Workshop

Practical Reduction of Polypharmacy (case-based)

**with Dr. James McCormack*

Langley Division of FP

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Faculty/Presenter Disclosure

- **Faculty:** Dr.Rita McCracken
- **Relationships with commercial interests: NONE**
  - **Grants/Research Support:** none
  - **Speakers Bureau/Honoraria:** none
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  - **Other:** none
- **Disclosure of Commercial Support**
  - This program has NOT received financial support from anyone.
  - This program has NOT received in-kind support from anyone.
- **<u>Potential for conflict(s) of interest</u>:**
  - n/a

Mitigating Potential Bias

- I will provide a published source to support every statement that I make.
- I welcome feedback if bias is noted by any audience member. (please be specific about what you heard me say and why you think it is biased).

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Agenda

1. Some polypharmacy basics
2. Specific issues with hypertension and diabetes drugs
3. Suggested process to deprescribe
4. Tools available
5. Case for practice and discussion

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Polypharmacy in elderly,
(literature review in one slide)

1. Physiology is different and comorbidity common.
2. Frailty common (and prognostic factor).
3. More drugs increases chances of more adverse events (mathematical reality).
4. Limited life span.
5. Frail elders typically excluded from trials.
6. Guidelines based on available trials.
7. EVERYONE SAYS “MORE RESEARCH NEEDED”

References, please email me.

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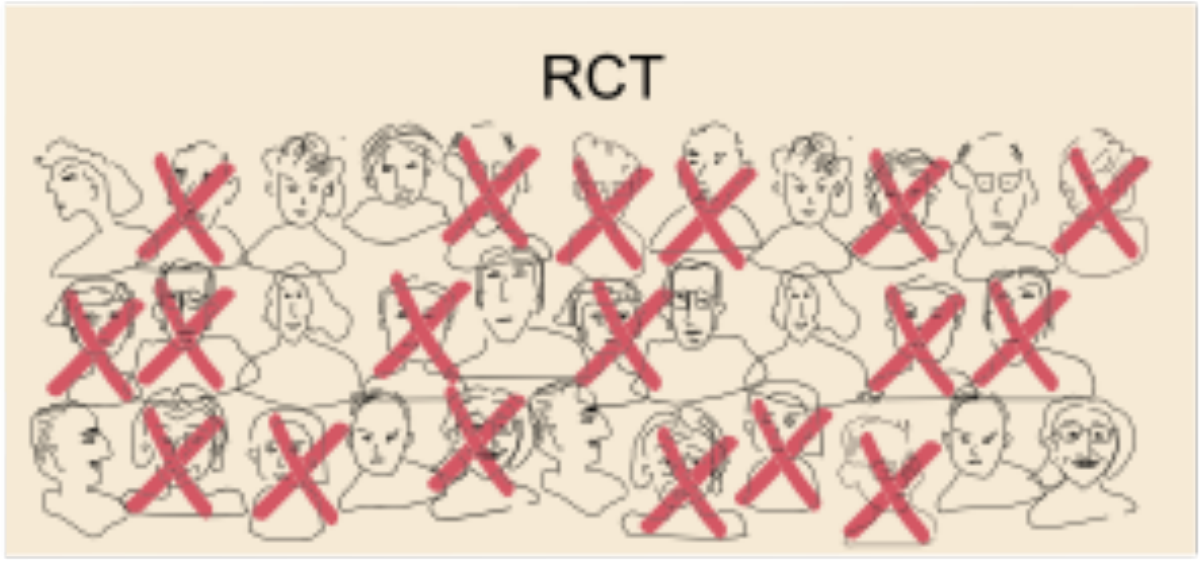
Problems with the “evidence”



