



STONEY HEALTH SERVICES POLICY AND PROCEDURES

OXYGEN THERAPY POLICY

Effective: March 7, 2015

Policy Code: (PP + TITLE)

Review: May 10, 2018

Sheet: 1 of 5

Next Revision: May 10, 2022

Approval: Executive Director

**Applies
To:**

- Leadership & Operations
- Programs & Services

Related Policies & Procedures: SHS Medication Management Policy

1. **STANDARD:** All authorized SHS personal will administer oxygen, as needed, in a safe and effective manner.
2. **RATIONALE:** Oxygen is administered to treat and prevent the symptoms and manifestations of hypoxia and/or hypoxemia.
3. **POLICY:** All SHS personnel authorised to administer oxygen will comply with the procedures in this policy.
4. **PROCEDURE(S):**
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 - a. Urgent or Emergent Situations, p. 1
 - b. Non-Emergency Situations, p. 2
 - c. Home Care Clients, p. 2
 - B. Equipment, p. 2
 - C. Discontinuing Oxygen, p. 3
 - D. Ordering Oxygen, p. 3
 - E. Safety Measures, p. 3

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- A. **ADMINISTERING OXYGEN:** Oxygen cylinders are rented, supplied, serviced and delivered by an oxygen company. SHS stores oxygen cylinders for use at the Health Centre, only.
 - a. **Urgent or Emergent Situations:** In an emergency situation when a physician's order cannot be immediately obtained, oxygen administration may be started without a physician's order by a Registered Nurse or a Licensed Practical Nurse if delegated to do so by a Registered Nurse in the presence of:
 - acute chest pain
 - unstable angina
 - Increased work of breathing noted in client i.e. excessive use of accessory muscles of respiration, wheezes, stridor, tracheal tug, perioral cyanosis
 - other acute situations in which hypoxia is suspected
 - When a client requires oxygen delivery in an emergency situation, his/her oxygen saturation levels and vital signs should be monitored and documented at least every 5-10 minutes.
 - A physician is to be contacted as soon as possible after initiation of oxygen therapy in these instances, for consultation and/or further orders.



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b. Non-Emergency Situations: O₂ therapy is to be used at the Health Centre for Urgent/Emergent situations only.

c. Home Care Clients: Home Care clients are fully and independently -supported by the Oxygen Therapy Provider. **NB:** If a client in acute respiratory distress requires oxygen, the client is advised to call EMS.

- Authorization for oxygen therapy must be obtained from Non-Insured Health Services prior to ordering the equipment through a vendor.
- The equipment will be set up by the vendor supplying the equipment; they will instruct the client on “proper usage and care.”

B. EQUIPMENT: At SHS we have low flow variable Oxygen delivery systems, as indicated below, which means that oxygen concentration cannot be guaranteed since it is influenced by the client’s rate and depth of breathing (i.e. if tidal volume increases on inspiration, room air is drawn in and the FiO₂ is decreased (i.e. Nasal Cannula, Simple Oxygen Mask). Oxygen-related equipment and supplies for the Health Centre are kept in the Treatment Room. They are checked monthly and as needed by the Clinic Nurse or designate. Oxygen-related equipment and supplies for Home Care clients are kept in client’s homes where the set-up is done by the vendor.

a. Nasal Prongs/Cannula: Used to provide concentrations of oxygen in the range of 22-40% depending on client’s flow demands. Ensure that nares are patent. Insert prongs portion into the nares and direct along the natural curvature of both nasal passages.



NB: Oxygen flow should ideally not exceed:

- **Adults: 6 LPM**
- **Adults with History of COPD: Max. is 3 LPM**
(to prevent CO₂ retention, thus hypoventilation)
- **Children: 3 LPM**

b. Simple Oxygen Mask: Used to provide concentrations of oxygen in the range of 0.35-0.50 FiO₂. The **flow rate should never be set less than 5 LPM** to prevent rebreathing of exhaled gas and never more than 10 LPM.





