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|  <p style="text-align: center;">DIVISION OF ADULT INSTITUTIONS</p> <p style="text-align: center;">POLICY AND PROCEDURES</p> | DAI Policy #: 500.31.32 | Page 1 of 4 |
| | Original Effective Date: 06/23/14 | New Effective Date: 06/23/14 |
| | Supersedes: N/A | Dated: N/A |
| | Administrator's Approval: Jim Schwochert, Administrator | |
| | Last Reviewed, No Changes: 11/22/16 | |
| Required Posting or Restricted: | | |
| <input type="checkbox"/> Inmate <input checked="" type="checkbox"/> All Staff <input type="checkbox"/> Restricted | | |
| Chapter: 500 Health Services | | |
| Subject: Dialysis Adequacy | | |

POLICY

Division of Adult Institution facilities providing dialysis shall ensure measures are taken to assist in the delivery of a dose of hemodialysis that meets or exceeds the current Kidney Dialysis Outcome Quality Initiative and Centers For Medicare Services conditions of coverage target goal for dialysis adequacy.

REFERENCES

Counts, C. (Ed)(2008) Core Curriculum for Nephrology Nursing, Fifth Edition. Pitman, NJ: ANNA

Gomez, N. (Ed) (2011) Nephrology Nursing Scope and Standards of Practice, 7th Edition, ANNA

DEFINITIONS, ACRONYMS AND FORMS

ANNA – American Nephrology Nurses Association

CMS – Centers for Medicare Services

Dialysis Adequacy – The measure of how effectively a dialysis treatment removes waste products from the body.

DOC-3021A – Dialysis Progress Notes

DOC-3023 – Prescriber's Orders

KDOQI – Kidney Dialysis Outcome Quality Initiative

Kt/V – (K) dialyzer clearance, (t) dialysis time, (V) volume of distribution of urea

URR – Urea reduction ratio

PROCEDURE

I. General Guidelines

- A. Dialysis adequacy in Hemodialysis shall be measured at least monthly by one of the acceptable methods including:
 1. Kt/V single-pool urea kinetic modeling.
 2. URR.

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- B. Conductivity (ionic) clearance underestimates dialyzer urea clearance. This can be obtained on certain models of dialysis machines. This shall not be utilized independently as a means for measuring dialysis adequacy.

II. Inadequate Dialysis

- A. Signs and symptoms of inadequate dialysis may include:
1. Abnormal electrolytes, hypervolemia, symptoms of uremia (e.g., nausea, vomiting, fatigue, itching).
 2. Hypertension or numerous antihypertensive medications to control blood pressure.
 3. Left ventricular hypertrophy.
 4. Worsening nutritional status.
 5. Anemia.
 6. Bone disease.
 7. Neuropathies.
 8. Abnormal sleep pattern, insomnia.
 9. Neurologic symptoms (e.g., restless legs, difficulty concentrating, confusion).
 10. Prolonged recovery post-dialysis, poor quality of life.
 11. Poor vocational or school performance.
- B. If signs and symptoms of inadequate dialysis present, or the actual delivered dose of hemodialysis falls below the target level, assess for etiology. Compromised urea clearances may result from:
1. Decreased blood flow rate, excessive dialyzer clotting.
 2. Access recirculation, reversed blood lines.
 3. Reduction in treatment time, dialyzer size or dialysate flow rate.
 4. Laboratory or sampling errors.
- C. Assess for additional intradialytic complications that could potentially result in an inadequate delivered dose of dialysis. These may include:
1. Inaccurate estimated dry weight.
 2. Large intradialytic weight gains.
 3. High ultrafiltration rate.
 4. Medication related.
 5. Hypoxemia, anemia.
 6. Cardiovascular issues.
 7. Increased temperature during dialysis.
 8. Eating during dialysis.
 9. Inaccurate pre-weight.
- D. Interventions include :
1. Identify root causes and decrease intradialytic complications.
 2. Take measures to correct any circumstances that could potentially result in compromised clearances during dialysis.
 3. Take measures to correct any circumstances resulting in reduced dialysis treatment time.

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- 4. Ensure lab specimens are obtained per current recommendations.
- 5. Follow manufacturer recommended priming instructions for dialyzers and blood tubing.

- E. Consult with the Nephrology Advanced Care Provider for adequacy results that do not meet the KDOQI and CMS guidelines for adequacy. Prescription treatment changes may be indicated.

- F. Document on the DOC-3021A – Dialysis Progress Notes and the DOC-3023 – Prescriber’s Orders.

- G. Provide inmate patient education on dialysis adequacy after considering the inmate patient’s level of education, understanding and cultural and health beliefs.

Bureau of Health Services: _____ **Date Signed:** _____
James Greer, Director

_____ **Date Signed:** _____
Ryan Holzmacher, MD, Medical Director

_____ **Date Signed:** _____
Mary Muse, Nursing Director

Administrator’s Approval: _____ **Date Signed:** _____
Jim Schwochert, Administrator

DIVISION OF ADULT INSTITUTIONS FACILITY IMPLEMENTATION PROCEDURES

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|--|-------------------------------------|--------------------|
| Facility: Name | | |
| Original Effective Date: | DAI Policy Number: 500.31.32 | Page 4 of 4 |
| New Effective Date: 00/00/00 | Supersedes Number: | Dated: |
| Chapter: 500 Health Services | | |
| Subject: Dialysis Adequacy | | |
| Will Implement <input type="checkbox"/> As written <input type="checkbox"/> With below procedures for facility implementation | | |
| Warden's/Center Superintendent's Approval: | | |

REFERENCES

DEFINITIONS, ACRONYMS, AND FORMS

FACILITY PROCEDURE

- I.
 - A.
 - B.
 - 1.
 - 2.
 - a.
 - b.
 - c.
 - 3.
 - C.

II.

III.

RESPONSIBILITY

I. Staff

II. Inmate

III. Other