July 29, 2009 — Primary-care physicians worldwide seem to have difficulty telling who is depressed and who is not, with substantial numbers missed or misidentified, according to a meta-analysis published online July 28 in the *Lancet.*

A meta-analysis of more than 50,000 patients reported by Alex J. Mitchell, MRCPsych, from Leicestershire Partnership Trust, Leicester General Hospital, in the United Kingdom, and colleagues shows that general practitioners (GPs) correctly identified depression in 47.3% of cases.

According to the investigators, this finding suggests that for every 100 unselected cases seen in primary care, there are more false positives than either missed or identified cases.

"One surprising thing is that if physicians try to look for depression, the rate of false positives outnumbers false negatives by at least 50%," said Dr. Mitchell.

Practice Location Important

The researchers found that GPs in the 41 pooled trials correctly identified about half of individuals with clinical depression and that their accuracy depended in part on where they practiced.

The typical GP in an urban practice would encounter 20 true cases of depression in 100 patients. This doctor would correctly diagnose 10 of these cases, would miss 10, and would incorrectly diagnose 15 nondepressed subjects with depression, for a false-positive rate of about 20%.

A GP in a rural practice would encounter 10 true cases of depression in 100 patients, would correctly identify 5 cases and would misdiagnose 17 nondepressed patients with depression, for a false-positive rate of 17%.

Accuracy also varied by country. "There are considerable national differences, with UK and US physicians having the most difficulty and those from Netherlands and Italy the most success. In fact, UK GPs seem to make the most false-positive errors," said Dr. Mitchell. "This raises an unanswered question of why diagnostic accuracy varies among Westernized (high-income) countries."

"If clinicians make a false-negative error and do not offer a follow-up appointment, the implication is nonrecognition and undertreatment. If clinicians make a false-positive error and do not reconsider their diagnosis later, the implication is an overdiagnosis and overtreatment. Both types of error are problematic, yet both can be corrected if the clinician gets further information and keeps an open mind," Dr. Mitchell told *Medscape Psychiatry.*

Not a Criticism of GPs

The authors caution that these results "should not be interpreted as a criticism of GPs for failing to diagnose depression, but rather a call for better

understanding of the problems that nonspecialists face. No data suggest that GPs do worse than other nonpsychiatric medical colleagues."

"Because one-off brief assessments only facilitate identification of about half of those with depression, we suggest that additional consultation time should be available for those likely to have depression. Repeated assessments by the GP or other professional in a collaborative model with a case manager might help to reduce diagnostic errors and improve overall quality of care," they conclude.

Another interesting point is that treatment rates were low. Dr. Mitchell reported that antidepressant medication was used for 30% to 50% of "true positives" and "talking therapy" for 20% to 40% of patients. Treatment was often administered by the GPs themselves or a practice counselor. About 10% of patients were referred to a mental-health specialist.

In an accompanying editorial, Prof. Peter Tyrer, from Imperial College London, in the United Kingdom, writes: "If the diagnosis of depression cannot be agreed satisfactorily by the best minds in psychiatry, why should we expect the general practitioner to be a reliable assessor of the condition?"

He concludes: "It would be better to enhance the treatments available for common mental disorders in primary care. This intervention [psychosocial intervention for depression] is effective but does cost more and will have to compete with other priorities."

A Step Forward for Diagnosis in Primary Care

Allen Dietrich, MD, a practicing family physician from Hanover, New Hampshire, told *Medscape Psychiatry* that this analysis marks an important step toward solving the problem of depression diagnosis in primary care.

"The authors have worked hard to analyze data from many countries, gathered over almost 30 years and under many different circumstances. They do not fault or even claim that GPs are 'missing cases' but rather ask for a better understanding of the challenges, and I would add opportunities, in primary care. The article and editorials are steps forward in this regard," said Dr. Dietrich. "We need more and better medication and counseling treatment options, more access to support for patients as they begin treatment, and more cooperation between primary-care and mental-health specialists," he added.

The authors report no conflicts of interest.

Lancet. Published online July 28, 2009.