

V. References

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VI. APPENDICES

Appendix 1. ESRD Clinical Performance Measures (CPMs) for 2000 Data Collection Effort

Study period for HD patients is Oct, Nov, Dec 1999; for PD patients is Oct, Nov, Dec, 1999 and Jan, Feb, Mar 2000

Hemodialysis (HD) Adequacy

1. HD Adequacy CPM I: Monthly Measurement of Delivered Hemodialysis Dose.

HD Adequacy Guideline 1: Regular Measurement of the Delivered Dose of Hemodialysis (Evidence).

The dialysis care team should routinely measure and monitor the delivered dose of hemodialysis.

HD Adequacy Guideline 6: Frequency of Measurement of Hemodialysis Adequacy (Opinion).

The delivered dose of hemodialysis should be measured at least once a month in all adult and pediatric hemodialysis patients. The frequency of measurement of the delivered dose of hemodialysis should be increased when:

1. Patients are noncompliant with their hemodialysis prescriptions (missed treatments, late for treatments, early sign-off from hemodialysis treatments, etc.).
2. Frequent problems are noted in delivery of the prescribed dose of hemodialysis (such as variably poor blood flows, or treatment interruptions because of hypotension or angina pectoris).
3. Wide variability in urea kinetic modeling results is observed in the absence of prescription changes.
4. The hemodialysis prescription is modified.

Numerator:

Number of patients in denominator with documented monthly adequacy measurements (URR or Kt/V) during the study period. (The study period for HD patients is Oct, Nov, Dec 1999.)

Denominator:

All adult (≥ 18 years old) HD patients in the sample for analysis.

2. HD Adequacy CPM II: Method of Measurement of Delivered Hemodialysis Dose.

HD Adequacy Guideline 2: Method of Measurement of Delivered Dose of Hemodialysis (Evidence).

The delivered dose of hemodialysis in adult and pediatric patients should be measured using formal urea kinetic modeling (UKM), employing the single-pool, variable volume model.

Numerator:

Number of patients in denominator for whom delivered HD dose was calculated using formal urea kinetic modeling or Daugirdas II during the study period.

Denominator:

All adult (≥ 18 years old) HD patients in the sample for analysis.

3. HD Adequacy CPM III: Minimum Delivered Hemodialysis Dose.

HD Adequacy Guideline 4: Minimum Delivered Dose of Hemodialysis (Adults-Evidence, Children-Opinion). The dialysis care team should deliver a Kt/V of at least 1.2 (single-pool, variable volume) for both adult and pediatric hemodialysis patients. For those using the urea reduction ratio (URR), the delivered dose should be equivalent to a Kt/V of 1.2, i.e., an average URR of 65%; however URR can vary substantially as a function of fluid removal.

Numerator:

Number of patients in denominator whose average delivered dose of HD (calculated from data points on the data collection form) was a Kt/V ≥ 1.2 during the study period.

Denominator:

All adult (≥ 18 years old) HD patients in the sample for analysis who have been on HD for six months or more and dialyzing three times per week.

4. HD Adequacy CPM IV: Method of Post-Dialysis Blood Urea Nitrogen (BUN) Sampling.

HD Adequacy Guideline 8: Acceptable Methods for Blood Urea Nitrogen (BUN) Sampling (Evidence).

Blood samples for BUN measurement must be drawn in a particular manner. Pre-dialysis BUN samples should be drawn immediately prior to dialysis, using a technique that avoids dilution of the blood sample with saline or heparin. Post-dialysis BUN samples should be drawn using the Slow Flow/Stop Pump Technique that prevents sample dilution with recirculated blood and minimizes the confounding effects of urea rebound.

Numerator:

Number of facilities in denominator with written policies requiring post-dialysis blood urea nitrogen (BUN) sampling to be done using the Slow Flow/Stop Pump Technique (15-60 seconds after slowing or stopping blood flow) during the study period.

Denominator:

All dialysis facilities included in the sample for analysis.

5. HD Adequacy CPM V: Baseline Total Cell Volume Measurement of Dialyzers Intended for Reuse.

HD Adequacy Guideline 11: Baseline Measurement of Total Cell Volume (Evidence).

If a hollow-fiber dialyzer is to be reused, the total cell volume (TCV) of that hemodialyzer should be measured prior to its first use. Batch testing and/or use of an average TCV for a group of hemodialyzers is not an acceptable practice.

Numerator:

Facilities in the denominator that during the study period pre-volumed 100% of dialyzers intended for reuse.

Denominator:

All facilities in the sample for analysis that reuse dialyzers.

Peritoneal Dialysis (PD) Adequacy

6. PD Adequacy CPM I: Measurement of Total Solute Clearance at Regular Intervals.

PD Adequacy Guideline 4: Measures of Peritoneal Dialysis Dose and Total Solute Clearance (Opinion).

Both total weekly creatinine clearance normalized to 1.73 m² body surface area (BSA) and total weekly Kt/V_{urea} should be used to measure delivered peritoneal dialysis doses.

PD Adequacy Guideline 11: Dialysate and Urine Collections (Opinion).

