

Introduction

When children are unable to maintain adequate oxygenation, supplementary oxygen must be provided. Because oxygen is a drug, it must be treated as such and given only for specific indication (*Merenstien, and Gardner, 2006*). Oxygen is the drug that most commonly used in neonatal care and is an integral part of all respiratory support. The goal of oxygen therapy is to achieve adequate oxygen delivery to the tissues without creating oxygen toxicity (*Considine, et al, 2006*).

Adequate oxygenation is vital to prevent tissue damage. Administration of oxygen is a life saving intervention commonly used and is an important skill for a children's nurse to acquire. How much oxygen is delivered to the child is expressed as the fractional inspired oxygen concentration (*Huband, et al, 2005*).

The provision of supplementary oxygen for infants and children with hypoxaemia is expensive but advantageous because it facilitates earlier discharge from hospitals and enhances quality of life in the home setting. However, the prescription of supplemental oxygen varies greatly between neonatologists, pediatric physicians and pediatric cardiologists. There is a lack of consensus on appropriate indication for prescribing oxygen, desirable oxygen targets and clinically significant immediate and long term outcome measures. (*Maclean and Fitzgerald, 2006*)

It is the responsibility of the pediatric nurse who give care for children under oxygen therapy to explain carefully to the parents and the child (if the age and cognitive development allow) about the need for oxygen therapy which will help to maximize cooperation. Careful explanation of all the equipment involved is important to minimize anxiety by reducing fear of the unknown (*Beattie and Carachi, 2005*).

Checklist for oxygen therapy is an internationally accepted best practice now adapted to the Egyptian context. Acquiring knowledge about a skill is essential to learning how to perform the skill safely and effectively. Knowledge acquisition can occur through interactive, instructor, regarding, printed material for training, self learning by computer or a combination of them. Pre and post learning assessment are given to ensure that the knowledge has been effectively transferred and understood and added that initial acquisition of skill can be taken through role play, demonstration and practice with models, or use of other simulations. Participation use clinical learning guides step by step instruction on how to perform a skill facilitate skill acquisition and initial skill competency which enable the pediatric nurse to give nursing care for children under oxygen therapy (*Shoulah, et al, 2006*).