

The Goldilocks Approach: Type II Diabetes in the Elderly

Family Medicine Forum (FMF), 2016, Vancouver

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OBJECTIVES

- Review evidence and guidelines around testing and treatment of Type 2 Diabetes in the Elderly
- Explore potential goals of therapy, considering harms of under- and over- treatment
- Develop a patient-centered approach, including prescribing/de-prescribing medications and ordering/stopping tests in the context of diabetes

WHY CARE?

1 IN 5 DIABETICS ARE OVERTREATED

PATIENTS WHO REPORT HYPGLYCEMIA HAVE A **3.4X**
INCREASED LIKELIHOOD OF DYING

\$65 MILLION WASTED EACH YEAR ON UNNECESSARY, HARMFUL
TREATMENT OF DIABETIC ELDERS IN CANADA

HOW DO WE DO IT RIGHT?



TAKE AWAY:

- Hypoglycemia is very dangerous: avoiding it should be prioritized over tight control (which doesn't help patients anyway)
- Treatment targets vary by individual; in most, aim for <7.5-8.5% and control of hyperglycemic symptoms; A1c can be higher for more frail patients
- Use metformin if possible, next sulfonylureas (but probably not glyburide), or long-acting insulins, mainly to prevent symptoms
- Cap blood testing should be mostly used to check for hypoglycemia when patient feeling unwell
- HBA1c should be done just 1-2x/ year, depending on stability; de prescribe if trending below target
- There are many tools, handouts to help you to talk with patients stop medications and tests that are unnecessary or even harmful

DM 2 in the Elderly Resources:

Your Homework:

Using the attached Deprescribing Algorithm:

1. Next week, pick 5 patients in your practice >70 yrs who are diabetic
2. Look at their most recent HbA1c
3. Have a conversation with 2 of those patients, who might be overtreated
4. Stop one medication
5. Tell a colleague about the process

Slides:

Available at www.lessismoremedicine.com/media-talks/

Screening:

Canadian Task Force on Preventative Health Care (CTFPHC): Screening for Type 2 Diabetes: <http://canadiantaskforce.ca/ctfphc-guidelines/2012-type-2-diabetes/>

App: <http://itunes.apple.com/ca/app/ctfphc/id947916489>

Risk Calculators:

FINDRISC: <http://canadiantaskforce.ca/files/guidelines/2012-type-2-diabetes-clinician-findrisc-en.pdf>

CANRISK: <http://healthycanadians.gc.ca/diseases-conditions-maladies-affectations/disease-maladie/diabetes-diabete/canrisk/index-eng.php>

Treating/Monitoring:

Canadian Diabetes Association (CDA): Clinical Practice Guidelines: Diabetes in the Elderly: <http://guidelines.diabetes.ca/browse/Chapter37>

Palliative and Therapeutic Harmonization (PATH): Diabetes Guidelines for Elderly Residents in Long Term Care (LTC) Facilities and the Frail Elderly: <http://pathclinic.ca/resources/diabetes-guidelines/>

Unnecessary tests and treatments, Choosing Wisely:

<http://www.chosingwiselycanada.org>

Mayo Clinic Diabetes Medication Choice Decision Aid:

<http://diabetesdecisionaid.mayoclinic.org>

CADTH Diabetes Tools & Resources: <http://www.cadth.ca/tools-and-resources>

Treating Cardiovascular Risk:

Absolute CVD Risk/Benefit Calculator:

