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Editorial

Treating patients with ReSPECT during a pandemic: Resuscitation decisions during COVID-19



Decisions about whether to recommend cardiopulmonary resuscitation (CPR) for a patient are complex. When carried out correctly they facilitate autonomy, dignity and compassion at the end of a patient's life. However, failure to make or indeed effectively communicate these decisions to patients and their families can lead to complaints, negative publicity and most importantly inappropriate resuscitation attempts which have a harmful effect on the patient and their families as well as clinicians.^{1–3}

These complex decisions are even more difficult during a global pandemic because of multiple factors: there is increased, and changing, uncertainty around survival from cardiac arrest associated with coronavirus (COVID-19) infection⁴; performing CPR may increase the risk to clinicians because of aerosol generation⁵; critical care resources necessary for post CPR treatment are stretched to capacity; and there is limited opportunity for face to face discussions with families.⁶ In addition patients with COVID-19 often deteriorate rapidly so a decision about resuscitation recommendations needs to be made as early as possible. Early in the pandemic concerns were raised about the inappropriate use of do not attempt CPR (DNACPR) decisions which led to a Care Quality Commission investigation in the UK.³ The report found examples of both good and bad practice concerning the use of DNACPR decisions.³

The increased mortality following cardiac arrest in patients with COVID-19 is highlighted in the paper by Ippolito and colleagues in this issue of *Resuscitation*.⁴ Describing a systematic review and meta-analysis of outcomes following in hospital cardiac arrest in 1179 patients with COVID-19 across ten studies, they estimated 30 day mortality to be 89.9% increasing to 95.5% for those that had an arrest outside of intensive care settings. This compares with a survival rate of up to 25% in pre-COVID studies.⁴ Interpretation of these results does however require some care as only ten studies were included with the majority based in the United States and all studies were based on data from the first wave of the pandemic. Since then patient characteristics and outcomes may have changed through improvement of novel therapies, vaccination and a changing pathophysiological response to variants of the virus. However, these results highlight the need to base resuscitation recommendations on relevant evidence. When the chance of survival from CPR is so small and patients are so sick, it is crucially important to consider as early as possible whether CPR would be in their best interests.

The paper by Sutton and colleagues (also in this issue of *Resuscitation*) suggests that clinicians were acting pro-actively during

the pandemic to document recommendations about CPR for patients presenting with COVID-19 symptoms.⁷ In a secondary analysis of data from the PRIEST study they found that 31% (3929/12748) of patients presenting with COVID-19 symptoms had a DNACPR decision made on the same day as attending the emergency department and a further 1710 patients had a DNACPR decision made later on in their hospital admission. This is a substantially higher number of DNACPR decisions than reported in pre-COVID studies, although there was no control group in this study to give a pre-COVID baseline DNACPR rate. As the authors point out, it is unclear whether these findings reflect an increased overall need for DNACPR decisions or increased willingness to use DNACPR decisions in COVID-19. However, given the findings of increased mortality following in hospital cardiac arrest for patients with COVID-19 the former explanation seems plausible.

While patients in the PRIEST study with a DNACPR decision recorded were more likely to be acutely unwell and have underlying co-morbidities and reduced functional status, most patients with a DNACPR decision survived to 30 days with 11.6% receiving some form of organ support including mechanical ventilation. This suggests that CPR decisions are being made in a broader context of treatment planning for a patient, providing reassurance to those with concerns that DNACPR decisions may be conflated with other treatment decisions leading to risk of harm to patients.⁸ This finding is also supported by research conducted by Coleman and colleagues. They demonstrated a marked increase in the documentation of resuscitation status and treatment escalation plans during the first COVID-19 peak in a large UK hospital.⁶ They noted patients were generally younger, had less comorbidities and less likely to have a palliative care referral compared to those with forms completed in a pre-COVID period. They also noted that more forms were completed in which patients were for full escalation.

The latest European Resuscitation Council guidelines emphasise that resuscitation decisions should be integrated into emergency care plans rather than stand-alone decisions.⁹ In the UK, the Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) process has been adopted by many health and social care providers to serve this purpose.⁸ An evaluation of the use of ReSPECT in six NHS Trusts across the UK, pre-COVID-19, also found that use of ReSPECT facilitated a shift to considering DNACPR decisions in a more holistic approach to overall treatment planning. So perhaps COVID-19 has accelerated a welcome change in practice in this area.¹⁰

The rapid deterioration and poor outcome following in hospital cardiac arrest in patients with COVID-19 necessitates timely recognition of deterioration and early advance care planning with regard to future emergency treatments. The evidence from Sutton and colleagues suggests that this is happening, and furthermore that despite the urgency of these situations clinicians are making nuanced recommendations that reflect the different needs and situations of patients. Hopefully, as we emerge from the pandemic, this change in practice will continue and in the future every patient can be treated with ReSPECT.

Authors contributions

I can confirm all authors have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted.

Conflicts of interest

None.

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