

There is Not Evidence that “Screening” with Self-Report Questionnaires for Presently Experienced Health Problems and Symptoms Improves Health:

A Review of Randomized Controlled Trials Included in Major Screening Guidelines and Recommendations

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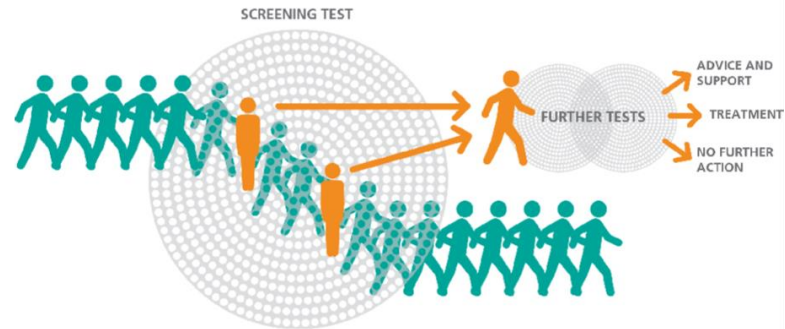


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Jewish General Hospital

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Screening: The Paradigm



- ▶ Detection of asymptomatic, hidden disease in apparently healthy people allows for early-stage treatment
- ▶ Early stage treatment increases the likelihood of effectiveness and, thus, reduce the risk of future ill health
- ▶ Target of screening not detectable without a screening test
- ▶ Target condition is progressive

Screening: The Paradigm



Screening: The Paradigm



Screening: The Paradigm



If you haven't had
a mammogram,
you need more
than your breasts
examined.

A mammogram is a safe, low-dose X-ray that can detect breast cancer before there's a lump. In other words, it could save your life and your breast.

If you're a woman over 35, be sure to schedule a mammogram. Unless you're still not convinced of its importance.

In which case, you may need more than your breasts examined.

Find the time.
Have a mammogram.

**AMERICAN
CANCER
SOCIETY**

Give yourself the chance of a lifetime.

Screening: A New Paradigm



Screening: A New Paradigm – USPSTF 2002 Depression Screening

Screening for Depression in Adults: U.S. Preventive Services Task Force Recommendation Statement

U.S. Preventive Services Task Force*

Description: Update of the 2002 U.S. Preventive Services Task Force (USPSTF) recommendation statement on screening for depression in adults.

Methods: The USPSTF examined evidence on the benefits and harms of screening primary care patients for depression, including direct evidence that depression screening programs improve health outcomes. The USPSTF did not reexamine evidence for those key questions that had strong, consistent evidence in the 2002 review, including questions about the accuracy of screening instruments in identifying depressed adult patients in primary care settings, and the efficacy of treatment of depressed adults with antidepressants or psychotherapy. New areas of evidence considered for this review (and not reviewed in 2002) include efficacy of treatment of depression in older adult patients, harms of screening for depression in

primary care settings, and adverse events from treatment of depression in adults.

Recommendations: The USPSTF recommends screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up. (Grade B recommendation)

The USPSTF recommends against routinely screening adults for depression when staff-assisted depression care supports are not in place. There may be considerations that support screening for depression in an individual patient. (Grade C recommendation)

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www.annals.org

For author affiliation, see end of text.

* For a list of the members of the USPSTF, see the **Appendix** (available at www.annals.org).

Screening: A New Paradigm

- ▶ Depression
- ▶ Intimate Partner Violence
- ▶ Developmental Delays
- ▶ Alcohol Abuse
- ▶ Illicit Substance Use
- ▶ Currently present
- ▶ Patient experiences symptoms or problem
- ▶ May or may not be progressive
- ▶ Can detect without a test
- ▶ No evidence that early treatment more effective

Objectives

- ▶ We examined recommendations on questionnaire-based screening from 3 major national guideline organizations
 - ▶ Canadian Task Force on Preventive Health Care (CTFPHC)
 - ▶ UK National Screening Committee (UKNSC)
 - ▶ United States Preventive Services Task Force (USPSTF)
- ▶ We evaluated the consistency of questionnaire-based screening recommendations
- ▶ We determined if there is RCT evidence to support recommendations

