Results of a nationwide survey on the use of non-invasive respiratory support in patients with respiratory failure due to COVID-19 infection

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INTRODUCTION

- Patients with acute respiratory failure due to COVID-19 infection may receive respiratory support via any of the following modalities:
  - Conventional oxygen therapy
  - High flow nasal oxygen (HFNO)
  - Continuous positive airway pressure (CPAP)
- A proportion of patients will subsequently require invasive ventilation
- There is insufficient evidence on the relative effectiveness of different modes of non-invasive respiratory support (NIRS) in patients with respiratory failure due to COVID-19
- Given this lack of evidence, and guidelines, to aid clinical decisions, there may well be significant variation in the use of NIRS in COVID-19
- The RECOVERY-RS trial conducted during the period April 2020 – May 2021 sought to address this evidence gap and determine the effectiveness of CPAP and HFNO compared to conventional oxygen therapy
- This survey, performed during the RECOVERY-RS recruitment period, aimed to:
  - Characterise the use of NIRS in COVID-19 patients in the UK
  - Assess opinion on the need for trial data to address the lack of evidence on relative effectiveness of different NIRS

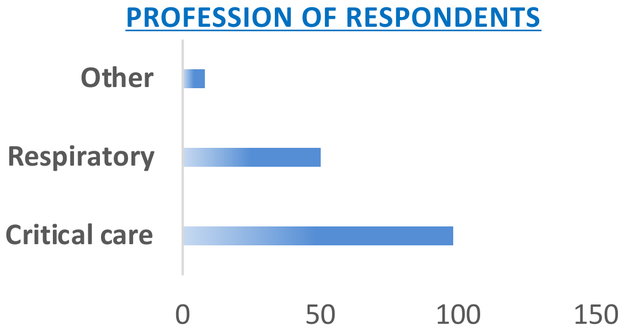
METHOD

- Anonymous, online survey
- Comprising 10 questions
- Distributed via professional societies (e.g. Intensive care society, North East Thoracic Society etc.)
- Conducted over 3 months September – October 2020
- Invited healthcare professionals (HCPs) involved in treating COVID-19 patients to participate

RESULTS

- 145 respondents
- 49% routinely managed acute respiratory failure (ARF) outside of the COVID-19 pandemic

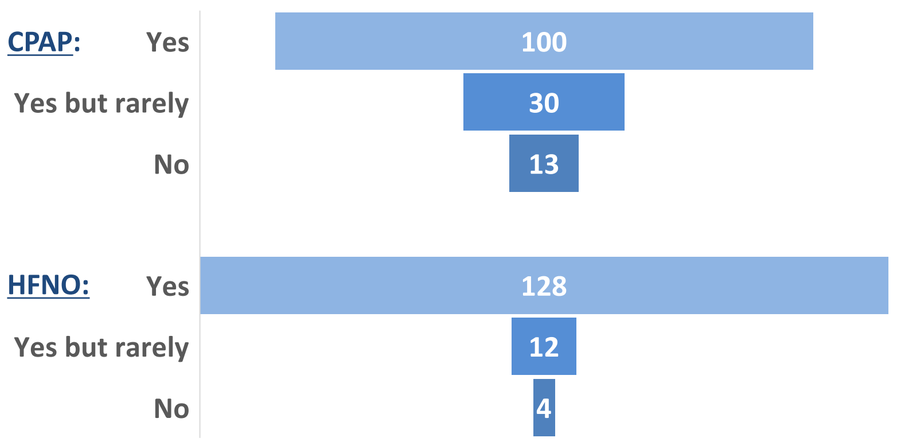
PROFESSION OF RESPONDENTS



'Other' included research nurses, physiotherapists & acute physicians

RESULTS

PRIOR TO COVID-19 HAVE YOU USED CPAP OR HFNO FOR ARF DUE TO INFECTION e.g. PNEUMONIA, FLU?