Two to three total solute removal measurements are required during the first six months of peritoneal dialysis (See Guideline 3). After six months, if the dialysis prescription is unchanged:

1. Perform both complete dialysate and urine collections every four months; and
2. Perform urine collections every two months until the renal weekly Kt/V_{urea} is <0.1.

Thereafter, urine collections are no longer necessary, as the residual renal function contribution to total Kt/V_{urea} becomes negligible (See Guideline 5).

Numerator:

Number of patients in denominator with total solute clearance for urea and creatinine measured at least once in a 6 month time period. (The study period for PD patients is Oct, Nov, Dec 1999 and Jan, Feb, Mar 2000.)

Denominator:

All adult (≥ 18 years old) PD patients in sample for analysis.

7. PD Adequacy CPM II: Calculate Weekly Kt/V_{urea} and Creatinine Clearance in a Standard Way.

PD Adequacy Guideline 4: Measures of Peritoneal Dialysis Dose and Total Solute Clearance (Opinion).

Both total weekly creatinine clearance normalized to 1.73 m² body surface area (BSA) and total weekly Kt/V_{urea} should be used to measure delivered peritoneal dialysis doses.

PD Adequacy Guideline 6: Assessing Residual Renal Function (Evidence).

Residual renal function (RRF), which can provide a significant component of total solute and water removal, should be assessed by measuring the renal component of Kt/V_{urea} and estimating the patient's glomerular filtration rate (GFR) by calculating the mean of urea and creatinine clearance.

PD Adequacy Guideline 9: Estimating Total Body Water and Body Surface Area (Opinion).

V (total body water) should be estimated by either the Watson or Hume method in adults using actual body weight.

Watson method:

For Men: V (liters) = $2.447 + 0.3362 \cdot Wt(\text{kg}) + 0.1074 \cdot Ht(\text{cm}) - 0.09516 \cdot \text{Age}(\text{years})$

For Women: $V = -2.097 + 0.2466 \cdot Wt + 0.1069 \cdot Ht$

Hume method:

For Men: $V = -14.012934 + 0.296785 \cdot Wt + 0.192786 \cdot Ht$

For Women: $V = -35.270121 + 0.183809 \cdot Wt + 0.344547 \cdot Ht$

BSA should be estimated by either the DuBois and DuBois method, the Gehan and George method, or the Haycock method using actual body weight.

For all formulae, Wt is in kg and Ht is in cm:

DuBois and DuBois method: BSA (m²) = $0.007184 \cdot Wt^{0.425} \cdot Ht^{0.725}$

Gehan and George method: BSA (m²) = $0.0235 \cdot Wt^{0.51456} \cdot Ht^{0.42246}$

Haycock method: BSA (m²) = $0.024265 \cdot Wt^{0.5378} \cdot Ht^{0.3964}$

Numerator:

The number of patients in denominator with all of the following:

- Weekly creatinine clearance normalized to 1.73 m² body surface area (BSA) and total weekly Kt/V_{urea} used to measure delivered PD dose; and
- Residual renal function (unless negligible*) is assessed by measuring the renal component of Kt/V_{urea} and estimating the patient's glomerular filtration rate (GFR) by calculating the mean of urea and creatinine clearance; and
- Total body water (V) estimated by either the Watson or Hume method using actual body weight, and BSA estimated by either the DuBois and DuBois method, the Gehan and George method, or the Haycock method of using actual body weight, during the study period.

* negligible = < 200 mL urine in 24 hours.

Denominator:

All adult (≥ 18 years old) PD patients in the sample for analysis.

8. PD Adequacy CPM III: Delivered Dose of Peritoneal Dialysis.

PD Adequacy Guideline 15: Weekly Dose of CAPD (Evidence).

For CAPD, the delivered peritoneal dialysis dose should be a total Kt/V_{urea} of at least 2.0 per week and a total creatinine clearance (CrCl) of at least 60 L/week/1.73 m².

PD Adequacy Guideline 16: Weekly Dose of NIPD and CCPD (Opinion).

For NIPD, the weekly delivered peritoneal dialysis dose should be a total Kt/V_{urea} of at least 2.2 and a weekly total CrCl of at least 66 L/1.73 m².

For CCPD, the weekly delivered peritoneal dialysis dose should be a total Kt/V_{urea} of at least 2.1 and a weekly total CrCl of at least 63 L/1.73 m².

Numerator:

- For CAPD patients in the denominator, the delivered PD dose was a weekly Kt/V_{urea} of at least 2.0 and a weekly CrCl of at least 60 L/week/1.73 m² or evidence that the prescription was changed according to NKF-DOQI recommendations, during the study period.
- For cycler patients in the denominator without a daytime dwell (NIPD), the delivered PD dose was a weekly Kt/V_{urea} of at least 2.2 and a weekly CrCl of at least 66 L/week/1.73 m² or evidence that the prescription was changed according to NKF-DOQI recommendations, during the study period. For cycler patients in the denominator with a daytime dwell (CCPD), the delivered PD dose was a weekly Kt/V_{urea} of at least 2.1 and a weekly CrCl of at least 63 L/week/1.73 m² or evidence that the prescription was changed according to NKF-DOQI recommendations, during the study period.

