Principles of Do Not Attempt Resuscitation (DNAR) Orders: Evidence Based Review

"Doctors have an ethical obligation to show respect for human life, protect the health of their patients, and make their patients’ best interests their first concern.”

General Medical Council (GMC), 2002

In most circumstances, fulfilling the ethical obligation described above is easy; attempt to treat the complaint with which the patient presents. Once an appropriate course of action is identified and the patient has consented to it, treatment is commenced.

Complications arise when no treatment is available that is likely to be of benefit. The GMC guidance quoted above continues:

“...this means offering those treatments where the possible benefits outweigh any burdens or risks associated with the treatment, and avoiding those treatments where there is no net benefit to the patient.”

In theory it is straightforward: if no benefit will be gained from treatment then there is no obligation to provide that treatment. Indeed if the treatment imposed any discomfort on the patient it would be ethically wrong. Where there is doubt over the potential benefit of a treatment the risks and benefits should be conveyed to the patient, who will then decide whether or not to have the proposed treatment.

While this statement appears clear-cut it is obvious that a number of potential difficulties arise:

- It can be very difficult to predict the potential benefit of a specific course of action, for example invasive ventilation of “end stage” COPD patients
- It can be even harder to predict the potential burden to a patient of a particular course of action, for example length of likely hospital stay, risks of tracheostomy, extent of debilitation resulting from an ICU stay
- Communicating these risks and benefits to patients in an easily understood fashion can be extremely challenging
- In the emergency situation there is often no time for considered debate

Furthermore, in an emergency the patient may well be unable to take part in any debate as they may well lack the ability to understand and retain the relevant information and weigh it in the balance (that is, they lack capacity). In this situation the doctor must make a decision acting in the patient’s best interests.

It is important to note that “best interests” requires a holistic assessment from the patient’s viewpoint, not just a consideration of the medical facts. It is vital that the clinician does not simply substitute their values (or those of others involved in the situation, such as relatives) in place of the patient’s. The doctor making the decision should endeavour to gather as much information as possible regarding the patient’s likely views – relatives and close friends are a good source of such information but confidentiality must be respected. Additionally it must be recognised that, for a patient lacking capacity and with no relevant advance decision, the responsibility for making decisions relating to medical care lies with the team providing that care, not the relatives.

The difficulty of such decision making mandates the involvement of the most senior clinicians available, who in turn may well wish to consult with other relevant experts.
Where there is doubt about the possible effectiveness of a treatment versus the possible negative impacts, the treatment should be commenced. As stated in the introduction to this module, the presumption should always be in favour of potentially life-prolonging treatment.

The GMC guidance states:

"Where patients lack capacity to make decisions about treatment, and there is a reasonable degree of uncertainty about the appropriateness of providing a particular treatment, treatment which may be of some benefit to the patient should be started until a clearer assessment can be made. It must be explained clearly to all those involved in caring for the patient that the treatment will be reviewed, and may be withdrawn at a later stage, if it is proving to be ineffective or too burdensome for the patient."

It is important to note that ethically and legally there is no difference between withholding and withdrawing treatment, and this applies to all "medical" treatments including artificial nutrition and hydration.

It is occasionally argued that a treatment (for example, ventilation) should not be started as once started it is difficult to stop. Any treatment can be stopped if it is not providing an overall benefit. As something of an aside, it is worth noting that in England and Wales artificial nutrition and hydration for a patient who is not imminently dying should only be withdrawn after consultation with the Court and only after full consideration of any wishes the patient may have expressed in advance.

When considering withholding or withdrawing any treatment, other legal issues (such as whether the death would require reporting to the coroner or was the result of an assault) should be irrelevant, but very careful documentation is, of course, vital.

**Cardiopulmonary resuscitation – DNAR orders**

Cardiopulmonary resuscitation is a treatment like any other and as such the same ethical principles apply. The proposed treatment (CPR) must provide a potential benefit. In the case of a patient who is dying, CPR will not reverse the disease process and will, at best, simply prolong the process of dying. Difficulties arise again, however, in identifying when a patient is dying.
What are the potential benefits of CPR?

<table>
<thead>
<tr>
<th>Patient category</th>
<th>Outcome</th>
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</thead>
<tbody>
<tr>
<td>In-hospital monitored arrest with tachyarrhythmia</td>
<td>30% survival to discharge (Peberdey et al, 2003)</td>
</tr>
<tr>
<td>In-hospital arrest asystole or PEA</td>
<td>11% survival to discharge (Nadkami et al, 2006)</td>
</tr>
<tr>
<td>In-hospital arrest (all) (Conroy et al, 2006)</td>
<td>14% survival to discharge</td>
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<td>33–50% of survivors will have new, moderate to severe functional or neurological impairment</td>
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<tr>
<td>Out of hospital arrest survival to discharge</td>
<td>5–10% (BMA, 2007)</td>
</tr>
<tr>
<td>Out of hospital arrest requiring ICU admission</td>
<td>5% survival to discharge (Gratrix et al, 2007)</td>
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It must be borne in mind when considering such data that these results are statistics from whole populations. An individual patient with significant co-morbidities and a significant acute illness is likely to be at the lower end of the spectrum for survival from cardiorespiratory arrest.