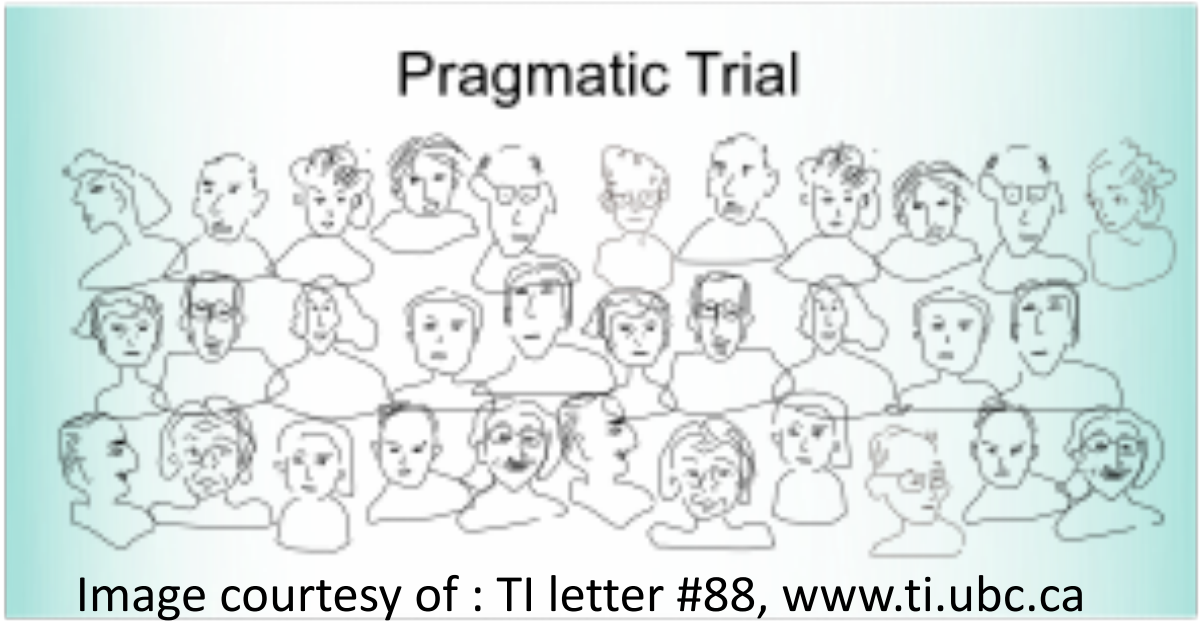


Image courtesy of : TI letter #88, www.ti.ubc.ca

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HYVET : who they studied

Inclusion criteria:

- Aged 80 or more,
- Systolic BP 160-199 mm Hg
- + diastolic BP <110 mm Hg,
- Informed consent

Exclusion criteria:

- Standing SBP <140 mm Hg
- Stroke in last 6 months
- Dementia
- Need for daily nursing care

Reference: Beckett NS, et al. N Engl J Med. 2008;358(18):1887-98.

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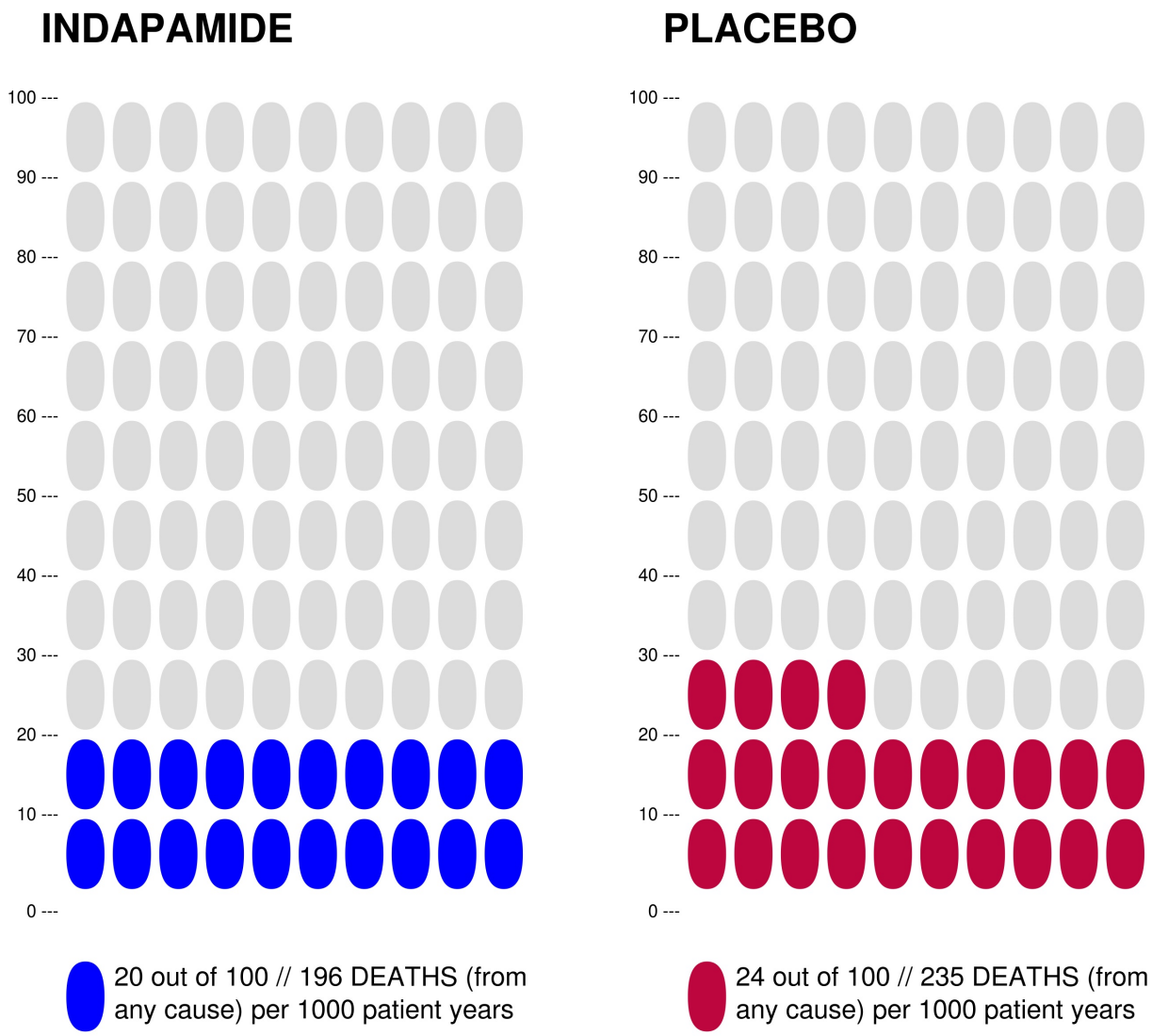
HYVET – all cause death/1000 pt years



