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Pharmacology Formulated: 11/91	Effective: 11/03/94 Revised: 11/03/14 Revised: 08/15/23

Pharmacology

Purpose	To provide guidelines for the administration of medications.
Scope	All Respiratory Care Services employees.
Policy	<ul style="list-style-type: none"> • It is the policy of The University of Texas Medical Branch Hospital's Respiratory Care Service Department to provide treatment modalities with medication as ordered by physicians. • All medication orders will be verified prior to administration. • The patient's medical record will be checked for any allergies and contraindications prior to administration. • Muccomyst and the bronchodilator treatments are two different therapies and should be given separately. • Aseptic techniques will be followed when handling medications at all times. • All multi-dose vials will be dated and initialed when opened and disposed of per manufacturer's recommendation. • The physician's order must include: dosage of medication, frequency, method of administration, and duration of administration (if other than completion). Physician orders not within these guidelines should be reported to the RCS Supervisor for follow up.
Precautions	If a patient experiences any clinical difficulties while receiving medications, the treatment should be stopped immediately and a physician should be notified and a Patient Safety Net form submitted online. Additionally, the RCS Supervisor will be notified of all medication incidents.
Side Effects	<p>Tachycardia: Heart rate faster than 100 beats per minute. (The attending physician should verify treatment of patients with bronchodilator if a patient has tachycardia).</p> <p><i>Action: In those patients with elevated heart rate prior to treatment, any acceleration of 15-20 beats per minute during the treatment is cause for treatment discontinuation. Such discontinuance should be noted and called to the physician's attention.</i></p> <p>Bronchospasm: Identification with the following signs and symptoms: increased airway resistance, decreased expiratory forced volumes and flow rates, hyperinflation of lungs and thorax; increased work of breathing, changes in elastic recoil, abnormal distribution of both ventilation and pulmonary blood flow, mismatched ratios and altered blood gases, and pulmonary hypertension. A paradoxical pulse may develop and the use of accessory muscles of respiration will indicate severity of obstruction. Subjective complaints and wheezing are less reliable indications of disease presence and/or absence.</p>

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Side Effects
Continued

Symptoms - dyspnea, cough, wheezing. Onset - patient feels a sense of restriction in the chest, often with non-productive cough, then respirations become audibly harsh, and wheezing in both phases of respiration becomes prominent. Patients frequently have tachypnea, and expiration becomes prolonged. The lungs become rapidly overinflated, and the anterior-posterior diameter of thorax increases. If the attack is severe or prolonged, the accessory muscles become visibly active.

Palpitation: May be described by patient as "pounding", "fluttering", "flopping", or "slipping" and in most cases it will be obvious that the complaint is of a sensation related to disturbed heart beat. Generally, there is an association with other general alterations in heart rate, including accelerated heart rate, increased intensity of heart sounds, especially the first sound, shorter duration of systole and greater ejection velocity.

Nausea: Patient feels imminent desire to vomit, usually referred to throat or epigastrium. With severe nausea, there is often evidence of altered autonomic activity - pallor of skin, increased perspiration, salivation, occasional hypotension and bradycardia.

Action for the above side effects: Stop therapy, monitor patient, and notify nurse and medical officer prior to further therapy. Document reactions on medical record.

Anaphylaxis: "An unusual or exaggerated allergic reaction of an organism to foreign protein or other substances. These exaggerated responses can range from minor skin disturbances to fatal hypotension. Signs and symptoms include sudden onset and "shock." The most dramatic form of anaphylaxis is sudden, severe bronchospasm, vasospasm, severe hypotension and rapid death. Signs are largely caused by contraction of smooth muscles and may begin with irritability, extreme weakness, nausea and vomiting and may proceed to dyspnea, cyanosis, convulsions and "cardiac arrest."

Action: Stop therapy, monitor patient. Do not leave patient until returned to baseline status or other appropriate personnel have arrived. Code 99 may be utilized in the event reaction is of sudden onset. Notify nurse and medical officer prior to further therapy. Document reaction on medical record.

Corresponding Policies

Institutional Handbook of Operating Procedures, Adverse Drug Events, Policy # 9.13.14 <http://www.utmb.edu/policy/ihop/search/09-13-14.pdf>

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RCS Policy and Procedure Manual, Guidelines for Medical Record Documentation, #7.1.1.

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