In 2002 the British Medical Association (BMA), Royal College of Nursing and Resuscitation Council issued a joint statement, “Decisions related to cardiopulmonary resuscitation”, in response to increasing concern among the public and profession that such decisions were being made in an arbitrary and subjective fashion, often by very junior members of medical teams. A revised version was published in 2007. The document provides clear guidance about when DNAR orders may be appropriate (see box) and the process to follow in making such decisions, emphasising the overriding importance of communication with the patient whenever possible.

Key points include:

- a presumption in favour of attempting resuscitation
- the importance of considering advance decisions as part of the overall care plan
- the need for consideration of the benefits of CPR in the context of the patient’s clinical condition
- the absolute necessity of ascertaining the patient’s wishes if at all possible (cf advance directives)
- the need to consider the patient’s human rights – including the right to life and the right to be free from degrading treatment
- the need to consider the views of the entire medical team and, confidentiality allowing, the views of those closest to the patient
- the requirement for clear documentation of the decision reached and the reasons behind that decision
- the need for regular review of the decision
The overall responsibility for the decision lies with the consultant, general practitioner or suitably experienced nurse caring for the patient. If they are not available then the most senior member of the team can, in an emergency, make the decision but must consult their senior at the earliest possible opportunity. While the patient’s and relatives’ wishes and opinions must be given the greatest respect it should be noted that there is no compulsion on medical staff to provide medical care that they feel would be futile. In the context of a difference of opinion between the medical team and the patient or family, and when time allows, a second opinion should be sought. The BMA also recommend that all Trusts establish their own policies.

DNAR orders do not equate to a decision to institute palliative care only. Palliation may be appropriate, but equally continuing active treatment (for example, intravenous antibiotics) but stopping short of CPR is an entirely logical plan in appropriate patients.

**Discontinuing CPR**

Most attempts at resuscitation do not result in a return of spontaneous circulation. It is important to consider a number of factors when deciding whether to discontinue CPR:

- time since arrest
- any delay in commencing effective CPR
- arrest rhythm
- presence of any reversible factors
- co-morbidities
- any expressed wishes of the patient (particularly advance decisions)

In out of hospital arrest of cardiac origin a cardiac output will usually return on site, if it is going to return at all. According to the Resuscitation Council “normothermic patients with primary cardiac arrest who require on-going CPR without any return of a pulse during transport to hospital almost never survive neurologically intact” (Advanced Life Support (ALS) Manual, 2006). They also state that asystole for more than 20 minutes despite ALS and exclusion of reversible factors may justify abandoning further attempts at resuscitation. Persistent ventricular fibrillation gives grounds to continue but senior input should be sought as soon as possible.

**Prognostication post cardiac arrest**

There are no reliable methods for establishing a prognosis in patients who have regained a cardiac output post arrest in the first 24–48 hours post arrest. In the majority of cases a period of intensive care support (with consideration given to the induction of hypothermia in appropriate cases) is indicated.

**Advance decisions**

The difficulty in communicating accurately one’s wishes regarding medical care at the time of an acute illness has led to the development of the advance decision. Also known as living wills or advance statements, these documents are most commonly produced in the setting of a chronic illness likely to lead to deterioration in the patient’s condition such that capacity may be lost – they allow (an adult) patient to communicate their wishes to the healthcare team even when they may no longer be able to do so.
In the same way that a patient’s refusal of treatment while competent must be respected even if they become incompetent, an advance refusal of treatment is binding in law. Since the Mental Capacity Act (2005) came into force (Oct 2007) this is supported by statute.

Conversely, an advance decision expressing the desire for specific treatments (for example, ventilation or CPR) is not legally binding. Health professionals are under no obligation to provide treatment they believe to be futile. Such a document should, however, be respected and followed whenever possible.

Patients who have made an advance decision should be encouraged to ensure that it is shared with healthcare professionals they encounter. If the directive covers a refusal of life-preserving treatment it must be:

- in writing
- signed and witnessed
- state clearly that it applies even if life is at risk

To ensure the applicability of an advance decision, healthcare professionals must try to identify whether the patient:

- has done anything that clearly goes against their advance decision
- has withdrawn their decision
- has subsequently conferred the power to make that decision on an attorney or
- would have changed their decision if they had known more about the current circumstances

Advance decisions may not apply if the person who made the directive is being assessed or treated under the Mental Health Act (1983).