

LETTER

Meta-analysis: Psychosocial interventions augment cardiac rehabilitation program

To the Editor: A report in *ACP Journal Club* and *Evidence-Based Medicine* is an endorsement of the selected article and endows it with the status of "truth." Health care planners, managers, and clinicians, too busy to read the literature, may be overly influenced by these abstracts, for example, with the recent re-

port on the effect of psychosocial interventions in cardiac rehabilitation programs (1).

There are potentially quite serious problems with meta-analysis, particularly if the studies being pooled lack rigor or are an incomplete set of studies (2). Several writers have pointed out limitations of this new approach to reviewing the literature (3, 4), but this example suggests that it may

be important to remind readers of these limitations again.

A near halving of 2-year mortality is too good to be true and should evoke an even more critical approach than usual, even if the abstract writer and commentator were unaware of the findings of the largest trial in this area (with as many patients as all previous trials combined) (5).

Finally, the title and the conclusion

for the abstract add further emphasis to an interpretation by the authors of the pooling, which is not justified in the original trial data and not claimed by authors of the original trials.

It is doubtful whether this report or the article on which it is based will, in the longer term, serve the best interests of the cardiac patient.

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Editor's note

Linden has responded elsewhere (6).

Response: These concerns center on estimating the effect of psychosocial interventions on mortality. The odds ratio for death in Linden's review was 1.70 (95% CI 1.06 to 2.64), favoring addition of a psychosocial intervention to usual cardiac rehabilitation (1). Of note, in their abstract (5), Jones and West reported a relative risk of 0.68 (95% CI 0.44 to 1.04) for 6-month mortality, favoring psychosocial intervention, which is consistent with the results of Linden's meta-analysis. The psychosocial interventions and the comparison groups in different studies varied in the details of the care they received, and the studies were too small to determine whether

the effects of some interventions differed in mortality or other events.

In their letter to the editor about the original Linden report (7), West and Jones cited 4 studies that were not included in Linden's overview. 2 did not report mortality by group, and 1 lacked an appropriate comparison group. Their recently published study (8) was previously available only in abstract form (7). Publication bias is a concern in meta-analysis. Linden and colleagues stated that they used only published peer-reviewed reports and did not estimate the number of unpublished reports necessary to negate the result.

In the full report by Jones and West of 2328 patients discharged from hospital after myocardial infarction (8), who were unselected for psychosocial distress and followed for 12 months, 6-month mortality appeared to be less in the treatment group and survival curves rejoined between 6 to 12 months, but only 75% of the patients in the experimental group completed the 7-week intervention. This report adds to the knowledge of post-MI rehabilitation but is not the final answer any more than Linden's overview. Moreover, Linden and colleagues question whether psychosocial intervention is cost-effective,

so any differences in the findings may not be of great clinical importance.

Further investigation is warranted given the conflicting results of the overview (1) and the recent trial (8). Identifying subgroups of patients most likely to benefit and determining the most cost-effective and efficient means of delivering psychosocial interventions are 2 goals that may be achieved through further study.

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References

1. Redfern C. ACP J Club. 1996 Sep-Oct;125:34. Evidence-Based Medicine. 1996 Sept-Oct;1:178. Comment on: Linden W, Stossel C, Maurice J. Arch Intern Med. 1996;156:745-52.
2. Peto R. Biomedicine. 1978;28:24-36.
3. Spector TD, Thompson SG. J Epidemiol Community Health. 1991;45:89-92.
4. West RR. J R Coll Physicians London. 1993;27:111-5.
5. Jones DA, West RR. Br Heart J. 1997;69(Suppl 5):37.
6. Linden W. Arch Intern Med. 1997;157:1268-9.
7. West RR, Jones DA. Arch Intern Med. 1997;157:1268.
8. Jones DA, West RR. BMJ. 1996;313:1517-21.

Letter also published in *ACP Journal Club* 1997;127:A-16.

Journals Reviewed for This Issue Core Journals

Am J Med	Arch Pediatr Adolesc Med	Cochrane Library	J Neurol Neurosurg Psychiatry
Am J Obstet Gynecol	Arch Surg	Diabetes Care	J Pediatr
Am J Psychiatry	Arthritis Rheum	Hypertension	J Vasc Surg
Am J Surg	BMJ	JAMA	Lancet
Ann Intern Med	Br J Gen Pract	J Am Board Fam Pract	N Engl J Med
Ann Surg	Br J Obstet Gynaecol	J Am Coll Surg	Obstet Gynecol
Arch Dis Child	Br J Surg	J Gen Intern Med	Pediatrics
Arch Gen Psychiatry	Circulation	J Intern Med	Surgery
Arch Intern Med	Clin Pediatr		

Journals for Continuing Review

Acta Obstet Gynecol Scand	Arch Neurol	Gut	Med Care
Age Ageing	Br J Psychiatry	Heart (formerly Br Heart J)	Med J Aust
Am J Cardiol	Br J Rheumatol	J Am Coll Cardiol	Neurology
Am J Gastroenterol	Can Med Assoc J	J Am Geriatr Soc	Spine
Am J Public Health	Chest	J Clin Epidemiol	Stroke
Am J Respir Crit Care Med	Clin Invest Med	J Fam Pract	Thorax
Ann Emerg Med	Crit Care Med	J Infect Dis	
Ann Med	Fertil Steril		
Arch Fam Med	Gastroenterology		