Denominator:

All adult (≥ 18 years old) PD patients in the sample for analysis.

Vascular Access

9. Vascular Access CPM I: Maximizing Placement of Arterial Venous Fistulae (AVF).

Vascular Access Guideline 29A: Goals of Access Placement-Maximizing Primary Arterial Venous Fistulae (Opinion). Primary arterial venous fistulae (AVF) should be constructed in at least 50% of all new patients electing to receive hemodialysis as their initial form of renal replacement therapy. Ultimately, 40% of prevalent patients should have a native AV fistula. (See Guideline 3, Selection of Permanent Vascular Access and Order of Preference of AV Fistulae.)

Numerator:

- The number of incident patients in the denominator who were dialyzed using an AVF during their last HD treatment during the study period. (The study period for HD patients is Oct, Nov, Dec 1999.)
- The number of prevalent patients in the denominator who were dialyzed using an AVF during their last HD treatment during the study period.

Denominator:

- Incident adult (≥ 18 years old) HD patients (defined as those patients initiating their most recent course of HD on or between Jan 1 and Aug 31, 1999) in the sample for analysis.
- Prevalent adult (≥ 18 years old) HD patients in the sample for analysis.

10. Vascular Access CPM II: Minimizing Use of Catheters as Chronic Dialysis Access.

Vascular Access Guideline 30A: Goals of Access Placement- Use of Catheters for Chronic Dialysis (Opinion). Less than 10% of chronic maintenance hemodialysis patients should be maintained on catheters as their permanent chronic dialysis access. In this context, chronic catheter access is defined as the use of a dialysis catheter for more than three months in the absence of a maturing permanent access.

Numerator:

The number of patients in the denominator who were dialyzed with a chronic catheter continuously for 90 days or longer prior to the last HD session during the study period.

Denominator:

All adult (≥ 18 years old) patients in the sample for analysis.

11. Vascular Access CPM III: Monitoring Arterial Venous Grafts for Stenosis

Vascular Access Guideline 10: Monitoring Dialysis AV Grafts for Stenosis (Evidence/Opinion).

Physical examination of an access graft should be performed weekly and should include, but not be limited to, inspection and palpation for pulse and thrill at the arterial, mid, and venous sections of the graft (Opinion). Dialysis arterial venous graft accesses should be monitored for hemodynamically significant stenosis. The DOQI Work Group recommends an organized monitoring approach with regular assessment of clinical parameters of the arterial venous access and dialysis adequacy. Data from the monitoring tests, clinical assessment, and dialysis adequacy measurements should be collected and maintained for each patient's access and made available to all staff. The data should be tabulated and tracked within each dialysis center as part of a Quality Assurance/ Continuous Quality Improvement (QA/CQI) program (Opinion). Prospective monitoring of arterial venous grafts for hemodynamically significant stenosis, when combined with correction, improves patency and decreases the incidence of thrombosis (Evidence). Techniques, not mutually exclusive, that can be used to monitor for stenosis in arterial venous grafts include:

A. Intra-access flow (Evidence)

B. Static venous pressures (Evidence)

C. Dynamic venous pressures (Evidence)

Other studies or information that can be useful in detecting arterial venous graft stenosis include:

D. Measurement of access recirculation using urea concentrations (See Guideline 12) (Evidence)

E. Measurement of recirculation using dilution flow techniques (nonurea-based) (Evidence)

F. Unexplained decreases in the measured amount of hemodialysis delivered (URR, Kt/V) (Evidence)

G. Physical findings of persistent swelling of the arm, clotting of the graft, prolonged bleeding after needle withdrawal, or altered characteristics of pulse or thrill in a graft (Evidence/Opinion)

H. Elevated negative arterial pre-pump pressures that prevent increasing to acceptable blood flow (Evidence/Opinion)

I. Doppler ultrasound (Evidence/Opinion)

Persistent abnormalities in any of these parameters should prompt referral for venography (Evidence).

Numerator:

The number of patients in the denominator whose AV graft was routinely monitored (screened) for the presence of stenosis during the study period by one of the following methods and with the stated frequency: Color-flow Doppler at least once every 3 months; Static venous pressure at least once every 2 weeks; Dynamic venous pressure every HD session; Dilution technique at least once every 3 months.

Denominator:

All adult (≥ 18 years old) patients in the sample for analysis who were on HD continuously during the study period and who were dialyzed through an arterial venous graft during their last HD session during the study period.

Anemia Management

12. Anemia Management CPM I: Target Hemoglobin for Epoetin Therapy.

Anemia Management Guideline 4: Target Hemoglobin (hgb) for Epoetin Therapy (Evidence/Opinion).

The target range for hemoglobin should be 11 gm/dL - 12 gm/dL (Evidence). This target is for Epoetin therapy and is not an indication for blood transfusion therapy (Opinion).

Numerator:

Number of patients in denominator with documented mean hgb of 11-12 gm/dL during the study period. (The study period for HD patients is Oct, Nov, Dec 1999 and Oct, Nov, Dec 1999 and Jan, Feb, Mar 2000 for PD patients.)