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

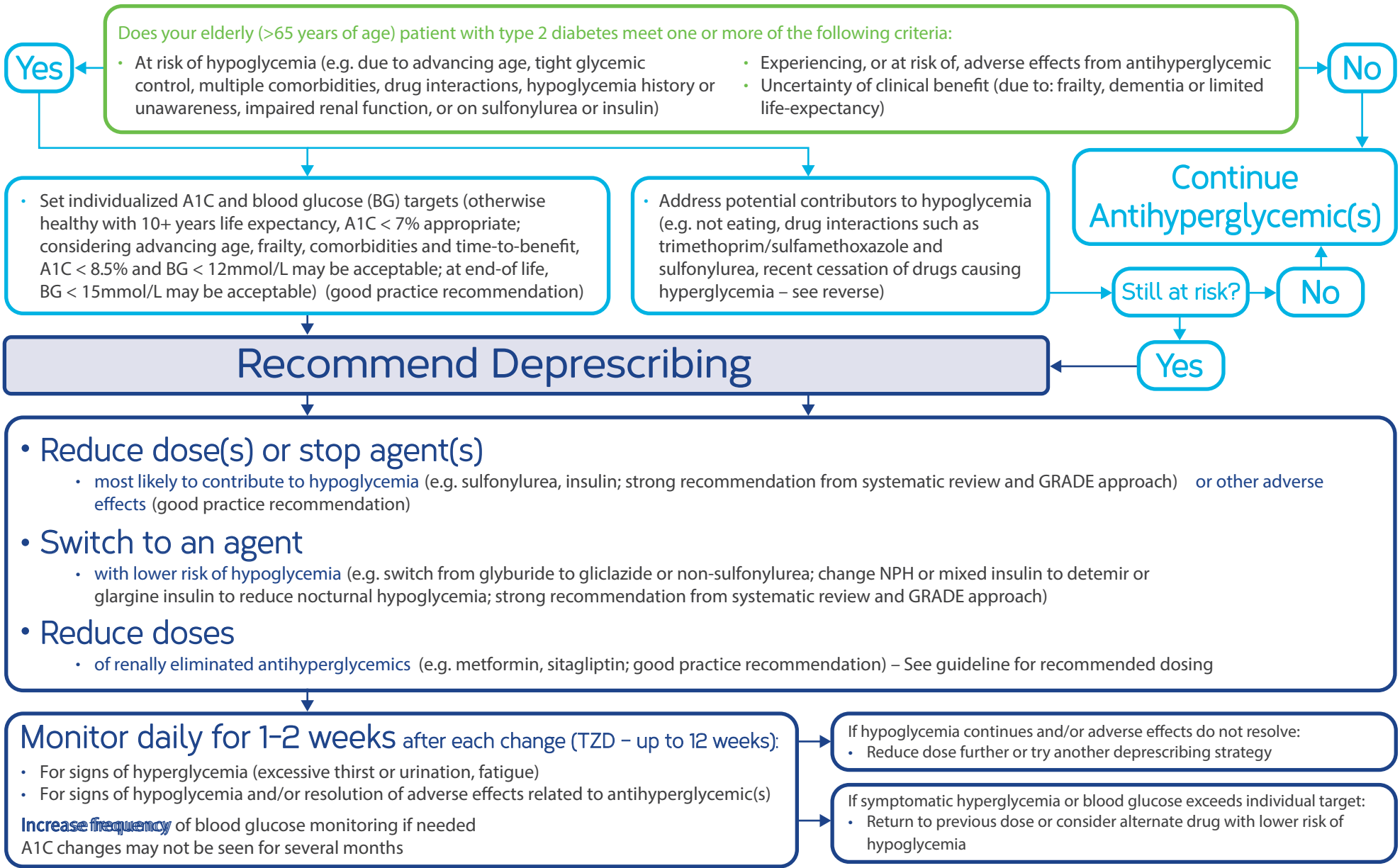
Towards Optimized Practice (TOP) Alberta Cardiovascular Prevention Guideline

<http://www.topalbertadoctors.org/cpgs/54252506>

De-prescribing Tools:

Antihyperglycemic Deprescribing Algorithm http://deprescribing.org/wp-content/uploads/2015/11/deprescribing_algorithms2016_AHG_vf-cc-Sept-2016-InDesign.pdf

MedStopper: <http://www.medstopper.com>





Antihyperglycemics and Hypoglycemia Risk

Drug	Causes hypoglycemia?
Alpha-glucosidase inhibitor	No
Dipeptidyl peptidase-4 (DPP-4) inhibitors	No
Glucagon-like peptide-1 (GLP-1) agonists	No
Insulin	Yes (highest risk with regular insulin and NPH insulin)
Meglitinides	Yes (low risk)
Metformin	No
Sodium-glucose linked transporter 2 (SGLT2) inhibitors	No
Sulfonylureas	Yes (highest risk with glyburide and lower risk with gliclazide)
Thiazolidinediones (TZDs)	No

Drugs affecting glycaemic control

- Drugs reported to cause hyperglycemia (when these drugs stopped, can result in hypoglycemia from antihyperglycemic drugs) e.g. quinolones (especially gatifloxacin), beta-blockers (except carvedilol), thiazides, atypical antipsychotics (especially olanzapine and clozapine), corticosteroids, calcineurin inhibitors (such as cyclosporine, sirolimus, tacrolimus), protease inhibitors
- Drugs that interact with antihyperglycemics (e.g. trimethoprim/sulfamethoxazole with sulfonylureas)
- Drugs reported to cause hypoglycemia (e.g. alcohol, MAOIs, salicylates, quinolones, quinine, beta-blockers, ACEIs, pentamidine)

Engaging patients and caregivers

- Some older adults prefer less intensive therapy, especially if burdensome or increases risk of hypoglycemia
- Patients and/or caregivers may be more likely to engage in discussion about changing targets or considering deprescribing if they understand the rationale:
 - Risks of hypoglycemia and other side effects
 - Risks of tight glucose control (no benefit and possible harm with A1C < 6%)
 - Time to benefit of tight glucose control
 - Reduced certainty about benefit of treatment with frailty, dementia or at end-of-life
- Goals of care: avoid hyperglycemic symptoms (thirst, dehydration, frequency, falls, fatigue, renal insufficiency) and prevent complications (5-10 years of treatment needed)
- Many countries agree on less aggressive treatment of diabetes in older persons
- Reviewing options for deprescribing, as well as the planned process for monitoring and thresholds for returning to previous doses will help engage patients and caregivers