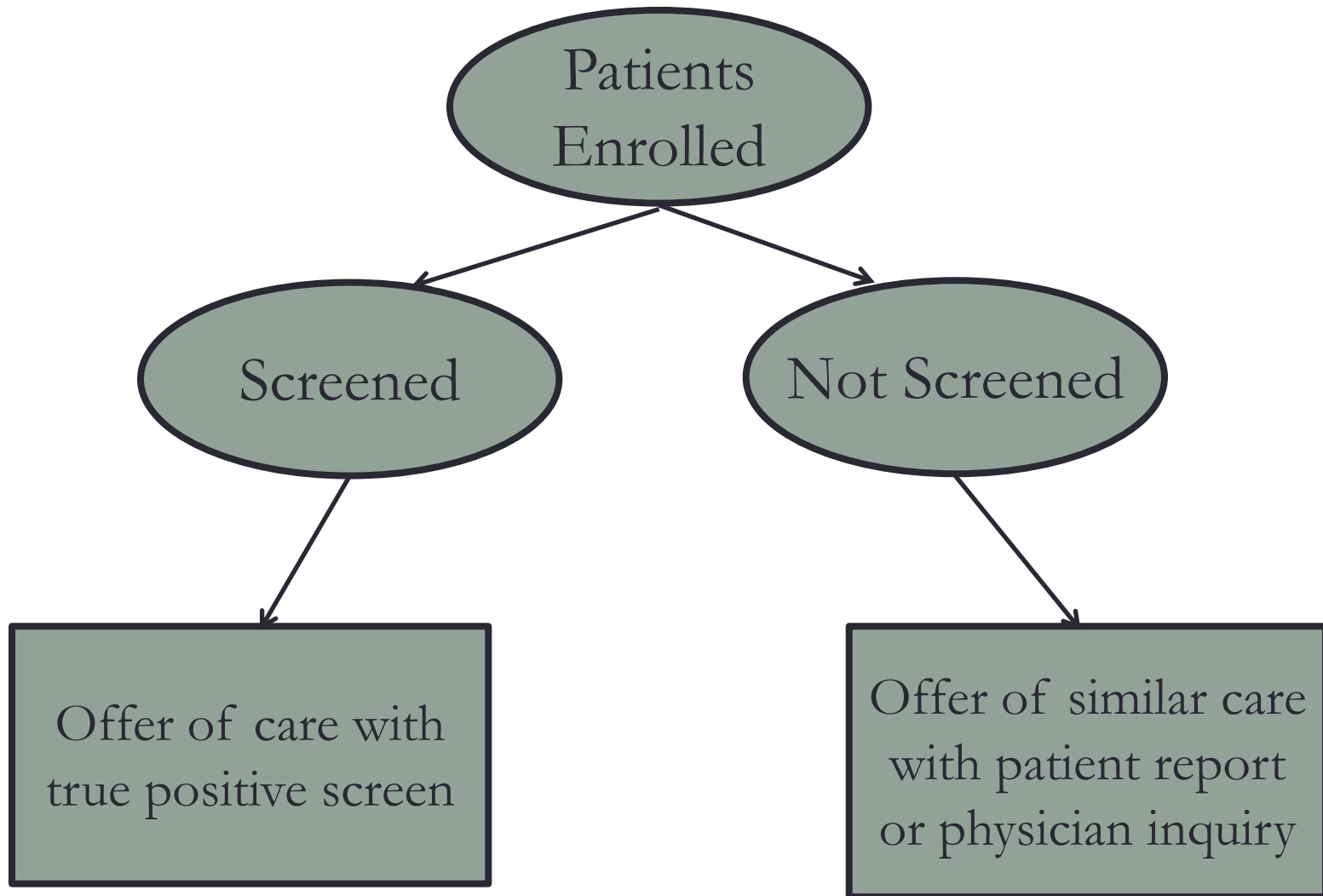
Methods: Identification of Eligible Screening Recommendations

- ▶ Review of all guidelines and recommendation statements listed on websites of CTFPHC, UKNSC, USPSTF
- ▶ Included all recommendations primarily focused on the use of a questionnaire to screen for unreported and undetected, presently experienced health problems or symptom-based syndromes
- ▶ Review by two investigators independently with consultation with third as necessary

Methods: Identification of Screening RCTs Described in Recommendation

- ▶ Reviewed recommendation statements and accompanying evidence reviews.
- ▶ If separate sections on screening trials (versus treatment trials), we extracted data on all trials in screening trial section. Otherwise, extracted all trials described as screening trial.

Methods: What is a Screening Trial



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- 1) Determines trial eligibility and randomize patients included in outcome analyses prior to screening;
- 2) Excludes patients whose physicians have already diagnosed them with or who were being treated for the condition being screened at the time of trial enrollment; and
- 3) Provide similar management options to patients with the condition in the screening arm of the trial and patients in the non-screening arm identified with the condition via other mechanisms, such as patient report or unaided physician diagnosis.