Denominator:

All adult (≥ 18 years old) HD or PD patients in the sample for analysis, exclude patients with mean hgb > 12 gm/dL who are not prescribed Epoetin at any time during the study period.

13. Anemia Management CPM IIa: Assessment of Iron Stores among Anemic Patients or Patients Prescribed Epoetin.

Anemia Management Guideline 5: Assessment of Iron Status (Evidence).

Iron status should be monitored by the percent transferrin saturation and the serum ferritin concentration.

Anemia Management Guideline 6A: Target Iron Level (Evidence).

Chronic renal failure patients should have sufficient iron to achieve and maintain a hgb of 11 to 12 gm/dL.

Anemia Management Guideline 7A: Monitoring Iron Status (Opinion).

During the initiation of Epoetin therapy and while increasing the Epoetin dose in order to achieve an increase in hematocrit/hemoglobin, the transferrin saturation and the serum ferritin concentration should be checked every month in patients not receiving intravenous iron, and at least once every 3 months in patients receiving intravenous iron, until target hematocrit/hemoglobin is reached.

Anemia Management Guideline 7B: Monitoring Iron Status (Opinion).

Following attainment of the target hematocrit/hemoglobin, transferrin saturation and serum ferritin concentration should be determined at least once every 3 months.

Numerator:

- The number of HD patients in the denominator with at least one documented transferrin saturation and serum ferritin concentration result every three months.
- The number of PD patients in the denominator with at least two documented transferrin saturation and serum ferritin concentration results over the six-month study period.

[Note: Not directly comparable to Numerator "a", but most feasible given probable frequency of visits for PD patients.]

Denominator:

- All adult (≥ 18 years old) HD patients included in the sample for analysis, if first monthly hgb is < 11 gm/dL for at least one of the study months or if prescribed Epoetin at any time during the study period regardless of hgb.
- All adult (≥ 18 years old) PD patients included in the sample for analysis, if first monthly hgb is < 11 gm/dL for at least one of the two-month periods during the six-month study period or if prescribed Epoetin at any time during the study period regardless of hgb.

14. Anemia Management CPM IIb: Maintenance of Iron Stores-Target.

Anemia Management Guideline 6B: Target Iron Level (Evidence).

To achieve and maintain target hgb of 11-12 gm/dL, sufficient iron should be administered to maintain a transferrin saturation of $\geq 20\%$, and a serum ferritin concentration of ≥ 100 ng/mL.

Numerator:

- The number of HD patients in the denominator with at least one documented transferrin saturation $\geq 20\%$ and at least one documented serum ferritin concentration ≥ 100 ng/mL during a three month period.
- The number of PD patients in the denominator with at least one documented transferrin saturation $\geq 20\%$ and at least one documented serum ferritin concentration ≥ 100 ng/mL during the six-month study period.

[Note: Not directly comparable to Numerator "a", but most feasible given probable frequency of visits for PD patients.]

Denominator:

- All adult (≥ 18 years old) HD patients included in sample, if first monthly hgb is < 11 gm/dL for at least one of the study months or if prescribed Epoetin at any time during the study period regardless of hgb.
- All adult (≥ 18 years old) PD patients included in sample, if first monthly hgb is < 11 gm/dL for at least one of the two-month periods during the six-month study period or if prescribed Epoetin at any time during the study period regardless of hgb.

15. Anemia management CPM III: Administration of Supplemental Iron.

Anemia Management Guideline 8A: Administration of Supplemental Iron (Evidence).

Supplemental iron should be administered to prevent iron deficiency and to maintain adequate iron stores so that chronic renal failure patients can achieve and maintain a hgb of 11 to 12 gm/dL in conjunction with Epoetin therapy.

Anemia Management Guideline 8C: Administration of Supplemental Iron (Evidence/Opinion).

The adult pre-dialysis, home hemodialysis, and peritoneal dialysis patient may not be able to maintain adequate iron status with oral iron. Therefore, 500 to 1000 mg of iron dextran may be administered intravenously in a single infusion, and repeated as needed, after an initial one-time test dose of 25 mg.

Anemia Management Guideline 8D: Administration of Supplemental Iron (Opinion/Evidence).

A trial of oral iron is acceptable in the hemodialysis patient, but is unlikely to maintain the transferrin saturation > 20%, serum ferritin concentration > 100 ng/mL, and hgb at 11-12 gm/dL.

Anemia Management Guideline 8G: Administration of Supplemental Iron (Opinion/Evidence).

Most patients will achieve a hgb 11 to 12 gm/dL with transferrin saturation and serum ferritin concentration < 50% and < 800 ng/mL, respectively. In patients in whom transferrin saturation is 50% and/or serum ferritin concentration is 800 ng/mL, intravenous iron should be withheld for up to three months, at which time the iron parameters should be re-measured before intravenous iron is resumed. When the transferrin saturation and serum ferritin concentration have fallen to 50% and 800 ng/mL, respectively, intravenous iron can be resumed at a dose reduced by one-third to one-half.

Anemia Management Guideline 8H: Administration of Supplemental Iron (Opinion).

