patients with MCI Validated screening tools: MMSE Clock-drawing test Mini-cog Memory impairment screen
Depression	Depression in elderly: decreased quality of life, outcomes of medical disease, healthcare utilization, morbidity, and mortality In elderly, suicide rates double Highest rate of suicide is in white males > 85 **As many as 67% of pts with depression present with somatic complaints.**	**Cdn CANMAT Guidelines 2009 (and CTFPHC Recommendation 2005):** • Combined pharmacotherapy and CBT or IPT is superior to either modality alone; the superiority is most evident when studied in elderly populations • In addition to other side effects, SSRIs are assoc with # and osteoporosis in the elderly • The simplest approach to case-finding in clinical practice is a quick 2-question screen (possibly as effective as longer screening tools): • "In the last month, have you been bothered by little interest or pleasure in doing things?" • "In the last month, have you been feeling down, depressed or hopeless?" • (Note that screening has never been shown to improve clinical outcomes, unless effective follow-up and treatment are instituted for people who screen +) **If screen + (yes to either question):** full diagnostic interview,with treatment & f/u There is no list of who should be screened. However CANMAT does indicate that high-risk symptom presentations include: Unexplained physical sx — Fatigue Pain — Insomnia Anxiety — Substance abuse Consider depression in elderly with somatic complaints. Can present atypically with cognitive, functional, or sleep problems as well as complaints of fatigue or low energy.
Vision screening	Decreased visual acuity: increases fall risk, and (in one study) all-cause mortality However, correcting visual impairments not shown to reduce mortality Cataract surgery shown to improve cognition, depression, and vision-related quality of life in older patients	**Cdn Ophthalmol Soc Guidelines 2007:** • Screen for declining visual acuity q2yrs in pts >65 yrs who are asymptomatic, low-risk • Screen for declining visual acuity q1yrs in pts >60 yrs who are high-risk (ie DM, cataract, macular degen, glaucoma, or FH of these) • Any patient noting changes in visual acuity, visual field, colour vision, or physical changes to the eye should be assessed as soon as possible*

	with cataracts	*Despite the guideline to assess acuity, it is a consensus guideline only (i.e. no evidence) as self-reported history of visual problems has NOT been shown to be assoc w/eventual improvement of vision. Unfortunately the guidelines do not explicitly indicate what means are used to "screen" patients – presumably it is the "comprehensive eye examination" including history & physical & dilated examination. Screen by history – could inquire re: - Diplopia - Driving - Reading, TV - Sudden/recent vision loss - Occupational/lifestyle restrictions
Glaucoma screening		**Cdn Ophthalmol Soc Guidelines 2009** – IOP insufficient for screening. Screen (using both structural and functional measures) in high-risk populations.
Hearing loss	Associated with depression, social isolation, poor self-esteem, and functional disability Affects 40-66% over age 75	No recent CDN guidelines were readily located. **PHAC CDN Guide to Clinical Preventive Health Care 1994:** • Screen by history: a **single question** to pt about hearing loss is sensitive for hearing loss • Screen by physical: **Whisper test** sensitive & specific • **Treat using hearing aids:** improve the quality of life in individuals who are hearing impaired
Poor Nutrition	Approx 15% of older adults are malnourished Clearly assoc with morbidity & mortality	**Cdn Task Force Guidelines 2001**– Provide nutritional assessment, counselling. Use mini-nutritional assessment tool Evaluate patients who unintentionally lose 10% or more weight No well-validated lab test Interventions: SLP eval, treat oral pathology, increase feeding freq, nutritional supp
	Vit D reduces risk of falls by 22%	Recommend Vit D 800-1000 IU for elderly Recommend 1200 – 1500 mg elemental Ca in diet for elderly
Falls	Incidence is 30-40% in non-institutionalized elderly each year Causes: • age-related postural changes, • decreased vision • cognitive impairment • certain medications (particularly anticholinergic,	**Screen:** - Inquire re: ?Fall in last year - If no, assess gait & balance *Get Up and Go test* (stand from sitting, walk 10 ft, turn, return to chair to sit). > 16 seconds = increased risk of falling Alternatives: *Chair stand, Romberg, pull test* **If screen +** review of circumstances of the fall(s), measure of orthostatic vital signs, visual acuity testing, cognitive evaluation, and gait and balance assessment

