Appendix 2 (as supplied by authors): Example of integrating guideline recommendations by the clinical working group: decisions regarding timing and methods of diabetes screening in the BETTER trial

Every source guideline had its own taxonomy for strength of evidence of the guideline recommendations. The clinical working group process aimed to establish an actionable goal consistent with the combination of the different guideline recommendations.

Guideline Recommendation	Verbatim Guideline Recommendations and Grade of Evidence	Reference	Clinical Working Group Discussion
I	All individuals should be evaluated annually for type 2 diabetes risk on the basis of demographic and clinical criteria **[Grade D, Consensus]**.	CDA 2008 [1]	Non-specific recommendation, captured better in II
II	Screening for diabetes using an FPG should be performed every 3 years in individuals >=40 years of age **[Grade D, Consensus].** More frequent and/or earlier testing with either an FPG or a 2hPG in a 75-g OGTT should be considered in people with additional risk factors for diabetes **[Grade D, Consensus].**These risk factors include: First-degree relative with type 2 diabetes for members of a high-risk population (e.g. people of Aboriginal, Hispanic, Asian, South Asian or African descent) * • History of IGT or IFG * • Presence of complications associated with diabetes * •Vascular disease (coronary, cerebrovascular or peripheral) • History of gestational diabetes mellitus * • History of delivery of a macrosomic infant • Hypertension * • Dyslipidemia • Overweight • Abdominal obesity * • Polycystic ovary syndrome * • Acanthosis nigricans * • Schizophrenia	CDA 2008 [1]	**Chosen recommendation, items with * could feasibly be included in the project.**
III	Testing to detect pre-diabetes and type 2 diabetes in	ADA 2010 [2]	Content included in II

Appendix to: Campbell-Scherer D, Rogers J, Manca M, et al. Guideline harmonization and implementation plan for the BETTER trial: Building on Existing Tools to Improve Chronic Disease Prevention and Screening in Family Practice. *CMAJ Open* 2014. DOI: 10.9778/cmajo.20130040.

	asymptomatic people should be considered in adults of any age who are overweight or obese (BMI ≥25 kg/m2) and who have one or more additional risk factors for diabetes. In those without these risk factors, testing should begin at 45 years of age. **(B)**		
IV	If tests are normal, repeat testing should be conducted, at least, at 3-year intervals. **(E)**	ADA 2010 [2]	Content included in II
V	Monitoring for the development of diabetes in those with pre-diabetes should be performed every year. **(E)**	ADA 2010 [2]	**Chosen recommendation**
VI	The USPSTF recommends screening for type 2 diabetes in asymptomatic adults with sustained blood pressure (either treated or untreated) greater than 135/80 mm Hg. **Grade: B Recommendation**.	USPSTF 2008 [3]	Content included in II
VII	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for type 2 diabetes in asymptomatic adults with blood pressure of 135/80 mm Hg or lower. **Grade: I Statement.**	USPSTF 2008 [3]	Rejected in favor of II. The decisions to screen are not based on high quality evidence.

Grades of Evidence

A	The best evidence was at Level 1
B	The best evidence was at Level 2
C	The best evidence was at Level 3
D	The best evidence was at Level 4 or consensus

Studies of Diagnosis

Level 1	a) Independent interpretation of test results (without knowledge of the result of the diagnostic or gold standard) b) Independent interpretation of the diagnostic standard (without knowledge of the test result) c) Selection of people suspected (but not known) to have the disorder d) Reproducible description of both the test and diagnostic standard e) At least 50 patients with and 50 patients without the disorder
Level 2	Meets 4 of the Level 1 criteria
Level 3	Meets 3 of the Level 1 criteria
Level 4	Meets 1 or 2 of the Level 1 criteria

Studies of Treatment or Prevention

Level 1A	Systematic overview or meta-analysis of high-quality RCTs a) Comprehensive search for evidence b) Authors avoided bias in selecting articles for inclusion c) Authors assessed each article for validity d) Reports clear conclusions that are supported by the data and appropriate analyses OR Appropriately designed RCT with adequate power to answer the question posed by the investigators a) Patients were randomly allocated to treatment groups b) Follow-up at least 80% complete c) Patients and investigators were blinded to the treatment* d) Patients were analyzed in the treatment groups to which they were assigned e) The sample size was large enough to detect the outcome of interest
Level 1B	Nonrandomized clinical trial or cohort study with indisputable results
Level 2	RCT or systematic overview that does not meet Level 1 criteria
Level 3	Nonrandomized clinical trial or cohort study
Level 4	Other

Studies of Prognosis

Level 1	a) Inception cohort of patients with the condition of interest, but free of the outcome of interest b) Reproducible inclusion/exclusion criteria c) Follow-up of at least 80% of subjects d) Statistical adjustment for extraneous prognostic factors (confounders) e) Reproducible description of outcome measures
Level 2	Meets criterion a) above, plus 3 of the other 4 criteria
Level 3	Meets criterion a) above, plus 2 of the other criteria
Level 4	Meets criterion a) above, plus 1 of the other criteria

*In cases where such blinding was not possible or was impractical (e.g. intensive vs. conventional insulin therapy), the blinding of individuals who assessed and adjudicated study outcomes was felt to be sufficient

Evidence Grading System

Level A	Clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered, including: • Evidence from a well-conducted multicenter trial • Evidence from a meta-analysis that incorporated quality ratings in the analysis Compelling nonexperimental evidence, i.e., the “all or none” rule developed by the Centre for Evidence-Based Medicine at Oxford Supportive evidence from well-conducted randomized controlled trials that are adequately powered, including: • Evidence from a well-conducted trial at one or more institutions • Evidence from a meta-analysis that incorporated quality ratings in the analysis
Level B	Supportive evidence from well-conducted cohort studies, including: • Evidence from a well-conducted prospective cohort study or registry • Evidence from a well-conducted meta-analysis of cohort studies Supportive evidence from a well-conducted case-control study

Level C	Supportive evidence from poorly controlled or uncontrolled studies, including: • Evidence from randomized clinical trials with one or more major or three or more minor methodological flaws that could invalidate the results • Evidence from observational studies with high potential for bias (such as case series with comparison to historical controls) • Evidence from case series or case reports Conflicting evidence with the weight of evidence supporting the recommendation
Level E	Expert consensus or clinical experience

Evidence Grading System

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small.	Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

References

1. Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Canadian Diabetes Association 2008 clinical practice guidelines for the prevention and management of diabetes in Canada. *Can J Diabetes* 2008;32(Supp1):S1-S201. Available: www.diabetes.ca/for-professionals/resources/2008-cpg/

2. American Diabetes Association. American Diabetes Association clinical practice recommendations 2009. *Diabetes Care* 2010;32(Supp 1):S1-S96. Available: http://care.diabetesjournals.org/content/33/Supplement_1

3. U.S. Preventive Services Task Force. Screening for type 2 diabetes mellitus in adults. Agency for Healthcare Research and Quality. 2008. Available: www.ahrq.gov/Clinic/uspstf08/type2/type2rs.htm