- All letters must be typed with double spacing and signed by all authors.
- No letter should be more than 400 words.
- For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the *BMJ*.
- We do not routinely acknowledge letters. Please send a stamped addressed envelope if you would like an acknowledgment.
- Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.

“Fast track” admission for acute myocardial infarction

SIR,—Alastair C H Pell and colleagues report that “fast track” admission reduces delays to thrombolysis in acute infarction.¹ Notwithstanding their misleading flow chart, however, their fast track requires admission to the cardiac care unit before administration of thrombolytic treatment. From table III it can be calculated that a large part of the improvement relates not to fast track admission to the cardiac care unit but to the reduction from 33 minutes to only seven minutes in the time to administration of thrombolytic treatment after arrival. Moreover, their conclusion that fast track admission does not require additional staff does not apply to most hospitals, which like Newham General Hospital, do not have a cardiac care team.

Newham General Hospital has a different fast track system, whereby patients with chest pain are seen immediately by the casualty officer, who bypasses the medical team and admits directly to the cardiac care unit if the electrocardiogram is diagnostic. The medical team is informed, and some one from the team meets the patient in the cardiac care unit to initiate thrombolytic treatment if appropriate. Full assessment of the patient is completed while treatment is in progress. This fast track policy was introduced last February, since when 160 patients with confirmed infarction have been admitted, of whom 128 received thrombolytic treatment. The fast track system correctly identified 81 of these patients.

The table shows the median delays to thrombolysis in consecutive admissions before (n=488) and after the fast track policy was introduced. The delay within the hospital until thrombolytic treatment is started has been reduced significantly by fast track admission to the cardiac care unit, not by changes in practice within the unit. Nevertheless, the delays in Edinburgh (52 minutes) and Newham (74 minutes) remain excessive, and further reductions would be expected if treatment at both

centres was initiated in the accident and emergency department itself.

The effects of fast track admission on mortality cannot be assessed from these small numbers, but an overall reduction in the delay in hospital before thrombolytic treatment is started of 31 and 41 minutes (Newham and Edinburgh, respectively) would not be expected to have much impact on prognosis, judging by the results of the second international study of infarct survival.² More important is the proportion of patients with acute infarction who actually receive thrombolytic treatment. If Edinburgh could improve on its treatment rate of 51% this might have a more useful effect on outcome than further reductions in the time to thrombolytic treatment.

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- 1 Pell ACH, Miller HC, Robertson CE, Fox KAA. Effect of “fast track” admission for acute myocardial infarction on delay to thrombolysis. *BMJ* 1992;304:83-7. (11 January.)
- 2 ISIS-2 Collaborative Group. Randomised trial of intravenous streptokinase, oral aspirin, both, or neither among 17 187 cases of suspected acute myocardial infarction: ISIS-2. *Lancet* 1988; ii:349-60.

SIR,—Alastair C H Pell and colleagues report impressive reductions in the time between patients presenting to hospital and being given thrombolytic treatment for acute myocardial infarction.¹ These were achieved with a “fast track” direct to the cardiac care team for patients fulfilling electrocardiographic and clinical criteria for acute myocardial infarction.

Hope Hospital’s accident and emergency department, which deals with a similar number of new patients to that dealt with by Edinburgh Royal Infirmary, recently audited similar delays. Altogether 181 patients who received streptokinase

during January to December 1991 were reviewed. These patients had a mean delay between arriving at the accident and emergency department and being admitted to the coronary care unit of 99.6 (SD 52.1) minutes (median 88 minutes). This compares with medians of 32 minutes for the patients admitted by the fast track route and 45 minutes for all patients in the Edinburgh study. Delays were due mainly to triplication of assessment, as described.

In our study 83% of patients who received thrombolytic treatment had referred themselves and were initially assessed by accident and emergency staff. These patients had longer mean delays (101.8 (53.9) minutes) than the direct medical referrals (88.2 (40.9) minutes), but both groups had longer delays than the Edinburgh patients admitted by the fast track route.

As accident and emergency staff initially assess most of our patients we believe that they could start thrombolytic treatment, for appropriate patients, in their department. This requires adherence to a well defined protocol agreed between medical and accident and emergency departments, which must include contraindications to, as well as indications for, thrombolytic treatment. This would not increase the pressure on accident and emergency beds. Those patients not fulfilling defined criteria would be referred to the medical registrar for further assessment. This system has been used successfully in the United States by Moses *et al*² and Sharkey *et al*³; both groups thought that thrombolytic treatment given in the accident and emergency department according to clearly defined guidelines was effective in minimising delays.

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- 1 Pell ACH, Miller HC, Robertson CE, Fox KAA. Effects of “fast-track” admission for acute myocardial infarction. *BMJ* 1992; 304:83-7. (11 January.)
- 2 Moses HW, Bartolozzi JJ Jr, Koester DL, Collier JA, Taylor GJ, Mikell FL, *et al*. Reducing delay in the emergency room in administration of thrombolytic therapy for myocardial infarction associated with ST elevation. *Am J Cardiol* 1991;68: 251-3.
- 3 Sharkey SW, Brunette DD, Ruiz E, Hession WT, Wysham DG, Goldenberg IF, *et al*. An analysis of time delays preceding thrombolysis for acute myocardial infarction. *JAMA* 1989; 262:3171-4.

SIR,—Alastair C H Pell and colleagues report that “fast track” admission for acute myocardial infarction reduces the in-hospital delay to thrombolytic treatment from a median of 60 minutes to 32 minutes.¹ But the delay in getting to hospital increased from 79 to 107 minutes, thereby negating any benefit from this reduction.

We have conducted a retrospective survey of patients admitted to the coronary care unit at Homerton Hospital with suspected myocardial

Median delays in hospital and delays to thrombolysis in patients with confirmed myocardial infarction

	Jan 1988- Feb 1991 All patients (a)	Feb-Dec 1991			p Value
		Fast track admissions (b)	Other admissions (c)	All admissions (d)	
Time from arrival at hospital to admission to cardiac care unit (minutes)	82	38	79	49	a v b, p<0.001 a v c, NS a v d, p<0.001 b v c, p<0.001
Time to thrombolytic treatment (minutes):					
After admission to hospital	105	60	133	74	a v b, p<0.001 a v c, NS a v d, p<0.001 b v c, p<0.001
After onset of symptoms	240	150	300	190	a v b, p<0.001 a v c, NS a v d, p<0.005 b v c, p<0.001