
Cardiopulmonary resuscitation: capacity, discussion and documentation

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Summary

Background: End-of-life care decisions, including treatment such as cardiopulmonary resuscitation (CPR), are complex issues requiring a patient to have the capacity for effective decision-making.

Aim: To assess the prevalence and documentation of CPR decisions in our hospital in patients aged >65 years.

Design: Prospective audit.

Methods: Review of patient notes and resuscitation forms within our acute Trust on Elderly Care and General Medicine wards, including the decisions made, involvement of patient and/or family members and whether an assessment of capacity was made.

Results: On the Elderly Care wards, 37 CPR decisions were made on 104 patients, and nearly all of these were clearly documented. On the

General Medical wards, only one decision out of 40 patients was made. Geriatricians incorporated patient views in one quarter of decisions; all but one of these patients wanted CPR. Of those patients 'not for CPR', family members were informed in only one third of cases, according to the documentation. Capacity was documented on only four occasions.

Discussion: Geriatricians make significantly more CPR decisions than general physicians do, but still involve patient and family views in only a minority of cases, and an assessment of capacity is rarely explicitly documented. We suggest a three-step approach to clinical decision making, to increase both the volume and the quality of CPR decisions, which may be improved further by the use of information leaflets for patients and their families.

Introduction

All human life is finite, being subject to ageing, decline and ultimately death. While a clinician's main aim is to treat disease and to improve quality of life, they also require the skills to recognize when high-quality end-of-life care is needed. Deciding whether a patient should be 'for' or 'not for' cardiopulmonary resuscitation (CPR) can be very challenging. This challenge can be the decision itself, or choosing whether to raise the subject at all, both for the patient and the clinician. Patients often wish to express their preferences for treatment, but some individuals may not volunteer this information. Such individuals' views will be missed, unless they are given opportunities to discuss the subject.

All too frequently, the decision is not addressed by clinicians, in the hope that it will not soon become relevant.¹

CPR has become everyday practice in UK hospitals since first described in the 1960s,² and is estimated to be attempted on ~20% of those who die in hospital.³ Survival rates following CPR are generally poor, and survival to discharge depends on a number of factors: witnessed cardiac arrest (and location of arrest); 'down time' to defibrillation (if ventricular fibrillation/pulseless ventricular tachycardia); and co-morbidity (e.g. hypotension, malignancy, acute stroke, sepsis, pneumonia, dementia, homebound-lifestyle, organ failure).^{4,5}

Decisions regarding CPR should primarily relate to the underlying disease co-morbidity rather than simply the age of the patient, but co-morbidity tends to increase in advancing age.

Age has been suggested as an independent predictor for poor survival in some earlier CPR outcome studies,⁶ but more recent data have contradicted this idea.^{7,8} If a patient has an *in hospital* cardiopulmonary arrest, there is a 10–20% chance of survival to discharge.^{4,5,9} It is unlikely that the previous studies give us a guide to likely outcome in our increasingly frail and unwell cohort of elderly patients in hospital, most of whom have significant co-morbidity.

Do not attempt resuscitation (DNAR) orders or 'not for CPR' decisions are now widespread in current clinical practice. They allow decisions to be made in certain situations to forego potentially life-prolonging CPR. If no decision is made, then any patient is for CPR by default. This decision should be made by the patient after information is provided by the treating clinician, in cases where the patient retains the capacity to decide the issue. There is hence an onus on clinicians to assess the capacity of the patient to make an informed decision. In the UK, US and Canada, the law states that a person must have their wishes respected unless they can be shown not to be legally competent. Clinicians need to be aware of their local jurisdiction.

Capacity comprises four components: (i) the ability to understand information; (ii) the ability to retain that information; (iii) the ability to process the information; and (iv) the ability to express a clear opinion based on the information provided.

Capacity is specific to the issue under consideration. A patient may have the capacity to choose their breakfast cereal, but not to decide on more complex issues such as CPR. The assessed capacity required for legal competence increases with the seriousness of what is at stake.¹⁰ It should be presumed that a person has retained capacity unless shown otherwise. This is a fundamental part of the Mental Capacity Act (2005).¹¹

If a patient is deemed to lack capacity, it is the responsibility of the multidisciplinary team to discuss complex decisions such as CPR. If a patient lacking capacity has family, then the team should involve them in these discussions in order to determine whether the patient previously held an opinion on the issue. Family discussions should include quality-of-life issues, and whether life would be intolerable for that individual if they survived after CPR. The healthcare professional team should be guided by this information to make a CPR decision.

