

How Well Did We Palliate Breathlessness in Those Dying of COVID-19?

Stephen J Fenning¹, Susan Travers¹, Suzanne Young¹, Jack Maddicks¹, Jessica McNiff¹, Colette Reid¹

1. NHS Lothian

Abbreviated abstract: Breathlessness is the most significant symptom in those dying of COVID-19 but historically it has been palliated poorly at end of life. We assessed how it had been palliated in our local hospitals during the pandemic. A retrospective case note examination of 71 COVID-19 deaths was undertaken. Less than a third of episodes of breathlessness (113/426 – 27%), as measured by respiratory rate, were palliated with anticipatory medicines. Further education of staff is recommended.

References:

1. Keeley P et al. *BMJ Support Palliat Care* 2020 May 28: bmjspcare-2020-002368
2. Royal College of Physicians. National care of the dying audit for hospitals, England. (2014)

Background

- Breathlessness is the most significant symptom in those dying of COVID-19, with acute respiratory distress syndrome being the most common mode of death (90%)¹
- Across the United Kingdom, palliative care guidelines have been developed, specifically for COVID-19, to support and encourage clinical teams in providing adequate symptom control for the dying
- The importance of palliating breathlessness effectively has long been recognised and yet it remains a frequently overlooked symptom at end of life²
- The aim of this work was to examine the application of COVID-19 guidelines in the management of breathlessness at end of life

Methods

- Retrospective case note examination of hospitalised patients who had died of COVID-19
- Patients included if:
 - Admitted to any of 3 acute hospitals in NHS Lothian, Scotland, prior to the end of April 2020
 - COVID-19 recorded within Part 1 of Medical Certificate of Cause of Death
 - End of life care provided on a general ward, rather than in an Intensive Care Unit
 - Not on regular opioid therapy prior to admission
- Total doses of opioid and midazolam in the final 24 hours of life were calculated
- All respiratory events (defined as respiratory rate ≥ 25 breaths per minute) occurring after anticipatory medicines had been prescribed were counted
- We noted whether anticipatory medicines had been given in the 30 minutes prior to or in the 30 minutes following an event

Results and Conclusions

Across the 71 patients included:

- In the last 24 hours of life, the median (IQR) total dose of opioid was 33mg (14-55) oral morphine equivalent and the median (IQR) total dose of midazolam was 15mg (6-26)
- 37 (52%) patients were prescribed a syringe pump, with 24 (65%) pumps started in the last day of life
- 426 separate respiratory events were recorded, with 57 (80%) patients experiencing at least one event
- An opioid and/or benzodiazepine was given in 113 (27%) of events (*see Table 1*)

	RR ≥ 25 (TOTAL)	RR 25-29	RR 30-34	RR 35-39	RR ≥ 40
Number of events	426	217	138	44	27
Number (%) of events where opioid and/or benzodiazepine given	113 (27%)	47 (22%)	41 (30%)	10 (23%)	15 (56%)
Number (%) of events where opioid given	100 (23%)	45 (21%)	35 (25%)	9 (20%)	11 (41%)
Number (%) of events where benzodiazepine given	50 (12%)	17 (8%)	17 (12%)	6 (14%)	10 (37%)

Table 1: Use of 'as required' opioids and benzodiazepines in relation to respiratory events (as measured by respiratory rate, RR, of greater than or equal to 25 breaths per minute)

- **The majority of patients dying of COVID-19 are tachypnoeic during their last days of life but only a minority of respiratory events are palliated**
- **Specific COVID-19 palliative care guidelines are necessary but may not be always be followed**
- **With future waves expected, further education of healthcare professionals is imperative**