



Eastern Metropolitan Region
Palliative Care Consortium

Consortium Clinical Group

Management of respiratory secretions in the terminal phase

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Background:

Terminal respiratory secretions (known as ‘death rattle’ or ‘noisy breathing’) are often observed in an imminently dying person. Despite the symptom occurring in 23 - 92%^(1, 3) of patients, there is a lack of robust research to guide assessment or management. The cause of terminal respiratory secretions is unproven, but it is considered to be due to a pooling of respiratory secretions that occurs as a person becomes weaker, loses consciousness and the ability to cough or swallow normally^(5,9). Family members can express concern that terminal respiratory secretions may be distressing to the patient and they require ongoing support and education.

Key points to remember

- The ‘death rattle’ is a strong predictor of death. After commencement, the median survival time is 23 hours⁽³⁾
- A differential diagnosis for the noisy breathing should be considered; including cardiac failure, respiratory infections or gastro-intestinal obstruction. Use clinical judgement to ascertain if further treatment is required
- Providing quality care and support to the patient’s family is critical, including bereavement care
- Consider ceasing any additional subcutaneous or intravenous fluids
- The literature search conducted showed no anti-secretory medication was consistently better than another. The research indicates medication may or may not be useful or required^(1, 4,5)
- Mouth care and position changes will maximise patient comfort and may help with the secretions
- Clinical experience shows suctioning can be “very uncomfortable for the patient and cause significant...distress”⁽⁹⁾. If suctioning is needed, gentle oral suctioning only maybe appropriate⁽²⁾
- Implement the management flow chart (on page 3) when the symptom is detected
- Regularly assess the patient’s clinical situation and response to any medication administered

Guidelines for initiating medication:

- 1) Identify the presence of terminal respiratory secretions as soon as they start. Medications are most effective when started at a rattle score of 1⁽³⁾. A scoring tool may be used in clinical documentation

	<i>Rattle Intensity Score</i> ⁽⁶⁾
0	Not audible
1	Only audible near patient
2	Clearly audible at the end of the patients bed in a quiet room
3	Clearly audible at a distance of about 9.5m in a quiet room

- 2) Continue pharmaceutical treatment for 24 hours. Effectiveness improves with time⁽³⁾
- 3) Assess the hydration of the mouth as medication will exacerbate dryness
- 4) Drug selection & prescribing is based on the differing pharmacological profiles, prescriber preference, accessibility and the cost of medication⁽⁸⁾.



The patient is dying and has terminal respiratory secretions

GENERAL APPROACH

Patient care:

- Nurse the person on their side, reposition to other side every 3-4 hours.
- Elevate the head of the bed slightly, retaining a position of comfort
- Provide frequent mouth care (every 1-2 hours).
- Use background music or a fan to diffuse the sound
- If suctioning is needed, only use gentle oral suctioning

Family care:

- Explain how & why noisy secretions develop. Emphasising it is a normal part of dying process.
- Give reassurance that the noise & secretions are not distressing for the patient
- Provide the EMRPCC family leaflet on this symptom or other appropriate supportive literature

Are the noisy secretions still problematic?

Yes

No

Continue with the general approach and trial medication

Continue with the general approach

Any of the following drugs (listed alphabetically) are suitable for intermittent subcutaneous administration, depending on the availability and preference:

- Atropine 0.4 - 0.6mg stat ⁽⁷⁾ or
- Glycopyrronium (Glycopyrrolate) 0.2mg stat ⁽⁷⁾ or
- Hyoscine Butylbromide (Buscopan®) 20mg stat ⁽⁷⁾ or
- Hyoscine Hydrobromide (Hyoscine) 0.4mg stat ^(7,8)

or

An emerging management therapy is Atropine 1% ophthalmic drops 1-2 drops sublingually stat, then every 2-4 hours ^(4, 10)
Be aware, drop size varies due to variance in applicators and techniques

Has it been effective?