Methods

The Leeds Teaching Hospitals Trust has a policy on CPR decision-making, and we have been using a resuscitation status form in the Department of Elderly Medicine for over 2 years. This coloured document (Figure 1) is filed in the front of the hospital case notes, so it is easily accessible to all staff caring for the patient.

As part of an ongoing cycle of audit within our department, six Elderly care wards, including the Elderly Admissions Unit (admitting people aged 80 years and over) and the Acute Stroke Unit (admitting people aged 65 years and over) were visited on a single day to determine whether a resuscitation status form was filed in the notes, or whether a decision had been recorded in the notes. To see if there was any further decision-making later in the admission, a further single visit was made to each of the wards ten days later. We also noted whether there had been an assessment of capacity recorded, and if family were involved in the decision in any way.

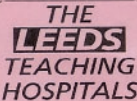
We felt it was appropriate to compare our practice in this area to other physicians. Written permission from the consultants on a General Medical ward and a Respiratory ward was granted to allow us to survey their patients.

Results

The age range of patients on the Elderly Medicine wards was 66–96 years, mean 84 years. There were 44 males, and 60 females. A CPR decision was available in the notes for 37/104, and was documented on the resuscitation status form for 34 of these. Decisions were often delayed beyond the first few days of hospital admission.

There was marked variability between consultant teams as to how often CPR decisions were made. This ranged from one consultant whose patients had decisions in 80% of cases, to another with only 10% of patients having a CPR decision. On the second visit one week later, 40 of the original 104 patients remained as in-patients on the acute site. Seven more CPR decisions had been made: two patients were designated 'for resuscitation' and five 'not for resuscitation'. No decision had been rescinded.

Of the 37 decisions that had been made, eight were 'for CPR' and in all but one case this had been discussed with the patient themselves. Twenty-nine patients were 'not for CPR'. In all cases it was clear that the rest of the multidisciplinary team had been informed of the decision, but 'capacity' was very rarely documented (four occasions).

	<h2>Resuscitation Status</h2>	WQN472
Patient's Name Unit Number Date of Birth (If adhesive label used, check details)	Resuscitation status must be clearly written in medical and nursing notes. All discussions about resuscitation should also be recorded and dated.	
This document applies ONLY to Cardio-pulmonary resuscitation The completed document should be kept in the patients notes at all times.		
DATE OF ADMISSION TO HOSPITAL..... ONLY VALID during this admission. NEW FORM if STATUS CHANGED.		
RESUSCITATION STATUS (E.g. Do not attempt resuscitation, or attempt resuscitation):.....		
DURATION OF STATUS (E.g. 48 hours, 1 week, 1 month):..... REVIEW DATE:		
REASONS FOR DECISION (E.g. Medical futility, Patients wishes):.....		
DISCUSSION DETAILS: WITH WHOM (E.g. Discussed with patient and/or named relatives):.....		
DISCUSSION DETAILS: BY WHOM (E.g. Name and title of health professional(s) involved):		
DATE OF DISCUSSION about resuscitation:		
DISCUSSION LIMITATIONS (E.g. Patient unconscious, or confused. Physiological futility of CPR:		
PROFESSIONAL COMMUNICATION OF RESUSCITATION STATUS (E.g. Nursing staff, therapy staff, GP and multi-disciplinary team):.....		
CONSULTANT RESPONSIBLE FOR RESUSCITATION DECISION:		
SENIOR MEDICAL SIGNATURE: DATE:		

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Figure 1. Resuscitation status form.

One quarter of the status forms were not completed with a signature. Of those that were, all but one were signed by a registrar or consultant. Futility was mentioned in 28 cases and the medical condition in 11. Over 80% of the documented decisions were indefinite, and there were no rescinded decisions. Each decision lasts for the duration of that hospital admission, and would need reviewing at the time of future admission.

In 13 of the 37 cases with a decision, there had been some discussion with the family about the decision, but in 24 this had not been documented. It may be that these patients lacked capacity, but this was not stated. It is unclear whether family had been actively involved in the decision-making process, or if they had simply been informed of a clinical decision.

On the General Medical and Respiratory wards, only 1 of 40 patients had a CPR decision recorded.

This was an 84-year-old man with severe pneumonia and the 'not for CPR' decision had been made by the consultant geriatrician on call under whom the patient had been initially admitted.