Active therapy reduced total mortality:

ARR = 2.2%,
<u>NNT = 48 for 2 years</u>

TREATMENT GROUP
mean BP 144/78
(48% reached target)

PLACEBO
Mean BP 159/84
(20 % achieved target)

Beckett NS, et al. N Engl J Med. 2008;358(18):1887-98

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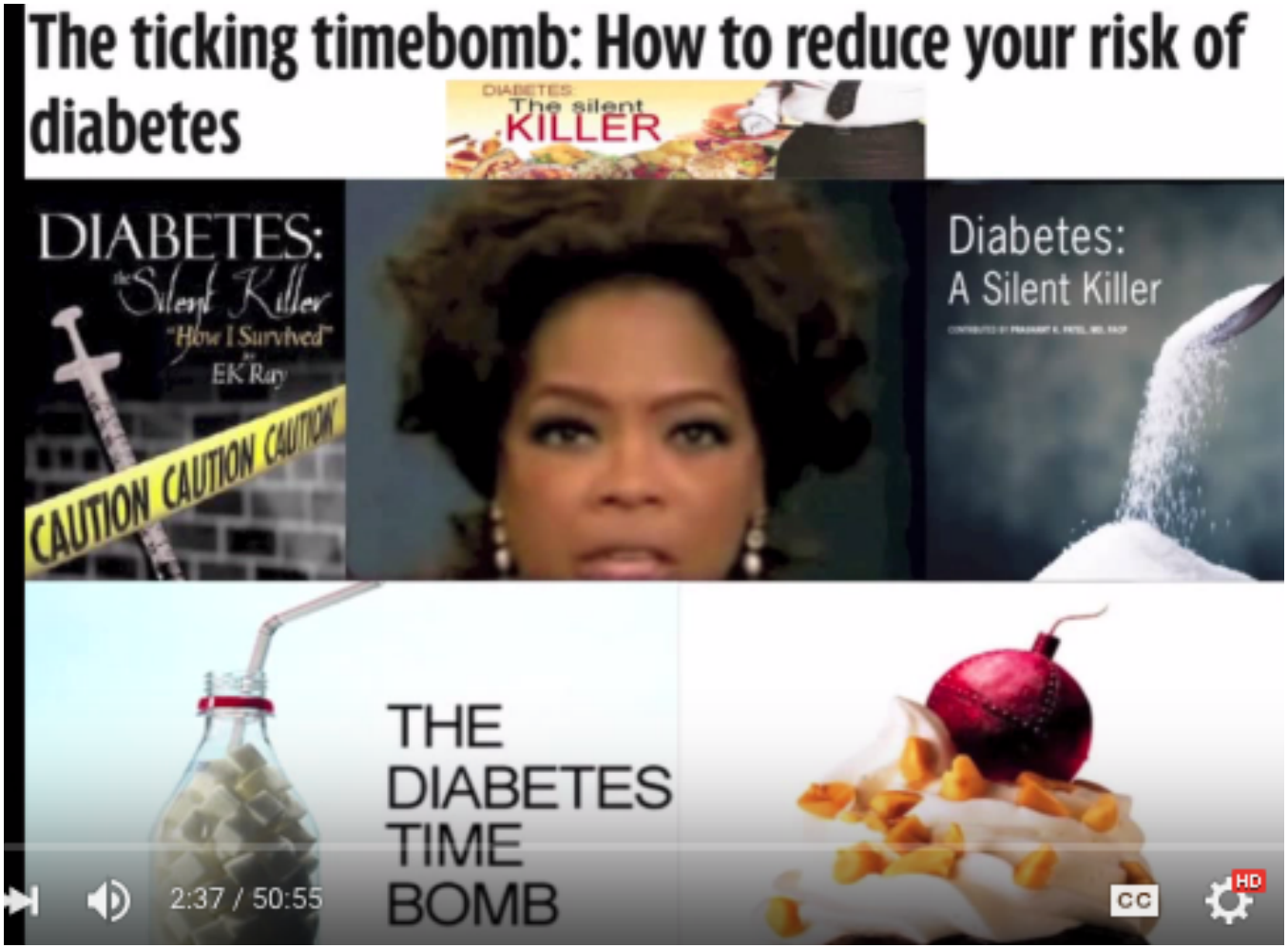
Leiden 85+, no one gets left out

"Overall, **90-year-old participants with SBP of 150 mmHg or less had a 1.62 times increased mortality risk** compared to those with SBP more than 150 mmHg (95%CI:1.21–2.20), independent of the SBP trend in preceding years. This applied to those with and without antihypertensive drugs and those with and without history of cardiovascular disease or noncardiovascular disease."

