**Paramedicine Oxygen Administration in Chronic Obstructive Pulmonary Disease: Literature Review**

**Introduction**

Oxygen is perhaps the most important element when it comes to a comparative analysis of elements that are required by the human body. It is a commonly used drug in the clinical setting and therefore this aspect calls for the need to carefully consider its use just as it would be with any other drug. Chronic obstructive pulmonary disease, which is an umbrella word that describes a vast range of respiratory diseases causing breathlessness [1], is amongst many illnesses that tend to require administration of oxygen. However, its successful administration in paramedicine tends to depend on correct prescription and effective delivery. In this literature review, the paper explores oxygen therapy in a cute exacerbation of COPD and how attitudes, beliefs and organisational barriers affect the intended outcome.

**Method**

**Literature search**

To search for the relevant and applicable previous studies about the current topic, the process employed systematic literature search from various databases. The search began with formulating of search terms that relate to how oxygen therapy is administered in paramedicine and how beliefs, attitude and organisational setting influence its outcome in patients with COPD. Search terms that were used to locate materials were: oxygen therapy in paramedicine for patients with COPD, paramedical administration of oxygen therapy in Australia for patients with COPD, and influence of beliefs, attitude and organisation setting on oxygen therapy for COPD. The databases utilised during the literature search were Google Scholar, Cumulative Index to Nursing & Allied Health Literature (CINAHL) and JBI COnNECT+.

**Study selection and data extraction**

The process or approach of selecting the relevant and relatively most appropriate materials considered the relevance of their titles, reliability of their research methods, and their quality as evident in the abstract section. The process of extracting evidence to inform the discussion of the current topic focused on material with relevant and quality information about oxygen administration in paramedicine and how beliefs and attitude amongst stakeholders would influence the outcome. The selection and extraction process was as shown in the diagram below.

**Results**

Administration of oxygen in emergency situations for patients with COPD and the achievement of its intended purpose or outcome are found to depend significantly on correct prescription and effective delivery. Prehospital situations such as acute respiratory failure in COPD tend to require paramedical oxygen administration [2] [3]. Prescribed doses tend to guide administration process of oxygen therapy in paramedical circumstance [4]. However, the prescription process or dose can only be accurate and effective if analysis of blood gas is integrated in the diagnostic process to establish the nature of the cute exacerbation and level of oxygen therapy required in response [4]. These two processes, the analysis of blood gas and prescription of the dose, should be based on certain guide lines with which paramedics can use for reference in comparison to their diagnosis information [1]. However, studies also reveal that there correct dose is not the only determinant of the outcome of oxygen administration in emergency circumstances; there is a need to investigate barriers and facilitators in delivery stages, including attitude and beliefs of stakeholder, which affect the delivery process of oxygen therapy in paramedicine [3] [5].

**Discussion**

Oxygen administration is one of the paramedical corrections of acute exacerbation in COPD that is highly significant but requires effective prescription and delivery. To ensure this effectiveness, there are various organisational and regional-based guidelines such as the current clinical practice guideline (CPG) of Ambulance Victoria, Australia that provide basis of reference when administering such drugs as oxygen. However, there is a need to consider possible barriers and facilitators that can support or hinder the paramedical practice during its administration in COPD emergency situations. To inform accurate and effective prescription of oxygen therapy in acute exacerbation situations of COPD, there is a need to conduct and consider the patient’s blood gas since this diagnosis would inform the amount of oxygen that is required [4]. It is also imperative to always compare the diagnosis report or information with written guidelines that is relevant to the situation [1].

Upon consideration of factors that may affect the outcome of prescription, there is also a need to consider such factors that may affect or facilitate the delivery process of oxygen therapy in the case of acute exacerbation among patients with COPD. Oxygen administration and its effective delivery are known to be relatively more effective when integrated with ventilation support. To achieve the restoration of oxygen concentration and pressure, there is a need to support the patient using ventilator that would help in breathing effectively [2]. Also, people, especially patients and the public, have considerably false perceptions and beliefs about oxygen therapy. Organisational settings, which reduce chances of positive outcomes of this paramedical practice such as lack of written guidelines, also affect the delivery process of oxygen administration [5]. It implies that cases use exercise of autonomy against this method can result in poor outcomes in such emergency situations.

**Conclusion**

Oxygen therapy is effect in paramedicine but it also requires just as much care during its prescription and delivery as it would be with other drugs. The accuracy of its prescription depends on whether there is a written form of guidance that inform activities by the paramedics with regard to the results of their diagnosis, which should also include tests of blood gas. The delivery process should characterise ventilator support for facilitation. However, there is a need to educate the public about the need and benefits of oxygen therapy to correct false perception which have potential hindrances on its delivery.

**References**

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