Discussion

Many older people on hospital wards are frail. This high prevalence of frailty is partly as a result of the ageing population, but also as a consequence of less-dependent individuals leaving hospital at an early stage, by a variety of supported discharge schemes. This hospital population is at higher risk of cardiopulmonary arrest, given their level of co-morbidity, and their likelihood of survival to discharge if CPR is required is negligible. In a recent audit, out of 307 deaths over a 1-year period, there were 31 arrest calls on the acute Elderly Medicine wards in this Trust, but no survivors to discharge.

We feel that clinicians need to be more pro-active in assessing patients for who CPR as a treatment would have little to offer. It is good medical practice to make an explicit decision, and once made, this may be referred to in the event of future hospital admissions. This would be particularly useful when the patient's view was previously expressed and would allow the clinician simply to check whether the patient still held the same view. Previous audits of CPR decisions were performed within our department in 2000 and 2002. Our patients had CPR decisions in 20/103 cases (19.4%) in 2000, and an improvement to 45/113 decisions (39.8%) in 2002, following the introduction of the resuscitation status document. There has been an increased public and media awareness over this period, but the form allows clear documentation, which then allows easy reference and remains as a permanent record for future medical care. Unfortunately despite increased levels of documentation of the decision, discussions with patients remain in the minority, or if they do occur, they are not being well documented.

The British Medical Association, Royal College of Nursing and Resuscitation Council guidance is consistent and all set out how CPR decisions should be approached.¹² They all emphasize the importance of patient autonomy and the right to informed choice. The summary principles are: (i) timely support and sensitive communication for patients/carers; (ii) decisions based on individual situation; (iii) sensitive discussion encouraged; and (iv) realistic information provided.

Since the local introduction of a resuscitation status form, around 40% of our patients have had

their CPR status clearly recorded. It is unclear why there is such variation between practice of clinicians. Our study contained just over 100 patients split between ten consultants, but other centres have described similar variation in decision rates between consultant teams and between elderly-care departments.¹³ A delay in making a CPR decision may be justified, as often full hospital notes may not be available immediately at the time of admission. Otherwise the variation in clinicians practice may relate to a number of factors. These may be, amongst others, fear of upsetting the patient, feeling that 'it is not the right time', that CPR was thought about but not documented, personal or religious views of the clinician, or simply that the subject was not considered at all. This seems unacceptable for a clinician who wishes to aim to provide holistic care to older people.

Geriatricians are more likely than other specialists to make these decisions,¹⁴ which is mirrored in our work. This is particularly noteworthy, as two-thirds of patients on the General Medical and Respiratory wards were aged 65 years or over, with serious medical illnesses including chronic lung disease, lung cancer, cor pulmonale, end-stage fibrotic lung disease, dementia, severe heart failure and sepsis.

Doctors frequently disagree about CPR decisions,¹⁵ and many do not want to discuss the issue with patients, fearing it may cause distress. However, several studies show this is not the case.¹⁶⁻¹⁸ Hill *et al.* showed that only 1/34 doctors would discuss CPR, but 59/100 patients wanted such a discussion. There may be concerns of upsetting patients by raising the issue of CPR, but only 1/100 patients became distressed while talking about CPR.¹⁶ In Morgan's study, 98/100 patients and 95/100 families were comfortable with the discussion.¹⁷

The attitude to patient rights and autonomy has changed since these studies were published, and indeed, involvement in discussing CPR decisions is now part of the Foundation training requirements for all junior doctors. Other health professionals also need to be involved as part of the team. Nurses may play a central role, and patients found discussing CPR with trained nurse practitioners acceptable.¹⁹ Part of the counselling process for CPR decisions involves informing patients about the success rate and complications of this intervention. Patients tend to overestimate the success rate of CPR.²⁰ For an informed choice to be made about benefits and risks, patients need accurate up-to-date information on local outcomes after CPR. This could be done by the provision of information leaflets to patients and their families. Cooke *et al.* found that 97% of patients

who read an information leaflet found it useful.¹⁹ We have performed a pilot study to survey the attitudes of patients and families about providing information leaflets about CPR and its outcome locally (Appendix). These have been well received to date.