Reference: Poortvliet RK, et al. Journal of Hypertension. 2013;31(1):63-70.

Older patients with LOWER Blood Pressure had HIGHER RISK OF DEATH.

DIABETES



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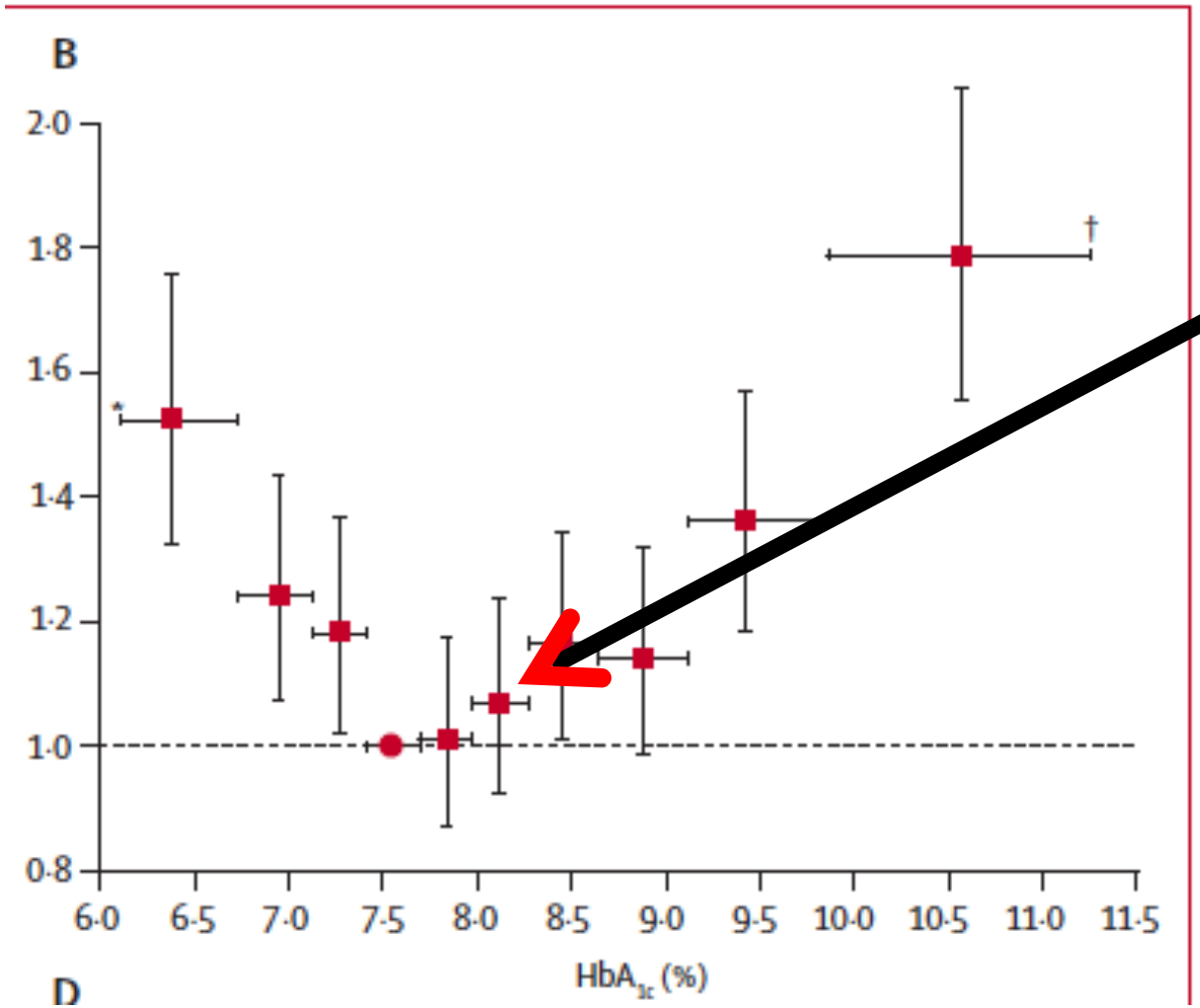
Lancet 2010; 375: 481-489

Survival as a function of HbA_{1c} in people with type 2 diabetes: a retrospective cohort study

Craig J Currie, John R Peters, Aodán Tynan, Marc Evans, Robert J Heine, Oswaldo L Bracco, Tony Zagar, Chris D Poole



7.8-8.1 = best Survival

(for community dwelling primary care diabetes patients)

Figure 2: **Adjusted hazard ratios for all-cause mortality introducing HbA_{1c} (%) into Cox proportional hazards model as a time-fixed or time-dependent covariate**
Consists of two time-dependent covariates with data from combined cohorts. Vertical error bars show 95% CIs, horizontal bars show HbA_{1c} range. Red circle–reference decile. *Truncated at lower quartile. †Truncated at upper quartile. All three methods compared (A); mean of all HBA_{1c} values (B); yearly mean, last observation carried forward‡ (C); updated mean (D).

