MORAL Balance

An Ethical Framework to aid Medical Decision-Making

MORAL Balance Analysis
COVID 19 – Use of PPE for CPR
Nottingham University Hospitals NHS Trust (NUH) Ethics of Clinical Practice Committee (ECPC)
Original discussion 26th March 2020.
Updated discussion 22nd April 2020 in light of conflicting national guidance.

What is the medical decision you are trying to make?
Should CPR be delayed during the COVID-19 pandemic until healthcare staff are wearing PPE?

Make sure of the Facts
Outline the facts of the case and decision in question (e.g. diagnosis, prognosis, comorbidities, frailty, all treatment options, verbal or written statements, resources). Include degree of uncertainty if present.

Effectiveness CPR

- Cardiorespiratory arrest encompasses a wide range of pathologies, for which the anticipated mortality (and response to/utility of CPR) will vary significantly.
- The average survival-to-discharge rate for adults who suffer in-hospital arrest is < 20%.[1]
- CPR is anticipated to be of greatest effectiveness where it is commenced with the minimum delay from onset of cardiorespiratory arrest.
- There is limited evidence for the utility of CPR in severe COVID-19 disease, however the mortality rate is likely to be extremely high.
- Some patients are dying with COVID-19 not because of infection. Arrest in such circumstances may carry a different prognosis and response to CPR (potentially better, potentially worse).
- Most survivors of cardiac arrest will need admission to critical care and require mechanical ventilation.
- Amongst frail older people the success rate is probably substantially less than 5%. About 2/3 of those surviving CPR have hypoxic brain damage.[2]