It is anticipated that once optimal hematocrit/hemoglobin and iron stores are achieved, the required maintenance dose of intravenous iron may vary from 25 to 100 mg/week for hemodialysis patients. The goal is to provide a weekly dose of intravenous iron in hemodialysis patients that will allow the patient to maintain the target hematocrit/hemoglobin at a safe and stable iron level. The maintenance iron status should be monitored by measuring the transferrin saturation and serum ferritin concentration every three months.

Numerator:

- a. The number of HD patients in the denominator prescribed intravenous iron in at least one of the study months.
- b. The number of PD patients in denominator prescribed intravenous iron in at least one of the two-month periods during the six-month study period

Denominator:

- a. All adult (≥ 18 years old) HD patients included in the sample for analysis if first monthly hgb < 11 gm/dL for at least one month out of a three month period or prescribed Epoetin at any time during the study period regardless of hgb level, with at least one transferrin saturation < 20% or at least one serum ferritin concentration < 100 ng/mL. EXCLUDE patients with mean transferrin saturation $\geq 50\%$ or mean serum ferritin concentration ≥ 800 ng/mL and EXCLUDE patients in first three months of dialysis and prescribed oral iron.
- b. All adult (≥ 18 years old) PD patients included in the sample for analysis if the first hgb in a two-month period < 11 gm/dL for at least one of the two-month periods during the six-month study period or prescribed Epoetin at any time during the study period regardless of hgb level, with at least one transferrin saturation < 20% or at least one serum ferritin concentration < 100 ng/mL. EXCLUDE patients with mean transferrin saturation $\geq 50\%$ or mean serum ferritin concentration ≥ 800 ng/mL and EXCLUDE patients in first three months of dialysis and prescribed oral iron.

IN-CENTER HEMODIALYSIS (HD) CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

LAB DATA. The following data are requested for OCT, NOV, & DEC 1999. For each question, use the FIRST LAB VALUES OF THE MONTH. Do not leave any questions blank. **ENTER THE FOLLOWING CODES IN THE SPACES BELOW IF LAB VALUES CANNOT BE LOCATED: NF** if Not Found. **HOSP** if patient was hospitalized during the month. **TRANS** if patient was absent during the month.

15. HEMOGLOBIN: Enter the FIRST Hemoglobin (HGB) determined by the laboratory for EACH MONTH: OCT, NOV, DEC 1999. Also enter the prescribed EPO dose and the route of administration for the three treatments prior to the first monthly hemoglobin; the first monthly Serum Ferritin concentration and Transferrin Saturation, and the route of iron administration.

	OCT 1999	NOV 1999	DEC 1999
A. First monthly pre-dialysis laboratory hemoglobin:	_____ . _____ g/dL	_____ . _____ g/dL	_____ . _____ g/dL
B. Was there a prescription for EPO during the seven days immediately before the above HGB was drawn?	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 15E)	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 15E)	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 15E)
C. What was the PRESCRIBED EPO dose in units for each treatment during the seven days immediately BEFORE the above HGB was drawn? (See instructions on page 4).	_____ units/tx _____ units/tx _____ units/tx	_____ units/tx _____ units/tx _____ units/tx	_____ units/tx _____ units/tx _____ units/tx
D. What was the prescribed route of EPO administration related to item 15C? (check all that apply)	<input type="checkbox"/> IV <input type="checkbox"/> SC	<input type="checkbox"/> IV <input type="checkbox"/> SC	<input type="checkbox"/> IV <input type="checkbox"/> SC
E. First monthly Serum Ferritin concentration:	_____ ng/mL	_____ ng/mL	_____ ng/mL
F. First monthly Transferrin Saturation:	_____ %	_____ %	_____ %
G. Was iron prescribed at any time during the month?	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 16)	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 16)	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 16)
H. If yes, what was the route of iron administration? (check all that apply)	<input type="checkbox"/> IV <input type="checkbox"/> P.O.	<input type="checkbox"/> IV <input type="checkbox"/> P.O.	<input type="checkbox"/> IV <input type="checkbox"/> P.O.

16. ADEQUACY: Enter the first monthly pre-and post-dialysis BUN FOR EACH MONTH: OCT, NOV, DEC 1999. The pre-and post-dialysis BUNs must be drawn on the same day of the month. If only performed quarterly, enter the FIRST values for the month performed and enter NP for the other two months. Also, enter the patient's actual DELIVERED time on dialysis when the BUNs were drawn and the code for the name of the dialyzer used at the time the BUNs were drawn (see attached chart for the dialyzer codes.).