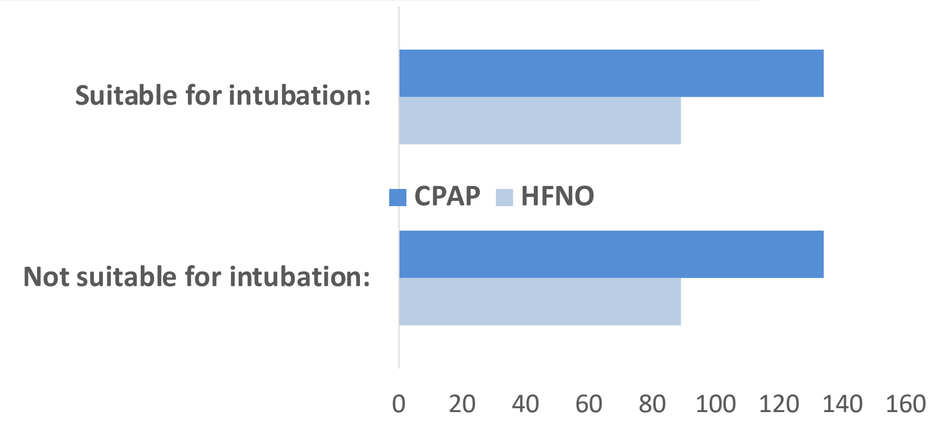


Prior to COVID-19, HFNO was used most commonly in the treatment of infection-related ARF.

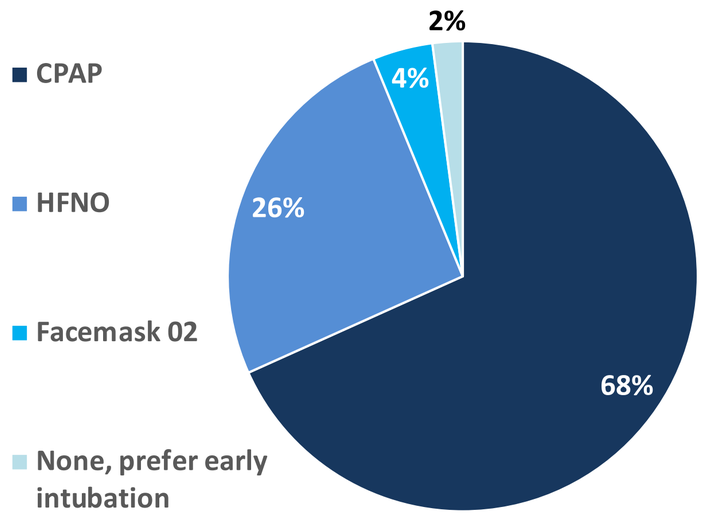
A small minority (3% HFNO vs 9% CPAP) reported no previous experience of their use.

WHICH TYPES OF NIRS ARE USED IN YOUR TRUST IN COVID-19 PATIENTS?

In patients with ARF due to COVID-19, CPAP was more frequently used than HFNO



WHICH OF THESE METHODS WOULD *YOU* PERSONALLY CHOOSE AS YOUR PREFERRED TREATMENT IN COVID-19 AS A POTENTIAL BRIDGE TO/PREVENTATIVE APPROACH TO INTUBATION?



The majority of respondents chose CPAP as their personally preferred treatment modality in patients with COVID-19

- 37% of respondents worked in trusts enrolled in the RECOVERY-RS trial
- The majority (59%) felt this was an important research study

CONCLUSION

- This survey identified that a variety of NIRS are used across the UK in COVID-19
- CPAP predominates – both as a ceiling of care treatment & a bridge to intubation
- This appears to represent a change in practice, with HCPs more commonly having used HFNO in infection-related ARF prior to the COVID-19 pandemic, despite a lack of evidence at the time to suggest superior efficacy of CPAP
- This survey demonstrates heterogenous use of NIRS & supports the need for evidence of the most effective NIRS in COVID-19
- The majority of respondents agreed that RECOVERY-RS is an important study, needed to address this key, unanswered research question