Guidance for End of Life Care in a Patient Receiving NIV, CPAP or High Flow Oxygen in Cases of COVID-19 Respiratory Failure

1. Purpose of the Document

The purpose of this guideline is to provide guidance for staff involved in caring for patients on Non-Invasive Ventilation (NIV), Continuous Positive Airways Pressure (CPAP) or High Flow Oxygen (HFO_2) where the decision has been made to move to symptomatic care and respiratory support is being discontinued.

2. Circumstances for Withdrawal

- The patient requests to discontinue their NIV / CPAP / HFO_2
- The patient is not recovering or tolerating NIV / CPAP / HFO_2
- The patient continues to deteriorate despite NIV / CPAP / HFO_2
- The patient has been placed on NIV / CPAP / HFO_2 as a bridge to decision making regarding escalation of care and consequently to this decision, the therapy needs to be discontinued.

Explanations to patient/family in the case of a medical decision to withdraw:

- The patient has suspected or confirmed COVID-19.
- Despite maximal appropriate therapy, the patient continues to deteriorate and there are no signs of recovery. We now do not expect the patient to survive this illness and it is no longer appropriate to artificially prolong life with such treatment or prolong suffering.
- That the current treatments will be removed as they are not effective.
- That the plan of care will be to focus on those interventions that prioritise the comfort of the patient.
- Our primary aim now is to alleviate any pain or distress.
- The patient is expected to rapidly deteriorate and die.

3. Practicalities

- Discussion with patients, families and carers is best practice however we must be accepting that in an emergency, decisions should not be delayed.
- Risk assess and if possible initiate plans to allow a relative to attend the hospital to visit.
- If the relatives are unable or chose not to attend, they should be offered the opportunity, where possible, to communicate with their relative – this could be by audio or video technology.
- The patient's wishes regarding spiritual care should be explored and offered.
- DNACPR should be in place.

4. The Process of Withdrawing NIV, CPAP or HFO_2

- NIV / CPAP / HFO_2 are currently classed as aerosol generating procedures (AGP) and appropriate PPE should be worn in the room for an hour after the therapy has stopped.
- PPE can be stepped down to 'droplet precautions' after 1 hour.
- The clinicians involved in the withdrawal will need to think through the practicalities of potentially giving repeated doses of medication while remaining present and maintaining infection control measures (i.e. not coming in and out a room for example).
- It is not common practice to "wean" patients from NIV / CPAP / HFO_2 by reducing ventilator settings or O_2 percentage as this can prolong dying and increase the discomfort experienced by the patient.
- Symptoms should be controlled as far as possible prior to the removal of the therapy and it can be anticipated that the patient will experience breathlessness and distress.
- The focus of care during withdrawal is symptom control and the patient may require multiple doses of medication to control their symptoms both prior to the withdrawal and after the withdrawal.
- The patient should ideally be commenced on a continuous subcutaneous infusion (CSCI) of an opioid and midazolam, at least 2 hours prior to the process of withdrawing beginning.
- A BD Saf-T-Intima™ cannula should be inserted to aid the administration of subcutaneous (SC) medications.

5. Medication

Symptoms of breathlessness and distress can be anticipated and can be effectively managed.

Assess the patient **prior** to withdrawal:
1. Is the person's work of breathing high / respiration rate high?
2. Are they in pain?
3. Are they are already distressed or agitated?
4. Are there audible respiratory tract secretions?
5. Does the person have functioning IV access?

- The choice of drugs will depend on what the patient is already on.
- If they are already on a CSCI with an opioid and midazolam and **these are effective** give a dose of their usual breakthrough opioid and a dose of subcutaneous midazolam.
- If the patient is already on a CSCI with an opioid and midazolam and **these are not effective** increase the dose by 20- 50%, depending on the severity of symptoms, and alter the dose of breakthrough medications accordingly.
- In patients who are naive of symptom control medication consider commencing a CSCI with morphine 10mg and midazolam 10mg and the following anticipatory medications:

Route	Breathlessness	Pain	Distress	Secretions	Agitation
SC	2mg - 5mg SC morphine	2mg - 5mg SC morphine	2mg - 5mg SC midazolam	20mg SC hyoscine butylbromide	Levomepromazine 2.5mg - 5mg SC
IV (as alternative to SC)	2mg - 5mg IV morphine	2mg - 5mg IV morphine	2mg - 5mg IV midazolam		

It is expected that all patients will be distressed, commonly with breathlessness, dyspnoea and/or agitation. They will therefore need a dose of opioid and midazolam **prior** to withdrawal.

IV route should take around 3 - 5 minutes to be effective while subcutaneous is around 10-15 minutes. Repeated doses can be utilised as necessary to achieve comfort, taking this into account.

Remove the NIV / CPAP / HFO_2 once the patient has been made as comfortable as possible. During the time after withdrawal there may be a need to repeat doses of these medications.