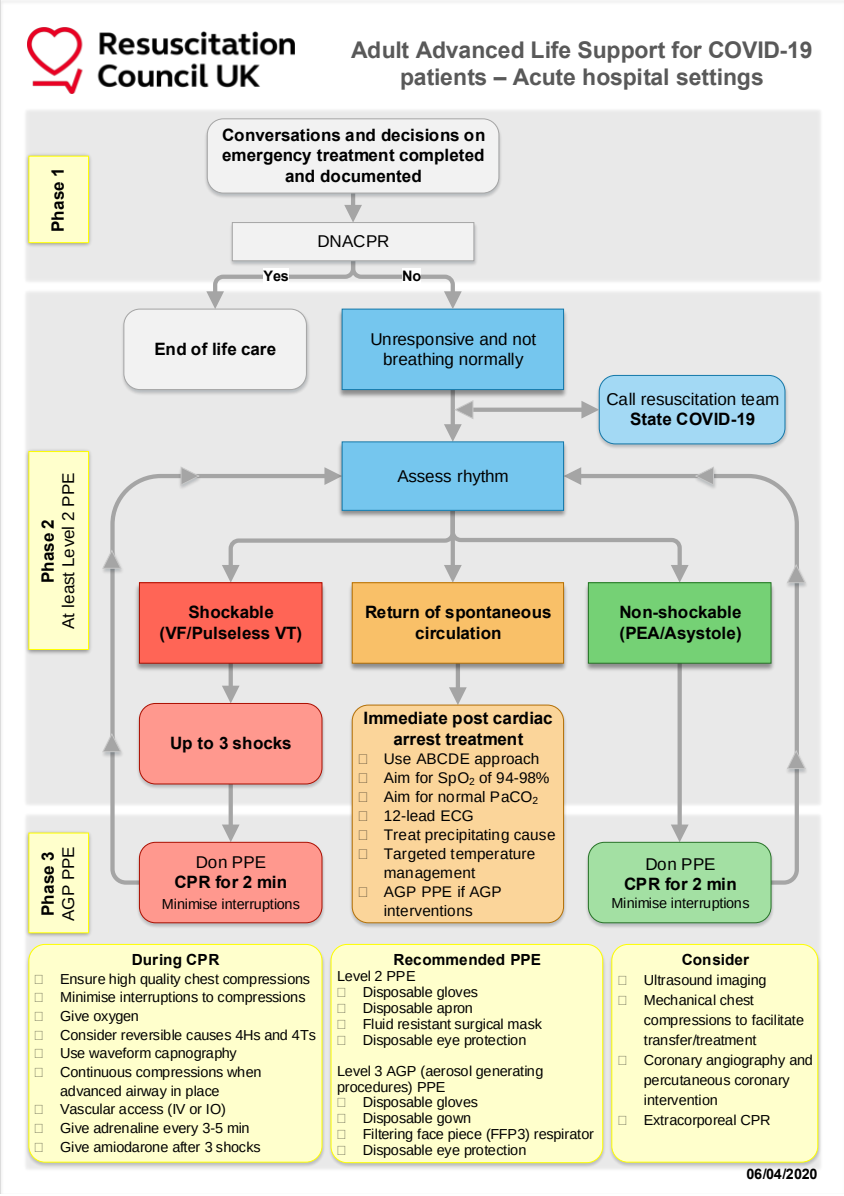
COVID-19

- COVID-19 infection, and sadly deaths, in healthcare staff is occurring nationally. Unclear how and when they became infected.
- Staff sickness or isolation (and therefore unavailable to work) could be a problem for safe staffing levels. CPR team will be drawn from front line clinical staff.
- All patients are now generally considered as potentially COVID-19 +'ve, necessitating appropriate PPE for all patient care interactions.

1 https://www.ncepod.org.uk/2012report1/downloads/CAP_fullreport.pdf
2 Information from HCOP consultant, member of Committee.

PPE

- Resuscitation Council: chest compressions (but not defibrillation) are considered an aerosol generating procedure (AGP) putting healthcare staff at risk of infection.[3]
- Public Health England: Chest compressions and defibrillation (as part of resuscitation) are not considered AGPs; first responders (any setting) can commence chest compressions and defibrillation without the need for AGP PPE while awaiting the arrival of other clinicians to undertake airway manoeuvres.[4]
- Both consider airway interventions as AGP.
- Donning of PPE prior to contact with COIVD-19 patients is estimated to take approximately several minutes (longer for larger teams of people). CPR scenarios are high stress and high intensity – high risk PPE failure
- There is an acknowledgment that this will delay onset of CPR: the risk of transmission to staff and the wider population is considered to outweigh the benefit from earlier resuscitation efforts.



Summary
Defibrillation can be given without AGP PPE.
Chest compressions cannot.

PHE advises that both defibrillation and chest compressions can be given without AGP PPE.

[3] https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/covid-healthcare-resources/

[4] https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe

Do Not Attempt CPR Orders

- Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) orders provide clear instruction to healthcare teams in the event of cardiorespiratory arrest. They are used to prevent CPR attempts that would be contrary to the patient's best interests (in the form of a prior expressed wish, or anticipated futility).
- In a COVID-19 statement, The Resuscitation Council (UK) specifically recommends that "Patients for whom a 'do not attempt cardiopulmonary resuscitation' (DNACPR) and/or other similar decision is appropriate should also be identified early."[5]
- GMC Guidance:
    - In patients who lack capacity, family should be consulted (unless before losing capacity the person stated that this should not happen). In other words, as a family member, you should be made aware of their condition, their chances of survival and plans for their treatment, including decisions about CPR. You may be able to help the healthcare team to make the best decision for the person, by explaining what you know about their beliefs and likely wishes. However, unless you have been given specific legal power (e.g. Power of Attorney) to make decisions about this type of treatment for them you are not entitled to make such decisions and should not be asked to do so.
    - As a medical intervention, the decision to offer CPR is made at the discretion of the treating clinicians. As established within case law (England and Wales) there is no legal obligation upon a clinician to offer a medical treatment that is "futile or burdensome".[6] However such decisions sit within a wider legal framework that includes Article 2 of the *European Convention on Human Rights* (ECHR): the right to life. GMC guidance[7] (itself based upon case law) stipulates that where a patient asks for a treatment that treating clinician does not consider "clinically appropriate", the clinician is not obliged to provide this, but should offer a second opinion.[8]
    - GMC guidance states that where insufficient information is known about a patient (or their wishes) to make a DNACPR decision, that the presumption should be in favour of CPR.
    - GMC guidance stipulates that "decisions about setting priorities that affect patients [must be] fair and based on clinical need and the likely effectiveness of treatments, and are not based on factors that may introduce discriminatory access to care."[9] It further stipulates that where decisions around allocation of limited resources are made, "You must take account of any local and national policies that set out agreed criteria for access to particular treatments and allocating resources, and make sure that these policies are available to clinical staff."[10]

[5] Resuscitation Council UK Statement on COVID-19 in relation to CPR and resuscitation in healthcare settings [Internet]. Resus.org.uk. 2020 [cited 25 March 2020]. Available from: https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/covid-healthcare/

[6] Re J (A Minor) (Wardship: Medical Treatment) [1990] 3 All ER 930.

[7] General Medical Council. Treatment and care towards the end of life. 2010.

