We are surprised that Morgan and colleagues were advised by the defence organisations that they were legally obliged to provide cardiopulmonary resuscitation for any patient who requested it. Doyal and Wilsher have stated that there is no moral obligation to give useless or harmful treatment.[4] We suspect that in many instances doctors decide against resuscitation and do not discuss it on this basis.

It is disappointing that Hill and colleagues found that some consultants would not resuscitate healthy people aged over 70. This approach cannot be justified, and there is clear evidence that selected elderly patients can do as well after cardiopulmonary resuscitation as selected younger patients.[5]

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1 Hill ME, MacQuillan G, Forsyth M, Heath DA. Cardiopulmonary resuscitation: who makes the decision? *BMJ* 1994;**308**:1677. (25 June.)
2 Morgan R, King D, Prajapati C, Rowe J. Views of elderly patients and their relatives on cardiopulmonary resuscitation. *BMJ* 1994;**308**:1677-8. (25 June.)
3 Murphy DJ, Burrows D, Santilli RN, Kemp AW, Tenner S, Kreling B, *et al.* The influence of the probability of survival on patients' preferences regarding cardiopulmonary resuscitation. *N Engl J Med* 1994;**330**:545-9.
4 Doyal L, Wilsher D. Withholding cardiopulmonary resuscitation; proposals for formal guidelines. *BMJ* 1993;**306**:1593-6.
5 Tresch D, Heudebert G, Kutty K, Ohlert J, VanBeek K, Masdi A. Cardiopulmonary resuscitation in elderly patients hospitalised in the 1990s: a favourable outcome. *J Am Geriatr Soc* 1994;42:137-41.

Nurses' and doctors' views may differ

EDITOR,—Written orders for nursing and junior medical staff not to resuscitate a patient are documented only in a minority of patients.[1] In the absence of such orders, cardiopulmonary resuscitation of a patient in hospital after a cardiac arrest is most often initiated by nursing staff. Junior medical staff conducting the resuscitation usually decide when to abandon the attempt.

We conducted a survey in a geriatric assessment and continuing care unit to find out if there was any difference in opinion between the consultant, the senior house officer, and the trained nursing staff as to which of 229 inpatients should be resuscitated in the event of a cardiac arrest. Five consultants, five senior house officers, and 35 nurses who were all involved in the patients' care were interviewed.

Of the 139 patients on the acute assessment wards, nurses would resuscitate 78 (56%), more than either the senior house officer (68; 49%) or the consultant (48; 35%). There was a statistically significant difference in opinion between consultants and nurses, and between consultants and senior house officers (McNemar's test, $P<0.01$). There was no significant difference in opinion between nurses and senior house officers ($P>0.05$). On the continuing care wards, nurses would initiate cardiopulmonary resuscitation in 33 (44%) of the 75 patients, but the consultants did not feel that resuscitation of any of the patients in continuing care would be appropriate.

Nurses' decision to initiate cardiopulmonary resuscitation may be influenced by ethical considerations and potential medicolegal problems as well as "bonding" with the patient—especially those whom they may have been looking after for a significant length of time. Some factors can influence the outcome of cardiopulmonary resuscitation,[2,3] and not all nurses may be fully aware of these. Leaving the decision to initiate cardiopulmonary resuscitation to nurses may lead to some patients being inappropriately resuscitated.

Morgan *et al* show that elderly patients and their relatives favour more open discussion of resuscitation.[4] We feel it is important that any decision taken after such discussion should be clearly communicated to the nursing staff.

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1 Aarons EJ, Beeching NJ. Survey of "do not resuscitate" orders in a district general hospital. *BMJ* 1991;**303**:1504-6.
2 Bedell SE, Delbanco TL, Cook EF, Epstein FH. Survival after cardiopulmonary resuscitation in the hospital. *N Engl J Med* 1983;**309**:569-76.
3 Murphy DJ, Murray MD, Robinson BE, Campion EW. Outcomes of cardiopulmonary resuscitation in the elderly. *Ann Intern Med* 1989;**111**:199-205.
4 Morgan R, King D, Prajapati C, Rowe J, Views of elderly patients and their relatives on cardiopulmonary resuscitation. *BMJ* 1994;**308**:1677-8. (25 June.)