ELSEVIER

JAMDA

journal homepage: www.jamda.com

Review

Evidence-Informed Guidelines for Treating Frail Older Adults With Type 2 Diabetes: From the Diabetes Care Program of Nova Scotia (DCPNS) and the Palliative and Therapeutic Harmonization (PATH) Program

A1c > 8%

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[c] District Medical [illegible]tor of Conti[illegible] Ca[illegible]h Anti[illegible]it Health Authority and RK MacDonald [illegible], Antigo[illegible], Nova Sc[illegible]
[d] Diabetes Care Program of Nova Scotia, Nova Scotia Department of Health and Wellness, Halifax, Nova Scotia

1. Available studies do not include Frail People.
2. Time to Benefit in more well people >10 years for macrovascular outcomes
3. Microvascular outcomes not relevant in frail people (maybe in everyone, due to odd composite measures)
4. Tight glycemic control in >65yo, even when well, DUBIOUS (?harmful? VADT, ADVANCE, ACCORD)

Mossello, Florence, Italy

(JAMA Intern Med, 2 March 2015)

Prospective cohort, n= 172 outpatients, 1 June 2009 - 31 May 2011, baseline ax + f/u (6-18 months)

Inclusion criteria:

- Aged 65 or more,
- Dx MCI or Dementia, MMSE 10-27
- Informed consent ((family member if need be)

Exclusion criteria:

- MMSE<10
- A. Fib (bc automated machines not reliable)
- Refusal to wear BP cuff

At baseline and follow up they assessed:

1. Vascular comorbidities (incl HTN, DM2, CHF, CHD, arrhythmias (not A.Fib), CV Dz, CKD)
2. List of all hypertension medications.
3. Office SBP/DBP
4. Cognitive Ax
5. BADL's and IADL's

Fastidious attention to BP monitoring, including:

24hr ABPM @ baseline

- Mean
- Variability
- Nighttime "dipping"

Office BP @followup

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What did they find in Florence?

At mean of 9 months to follow up

- DECREASE in MMSE (baseline **22.1** (SD 4.4) to **20.7** (SD 5.8) (p=<0.001)
- Using daytime SBP, compared tertiles
  - <128 (MMSE -2.8 (SD 3.8))
  - **128-144 (MMSE – 0.7 (SD 2.5)) (p<0.002)**
  - >145 (MMSE -0.7 (SD 3.7)) (p<0.003)

There is not much data on blood pressure in people with cognitive impairment, said lead author Dr. Enrico Mossello of the University of Florence in Italy. This study is the first to suggest that **cognitive declines might happen faster in older people on blood pressure medicine** whose systolic pressure – […] – is low, he said.

Mossello et al, JAMA Intern Med, 2 March 2015

http://www.theglobeandmail.com/life/health-and-fitness/health/low-blood-pressure-linked-to-faster-cognitive-decline/article23287122/

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Guidelines for Rx of HTN (in Frail Elders)

Canadian Guidelines:

- Antihypertensive therapy should be considered in all patients [...] regardless of age (Grade B). Caution should be exercised in elderly patients who are frail.
- In the very elderly (aged 80 years) who do not have diabetes or target organ damage, the SBP threshold for initiating drug therapy is **160 mm Hg** (Grade C).
- **Treatment target is < 150 mmHg**
  - References:
    - CHEP (2014) https://www.hypertension.ca/en/chep
    - Jansen, et al, BMC Family Practice (2015) http://www.biomedcentral.com/1471-2296/16/104

SBP <150 mmHg

A Practical Approach to De-prescribing

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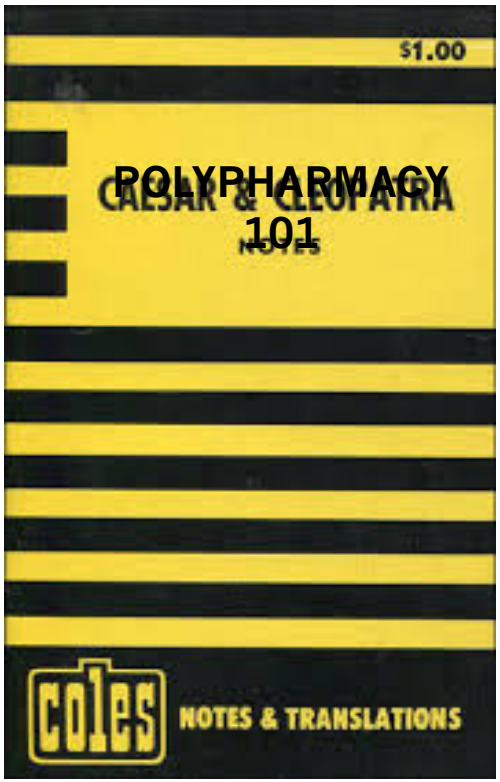
STEP 1 - Do a Comprehensive Medication History

UNTIL PROVEN OTHERWISE



The drug and the dose are WRONG!!!!!