	psychotropic, and cardiovascular medications) • diseases affecting muscle strength and coordination • environmental factors	Review Rx – highest risk with CNS drugs esp psychotropics **Interventions** - Weight-bearing exercise that includes impact - Ca and Vit D as per previous line on Nutrition - Smoking cessation - Moderate alcohol intake: <three drinks per day - modify environment to minimize trip risks
Urinary incontinence	Affects 11 to 34 percent of older men and 17 to 55 percent of older women Risk doubles in women with diabetes	UpToDate - "Because problems are often treatable yet not raised by patients, asking about UI biannually is recommended" **Cdn Urol Assoc incontinence guidelines 2006** • no mention of screening asymptomatic pts • a list of risk factors is provided; (this may be useful in deciding which patients to screen, as no other guidance on screening is given in the article): immobility, chronic disease, impaired cognition, delirium, Rx incl diuretics, morbid obesity, fecal impaction, envt barriers, hi-impact physical activities, DM, stroke, estrogen depletion, pelvic muscle weakness, childhood nocturnal enuresis, "race" (no mention of which race is associated with high risk), pregnancy/vaginal delivery, previous anti-incontinence surgery, previous hyst • symptomatic pts need Hx, Px, PVR and U/A
Elder mistreatment	Occurs in 3-8% of elderly	Since older patients are unlikely to report, inquire when there are contusions, burns, bite marks, genital or rectal trauma, pressure ulcers, or a BMI <17.5 without clinical explanation
Driving risk	Risk of MVA increases over age 70 Dx of dementia increases risk of MVA (OR 2.4-4.7)	Discuss driving with all pts with dementia
Financial support	In US 10 percent of older adults still live at or below the poverty line Social isolation and poverty are associated with high rates of depression, anxiety, disability, and self-rated poor health	Screen for poverty & social isolation

General refs

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Visual acuity: Can J Ophthalmol 2007;42(1),39-45
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4 In the elderly patient, assess functional status to:
- anticipate and discuss the eventual need for changes in the living environment.
- ensure that social support is adequate.

COMPLETE FUNCTIONAL ASSESSMENT

- does living environment need to change?
- is social support adequate?
- hearing aid, denture, glasses, walker?

1. ADLs
- *Mnemonic: DEAT^{2}H*
  - Dressing
  - eating and EtOH (CAGE)
  - ambulating (falls?)
  - toileting (non-judgemental questions)
  - transferring
  - hygiene / bathing
- Communication (Vision/ hearing)
- Caregiver
- Depression (ask!)
- Dementia (memory/MMSE/MOCA/clock)
- Social/living situation
- Don't miss Abuse/neglect

2. IADLs
- *Mnemonic:SHAFT* -TT
  - -Shopping
  - Housework
  - Accounting
  - Telephone
  - Transportation
  - Taking Rx
  - Food prep
- weight loss? dentures fitting?

3. Assessment for Alzheimer's:
Mnemonic: CURE FROM IRAN
Ask patient about CURE = staging – modified from Brief Cognitive Rating Scale
C – Current Events (mild)
U – USA president (moderate)
R – Relatives – children / spouse names forgotten(severe)
E – Everything forgotten (severe)

Ask caregiver about FROM IRAN (Modified from Functional Assessment Staging Tool FAST)
F – Function
R – Repetitive Questioning
O – Onset (Acute vs. Slowly progressing)
M – Memory

I – IADL impaired (mild)
R – Repetitive dressing (moderate)
A – ADLs impaired (severe)
N – Non-ambulatory, non-verbal (very severe)

5 In older patients with diseases prone to atypical presentation, do not exclude these diseases without a thorough assessment (e.g., pneumonia, appendicitis, depression).

- Most commonly missed diagnoses are cancer, pulmonary embolus, coronary disease, aneurysms, appendicitis (J Am Board Fam Med 2012;25:87–97)
- Depression can present atypically with somatic complaints, cognitive, functional, or sleep problems as well as complaints of fatigue or low energy. However, serious organic pathology can present as depression; rule it out using a targeted history, physical examination, and investigations

Specific statements in the Priority Topics & Key Features:

Anemia Consider anemia in elderly on NSAIDs

Dementia do not attribute behavioural problems to dementia without assessing for other possible factors (e.g., medication side effects or interactions, treatable medical conditions such as sepsis or depression).

