HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Nursing		
Document:	Internal Policy and Procedure		
Title:	Measurement of Respiration		
Applies To:	All Nursing Staff		
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1. PURPOSE:

1.1 To obtain baseline reading of patient's respiration.
1.2 To identify normal alteration in respiration measurement as tachypnea and bradypnea.
1.3 To obtain vital signs data for physical assessment.

2. DEFINITONS:

2.1 Respiration is the exchange of oxygen and carbon dioxide between cells of the body and the atmosphere. A respiration consists of inhalation, pause and expiration.
2.2 Tachypnea - defined as increased shallow breathing.
2.3 Bradypnea – decreased in rate but regular breathing.
2.4 Apnea – The cessation of breathing, there is no movement of the muscle of inhalation, and the volume of the lungs initially remains unchanged.
2.5 Hyperpnea – abnormally rapid or deep breathing.
2.6 Kussmaul respiration – deep, rapid and labored breathing without pause in adults >20 bpm, breathing usually sounds labored with deep breaths that resembles sighs. This pattern can result from certain medical conditions such as diabetic keto acidosis, which is a serious complication of diabetes.
2.7 Cheyne stokes respiration – characterized by alternating apnea and hyperventilation during sleep, mostly in N1 and N2 sleep. This can be clinically observed and documented with a cyclic variation or breathing pattern with a change in saturation from 90% to 100%.
2.8 Biot's respiration – an abnormal pattern of breathing characterized by groups of regular deep inspiration followed by regular or irregular periods of apnea. It is caused by damage to the pons due to stroke, trauma or uncal herniation.

3. POLICY:

3.1 The respiration will be assessed:
- 3.1.1 Upon admission.
- 3.1.2 Detecting complication such as pulmonary edema associated with blood transfusion and administration of IV fluids.
- 3.1.3 Identifying patients who are deteriorating and are critically ill.
- 3.1.4 Evaluating response to treatment (e.g. use of opiates).
- 3.1.5 Monitoring lung disease such as COPD, and response to treatment.
- 3.1.6 Monitoring patients receiving oxygen therapy.
- 3.1.7 Pre-operative and post-operative monitoring.
- 3.1.8 After procedure of pleural cavity aspiration, pleural biopsy and peritoneal dialysis.

3.2 The routine duration for taking is every 6 hours.
3.3 For patient at risk in respiration alteration, the duration for taking respiration is every 2 hours, or as ordered by the physician.
3.4 Use electronic system for documentation in vital signs monitoring form during system shutdown Use BLACK ink pen in writing down the reading in vital signs chart. Affix (RN initial and Job number at the bottom of each column).

3.5 If any error in recording is identified, do not use correction fluid. Cancel any error by drawing a line across and write "ME" and initial.

3.6 The respiration rate is counted for at least 30 seconds and multiplied by two. If any abnormality is suspected, respiration rate should be assessed in one full minute.

3.7 Report to the physician any abnormal finding, reading or any signs or symptoms identified in alteration of respiration function which affects respiration rate and rhythm.

3.8 The normal range of respiration:

3.8.1 Neonate: 40-60 cycle/min
Pediatrics: 20-30 cycle/min
Adults: 12-20 cycle/min

4. PROCEDURE:

4.1 Assess the patient for:

4.1.1 Pain, fever, respiratory distress, cardiac disease and fever.

4.1.2 Presence of signs and symptoms of respiration alteration: cyanosis, restlessness, irritability, confusion, coughing and orthopnea.

4.2 Performs hand hygiene.

4.3 Identifies patient correctly using 2 identifiers (Medical Record Number, and 4 (four) names for Saudi or complete name for Non – Saudi).

4.4 Position the patient in a comfortable position. Maintain a constant temperature to prevent shivering, which can increase respiratory rate. If possible, remove bulky clothing or bed covers from the upper body part to facilitate counting and observing depth, symmetry and pattern of breathing. If the patient is sitting, their feet must be flat on the floor, sitting with legs suspended that can reduce venous return, which may increase heart rate and subsequently respiratory rate.

4.5 Allow the patient to rest, if possible for 20 minutes before taking the measurement. Respiratory rate may increase after activity, giving abnormal baseline. Some medication can affect respiratory rate so this should also be taken into consideration.

4.6 While preparing the patient, observe for respiratory function (e.g. whether they can talk in full sentences). Taking a breath mid-sentence or one word answer maybe a sign of respiratory distress.

4.7 Notes whether the patient is alert and oriented to time and place. Changes in cognitive status, such as confusion, maybe due to hypoxia, cerebral injury or side effect of medications such as opiates.

4.8 It may be useful to assess respiratory rate at the same time as pulse or oxygen saturation. This will give more accurate rate and minimize subconscious influence, as patients may alter their breathing if they know they are being observed.

4.9 Using a watch with a second hand, counts breathe (inhalation and exhalation) for a full minute. This length of time is needed as changes can occur in the respiratory pattern and rate.

4.10 While observing the respiratory rate, note the rhythm which may indicate signs of underlying illness. Respiration should be regular with equal pause between each breath.

4.11 Observe the patients lips for signs of cyanosis (blue tinge), which may indicate hypoxia (low oxygen saturation [SPO2]).

4.12 Performs hand hygiene.

4.13 Record the respiratory rate on the vital signs chart.

4.14 Notify the physician for any abnormal findings observed.

5. MATERIALS AND EQUIPMENT:

5.1 Watch with second hand or digital display

5.2 Pen

6. RESPONSIBILITIES:

6.1 Nurse

7. APPENDICES:

7.1 Vital signs chart

8. REFERENCES:

8.1 Ministry of Health, General Nursing Administration, Functions and Duties Policies and Procedures

9. APPROVALS:

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Appendix 7.1

KINGDOM OF SAUDI ARABIA

وزارة الصحة
Ministry of Health

Hospital: _____ مستشفى:

Region: _____ المنطقة/المحافظة:

Dept./Unit: _____ القسم/الوحدة:

MRN: | | | | | | | | | | رقم الملف الطبي:

Name: _____ الاسم:

Nationality: _____ الجنسية:

Age: _____ ☐ سنة Years ☐ شهور Months ☐ يوم Days العمر:

Date of Birth: ___/___/14___ H ___/___/20___ تاريخ الميلاد:

Gender: ☐ Male ☐ Female الجنس:

VITAL SIGNS CHART

WEIGHT-kg						
POST-OPERATIVE DAY						
DATE						
TIME						
TEMPERATURE	40					
	39					
	38					
	37					
	36					
	35					
RESPIRATORY RATE						
O2 SATURATION						
BLOOD PRESSURE AND PULSE RATE PULSE = X SYSTOLIC = V DIASTOLIC = ^	240					
	220					
	200					
	180					
	160					
	140					
	120					
	100					
	80					
	60					
	40					
	20					
BP						
PAIN SCORE SCALE						
INITIALS AND JOB NUMBER						

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