	OCT 1999	NOV 1999	DEC 1999
A. How many times per week was this patient scheduled to receive dialysis?	_____ times per week	_____ times per week	_____ times per week
B. First monthly Pre-dialysis BUN:	_____ mg/dL	_____ mg/dL	_____ mg/dL
C. First monthly Post-dialysis BUN:	_____ mg/dL	_____ mg/dL	_____ mg/dL
D. Patient's PRE- & POST-dialysis weight when above BUNs were drawn: (Circle either lbs or kgs)	Pre: _____ lbs / kgs Post: _____ lbs / kgs	Pre: _____ lbs / kgs Post: _____ lbs / kgs	Pre: _____ lbs / kgs Post: _____ lbs / kgs
E. Actual DELIVERED time on dialysis at session when BUNs drawn:	_____ hrs _____ min	_____ hrs _____ min	_____ hrs _____ min
F. Delivered blood pump flow rate @ 60 min. during session at which BUNs are drawn.	_____ mL/min	_____ mL/min	_____ mL/min
G. Code for dialyzer used on dialysis at session when BUNs drawn: (see chart)	_____	_____	_____
H. First monthly recorded URR	_____ . _____ %	_____ . _____ %	_____ . _____ %
I. First monthly recorded Kt/V (If both URR and Kt/V were recorded, answer both 16H & 16I)	_____ . _____ Kt/V	_____ . _____ Kt/V	_____ . _____ Kt/V
J. Method used to calculate Kt/V	<input type="checkbox"/> UKM <input type="checkbox"/> Daugirdas II <input type="checkbox"/> Derived from URR (no pt. weights) <input type="checkbox"/> Other/Unknown_____	<input type="checkbox"/> UKM <input type="checkbox"/> Daugirdas II <input type="checkbox"/> Derived from URR (no pt. weights) <input type="checkbox"/> Other/Unknown_____	<input type="checkbox"/> UKM <input type="checkbox"/> Daugirdas II <input type="checkbox"/> Derived from URR (no pt. weights) <input type="checkbox"/> Other/Unknown_____

IN-CENTER HEMODIALYSIS (HD) CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

17. SERUM ALBUMIN: Enter the FIRST monthly serum albumin FOR EACH MONTH: OCT, NOV, DEC 1999. Check the method used (green or purple) by the lab to determine the serum albumin. If method unknown, please call lab to find out. Do not leave blank.

	OCT 1999	NOV 1999	DEC 1999
A. First monthly serum albumin:	_____ . _____ gm/dL	_____ . _____ gm/dL	_____ . _____ gm/dL
B. Check lab method used: BCG = bromcresol green: BCP = bromscresol purple	<input type="checkbox"/> BCG <input type="checkbox"/> BCP	<input type="checkbox"/> BCG <input type="checkbox"/> BCP	<input type="checkbox"/> BCG <input type="checkbox"/> BCP

18. VASCULAR ACCESS: Please answer the following questions concerning the patient's vascular access.

A. What type of access was used on the last hemodialysis session on or between 10/1/99 and 12/31/99 at the patient's primary incenter facility?

- AV Fistula (go to questions 18C1&C2)
 Synthetic Graft (go to questions 18C1&C2)
 Bovine Graft (go to questions 18C1&C2)
 Catheter (go to questions 18B1&B2)
 Other _____ (go to question 19)
 Unknown (go to question 19)

B1. Reason for catheter:

- Fistula or graft maturing, not ready to cannulate
 Temporary interruption of fistula or graft due to clotting or revisions
 All fistula or graft sites in this patient's body have been exhausted
 No fistula or graft surgically created in this patient's body at this time
 Other

B2. Had this catheter (or another) been used for the past 90 days or longer prior to use in the last hemodialysis session?

- Yes No Unknown

C1. Was routine monitoring (screening) for the presence of stenosis performed between 10/1/99 and 12/31/99?

- Yes No (go to question 19)

C2. If answer to question 18C1 is "Yes," please check all methods of monitoring (below) that were utilized. (See instructions on page 5)

- Color-Flow Doppler at least once between 10/1/99 and 12/31/99
 Static Venous Pressure at least once every 2 weeks between 10/1/99 and 12/31/99
 Dynamic Venous Pressure every HD session between 10/1/99 and 12/31/99
 Dilution Technique at least once between 10/1/99 and 12/31/99
 Other _____

19. Vascular Access Questions for Patients *New (or newly returned) to Hemodialysis*: Please answer the following questions ONLY if this patient was *new (or newly returned) to hemodialysis* within the time frame January 1, 1999 – August 31, 1999. (See instructions on page 5)

A. What type of access was in use at the initiation (or reinitiation) of hemodialysis between Jan 1, 1999 – Aug 31, 1999 for this patient new (or newly returned) to hemodialysis during this time period? (regardless of setting)

- AV Fistula Synthetic Graft Bovine Graft
 Catheter Other _____ Unknown

B. When was the access in item 19A placed?

_____/_____/_____ Unknown

C. What type of access for this patient identified in 19A was used 90 days after initiation (or reinitiation) of hemodialysis? (regardless of setting)

- AV Fistula Synthetic Graft Bovine Graft
 Catheter Other _____ Unknown

IN-CENTER HEMODIALYSIS (HD) CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

INSTRUCTIONS FOR COMPLETING QUESTIONS 15 THROUGH 19 (Continued from page 1): To answer questions 15 through 19, review the patient's clinic or facility medical record for OCT 1, 1999 through DEC 31, 1999. Do not leave any items blank. Enter the following if the information cannot be located: NF if not found, HOSP if hospitalized during the entire time period, TRANS if the patient was absent during the entire time period.