STEP 2 - Prioritize the medications

Will it Reduce Symptoms?

Is it actually helping?

Will it Reduce the Risk of Future Illness?

Is the size of the effect big enough to justify the potential side effects, costs and inconvenience?

Will it Cause Harm?

Are any of their symptoms being caused by their medication?

STEP 2a - Will it reduce symptoms?

does it have evidence that it works? - and how big of an effect?

sildenafil/PPIs ~ 50% absolute benefit

antidepressants, dementia meds ~10% absolute benefit?

is it actually working in that patient?

were the symptoms being caused by a medication?

STEP 2b - Will it reduce the risk of future illness?

does it have evidence that it works? - and how big of an effect - risk tools, benefit estimates

~baseline CVD/fracture risk, ~absolute benefit

neither you nor your patient will ever know if it works

is the medication causing any symptoms?

STEP 3 - Identify if the lowest dose has been determined

recommended starting doses are typically too high

75% of side effects are dose-related

can’t predict response

the right dose is the lowest dose that does the job

STEP 4 - Let the patient help you

what ones don’t they like taking?

which ones do they feel are helping them?

cost/inconvenience

STEP 5 - Use tricks to get buy-in

THEIR ARGUEMENTS

I've been on these for years and now you are telling me I don't need them

But these are for my heart!!

It's OK, I don't pay for my medications

But my "insert any specialist" says I need these

If it ain't broke don't fix it

YOUR ARGUMENTS

Well your renal function/hepatic function are decreased

Look what you've been able to do for yourself

You take control and figure out the dose - you teach me what works

Your specialist doesn't know you like I do

We can always restart if we need to

STEP 6 - Use common sense when tapering medications

if it is causing an important problem just stop it

most medications could probably just be stopped BUT…

typically recommend one at a time BUT be realistic

cutting the dose in half reduces everyone's apprehension

rebound - psychiatric/CVD medications for symptoms
- IHD/blood pressure

CASE STUDY

- Miss Rose Bloom, or
- Your own patient

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Miss Rose Bloom

Image reference: Yvetta Fedorova
http://well.blogs.nytimes.com/2012/04/16/too-many-pills-for-aging-patients/?_php=true&_type=blogs&_r=0

New Nursing Home Patient

- Cheerful 83 year old just placed in nursing home, after 2 months at Eagle Ridge Hospital
- Presentation to hospital:
  - Concerned neighbour had found her on floor
  - EHS noted home cluttered and dirty
  - Admission BMI 17, poorly groomed, MMSE 13/25
- Social Hx
  - Single retired legal secretary with elderly brother in Nanaimo - she loves to tell stories about their happy youth together
- Advance Care Plan=Resuscitation status listed on discharge summary from Eagle Ridge, says she is “full code”

PMHx *(info from discharge summary)*

- Type 2 diabetes
- Hypertension
- Osteoporosis
- Coronary artery disease
- Hysterectomy age 20
- A1c=7.6, GFR = 50, Hgb = 109

Medications:

- ❑ Metformin 250mg BID
- ❑ Glyburide 2.5mg BID
- ❑ Sliding scale insulin
- ❑ Ramipril 5mg OD
- ❑ Amlodipine 5mg BID
- ❑ Vitamin D 1000IU daily
- ❑ Calcium Carbonate 1250mg daily
- ❑ Acetaminophen 650mg QID
- ❑ Alendronate
- ❑ Elder care bowel protocol
- ❑ Zopiclone 3.75mg prn
- ❑ Quetiapine 12.5mg prn

Nursing Home, nurses first report

- BP 108/70, HR 60
- Ambulating, sometimes with walker
- Asking nurses to phone her brother > 10x/day
- Needs cuing and assistance with toileting and dressing.
- Complains of nausea every morning
- Eating ~ 25-50% meal portions
- Loves bingo and hymn singing

Ask yourself…

1. Do I need more info to STOP some drugs??
2. Which drugs should I stop RIGHT NOW?
3. Which should I titrate?
4. Which ones does she NEED?
5. Which ones am I AFRAID to stop?
   - What arguments/resistance am I anticipating from family/colleagues? Specialists?
6. For the meds I want to keep, what is the (presumed) age-frailty appropriate target for each medication

Discuss Case

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In summary

1. Review frail elders medication list frequently
   - 14075 fee code
2. Be honest about the quality of evidence and what a patient/ family can expect from a pill.
   - Harms exist, benefits are poorly understood
   - Existing trials/guidelines RARELY include frail elders.
3. Consider reducing medications.
   - Monitor what happens when you do.
4. PARTICIPATE IN PRAGMATIC TRIALS
5. Contact me!
   - Email: rita.mccracken@ubc.ca
   - Or, phone me 778 996 6894

Other resources and information

Clinical Frailty Scale*

1 **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 Ill - 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.