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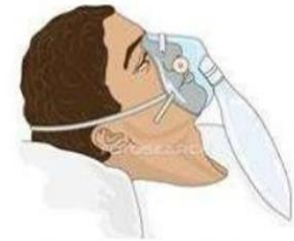
- Leadership & Operations
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- c. Non-Rebreathing Mask:** Provides a high concentration of oxygen in the range of 0.60-0.90 FiO₂ depending on mask fit. The bag under the mask must be totally inflated prior to each inspiration. It partially empties with inspiration and refills with expiration.

Adults: 10 LPM (minimum)

Children: 5 LPM (minimum)



Non Rebreather Mask

d. Oxygen Cylinders:

- Health Centre: Oxygen cylinders are inspected by Clinic Nurse, or designate, during monthly emergency cart checks. They are secured to prevent tipping and falling in the holder attached to the emergency cart. Extra O₂ tanks are stored in the Home Care storage shed (one on the right side).
- Home Care: Oxygen cylinders are inspected by Home Care Nursing personnel on the occasion of each visit.

C. DISCONTINUING OXYGEN:

- a. Adults: Oxygen therapy may be discontinued for adult clients if client is able to maintain SpO₂ greater than 90%, or greater than 88% for CO₂ retainers.
- b. Children: Oxygen therapy may be discontinued for children at the direction of a Physician order, or if transferred to hospital via EMS.

D. ORDERING OXYGEN: A physician's order is required to initiate oxygen therapy, except in an emergency situation. The order should include the rate of flow and the means of administration.

E. SAFETY MEASURES: Client and family are to be instructed in the following safety measures where appropriate as oxygen supports combustions so care must be taken when using oxygen around any potential heat source.

1. Oxygen should not be used in the presence of an open flame.
2. No smoking is allowed around oxygen.
3. The wearing of synthetic fabrics that can build up static electricity should be avoided.
4. Oils and petroleum products are not to be used around the client's face (i.e. Vaseline).
5. Oxygen cylinders are considered empty at 500 psi and should be changed.



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Duration Chart for Compressed Gas Portable Oxygen Cylinders

Flowrate	Approximate Hours of Use
1 LPM	14
2 LPM	7
3 LPM	4.5
4 LPM	4
5 LPM	3.5

Calculation assumes that cylinder is empty at 500 psi

5. INDICATORS AND FORMULAE

Indicators /Measures
Incident reports concerning oxygen administration

6. DEFINITIONS

- **SpO₂:** The measurement of functional saturation of oxyhemoglobin. This measurement is obtained by pulse oximetry.
- **FiO₂:** The fractional concentration of oxygen in inspired gas, i.e. 40% oxygen = 0.40 FiO₂.
- **Hypoxia:** Insufficient oxygen available to meet the metabolic needs of tissues and cells.
- **Hypoxemia:** Abnormal deficiency of oxygen in arterial blood.
- **Tidal Volume:** Tidal volume is the lung volume representing the normal volume of air displaced between normal inhalation and exhalation when extra effort is not applied. In a healthy, young adult, tidal volume is approximately **500 mL** per inspiration or 7 mL/kg of body mass.



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7. REFERENCES: Alberta Health Services Oxygen Therapy, O-12, pg 1. Established 2000.12

8. RESPONSIBILITIES:

- A. The Executive Director shall approve this policy.
- B. The Manager of Community Health & Wellness, Primary Care & Public Health and the Manager of Home & Community Care shall jointly ensure the application of this policy.
- C. All authorized SHS Nursing Personnel and Consultants (Physicians, Nursing personnel etc.) shall comply with this policy.

9. REVISED BY:

- K. Nelson (Home Care Nurse, M. Evans (TB Nurse) & S. Khan, Nurse Practitioner
- Date: May 10,2018

10. APPROVALS:

A. Khan
Chief Executive Officer
Executive Director

Date