15A: Enter the patient's FIRST MONTHLY pre-dialysis hemoglobin (HGB) value determined by the laboratory for EACH month: OCT, NOV, and DEC 1999. **15B and 15C:** Check the appropriate box to indicate if there was a prescription for EPO during the seven days IMMEDIATELY BEFORE the hemoglobin measurement reported in 15A. **If there was no prescription for EPO go to question 15E.**

Enter the **PRESCRIBED** EPO DOSE in units for **each treatment** during the seven days IMMEDIATELY BEFORE the hemoglobin measurement reported in 15A, even if the patient did not receive the EPO dose. Include any prescribed dose missed due to treatment skipped or error, etc., when entering each treatment dose. Enter 0 units if the patient was on "Hold" for a treatment (**for the purposes of this collection, a "hold" order will be considered a 0 unit prescribed dose**). If EPO is prescribed less frequently than every treatment, leave the units/tx space blank to indicate one or two doses per the seven day period.

15D: Check the appropriate space to indicate the prescribed route of administration for EPO (intravenous (IV) or subcutaneous (SC)). If patient received EPO IV **and** SC, please check both spaces.

15E: Enter the patient's FIRST MONTHLY serum ferritin concentration recorded in EACH month for which data are available during the months of OCT, NOV, and DEC 1999. If a serum ferritin concentration test was not performed monthly, enter the value for the month when performed and record "NP" for the other month(s).

15F: Enter the patient's FIRST MONTHLY transferrin saturation recorded in EACH month for which data are available during the months of OCT, NOV, and DEC 1999. If a transferrin saturation test was not performed monthly, enter the value for the month when performed and record "NP" for the other month(s).

15G: Check either "Yes" or "No" to indicate if iron was prescribed at any time during the months of OCT, NOV, and DEC 1999. **If there was no prescription for iron go to question 16.**

15H: If the answer to 15G is "Yes," please check the appropriate space to indicate the route of iron administration (intravenous (IV) or by mouth (P.O.)) each month for the months of OCT, NOV, and DEC 1999. If patient received iron by mouth **and** IV, please check both spaces.

16A: Please indicate the number of dialysis sessions this patient was scheduled to receive per week in OCT, NOV, and DEC 1999. If the prescription varied during a month, enter the prescription in effect for the first week of that month.

16B and 16C: Enter the patient's FIRST pre-and post-dialysis BUN values recorded EACH month for OCT, NOV, and DEC 1999. The pre-and post-dialysis BUN values must be drawn on the same date. If pre- and post-dialysis BUNs are only performed quarterly, enter the values for the month when performed and record "NP" (i.e., not performed) for the other two months.

16D: Enter the patient's PRE- and POST-dialysis weight at the session when the pre- and post-dialysis BUN levels were drawn. Circle either lbs or kgs as appropriate.

16E: Enter the patient's ACTUAL DELIVERED time on dialysis during the session when the BUN levels were drawn. **DO NOT ENTER THE PRESCRIBED TIME ON DIALYSIS.** If using finish time minus start time to calculate actual delivered time on dialysis, deduct time for any interruptions in dialysis which occurred.

16F: Please record the delivered blood pump flow rate in mL/min at 60 min. into the hemodialysis session. Do not record the prescribed blood pump flow rate or the highest achieved blood pump flow rate.

16G: Using the enclosed Dialyzer Code Chart, enter the code for the dialyzer used on the date the blood samples were drawn for the pre- and post-dialysis BUNs in OCT, NOV, and DEC 1999. If the dialyzer used is not listed on the chart, enter the code for "other" (9999).

16H and 16I: Enter the patient's FIRST URR and/or Kt/V recorded each month for OCT, NOV, and DEC 1999. If both Kt/V and URR were recorded for this patient, please enter both.

16J: Check the box which describes the method used by your dialysis center or its designee to calculate Kt/V.

UKM: Please check the box marked "UKM" if you know that the method used by your dialysis center or its designee to calculate Kt/V is formal urea kinetic modeling, using the single-pool, variable-volume model. Please refer to pages 25-39 of the NKF/DOQI Clinical Practice Guidelines for Hemodialysis Adequacy for information about formal urea kinetic modeling.
Daugirdas II: Please check the box marked "Daugirdas II" if you know that the method used by your dialysis center or its designee to calculate Kt/V is the Daugirdas II equation, as follows:

$$Kt/V = -\ln(R - 0.008 \times t) + (4 - 3.5 \times R) \times UF/W$$
 in which Ln is the natural logarithm; R is the post-dialysis BUN divided by the pre-dialysis BUN; t is the dialysis session length in hours; UF is the ultrafiltration volume in liters; and W is the patient's post-dialysis weight in kilograms.

Derived from URR: Please check the box marked "Derived from URR" if the "Kt/V" result is based on the Pre and Post BUN only (no patient weights).

Other/Unknown: Please check the "Other/Unknown" box if the method used is **NOT** UKM, Daugirdas II, or Derived from URR **OR** if you do not know the method used. Write in method used, if known.

IN-CENTER HEMODIALYSIS (HD) CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

17A: Enter the patient's FIRST serum albumin value recorded EACH month for OCT, NOV, and DEC 1999.

17B: Check the method used by the laboratory to determine the serum albumin values (bromcresol green or bromcresol purple). If you do not know what method the laboratory used, call the laboratory to find out this information. DO NOT LEAVE THIS QUESTION BLANK.