Resuscitation and patients' views

Questioning may be misunderstood by patients

EDITOR,—The editorial and papers on decisions regarding cardiopulmonary resuscitation show the importance of involving patients and establishing written policies.[1-3] We agree with these authors' conclusions but would sound a cautionary note.

Some months ago we instituted a policy whereby mentally competent patients admitted to the unit were routinely asked whether they would want cardiopulmonary resuscitation. Our experience was similar to that described by Morgan and colleagues,[3] with most patients welcoming being involved and wishing to express an opinion. However, on one occasion a relative took exception to the practice and contacted her MP and the local press and television. We were then both accused of running a covert euthanasia policy and attempting to withdraw treatment from elderly patients in order to save money. In the furore that followed we saw how the issue of withholding cardiopulmonary resuscitation is easily confused by the lay public with euthanasia.

While it must be ethically right that patients are involved in these decisions, great care needs to be taken in how their views are ascertained. Who asks patients, when and how they are asked, and which patients are excluded? Is the patient's view always binding, or is it to be considered as part of the overall decision making process? These are all vital questions to address when setting up such a policy. Unfortunately, in practice, it is often easier to avoid these difficult and complex issues—to continue with tradition and let the doctor decide.

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Explaining outcomes may change views

EDITOR,—As mentioned by Dominique Florin in her editorial,[1] I found a discrepancy between elderly patients wishing cardiopulmonary resuscitation and their doctors' decisions on cardiopulmonary resuscitation—78 of 100 patients wished resuscitation but only 11 were designated for resuscitation.[2] In view of this, I looked at the effect of giving information, including success rate on cardiopulmonary resuscitation, to the patients.

I interviewed a further 20 elderly inpatients (mean age 82 years), asking them if they would have wished to have been resuscitated during their hospital stay and their desirability to resuscitate specific patient groups. Their answers are shown in the table.

Effect of information sheet on wishes regarding cardiopulmonary resuscitation

Wish for resuscitation for:	No wishing for cardiopulmonary resuscitation (n=20)	No of patients who changed response after information (n=20)
Yourself	17	6
Those with:		
Dementia	4	2
Severe physical disability	12	5
Terminal cancer	2	1

The patients then read an information sheet which stated, "Resuscitation, which is the procedure we do when a patient has a cardiac arrest, involves: cardiac massage, care of the airway and giving oxygen, giving relevant drugs into a vein and applying electric shock to the chest when appropriate. Successfully restarting the heart in older people is often difficult to achieve." Once they had understood the information, I then asked, "Does this information alter your views on wanting to be resuscitated yourself?" Fourteen of these 20 patients did not change their wish. The table shows the results for the other patient groups. Thirteen of the patients said they would not have wanted to have been given this information on admission and 12 would not have wanted their relatives to have been given it.

These preliminary results suggest the need for a larger study to examine the effects of giving patients more information on cardiopulmonary resuscitation.

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1 Florin D. Decisions about cardiopulmonary resuscitation. *BMJ* 1994;**308**:1653. (25 June.)
2 Liddle J, Gilleard C, Neil A. The views of elderly patients and their relatives on cardiopulmonary resuscitation. *J R Coll Physicians Lond* 1994;**28**:228-9.

Is assumption of consent justified?

EDITOR,—Discussions on consent to cardiopulmonary resuscitation remain academic while the public is in such ignorance of the procedure. One nursing auxiliary made the comment that the first arrest that she witnessed "wasn't like on television" where everyone runs and in two minutes either a straight line on the monitor signals death or the patient sits up and recovers.

Medical ethicists insist on the right to lifesaving treatment but ignore the fact that, in practice, only very rarely is cardiopulmonary resuscitation a single event. In most cases it begins a train of interventions that include ventilation and transfer to intensive care. Of the approximately 44% of patients that survive the initial arrest, 32% are expected to survive to discharge. The remaining 68% may experience a lingering death in hospital.[1]

We know that a certain number of patients will have a cardiac arrest and that, at the time,

consent cannot be obtained. Are we justified in continuing the present practice of assuming that all patients want cardiopulmonary resuscitation? In Marguerite E Hill's survey all patients felt that resuscitation should be discussed with them, and more than half the women over 60 did not wish for resuscitation.[2] Do we accept that patients are entitled to realistic information on cardiopulmonary resuscitation and the right to make their own decisions?

