Review: screening instruments had sensitivities of 67–100% and specificities of 53–98% for detecting major depression in older primary care patients

Watson LC, Pignone MP. Screening accuracy for late-life depression in primary care: a systematic review. *J Fam Pract* 2003;**52**:956–64.

Q What is the accuracy of various screening instruments for detecting depression in older adults in primary care?

METHODS

Data sources: Medline and PsycINFO (1966 to January 2002); trial registry of the Cochrane Depression, Anxiety and Neurosis Group; US Preventive Services Task Force *Guide to Clinical Preventive Services* (1996); Agency for Health Care Policy and Research *Clinical Practice Guideline on Depression* (1993); recent systematic reviews; bibliographies; and peer review.

Study selection and assessment: English language studies of depression screening in primary care populations of adults >65 years of age; comparison of instrument with a criterion standard (structured or semistructured diagnostic interviews or independent evaluations by psychiatrists based on *DSM-III-R* or *DSM-IV*, *ICD-10*, or Research Diagnostic Criteria); and provision of information on diagnostic accuracy (usually sensitivity and specificity). Exclusion criteria: studies done in psychiatric facilities or clinics or those that retrospectively extracted briefer instruments from original versions of an instrument.

Outcomes: sensitivity and specificity.

MAIN RESULTS

18 studies met the inclusion criteria. Meta-analysis was not possible because the studies included multiple screening instruments. 8 different instruments were assessed. The test characteristics of 7 instruments for detecting major depression are summarised in the table. Studies assessing detection of minor or subthreshold depression (Geriatric Depression Scale, Center for Epidemiologic Studies Depression scale, and General Health Questionnaire) reported sensitivities of 39–70% and specificities of 72–82%.

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CONCLUSION

Overall, screening instruments had sensitivities of 67–100% and specificities of 53–98% for detecting major depression in older patients in primary care.

A modified version of this abstract appears in *Evidence-Based Medicine*.

Commentary

Many screening tools for clinical depression are now available for primary care practice. Watson and Pignone provide a useful and rigorous review of screening tools for older adults in primary care. Consistent with other reviews, the results show wide variations in sensitivity and specificity,¹ which are indicators of screening tool accuracy. However, a given screening tool may perform better or worse depending on the population and setting, and even high quality screening tools are not necessarily accurate in populations with a low prevalence of the disorder.² Screening tools may also lack accuracy for non-major depression, and overall, general screening programmes remain controversial.³ Detection of depression, although necessary, is not the only requirement for effective treatment to occur.⁴ Adequate treatment of depression in primary care may be impeded by various clinician, patient, structural, and process barriers, and these raise the question of the usefulness of simply implementing screening programmes. Such barriers to adequate treatment should constitute urgent agendas for both future interventions and health services research.

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Test characteristics of 7 instruments for detecting major depression in older adults in primary care

Instrument (number of trials)	Description (cutpoints)	Sensitivity	Specificity
Geriatric Depression Scale (9)	Primarily 15 items, yes/no format (3–5)	79–100%	67–80%
Center for Epidemiologic Studies Depression scale (5)	20 items ranking symptom frequency (9–21)	75–93%	73–87%
SelfCARE(D) (3)	12 item Likert scale (5)	77–90%	53–98%
Caribbean Culture-Specific Screen (2)	Number of items not reported (5–6)	82–92%	68–79%
Cornell Scale for Depression in Dementia (1)	Number of items not reported (7)	90%	75%
1-question screen (from Mental Health Inventory of the SF-36) (1)	1 item, 6 point scale (2)	67%	60%
Brief Assessment Schedule Depression Cards (1)	Number of items not reported (6)	92%	84%