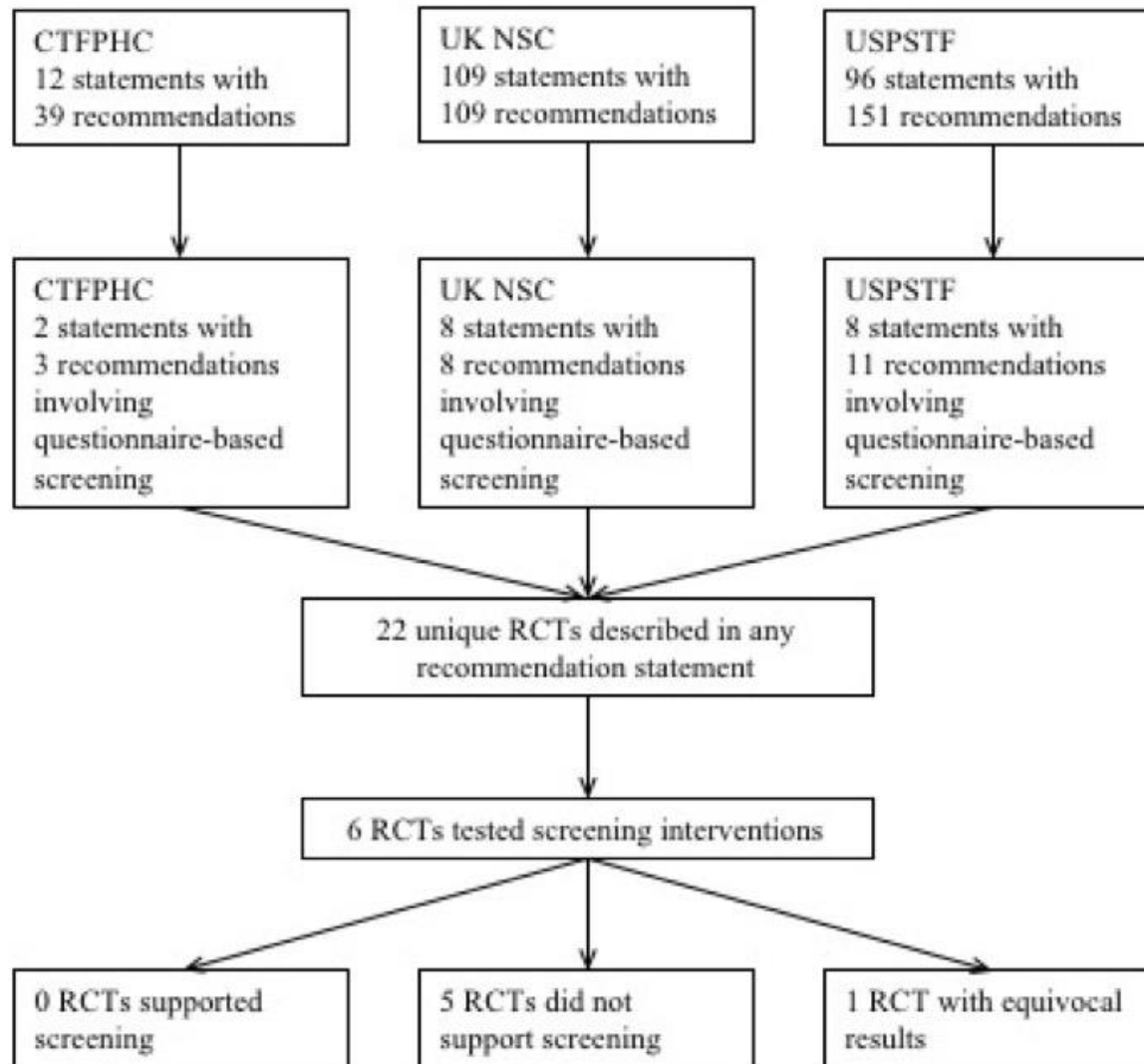
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Methods: Extraction of Data from RCTs

- ▶ All primary and secondary health outcomes
- ▶ Not process outcomes, such as number of diagnoses or time to diagnoses
- ▶ Extracted registrations, as available, and compared registered and reported outcomes

Results: Recommendations and RCTs



Results: CTFPHC Recommendations



Developmental Delay



Adult Depression



Adult Depression (risk)

Results: UKNSC Recommendations



Alcohol Misuse



Adult Depression



Postnatal Depression



Psychiatric Illness



Developmental
and Behavioural
Problems



Autism Spectrum
Disorder



Domestic Violence
Adult Women



Domestic Violence
Pregnant Women

Results: USPSTF Recommendations



Alcohol Misuse



Adult Depression



Adolescent Depression



Intimate Partner
Violence



Alcohol Misuse
- Adolescents



Illicit Drug Use



Depression in Children



Speech and
Language Delays



Abuse and Neglect
of Vulnerable Adults



Autism Spectrum
Disorder



Suicide Risk

Results: RCTs

Topic	Trial	N	Primary Health Outcomes	Secondary Health Outcomes
Adult Depression	Williams	969	1 Negative	-----
Adult Depression	Leung	462	1 Negative 1-2 Positive	13 Negative
Developmental and Language Delays	Guevara	2103	-----	-----
Developmental and Language Delays	de Koning / Van Agt	10355	7 Negative	2 Negative
Intimate Partner Violence	MacMillan	6743	6 Negative	15 Negative
Suicide Risk	Crawford	443	1 Negative	2 Negative

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Results: RCTs – Leung et al.

- ▶ Primary outcome definitions switched post hoc to present a trial with equivocal results as a positive trials
- ▶ Standardized mean difference of depression symptoms per woman treated (SMD = 1.81) was 6-7 times results from meta-analyses on psychological/counselling interventions in primary care (0.25, 30 trials; 0.31, 15 trials)
- ▶ Not likely to represent what would occur if screening were implemented

Why the Discrepancies?

- ▶ Inconsistency in defining screening trials, handling of lack of trial evidence or negative trial evidence
- ▶ Minimization of potential harms from screening (e.g., nocebo, medication effects, labelling)
- ▶ Lack of consideration of costs
- ▶ Other factors that drive positive recommendations despite lack of evidence or evidence of poor harm to benefit balance

Thank You

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