**Nursing Care**

* Directed toward what contributes to a normal concept and is thereby related to all factors involved in or with the concept. Not always needed to have a normal outcome.

Attributes

* Defining characteristics of the concept
* What property, quality, or data must be present for the concept to exist

Antecedents

* What precedes the concept for it to exist
* Events or incidents that must happen before the concept

Consequences

* Untoward events or outcomes that occur due to malfunction within the concept
* Positive events or outcomes that occur due to proper functioning within the concept

Interrelated Concept

* Concepts which can affect change in the other
* Concepts which work together to ensure a normal process
* Concepts which if depleted or impaired can cause a negative consequence in the other

Sub-Concept

* Critical components of major concept

Mobility

**Attributes**

Respiratory Rate WNL

Ph 7.35-7.45

Oxygen Saturation > 94%

PaO2: 85-100

PaCO2: 35-45 mmHg

EtCO2: 35-45 mmHg

Age Appropriate Level of

Consciousness

Race-Appropriate Skin Color

**Nursing Care**

Primary, Secondary,

Tertiary

Coping

Acid Base Balance

**Interrelated Concepts**

Respiratory Compromise

Respiratory Distress Respiratory Failure

Altered Oxygen Carrying Capacity Hypoxemia,

Altered Mental Status (Belligerent), Anoxia

V/Q Mismatch

**Gas Exchange**

The process by which oxygen is transported to cells and carbon dioxide is transported from cells. (G)

**Consequences**

**(Outcomes)**

Perfusion

Nutrition

Oxygen Carrying Capacity

Inhalation and Exhalation

Circulation

Age Appropriate Response to Environment

Capillary Refill < 2 sec

Age Appropriate Mobility

Eupnea

Age appropriate response to environment

Age appropriate response to environment

Age appropriate response to environment

**Antecedents**

Adequate Functioning of

Respiratory System

Adequate Perfusion

Adequate Neurologic

Function

Adequate Cardiovascular

Function

Efficient Cellular Metabolism

**Positive**

**Sub -Concepts**

**Negative**

Explanation of the Analysis Diagram for **Gas Exchance** Concept. The definition of the concept is written in the middle (circle) of the diagram.

Nursing Care is printed slightly above the rest of the Concept Diagram because it incorporates all aspects of the diagram prior to determining the care required. There are dotted arrows going out from Nursing Care because nursing interventions are not always needed.

Before a concept exists certain entities must exist. These entities are called Antecedents (ante means before). If these do not exist or are malfunctioning then the concept either does not exist or it does not exist at its optimal level. As shown, t*he Antecedents* for Gas Exchange Concept are adequate functioning of respiratory system, adequate perfusion, adequate neurologic function, adequate cardiovascular function, and efficient cellular metabolism.

To determine the level of effectiveness, the nurse assesses patients for certain concept Attributes. The assessment which would support optimum function for this concept would include *the Attributes of* respiratory rate WNL, ph 7.35-7.45, Oxygen Saturation > 94%,

PaO2: 85-100, PaCO2: 35-45 mmHg, EtCO2: 35-45 mmHg, age appropriate level of consciousness, and race-appropriate skin color*.* Depending on the quality of the Attribute (assessment) findings, the patient may exhibit positive or negative consequences. *Positive Consequences for* Gas Exchange Conceptmight include eupnea, age appropriate mobility, capillary refill < 2seconds, and age appropriate response to environment. *Negative Consequences* might include respiratory compromise, respiratory distress - respiratory failure, altered oxygen carrying capacity hypoxemia, altered mental status (belligerent), anoxia, and V/Q mismatch.

Interrelated Concepts are concepts which either affect or are affected by the Concept being defined in the diagram. Therefore the arrow between Interrelated and the defined Concept goes both ways. *The Interrelated Concepts* for the concept of Gas Exchange might includeMobility, Coping, Acid Base Balance, Perfusion, and Nutrition. *.*

Sub-Concepts are teaching points regarding the Concept being defined thus just a line is printed between the Concept and Sub-Concepts. The need for Nursing Care is triggered by: Compromised Antecedent(s), Decreased quality of Attribute(s), Negative Consequence(s), and/or a potentially negative impact from an Interrelated Concept(s).

When a Negative Consequence occurs the nurse will re-evaluate the Antecedents with the intent of identifying which Antecedent was compromised and then direct nursing interventions to strengthen the weakened Antecedent. The intervention would be considered effective when the Attribute(s) reaches optimal measurement and the outcomes are positive. Of course some will always have compromised Antecedents and therefore the nursing care and Attributes would be modified accordingly. Nursing Care would also take in consideration Interrelated Concepts to either strengthen the positive affect or limit the negative.

Nursing interventions are not always needed. However, continual assessment to determine if pro-active or follow-up interventions are required is ongoing.