* 1. 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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GLOBAL DETERIORATION SCALE (GDS)

Stage	Deficits in cognition and function	Usual care setting
1	**Subjectively and objectively normal**	Independent
2	• Subjective complaints of mild memory loss. • Objectively normal on testing. • No functional deficit	Independent
3	**Mild Cognitive Impairment (MCI)** • Earliest clear-cut deficits. • Functionally normal but co-workers may be aware of declining work performance. • Objective deficits on testing. • Denial may appear.	Independent
4	**Early dementia** • Clear-cut deficits on careful clinical interview. Difficulty performing complex tasks, e.g. handling finances, travelling. • Denial is common. Withdrawal from challenging situations.	Might live independently – perhaps with assistance from family or caregivers.
5	**Moderate dementia** • Can no longer survive without some assistance. • Unable to recall major relevant aspects of their current lives, e.g. an address or telephone number of many years, names of grandchildren, etc. Some disorientation to date, day of week, season, or to place. They require no assistance with toileting, eating, or dressing but may need help choosing appropriate clothing.	At home with live-in family member. In seniors' residence with home support. Possibly in facility care, especially if behavioural problems or comorbid physical disabilities.
6	**Moderately severe dementia** • May occasionally forget name of spouse. • Largely unaware of recent experiences and events in their lives. • Will require assistance with basic ADLs. May be incontinent of urine. • Behavioural and psychological symptoms of dementia (BPSD) are common, e.g., delusions, repetitive behaviours, agitation.	Most often in Complex Care facility.
7	**Severe dementia** • Verbal abilities will be lost over the course of this stage. • Incontinent. Needs assistance with feeding. • Loses ability to walk.	Complex Care

Adapted by Dr. Doug Drummond from Reisberg B, Ferris SH, Leon MJ, et al. The global deterioration scale for assessment of primary degenerative dementia. American Journal of Psychiatry 1982;139:1136-1139.

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HOME ABOUT FAQs RESOURCES CONTACT

MedStopper is a deprescribing resource for healthcare professionals and their patients.

1 Frail elderly? ☑

2 Generic or Brand Name:

3 Select Condition Treated:

Generic Name	Brand Name	Condition Treated	Add to MedStopper

Previous Next

MedStopper Plan

Arrange medications by: Stopping Priority CLEAR ALL MEDICATIONS

Treating Hypertension in Frailty

STOP

Taper and discontinue antihypertensives if sitting SBP is < 140 mmHg, but:

- It is not certain whether to discontinue treatment with a history of previous stroke (see full guideline)
- Before stopping, consider whether the medication is treating additional conditions such as atrial fibrillation or symptomatic heart failure

START

- Consider treatment when SBP is > 160 mmHg
- Aim for sitting SBP of 140 to 160 mmHg
  - Use seated (not supine) blood pressure to make treatment decisions
  - If there is symptomatic orthostasis or if standing SBP is < 140 mmHg, the seated SBP may need to be adjusted upwards
- In the severely frail nearing the end of life, a target SBP of 160 to 190 mmHg is reasonable
- In general, use no more than 2 medications

Intended for individuals who are severely frail, with a Clinical Frailty Scale score of 7 or higher—who require assistance performing basic ADLs, such as bathing or dressing

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DEANS

path clinic
PALLIATIVE AND THERAPEUTIC HARMONIZATION

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Diabetes Guidelines for the Frail Elderly

Intended for those with severe or very severe frailty according to the Clinical Frailty Scale. The guidelines advocate for more lenient blood glucose targets with frailty and make recommendations to avoid excessive blood glucose testing.

BLOOD GLUCOSE TARGETS, mmol/L	ACTION
Less than 7	Decrease diabetes treatment
7.0 – 9.9	May be acceptable. There is a risk for hypoglycemia with oral diabetes agents or insulin. If there is hypoglycemia, decrease treatment.
10 – 20	This range is acceptable if there are no reversible symptoms
Frequent Values Greater than 20	Increase treatment

HgbA1c TARGETS, %	ACTION
Less than 8	Decrease diabetes treatment
> 8 and < 12	Acceptable, if asymptomatic
More than 12	Increase treatment

Routine blood glucose testing is usually not necessary for those with stable BG measures that are within target range when using oral agents or stable doses of basal insulin without regular/rapid insulin.