Hypoglycemia information for patients and caregivers

- Older frail adults are at higher risk of hypoglycemia
- There is a greater risk of hypoglycemia with tight control
- Symptoms of hypoglycemia include: sweating, tachycardia, tremor BUT older patients may not typically have these
- Cognitive or physical impairments may limit older patient's ability to respond to hypoglycemia symptoms
- Some drugs can mask the symptoms of hypoglycemia (e.g. beta blockers)
- Harms of hypoglycemia may be severe and include: impaired cognitive and physical function, falls and fractures, seizures, emergency room visits and hospitalizations

Tapering advice

- Set blood glucose & A1C targets, plus thresholds for returning to previous dose, restarting a drug or maintaining a dose
- Develop tapering plan with patient/caregiver (no evidence for one best tapering approach; can stop oral antihyperglycemics, switch drugs, or lower doses gradually e.g. changes every 1-4 weeks, to the minimum dose available prior to discontinuation, or simply deplete patient's supply)
- Doses may be increased or medication restarted any time if blood glucose persists above individual target (12-15 mmol/L) or symptomatic hyperglycemia returns

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Farrell B, Black CD, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, Shamji S, Welch V, Bouchard M, Upshur R. 2016. Evidence-based clinical practice guideline for deprescribing antihyperglycemics. Unpublished manuscript.



Less is More in Medicine: Avoiding pitfalls of overtesting & overtreatment

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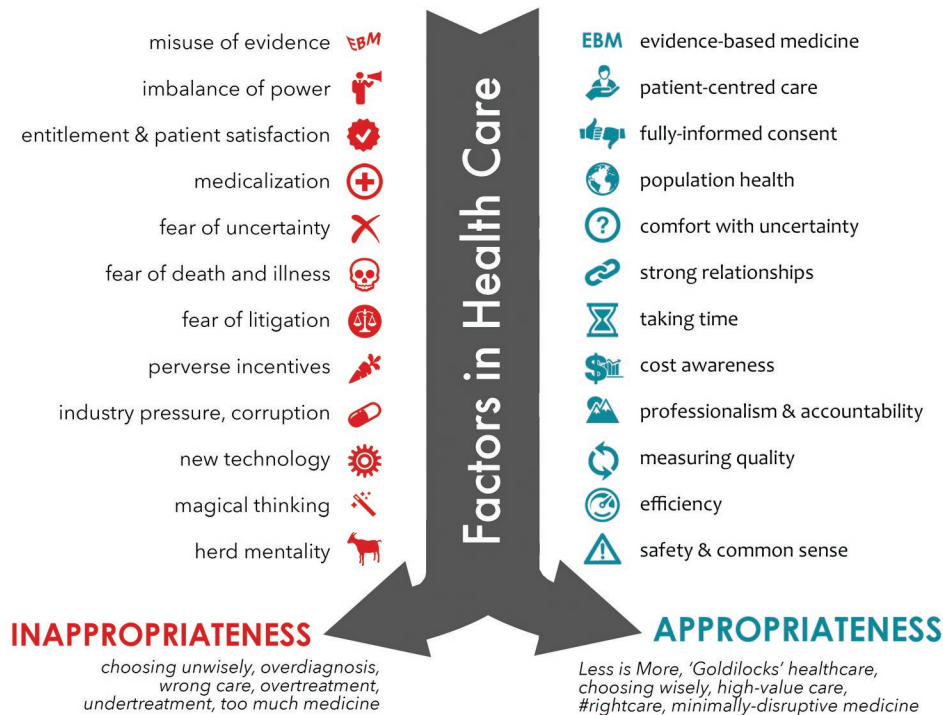
OBJECTIVES

- Understand the concept of 'appropriateness' in medicine
- Review pitfalls in overtesting and overtreatment, including examples of avoidable iatrogenic harm
- Learn and integrate techniques and shared decision-making tools in your discussions with patients to achieve appropriateness in care

WHY CARE?

More is not always better in medicine. Despite our good intentions, many tests and treatments are ineffective, wasteful, harmful, or not in keeping with patients' values. Our current approach is not sustainable nor is it safe. We must move towards the Triple Aim of better care, better health for the population, and lower costs overall.

HOW DO WE MOVE FORWARD?



TAKE AWAY:

- Numerous factors drive overtesting and overtreatment, which result in harms for patients; many of these drivers are modifiable, using the fundamental skills of GPs
- Cost is not the priority of choosing appropriately; when we chose interventions consistent with patient values, it often results in lower use, lower costs, and better population health
- Using the best available evidence with patients through shared-decision making, in relationships that are strong and continuous, will help improve quality
- Many tools exist to help support GPs and patients to engage in these processes