Dehydration is difficult to assess clinically; use reliable signs ie. vitals

Diarrhea: In elderly with unexplained diarrhea, pursue investigation sooner as they are more likely to have pathology

Fever: In elderly, there is no correlation between presence/absence of fever and presence/absence of serious pathology.

Fracture: if XR neg, may need bone scan / CT.

Depression can present atypically with somatic complaints, cognitive, functional, or sleep problems as well as complaints of fatigue or low energy. However, serious organic pathology can present as depression; rule it out using a targeted history, physical examination, and investigations

Infection: Look for infection as cause of ill-defined problems in elderly

Parkinsonism: Look for Parkinsonism in elderly with deterioration in functional status

Thyroid: Elderly are at higher risk

UTI: BPH is high-risk feature in elderly male. Suspect UTI in elderly with non-specific presentation (abdo pain, fever, delirium)

Addendum FYI: <u>Elderly patients</u> are mentioned in a number of <u>other topics</u> in the Priority Topics and Key Features document, including:

Abdo pain:
Include group-specific surgical causes of acute abdo pain in the elderly

Disability:
Screen elderly patients for disability risks (e.g., falls, cognitive impairment, immobilization, decreased vision) on an ongoing basis. In elderly, recommend primary prevention strategies (e.g., exercises, braces, counselling, work modification). **See #3 above.**

Grief:
Recognize atypical reactions ie. behaviour change

Immunization and Pneumonia:
Elderly, nursing home, hospitalized patients benefit from immunization ie. pneumococcus, flu, ribavirine. **See #3 above.**

Osteoporosis: *Older men need osteoporosis counselling too.*

Elderly
Sample SAMP - Questions

Raymond Tanguay, aged 75, comes to your office after having been discharged from hospital. He had been admitted for a hip fracture after he fell while walking in the snow. The emergency room doctor told him he needs to be treated for "osteoporosis" and he needs to be seen by his family physician for "follow-up and work-up."

He is known to have hypertension, high cholesterol and moderate chronic obstructive pulmonary disease (COPD). He is a smoker. He likes to drink three to four glasses of wine daily. His weight is 70 kg, height 170 cm. He has many questions about osteoporosis.

1. How can the diagnosis of osteoporosis be made?

_____

2. What are the risk factors for osteoporosis?

_____

3. Is there any lifestyle measure or nutritional measure that can be taken to lower the risk of osteoporosis?

_____

4. Mr. Tanguay asks you about blood sampling and other tests to be sure osteoporosis is not the manifestation of another medical condition. Which blood tests should you order to exclude secondary osteoporosis?

_____

5. Which patients should be considered for osteoporosis pharmacological therapy?

1. Patient with a ten-year absolute risk above 20% for any osteoporotic fracture
2. Men and women who have had a fragility fracture and whose T score is −1.5 or lower
3. Patient with a ten-year probability of hip fracture of 3%

6. Which one of the following statements about osteoporosis pharmacotherapy is true?

1. Etidronates are as effective as bisphosphonates in preventing vertebral fracture, nonvertebral fracture and hip fracture.
2. Nasal calcitonin therapy has been shown to reduce the risk of vertebral fractures among postmenopausal women at high risk of osteoporotic fractures.
3. Teriparatide has been shown to reduce risk of fracture in older men.

Elderly
Sample SAMP - Answers

1. Osteoporosis may be diagnosed in postmenopausal women and in men aged 50 and over if the measurement of bone mineral density in the lumbar spine, total hip or femoral neck is at least 2.5 standard deviations below that of a young control (T score –2.5 or less).

2. Smoking
   Excessive alcohol intake
   Low body mass index
   Glucocorticosteroid use
   Rheumatoid arthritis
   Previous fragility fracture
   Parental history of hip fracture

3. Weight-bearing exercise that includes impact
   Adequate calcium intake: (1,200-1,500 mg/d)
   Adequate vitamin D intake: (> 800 IU/d)
   Smoking cessation
   Moderate alcohol intake: <three drinks per day

4. Complete blood count
   Serum calcium
   Total alkaline phosphatase
   Serum creatinine
   Serum protein electrophoresis
   Liver transaminase levels

5. 1, 2, 3

6. 2

SAMP answer reference: Reference Rahmani P, Morin S. Prevention of osteoporosis-related fractures among postmenopausal women and older men. CMAJ 2009;181:815-20. SAMP question reference: CFPC. Self Learning. 2010:25(3);58-63.