Yes

No

- Maintain the general approach
- Repeat subcutaneous dose in 4-6 hours as needed

If ongoing doses of medication are required, consider a continuous subcutaneous infusion of either

- Glycopyrronium (Glycopyrrolate) 0.6 - 1.2 mg /24 hours ⁽⁷⁾ or
- Hyoscine Butylbromide (Buscopan®) 60 - 80mg / 24 hours (initially) and titrating

- Provide ongoing support to family, reiterating the noise is a part of the dying process and not distressing for the patient
- Continue with the general approach (as outlined above)
- An alternate drug or dose may be used but is unlikely to relieve the noise
- Address the grief and bereavement needs of carers & family





DISCLAIMER

The information is a guide only and reflects current Victorian palliative care practice and available literature at the time of release. It is the responsibility of the user to ensure information is used correctly in response to the patient/client's clinical situation.

Follow your organisation's policy and procedures regarding management of respiratory secretions and end of life care.

Printed versions can only be considered up to date, one month from the retrieval date, after which the latest version should be accessed from the Eastern Metropolitan Region Palliative Care Consortium website.

REFERENCES

- 1) Wee, B & Hillier, R (2012). *Interventions for noisy breathing in patients near to death (Review)*. The Cochrane Collaboration Art.No. CD005177. doi:10.1002/14651858.CD005177.pub2
- 2) Harlos, M. (2009). The terminal phase. In G.W.C. Hanks, N.I. Cherney, N.A.Christakis, M. Fallon,S. Kaasa & R.K Portenoy (Eds), *Oxford Textbook of Palliative Medicine*. 4th ed. pp. 1556-7, Oxford, England: Oxford University Press
- 3) Wildiers, H., Dhaenekint, C., Demeulenaere, P., Clement. P., Desmet. M., Van Nuffelen. R.,..... Menten. J. (2009). Atropine, Hyoscine Butylbromide, or Scopolamine Are Equally Effective for the Treatment of Death Rattle in Terminal Care. *Journal of Pain and Symptom Management*, 38 (1), 124-133 doi:10.1016/j.jpainsymman.2008.07.007
- 4) Heisler, M., Hamilton, G., Abbott. A., Chengalaram. A., Koceja. T., & Gerkin. R., (2012) Randomized double blind trial of sublingual atropine vs. Placebo for the management of death rattle. *Journal of Pain Symptom Management*. doi:10.1016/j.jpainsymman.2012.01.006
- 5) Bennett. M., Lucas. V., Brennan. M., Hughes. A., O'Donnell. V., & Wee. B., (2002). Using anti-muscarinic drugs in the management of death rattle: evidence- based guidelines for palliative care. *Palliative Medicine*. 16;369 doi:10.1191/0269216302pm584oa
- 6) Back. I.N., Jenkins. K., Blower. A., & Beckhelling. J., (2001). A study comparing hyoscine hydrobromide and glycopyrrolate in the treatment of death rattle. *Palliative Medicine*, 15,329-36 doi:10.1191/026921601678320313
- 7) Noisy breathing and respiratory secretions in patients receiving palliative care [revised 2010 Feb]. In: eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited; 2015 July. Retrieved October 2015
<http://etg.hcn.com.au/desktop/index.htm?acc=36265>
- 8) Western Australian Cancer & Palliative Care Network (2011). Evidence based clinical guidelines for adults in the terminal phase (2nd edition). Western Australia Department of Health. Retrieved October 2015
http://www.healthnetworks.health.wa.gov.au/cancer/docs/Evidence_based_guidelines_2011.pdf
- 9) Dudgeon, D. (2001). Dyspnea, Death Rattle, and Cough. In B. Rolling Ferrell & N. Coyle (Eds.), *Textbook of Palliative Nursing*, pp. 169-70. New York, Oxford University Press.
- 10) McCrate Protus.B.,Grauer.P.A.,& Kimbrel.J.M.,(2013). Evaluation of Atropine 1% Ophthalmic Solution Administered Sublingually for the Management of Terminal Respiratory Secretions. *American Journal of Hospice and Palliative Medicine* 30:338-392 doi:10.1177/1049909112453641
- 11) Twycross, R. & Wilcock, A. (2011). Management of death rattle (noisy respiratory secretions). *Palliative Care Formulary*. 4th ed. pp. 7-10, Nottingham, United Kingdom: Palliativedrugs.com Ltd

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