A crucial step in the decision process is assessing whether a patient can make their own decision (capacity to decide). A recent study has shown poor performance on general wards where the majority of patients who lacked capacity were not recognized.²¹ There is no clinical gold standard to ascertain mental capacity, but assessment by suitably experienced doctors is the key. Of concern, our data show that capacity was not formally recorded in the vast majority of cases. When choice is made on behalf of a patient who lacks capacity, it is good practice to inform any family, but again this was only recorded in a minority in

our survey. This potentially leaves doctors and the Trust open to criticism.²²

Decision-making about CPR status might be better clarified by dividing it into three stages (Figure 2).

If a clinician feels that there would very little or no prospect of successful CPR, then a 'not for CPR' decision should be made. This decision would be based on the presence of incurable illness or significant co-morbidity, the nature of the acute illness and the level of their pre-morbid function. Clearly, the definition of incurable illness would need to be judged by clinicians on an individual basis, and they will be accountable for their decision. If it is felt that CPR would not be efficacious, then the 'not for CPR' order should include the reasons as to why the decision was reached. A clinician has to decide if this should be an outright clinical decision, or whether the

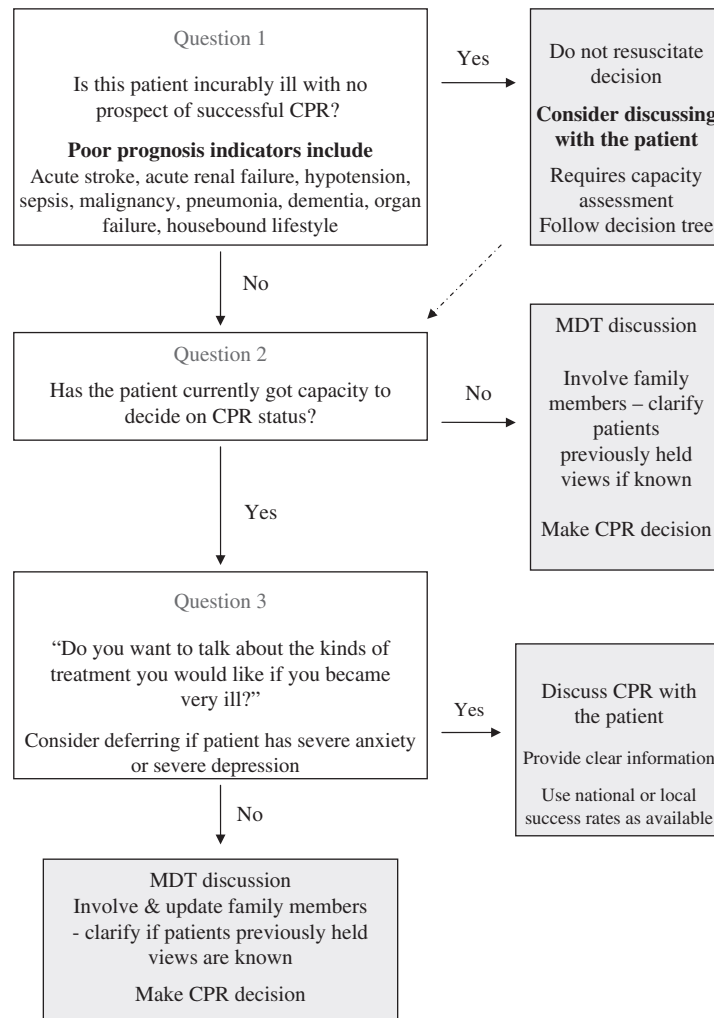


Figure 2. Cardiopulmonary resuscitation: an aid to decision-making.

decision tree should be followed to consider full discussion with patient.

If the patient does not have incurable illness or significant co-morbidity and there are no reasons to avoid the issue, then CPR should be discussed with the patient, if capacity is retained. This means that a discussion needs to take place between clinician and patient to allow judgement on capacity to decide about CPR. If capacity is retained, then follow the decision tree.

If the patient lacks capacity, then the multidisciplinary team should discuss the issue, involving family members, and come to a decision in the best interest of the patient. This discussion should aim to clarify whether the patient had previous views on the subject and the related quality-of-life issues. Clinicians should avoid deferring the decision to family members, but provide clear information and a balanced discussion of the patient's current illness, co-morbidity and any previously held views.

Discussions regarding CPR are often avoided. There may be a reason for not discussing the issue, such as significant depression or anxiety. If there are no clear reasons to avoid the issue, a clinician could ask the patient: 'Do you want to talk about the kinds of treatment that you would like to get if you became very ill?' If the answer is 'yes', the clinician should provide the patient with clear and up to date local information about CPR and clearly document the patient's view. If the answer is 'no' then the multidisciplinary team should discuss the issue of CPR with family members, clarifying whether the patient previously held any views, and make a clear decision in the best interests of that patient.