When medical futility is the reason for a non-resuscitation decision this should ideally be discussed with the patient. This can encourage consideration of other treatment issues and offer the patient the opportunity to talk of hopes and fears.[3] However, this is sometimes impractical or there is no time. A lack of prior discussion should not oblige a team to carry out a pointless procedure. To use breast cancer as an analogy, a doctor would not be expected to provide a liver transplant for a breast cancer patient with liver metastases. Unless the patient raised the matter independently, the doctor would not need to discuss this. Similarly, the only time when consent need not be routinely sought is when survival of cardiopulmonary resuscitation is very unlikely.

Change is difficult. Discussion on cardiopulmonary resuscitation with most patients would be time consuming, though there would eventually be savings in the time of skilled medical personnel if some unwanted resuscitation attempts were avoided. Nurses often know that a patient does not "want to go on." Though doctors could not base a non-resuscitation decision solely on a nurse's report, good interdisciplinary communication would promote patient autonomy.

Should we question the assumption of consent for such a violent, invasive procedure that precludes the possibility of a peaceful death?

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2 Hill ME, MacQuillan G, Forsyth M, Heath DA. Cardiopulmonary resuscitation: who makes the decision? *BMJ* 1994;308: 1677. (25 June.)
3 Murphy DJ. Do-not-resuscitate orders. Time for reappraisal in long-term-care institutions. *JAMA* 1988;260:2098-101.

Futile treatment need not be offered

EDITOR,—The advice given to R Morgan and colleagues by the Medical Protection Society and the Medical Defence Union that "legally if a patient requests cardiopulmonary resuscitation it should be provided" is both ill considered and, in the light of published work, incorrect.[1] Doctors are not obliged to offer futile treatment even if the treatment is demanded by a patient or a patient's family.

Studies investigating survival from cardiopulmonary resuscitation have shown repeatedly that for certain conditions such as pneumonia and metastatic malignancy this treatment is of no medical benefit, with survival rate of, or approaching, 0%.[2] Similarly, George *et al* and O'Keeffe *et al* have shown that the morbidity index before cardiac arrest identifies patients who will not survive an attempt at resuscitation.[3,4] The index is a weighted scoring system based on diagnoses, clinical observations, and biochemical findings. The score associated with failure to survive was ≥ 9 in George *et al*'s study and ≥ 5 in O'Keeffe *et al*'s study.

Should a doctor take the advice of the defence societies and comply with a request for cardiopulmonary resuscitation from a patient who has metastatic bronchial carcinoma and is admitted to hospital with septicaemia and hypotension due to pneumonia? Published survival studies suggest a 0% survival rate after a cardiac arrest in such cases. The morbidity score for such a patient before an arrest is 10, indicating that he or she would not survive an attempt at resuscitation. Thus a request for cardiopulmonary resuscitation should be declined, and the reason for this should be discussed with the patient and his or her family.

The Medical Defence Union and Medical Protection Society should reevaluate their advice before a doctor is faced with unnecessary litigation. Is it really illegal for a doctor to withhold a requested treatment that is of no medical benefit? Professional judgment and common sense suggest that it is not.

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1 Morgan R, King D, Prajapati C, Rowe J. Views of elderly patients and their relatives on cardiopulmonary resuscitation. *BMJ* 1994;308:1677-8. (25 June.)
2 Moss AH. Informing the patient about cardiopulmonary resuscitation: when the risks outweigh the benefits. *J Gen Intern Med* 1989;4:349-55.
3 George AL, Folk BP, Crecelius PL, Barton W. Pre-arrest morbidity and other correlates of survival after in-hospital cardiopulmonary arrest. *Am J Med* 1989;87:28-34.
4 O'Keeffe S, Redahan C, Keane P, Daly K. Age and other determinants of survival after in-hospital cardiopulmonary resuscitation. *Q J Med* 1991;296:1005-10.