[8] Re J (A Minor) (Child in Care: Medical Treatment) [1992] 2 all ER 614; Burke v GMC [2005] EWCA Civ 1003.

[9] GMC, Leadership and management for all doctors [p85]

[10] Ibid [p87]

Outcomes of Relevance to the Agents Involved

Agents are anyone who has a moral stake in the outcome (e.g. patient, family, other patients both in the hospital and outside the hospital, hospital staff, and society). Try and outline what outcomes matter most to these agents, especially taking account of any conversations you have had.

Patient

- Benefit from potentially life-saving CPR efforts.
- Desire to avoid futile and burdensome interventions with no realistic chance of success.
- Sense of responsibility toward society and healthcare workers – not wanting to make others sick.
- Not to suffer.
- To be involved in decisions that affect them.

Patient's Family

- Patient to live.
- Trust in the treating clinicians, especially where they are not able to witness care directly.
- Ability of gaining a clear understanding of events, especially where distance from patient may contribute toward confusion, misconceptions, and anxiety.
- Impact upon grief response following death.
- Avoidance of potential transmission to themselves and others.
- A dignified death for the patient.
- To be involved in decisions that affect their loved one and be offered explanation.

Other Agents

Healthcare staff

- Desire to save the patient's life.
- Desire to optimise outcomes for both individual patient at hand, and other patients (including potential future patients, e.g. the wider population) – maintain critical care resource
- Self-protection from infection and protect own families.
- Risk of compassion fatigue and burnout on the basis of the above.
- Perceived concern legal or complaint, where necessity dictates deviation from "standard practice"
- Helping patients have a "good death" - avoid burdensome and futile interventions (e.g. CPR where there is no realistic chance of success).
- Fear of being overwhelmed by numbers of patients e.g. DNACPR decisions do we have the time to explain to families as ordinarily required?

Society

- Save lives
- Prevent further spread of Covid-19, e.g. from staff to patients, staff to their families + wider.
- Maintain safety of healthcare staff – less sickness – more available to work, death of health care staff in media may detrimentally affect desire of staff to keep working.

- Concern that clinicians acting fairly and consistently – following national recommendations and standards.

Level out the Arguments in a Balancing Box

Populate facts and outcomes into a Balancing Box which uses Beauchamp and Childress's four principles of medical ethics.

Delaying CPR during the COVID-19 pandemic until healthcare staff are wearing PPE.

Autonomy (what outcomes matter to the patient)	**Burden** (what are the burdens and to whom)
• Optimisation of chances of survival/recovery • Reassurance that they are not being overlooked in context of anticipated high workload • Minimised risk of transmission to family or healthcare workers • Desire to protect healthcare workers – maintain healthcare capacity for others • Not to suffer • To be involved in decisions.	• Omission of CPR where it could be of benefit could cause unnecessary harm – this includes cases of patients being incorrectly allocated to the COVID cohort, or patients with a more favourable prognosis • Unnecessary CPR attempts with low likelihood of success – increased stress and risk of transmission for staff • Delays in DNACPR decisions may result in unwarranted CPR attempts – harm to patient • Uncertainty of making "wrong decision" • Use of limited PPE resource • Risk of transmission infection to staff or others
Benefit (what are the benefits and to whom)	**Justice** (fairness in the distribution of benefits and risks)
• CPR in appropriate cases improves survival • Being seen to try. • Use of DNACPR where appropriate promotes control of ("natural") death • Communication of DNACPR decisions with patient is a standard for quality end of life care: allows patient and/or family to anticipate of potential outcome	• Opportunity cost of resource allocation – multiple conversations requiring time of specialised clinicians; unnecessary CPR uses time (and PPE) of multiple healthcare workers • Importance of clear and consistent policy that avoids perception of unfairness – potential fairness issue of CPR being commenced on basis of immediate staff availability • Different people (e.g. families) have different communication/emotional needs – a blanket policy may overlook difference and fail to provide required support

Level out the arguments by seeing if you can balance the calls of each principle and judging if each fact or outcome is truly commensurate?

Consider asking three questions of the Balancing Box:

(i) Anything of particular note?

It is very difficult to predict either the utility/disutility of CPR across such a broad group of patients, or the effect that a delay in commencing CPR would have.

(ii) Where is the greatest conflict?

Delaying an attempt to save the life of the patient with a low possibility of success vs infecting healthcare staff.
Conflicting national guidance.

(iii) Where is the greatest congruence (agreement)?