All discussions and decisions, including assessment of capacity, should be clearly and fully documented on the resuscitation form and completed by a doctor's signature. A senior doctor, ideally the supervising consultant, should approve this at the earliest opportunity.

There are many decades of evidence showing poor outcome with CPR. Despite this, end-of-life decision-making, including CPR, continues to remain a neglected area of consideration for many clinicians. Patients and their families deserve clear information and should not be shielded from the reality of death. There is a need to make not only more decisions, but more high-quality patient-centred decisions.

Conclusions

Older people cross all specialities of medicine. Many have significant co-morbidity, which predisposes to a very poor outcome with CPR; survival to discharge is rare. To provide the holistic care that

every patient deserves, clinicians should offer effective therapies when they are justified, but similarly avoid futile treatment, acknowledge limited quality of life and facilitate good palliative care. The key to decision making about CPR is assessment. Clinicians need to assess: (i) comorbidity and chances of successful CPR (may incorporate scoring scales); (ii) the patient's capacity to make an informed decision; (iii) the patient's views; (iv) multidisciplinary team and family views (incorporating the patient's previously-held views if the patient lacks capacity); (v) the overall decision, which should then be clearly documented.

We offer a simple three-step approach which clinicians can use to focus the decision making process in older people about CPR. This process can be used in conjunction with information leaflets for patients and carers to facilitate increased awareness and to encourage a more open environment for discussion. Using a resuscitation form in conjunction with this method allows clear recording of decisions and views which may be referred to in future health care.

Acknowledgements

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Appendix: Cardiopulmonary resuscitation (CPR) information for patients and carers, Elderly Medicine Department, Leeds General Infirmary

The purpose of this leaflet

The medical and nursing team looking after you realise it is often difficult for patients to discuss sensitive subjects such as cardio-pulmonary resuscitation (CPR). This leaflet is to explain the subject. We hope that it will encourage you and your family to discuss CPR together and with us as a team.

Please do remember that the need for CPR is a relatively rare event.

What is CPR?

Cardiopulmonary arrest means that a person's heart and breathing stop. When this happens, it is sometimes possible to save life by re-starting the heart and breathing with emergency treatment called CPR. CPR might include:

Pushing down very firmly on your chest.

Giving medicines into your veins.

Using electric shocks to try to re-start your heart.

Inflating the lungs through a mask over your nose and mouth or by inserting a tube into your windpipe.

Chances of success

CPR can be successful in up to 4 in 10 cases after a simple heart attack, in otherwise well people. However, in frail people with serious conditions or illnesses in hospital, CPR is successful in re-starting the heart and breathing in fewer than 1 in 10 patients.

Following CPR

Many patients who recover from cardiorespiratory arrest have a pain in the chest because of the pressure that has been applied. The chest wall can be bruised or ribs fractured.

Up to 4 in 10 patients have a degree of brain damage.

Decision making

Usually every attempt will be made to resuscitate patients who are in hospital. The doctors and all the health care team have a duty to save lives. However, as in all treatment decisions, benefits have to be weighed against risks for each individual.

If we feel that the CPR may be successful we would assume that you would want us to try and resuscitate you, even if we had not previously discussed CPR with you. If you are not happy about this, you could choose not to be resuscitated. Please tell us and we would respect your wishes.

Sometimes when death is near we cannot further lengthen life and we concentrate on increasing quality of life. The heart and lungs will stop working as part of the natural process of dying. We would not attempt resuscitation in this situation, but allow death to occur with dignity.

If the outcome of CPR is not certain, we may wish to discuss it with you. You will be encouraged to ask a family member or friend to be with you when such discussions take place. If you are not able to discuss

this yourself, your family may be able to tell us what your wishes would have been.

Decisions about CPR can be changed at any time. A decision not to resuscitate will not affect any other aspect of your care.

Further discussion and information

The doctors looking after you will be happy to discuss CPR—please do approach any member of the team. If you wish to make an appointment to

see Dr Wanklyn, please ask your nurse. CPR is a very sensitive subject, so we would very much appreciate it if you would open the discussion with us. We can then talk about the options and deal with any worries you may have.

Please do remember that the cardiac arrest is a relatively rare event.

Dr Peter Wanklyn

March, 2005

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