Discuss implications with the patient

EDITOR,—I wish to add a further dimension to Dominique Florin's editorial on decisions about cardiopulmonary resuscitation.[1] For a "do not resuscitate" order to be humane, ethical, appropriate, and perhaps legal a senior doctor needs to be prepared to discuss with the patient, probably at length, the implications of his or her illness. Such discussion should cover the implications in relation to cardiopulmonary first aid; subsequent intensive care (this is often neglected: a patient who is successfully resuscitated after a respiratory or cardiac arrest often requires further intensive care); prolonged recovery; and uncertain outcome with the possibility of dependent survival. This discussion with the patient may be duplicated with concerned relatives.

A do not resuscitate order, if it is to be appropriate, also needs to be reassessed in the light of the patient's changing health and wishes almost daily. Some of the manifest deficiencies in the present system have arisen because of lack of time. Doctors of all grades are in short supply in the NHS.

Those of us who work in intensive care see that dying is not always the worst outcome for our patients. Partially successful resuscitation followed by a variable period of progressively futile intensive therapy followed by death is a far sadder end and could perhaps be avoided more often if the issues were faced earlier in the patient's illness.

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Terminally ill patients may want to live

EDITOR,—In their short report on decision making in cardiopulmonary resuscitation Marguerite E Hill and colleagues state that one third of the doctors they surveyed would attempt to resuscitate patients with incurable malignancy but that patients' requests for resuscitation declined with increasing age.[1] We have conducted an interview survey into hospice patients' attitudes to investigations and invasive procedures.

The interviews were done by medical students, who were not identified as being connected with the hospice. Twenty three randomly selected inpatients at Leicestershire Hospice, all of whom had incurable and advanced malignancy, were interviewed. If a patient did not understand any question the procedure was explained in a standard way. One of the 14 questions was, "If your heart stopped unexpectedly would you want to be resuscitated?" Eleven patients answered "Yes, definitely" and eight answered "No, definitely." One patient wanted resuscitation and another did not want it but were less definite; two patients answered "Don't know."

These responses were not related to the patients' age or their self assessed World Health Organisation performance (activity) status. Only one patient became emotional when discussing resuscitation. When the key nurses of these 23 patients were asked about resuscitation in the event of an unexpected cardiac arrest all answered that it would be inappropriate. There was thus a considerable discordance between the responses of the terminally ill patients and their nursing carers, even though patients' and nurses' ratings of performance status were highly correlated ($r=0{\cdot}78$, $n=23$, $df=21$, $P<0{\cdot}001$).

Hospice care aims to improve quality of life rather than to prolong life. This unit has held a policy of not resuscitating patients, and this policy is clearly reflected in the nurses' responses. The question of resuscitation is not routinely discussed with patients or relatives. In the light of our findings and the legal obligation to provide cardiopulmonary resuscitation if it is desired[2] we believe that we should be even more careful to discuss treatment options and listen to patients' wishes and to educate them about possible outcomes. Perhaps the most important lesson is that even a terminally ill patient with an incurable malignancy may find life worthwhile and precious.

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2 Morgan R, King D, Prajapati C, Rowe J. Views of elderly patients and their relatives on cardiopulmonary resuscitation. *BMJ* 1994;308:1677-8. (25 June.)

Microscopic haematuria

Examine urinary deposit before cystoscopy

EDITOR,—The algorithm of diagnostic tests for microscopic haematuria in Fritz H Schröder's editorial is illogical.[1] Once microscopic haematuria has been detected and infection excluded the next stage is to locate the site of bleeding. Practically this is either renal or urological, and the distinction can be made by light microscopy of a freshly provided centrifuged urinary deposit. Phase contrast microscopy can help distinguish dysmorphic from non-dysmorphic erythrocytes in difficult cases. The recommendation to perform cystoscopy before this simple, non-invasive, cheap, and effective procedure will condemn many patients with readily demonstrable glomerular haematuria to an unpleasant, uninformative, and unnecessary investigation. This is especially important in the younger age group, in which glomerular disease causes haematuria in a higher proportion of cases.

The detection of microscopic haematuria of glomerular origin is certainly grounds for further investigation since the commonest primary glomerulopathy—IgA nephropathy—was reported to progress to end stage renal disease in