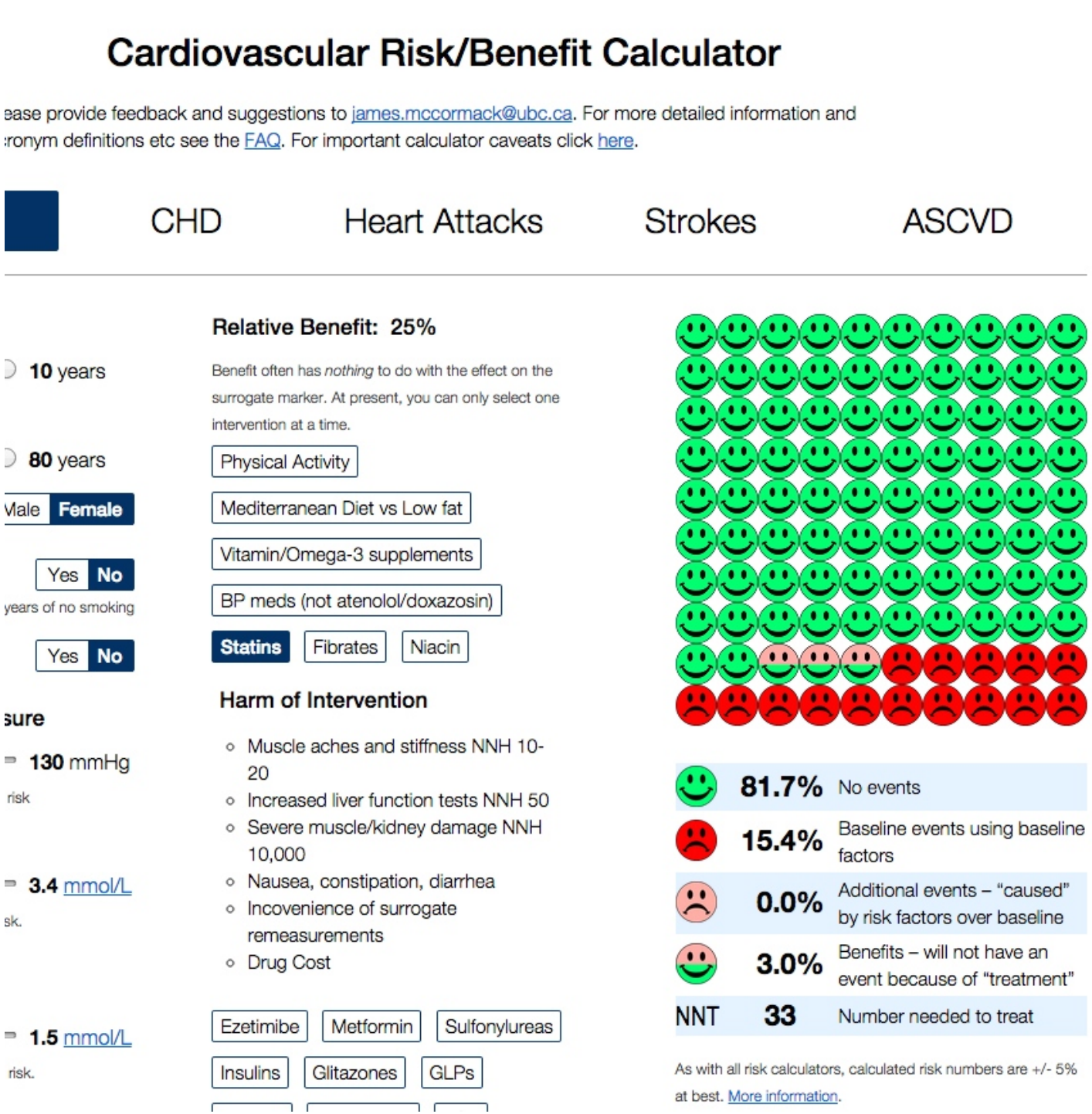
CLINICAL PEARLS

- Consider that most oral medications decrease A1C by ≈1% when deciding whether and which medications can be stopped.
- Use NPH as basal insulin instead of long-acting insulin analogues such as glargine (Lantus™) or detemir (Levemir™), as NPH is less expensive with similar outcomes.
- Basal insulin alone (without regular or rapid insulin) may be preferable due to variations in oral intake that can lead to hypoglycemia.
- With consistent BG measures between 16 – 20mmol/L, an increase in treatment may be indicated.
- Do not stop insulin with type 1 diabetes.

Developed by the Diabetes Care Program of Nova Scotia [http://cme.medicine.dal.ca/ADS.htm] with the Palliative and Therapeutic Harmonization (PATH) Program [www.pathclinic.ca]. For rational behind guideline: see Mallery LH. J Am Med Dir Assoc. 2013 Nov;14(11):801–8.

Diabetes Care Program of Nova Scotia

path clinic



Best Science Medicine Risk Calculator

(example of tool to help explain potential benefit using all avail CV risk data)

http://bestsciencemedicine.com/chd/calc2.html

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