



# Development of an Evidence-Based Treatment Pathway to Improve Dyspnea Management and Oxygen Utilization in a Hospice Organization

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## Statement of the Problem

- Dyspnea is complex, multifactorial, and common in patients approaching end of life.
- Palliative oxygen is widely prescribed as part of comfort care in hospice organizations despite lack of strong evidence for its efficacy.
- Oxygen is a limited resource with costs, benefits, and burdens.

## Literature Review

- Opioid therapy for dyspnea at end of life is well-established and evidence-based.<sup>1</sup>
- Oxygen is not superior to air via nasal cannula for breathless patients without significant hypoxemia.<sup>2,3</sup>
- For most actively dying patients, oxygen can be comfortably withdrawn.<sup>4</sup>
- Fans have more evidence for effectiveness than palliative oxygen.<sup>5</sup>

## Purpose/Aims

This quality improvement project's purpose is to improve the quality of dyspnea management at Navian Hospice.

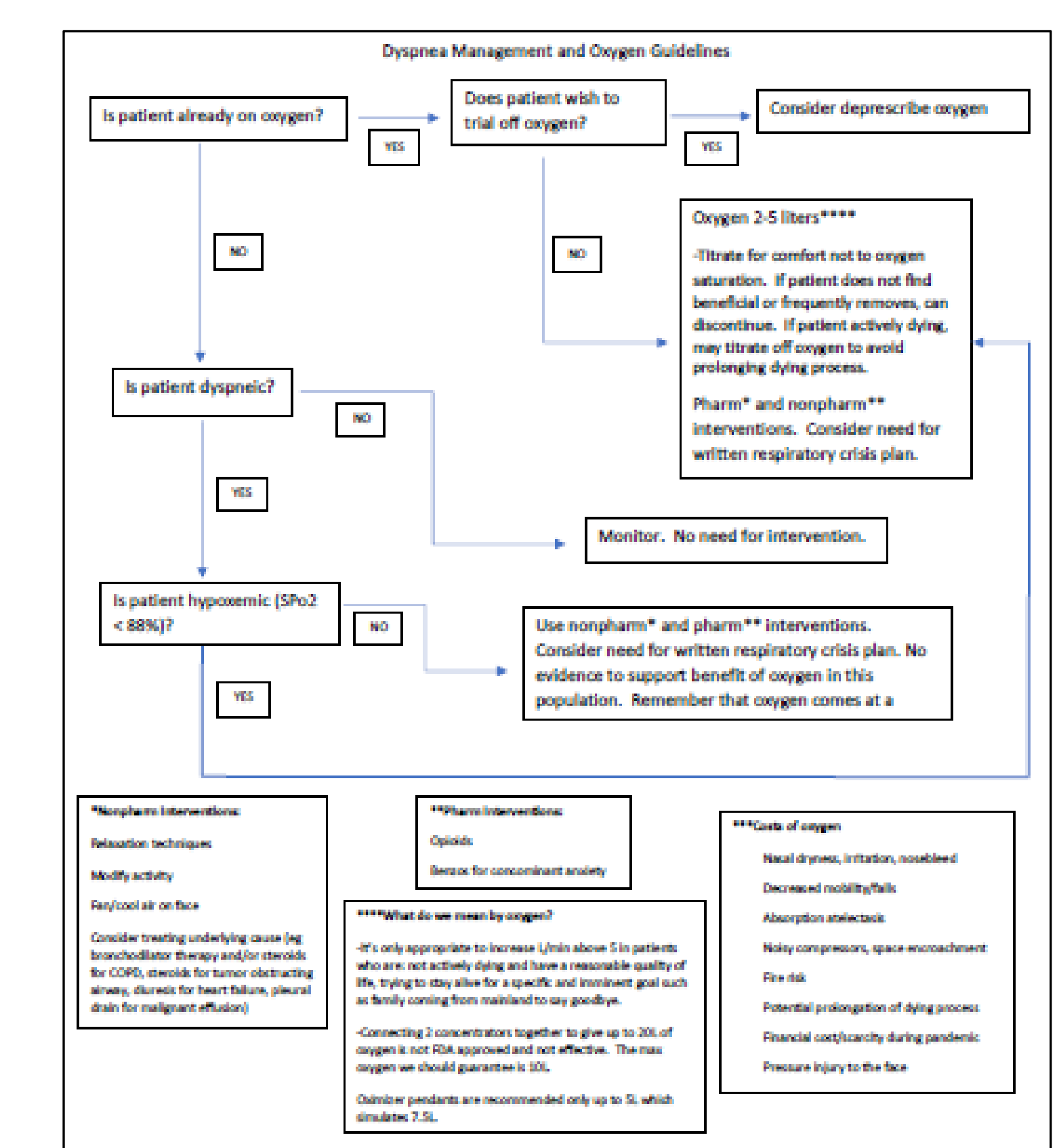
### Specific Aims:

- To implement a dyspnea management pathway based on current best evidence.
- To educate clinical staff about the evidence-based pathway.
- To demonstrate a change in clinical staff knowledge and beliefs about dyspnea management, including the use of oxygen therapy pre/post intervention.
- To decrease oxygen orders in the month post pathway implementation and education as compared to the month prior to the intervention.

## Methods

**Setting:** Navian Community Hospice, Honolulu, HI  
**Sample:** Average census ~105 patients; 35 clinical staff  
**Data Analysis:** Descriptive statistics and t-tests

- ✓ Literature review
- ✓ Create dyspnea pathway
- ✓ Pre-intervention survey
- ✓ Educational presentation (7/12-7/14)
- ✓ Post intervention survey
- ✓ EHR audit of new oxygen orders/hospice patients (5/30-6/26; 7/18-8/14)



## Findings

Survey Questions	Pre (N=17) Mean (SD)	Post (N=15) Mean (SD)	P value
Oxygen therapy is essential for good comfort care.	2.59 (±.71)	2.00 (±.38)	0.007*
Oxygen therapy should be ordered for most patients who are short of breath.	3.06 (±.75)	2.00 (±.54)	<0.001*
I feel comfortable educating hospice patients and family caregivers about the risks and benefits of oxygen therapy.	3.24 (±.66)	3.60 (±.51)	0.094
I can recognize clinical situations where oxygen may be beneficial for my patient's symptoms.	3.29 (±.47)	3.53 (±.52)	0.180
Medical evidence shows that opioids are more effective than oxygen for the treatment of dyspnea in terminally ill patients.	3.24 (±.44)	3.80 (±.41)	<0.001*
Benzodiazepines play a limited role in the management of dyspnea.	2.41 (±.71)	3.33 (±.49)	<0.001*
There is better evidence for the efficacy of palliative oxygen than for a fan blowing in the face for the treatment of dyspnea.	2.47 (±.712)	2.13 (±.83)	0.228
Oxygen therapy can usually be withdrawn in patients who are actively dying without increasing dyspnea.	3.06 (±.66)	3.40 (±.51)	0.115
I feel confident communicating a plan of care with patients experiencing dyspnea and their family caregivers.	3.00 (±.71)	3.47 (±.52)	0.044*

1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree; \*Statistically significant p<0.05

	New Oxygen Orders/Total Patient Census
Pre-intervention	0.28
Post-Intervention	0.20

## Conclusions/Future Directions

- An evidence-based pathway and education can improve staff knowledge and beliefs about managing dyspnea.
- # oxygen orders/patient decreased post intervention suggesting a trend towards lower oxygen utilization.
- Clinical staff were open to change and appreciative of education session.
- Continued review of oxygen orders will be used to target additional education efforts.
- Audits of clinical note documentation of oxygen therapy use will be used to provide regular feedback to staff.

## Limitations

- Unable to discern how practice changes have impacted dyspnea scores and/or quality of life.
- A change in practice may be temporary without continued effort.
- Decrease in oxygen orders do not necessarily correlate with pathway adherence.

## Acknowledgements/References

Mentor: Dr. Maurice Scott

### References

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