



MANITOBA RENAL PROGRAM

SUBJECT <ul style="list-style-type: none"> Measuring Peritoneal Dialysis Adequacy: KT/V Collection 	SECTION 40.10 Peritoneal Dialysis Procedures
	CODE 40.10.12
AUTHORIZATION <ul style="list-style-type: none"> Professional Advisory Committee, Manitoba Renal Program Nursing Practice Council, St. Boniface Hospital (Pending) 	EFFECTIVE DATE May 2016
	REVISION DATE

PURPOSE:

- To measure the adequacy of the Peritoneal Dialysis prescription.

POLICY:

- Adequacy of the Peritoneal Dialysis prescription involves both peritoneal and residual renal clearance of waste products from the blood, thus all urine and peritoneal dialysis effluent is collected in a 24 hour period. A blood sample is taken with the 24 hour urine collection. This is called a KT/V Collection.
- A KT/V Collection is performed one month after initiation of Peritoneal Dialysis, every 4-6 months thereafter, and as described on the algorithm (40.10.12a *Appendix A Incremental PD Protocol*), or as ordered by the physician.
- The KT/V Collection results are entered into a modeling software program by the Peritoneal Dialysis Nurse and the patient's Peritoneal Dialysis prescription is modified to attain the maximal clearance. The patient's lifestyle and preferences are factored into the Peritoneal Dialysis prescription.
- Registered Nurses and Licensed Practical Nurses who have received training and are competent may perform this procedure.
- Peritoneal Dialysis Patients are taught KT/V collection with their initial PD training. Instructions and supplies for home collection are provided at the end of the training period and as required thereafter.

EQUIPMENT:

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| <ul style="list-style-type: none"> 24 hour urine collection container Clamps Labels KT/V Collection Form Equipment for cyclor treatment | <ul style="list-style-type: none"> Other collection containers are not accepted by the lab. |
| <ul style="list-style-type: none"> Equipment for CAPD exchanges KT/V Collection Instruction Sheet Paper bag | <ul style="list-style-type: none"> As per 40.10.09 <i>Home Choice Cyclor Pro Set-up</i>. A y-connector and drain bags will be used for the collection. As per 40.10.08 <i>Peritoneal Dialysis Bag Exchange Utilizing Twin bag System</i>. For patient collection at home. For supplies given to patient for home collection. |

PROCEDURE:

KEY POINT:

A. KT/V COLLECTION FOR CYCLER

1. Start 24 hour urine collection:
 - Discard the first morning urine.
 - Collect all urine including the first morning urine of the next day.
 2. Cycler set up as per 40.10.09 *Home Choice Cycler Pro Set-up* (use 15l drain bags and y-connector):
 - No medication in dialysate.
 - Last fill must be programmed to "SAME"
 3. At the end of the treatment, disconnect the patient as per 40.10.09 *Home Choice Cycler Pro Set-up*.
 4. Send the cyclor drain bags for testing:
 - Cut the excess dialysate bag tubing off including the Y connector and manifold/cassette. Tie and clamp all ports.
 - Fill in KT/V form.
 - Addressograph and label each bag #1, #2, etc.
 5. Complete 24 hour urine requisition and send specimen. Ensure container is labeled.
 6. Ensure serum tests (glucose, albumin, creatinine, and urea) have been performed in the past 24 hours.
 7. Send specimens to biochemistry lab.
- If programmed to "DIFFERENT" the cyclor will empty any fluid remaining in the heater bag prior to the last fill. This will make the KT/V results inaccurate.
 - DO NOT USE ICODEXTRIN WITH THE CYCLER FOR A KT/V COLLECTION.
 - If the patient's peritoneal dialysis prescription includes any day bags, the effluent bags from these exchanges should be included in the 24 hour collection (See section B.).
 - The 24 hour urine is sent regardless of how low the volume is. (If 0 ml, indicate on the KT/V form).
 - Patient's height and weight must be documented for the test to be performed.

B. KT/V COLLECTION FOR CAPD

1. Start 24 hour urine collection:
 - Discard the first morning urine.
 - Collect all urine including the first morning urine of the next day.
 2. Start 24 hour dialysate collection:
 - Discard the effluent of the morning CAPD bag exchange.
 - Collect the effluent of the exchanges for the next 24 hours including the first morning exchange of the next day.
 3. Send the effluent bags for testing:
 - Cut the excess tubing off and tie and clamp all ports.
 - Fill in KT/V form.
 - Addressograph and label each bag #1, #2, etc.
 4. Send 24 hour urine
- The dialysate used can be Dianeal, extraneal, Nutrineal or Physioneal.
 - The 24 hour urine is sent regardless of how low the volume is.
 - Patient's height and weight must be documented for the test to be performed.

5. Complete 24 hour urine requisition and send specimen. Ensure container is labeled.
 - The 24 hour urine is sent regardless of how low the volume is. (If 0 ml, indicate on the KT/V form).
 - Patient's height and weight must be documented for the test to be performed.
6. Ensure serum tests (glucose, albumin, creatinine, and urea) have been performed in the past 24 hours.
7. Send specimens to biochemistry lab.

DOCUMENTATION:

- Patient Health Record
 - Date of KT/V Collection and result (note 24 hour urine volume on kardex)
 - Any changes to Peritoneal Dialysis Prescription

REFERENCES:

Kelman, E and Watson, D. (2006). Technical Aspects of Peritoneal Dialysis. In Molzahn, A. & Butera, E. (Eds.), *Contemporary nephrology nursing: principles and practices, second edition* (pp. 661-709). Pitman: American Nephrology Nurses Association.