



NURSING CARE PLAN Deficient Fluid Volume

ASSESSMENT DATA

Nursing Assessment

Merlyn Chapman, a 27-year-old sales clerk, reports weakness, malaise, and flu-like symptoms for 3–4 days. Although thirsty, she is unable to tolerate fluids because of nausea and vomiting, and she has liquid stools 2–4 times per day.

Physical Examination

Height: 160 cm (5'3")
Weight: 66.2 kg (146 lb)
Mild fever: 38.6°C (101.5°F)
Pulse: 86 BPM
Respirations: 24/minute
Scant urine output
BP: 102/84 mm Hg
Dry oral mucosa, furrowed tongue, cracked lips

Diagnostic Data

Urine specific gravity: 1.035
Serum sodium 155 mEq/L
Serum potassium 3.2 mEq/L
Chest x-ray negative

NURSING DIAGNOSIS

Deficient Fluid Volume related to nausea, vomiting, and diarrhea as evidenced by decreased urine output, increased urine concentration, weakness, fever, decreased skin/tongue turgor, dry mucous membranes, increased pulse rate, and decreased blood pressure

DESIRED OUTCOMES*

Electrolyte & Acid/Base Balance [0600] as evidenced by not compromised:

- Serum electrolytes
- Muscle strength

Fluid Balance [0601] as evidenced by not compromised:

- 24-hour intake and output balance
- Urine specific gravity
- Blood pressure, pulse, and body temperature
- Skin turgor
- Moist mucous membranes

NURSING INTERVENTIONS*/SELECTED ACTIVITIES

RATIONALE

Electrolyte Management: Hypokalemia [2007]

Obtain specimens for analysis of altered potassium levels (e.g., serum and urine potassium) as indicated.

Urine and serum analysis provides information about extracellular levels of potassium. There is no practical way to measure intracellular K⁺.

Administer prescribed supplemental potassium (PO, NG, or IV) per policy.

Low potassium levels are dangerous and Mrs. Chapman may require supplements.

Monitor for neurologic and neuromuscular manifestations of hypokalemia (e.g., muscle weakness, lethargy, altered level of consciousness).

Potassium is a vital electrolyte for skeletal and smooth muscle activity.

NURSING INTERVENTIONS*/SELECTED ACTIVITIES

RATIONALE

Monitor for cardiac manifestations of hypokalemia (e.g., hypotension, tachycardia, weak pulse, rhythm irregularities).

Many cardiac rhythm disorders can result from hypokalemia. It is critical to monitor cardiac function with hypokalemia.

Electrolyte Management: Hypernatremia [2004]

Obtain specimens for analysis of altered sodium levels (e.g., serum and urine sodium, urine osmolality, and urine specific gravity) as indicated.

Urine analysis provides information about retention or loss of sodium and the ability of the kidneys to concentrate or dilute urine in response to fluid changes.

Provide frequent oral hygiene.

Oral mucous membranes become dry and sticky due to loss of fluid in the interstitial spaces.

Monitor for neurologic and neuromuscular manifestations of hypernatremia (e.g., lethargy, irritability, seizures, and hyperreflexia).

Hypernatremia, as a result of low fluid volume, creates a hypertonic vascular space, which causes water to move out of the cells, including brain cells. This accounts for neurologic symptoms.

Monitor for cardiac manifestations of hypernatremia (e.g., tachycardia, orthostatic hypotension).

The heart responds to a loss of fluid by increasing the heart rate to compensate with an increase in cardiac output. Low fluid volume leads to a fall in blood pressure.

Fluid Management [4120]

Weigh daily and monitor trends.

Weight helps to assess fluid balance.

Maintain accurate I & O record.

Accurate records are critical in assessing the patient's fluid balance.

Monitor vital signs as appropriate.

Vital sign changes such as increased heart rate, decreased blood pressure, and increased temperature indicate hypovolemia.

Give fluids as appropriate.

As her nausea decreases encourage her oral intake of fluids as tolerated, again to replace lost volume.

Administer IV therapy as prescribed.

Mrs. Chapman has signs of severe fluid volume deficit. She will probably require intravenous replacement of fluid. This is especially true because her oral intake is limited because of nausea and vomiting.

EVALUATION

Outcomes met. Mrs. Chapman remained hospitalized for 48 hours. She required fluid replacement of a total of 5 liters. Her blood pressure increased to 122/74, pulse rate decreased to a resting level of 74, and respirations decreased to 12/minute. Her urine output increased as the fluid was replaced and was adequate at > 0.5 mL/kg/hour by the time of discharge. The urine specific gravity was 1.015. Lab work on the day of discharge was: K+: 3.8 and Na+: 140. She had elastic skin turgor and moist mucous membranes. She was taking oral fluids and was able to discuss symptoms of deficient fluid volume that would necessitate her calling her health care provider.

** The NOC # for desired outcomes and the NIC # for nursing interventions and selected activities are listed in brackets following the appropriate outcome or intervention. Outcomes, interventions, and activities selected are only a sample of those suggested by NOC and NIC and should be further individualized for each client.*

APPLYING CRITICAL THINKING

1. What action would you take if Mrs. Chapman's heart became irregular?
2. Mrs. Chapman is responding inappropriately to your questions; she seems to be confused. What do you think is happening?
3. Offer suggestions for ways to help Mrs. Chapman increase her oral intake.

4. Mrs. Chapman asks why you weigh her every morning. How do you respond?

See *Critical Thinking Possibilities in Appendix A.* 