- A Saf-T-Intima™ cannula should be inserted to allow repeated SC injections.
- If IV access is present, medications can be given IV rather than SC.
- Some patients cannot be awake without being distressed and may require repeated doses of midazolam, or a syringe pump if available, to make them comfortable.

We expect that when respiratory support is removed, patients will deteriorate and die over minutes to hours.

The purpose of these medications is not to shorten life but to appropriately reduce the patient's awareness and distress as they approach the end of life.

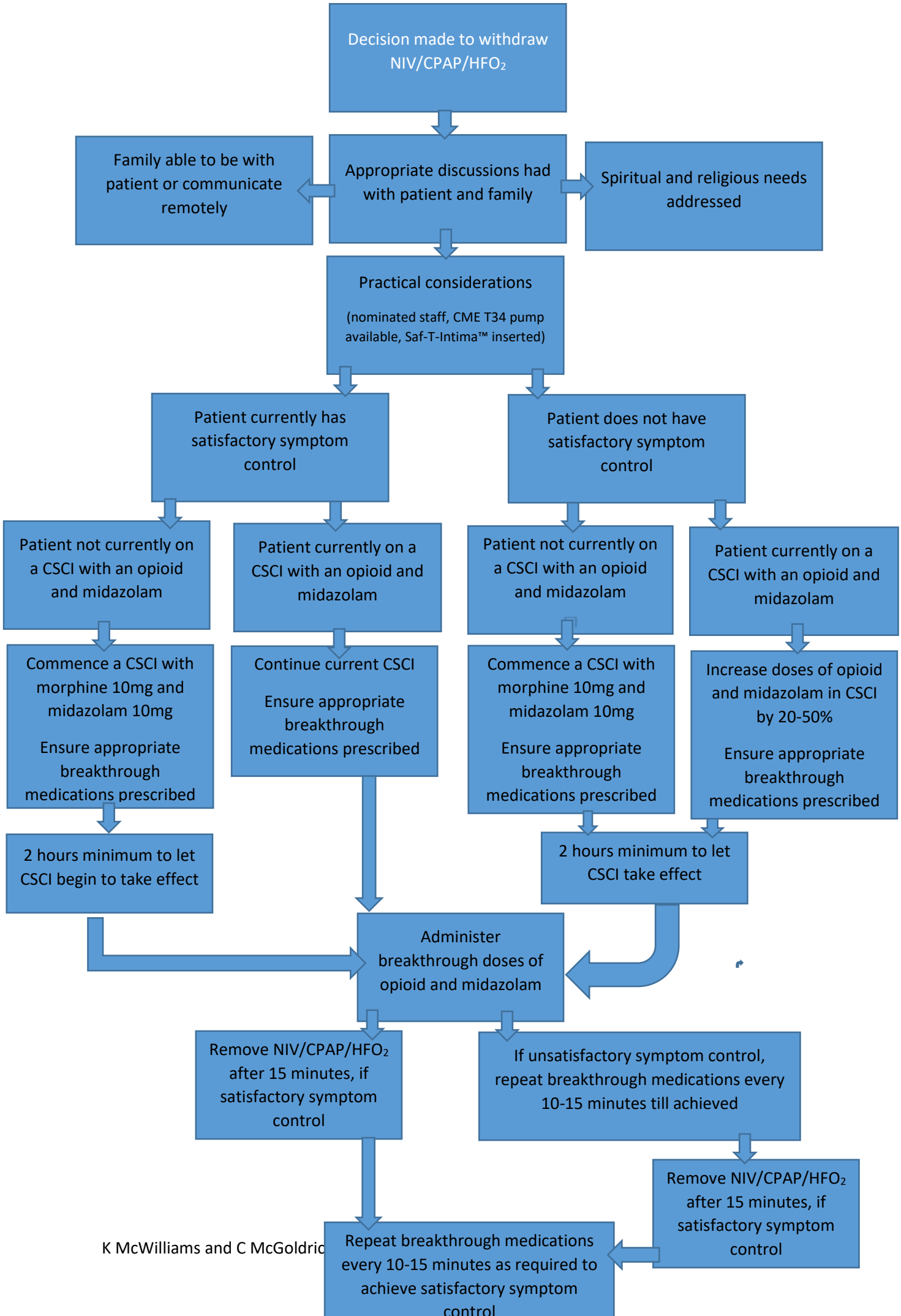
6. Other Resources

A wealth of guidance can be found at www.palliativecareguidelines.scot.nhs.uk

Communication resources for healthcare professionals can be reviewed at https://www.ec4h.org.uk/covid-19-effective-communication-for-professionals/

REDMAP guidance for Healthcare Professionals: https://www.ec4h.org.uk/wp-content/uploads/2020/04/RED-MAP-Guide-for-Hospital-Professionals-v5.0-080420.pdf

This guideline is based on a guideline by Monica Doyle, Deans Buchanan and Judith Joss, NHS Tayside



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