The priority of minimising risk of transmission is common across all areas. Even where the specific focus of this priority may vary (e.g. risk to self vs risk to family), there is agreement that an increased risk of transmission to any individual equates to an increased risk of transmission to all.

Discussion and Principles

NUH's Ethics of Clinical Practice Committee (ECPC) has no executive powers. Its purpose is to act as source of general advice and learning on the ethical principles underlying decisions in healthcare and clinical practice of the Trust.

The ECPC has previously discussed PPE both in regard to CPR and prioritisation when PPE resources are limited. This analysis updates that discussion in light of conflicting national advice regarding PPE and CPR and also considers implications for community health care services.

1. Utilisation of **earlier DNACPR decisions** would prevent unnecessary CPR attempts (alongside the associated benefits of reduced staff exposure and PPE use). There does not appear to be any strong ethical reason to relax the **GMC standard of a shared decision and explanatory model for DNACPR**, such that patient or family discussion should continue to occur.

2. Effort should be focused on achieving the national guidance.

3. **Prioritise FFP3 (fit testing and masks) and/or FFP2 masks in the following order:**
    1. **Factual need – those actually carrying out an AGP as per national guidance.**
    2. **Expected need – those most likely to need to carry out an AGP (the higher the likelihood of needing to carry out an AGP, the higher the priority for receiving PPE)**
    3. **Outside of guidance – this is much harder to justify (especially given national shortages) unless #1 and #2 have been met.**

4. Cardiopulmonary Resuscitation (CPR) and PPE. The **contradictory guidance** from the Resuscitation Council and Public Health England **is not helpful or welcomed**, putting the moral responsibility **unfairly** on health care professionals or providers.
    1. Both guidance agree that **defibrillation is not an AGP.** So should always occur wearing standard PPE (including surgical face mask).
    2. Both guidance agree that **airway manoeuvres are AGP**. So, require FFP3/FFP2.
    3. The contradiction is with regard to **chest compressions** (yes AGP – Resuscitation Council, no AGP - PHE).
        i. Chair ECPC has established that NUH is following PHE guidance (chest compression is acceptable without FF3/FFP masks) but this is not without controversy.
        ii. The decision by EMAS (regional ambulance service) is to use an alternative option of hoods (two per vehicle). Expensive and does require some training but bypasses need for fit testing or FFP3 masks.
        iii. It would seem difficult to conclude that a 'higher' standard was required in primary care compared to secondary care.
        iv. Even if the 'higher' standard of the Resuscitation Council was being followed in secondary care (NUH) one difference with ethical implication is the time before a full PPE (FFP3/FFP2 or EMAS hood) health care professional could start chest

compressions. If longer in primary care setting, then duty to treat patient makes the decision even more difficult.

v. Chair ECPC will email BMA Ethics Committee to see if they have considered or have any guidance.

5. FFP3 masks
    1. It is a legal duty for health care providers to provide appropriate PPE (fit testing for FFP3 masks and the masks) to health care professionals.
    2. But significant national shortages in fit testing capability is acknowledged. Multiple Trusts have stopped or had to pause fit testing.[11]
    3. Fit testing is time consuming and resource intensive and fit testing large number of staff must be regarded as a Herculean task.
    4. FFP2 masks (acceptable alternative to FFP3) are said to be in very short supply in the UK (these are the N95 masks used in USA and recommended by WHO)
    5. When the ECPC considered 1st April 2020 how the Trust should approach limited resource in PPE some ethical principles were concluded (see below).

Ethical Principles raised by Committee regarding PPE resource limitations and any deviation from health and safety law.

1. The law is designed to protect staff.
2. The default must always be to follow the law.
3. The ethical duty of the hospital, and the spirit of the law, is to protect the health of staff.
4. Additionally, the ethical duty of the hospital is to protect patients by having enough staff to deliver the required healthcare.
5. These are emergency times, it is not business as usual, circumstances do drive decisions, the Trust can only deliver what is practicable.
6. It is therefore ethically sound for the Trust to use resources wisely – aiming to do their utmost to protect both staff and patients and balance safety.
7. If the Trust is needing to deviate from the letter of the law suggest the principles of:
    a. Be sure of the facts that deviation is necessary. Document carefully.
    b. Gain support from others – other Trusts needing to do similar, regulatory legal advice
    c. Keep focused on staff safety – e.g. least bad option.
    d. Explain and be transparent.
    e. Trust NHS staff
    f. Try and record who is using what PPE.

6. There is a significant need to manage fear in health care professionals regarding PPE. Demonstrating rationale compliance to national guidance may assist.

[11] Verbal communication by Chair.