18A: Check the appropriate space to indicate type of vascular access used on **last hemodialysis session on or between OCT 1, 1999 and DEC 31, 1999** at the patient's primary in-center facility. Exclude dialysis sessions performed at temporary facilities because of holiday travel or hospitalizations.

18B₁ and 18B₂: Complete 18B₁ and 18B₂ only if vascular access checked in question 18A was a **catheter**.

18B₁: If the vascular access marked for question 18A was a catheter, indicate in the appropriate space the **reason for the catheter**.
18B₂: If the vascular access marked for question 18A was a catheter, indicate in the appropriate space if **one or more catheters** had been used **continuously** in this patient for the past **90 days or longer** prior to use on the last hemodialysis session between OCT 1, 1999 and DEC 31, 1999.

18C₁ and 18C₂: Complete 18C₁–18C₂ only if vascular access used on most recent dialysis session was an **AV fistula, synthetic graft or bovine graft**.

18C₁: If the vascular access marked for question 18A was an AV fistula, synthetic graft or bovine graft, indicate if there was **routine monitoring (screening) for the presence of stenosis** between OCT 1, 1999 and DEC 31, 1999. Routine monitoring or screening is the sequential measurement of access flow or venous pressure. The appropriate interval between sequential measurements depends on the technique used to monitor for stenosis, and is described below. **For the purpose of this review**, techniques used to monitor access flow include (a) one of the dilution methods in which the needles are reversed and recirculation is deliberately induced, or (b) conventional color-flow Doppler. In the former, the dilution indicator may be a change in (1) the velocity of ultrasound in blood, (2) hemoglobin/hematocrit, (3) temperature, (4) solute concentration, or (5) conductivity. Pump blood flow must be accurately measured to use this technique. Techniques used to monitor venous pressure include dynamic and static venous dialysis pressures. Dynamic venous pressure monitoring uses low blood pump flow rates usually set at 200 mL per minute. Static pressure monitoring is performed at zero blood pump flow. If access flow was monitored, it should have been measured on a regular basis by one of the available dilution techniques or by conventional color-flow Doppler at a **minimum frequency of once every three months**. If dynamic venous pressure was monitored it should have been measured at **every hemodialysis session**. If static venous pressure was monitored it should have been measured at a **minimum frequency of once every two weeks**. **For the purpose of this review**, clinical assessment such as prolonged bleeding after needle withdrawal, or altered characteristics of thrill or bruit, as well as dialysis adequacy measurements using Kt/V or URR, supplement but do **NOT** constitute monitoring techniques. **For the purpose of this review**, recirculation methods do **NOT** constitute monitoring for the presence of AV graft stenosis.

18C₂: If the vascular access marked for question 18A was an AV fistula, synthetic graft or bovine graft, check all monitoring methods utilized based on the definitions and intervals given above in 18C₁. If other techniques and/or corresponding intervals were used check "other" and write in the technique and corresponding intervals.

19: Answer questions 19A-C if the patient was **new (or newly returned) to hemodialysis** within the time frame January 1, 1999-August 31, 1999. These patients would have begun a regular course of hemodialysis during 1999 or may also be a patient who has changed modality, had a newly failed transplant, or returned after an episode of regained kidney function, and was placed on maintenance hemodialysis during the time frame January 1, 1999-August 31, 1999.

19A: Check the appropriate space to indicate type of vascular access used **at initiation of the first (or most recent) maintenance course of hemodialysis** for end-stage renal disease within the time frame January 1, 1999-August 31, 1999. This would include patients who have changed modality, had a newly failed transplant, or returned after an episode of regained kidney function, and were placed on maintenance hemodialysis during the time frame January 1, 1999-August 31, 1999. Exclude patients who have received intermittent dialysis treatments for volume overload or congestive heart failure.

19B: Write in the date when the vascular access noted in question 19A was placed. If the date is not known, check the box marked "Unknown."

19C: Check the appropriate space to indicate type of vascular access, for the patient identified in 19A, **in use 90 days after** the initiation (or reinitiation) date of hemodialysis, regardless of setting.

Appendix 3. 2000 CPM Data Collection Form — Peritoneal Dialysis

**PERITONEAL DIALYSIS (PD) CLINICAL PERFORMANCE
MEASURES DATA COLLECTION FORM 2000**

[Before completing please read instructions at the bottom of this page and on pages 5 and 6]

PATIENT IDENTIFICATION	MAKE CORRECTIONS TO PATIENT INFORMATION ON LABEL IN THE SPACE BELOW
Place Patient Data Label Here	
10a. Is Patient Hispanic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
11. If the above patient information is incorrect make corrections in space above then continue to question 12. Please verify patient's race and check question 10a. above. If patient unknown or was not dialyzed in the unit at any time during Oct 1999 – Mar 2000 return the blank form to the Network.	
12a. Patient's height (MUST COMPLETE): _____ inches OR _____ centimeters	
12b. Patient's weight (abdomen empty) (first clinic visit weight after Oct.1, 1999): _____ lbs. Or _____ kg.	
13. Does patient have limb amputation(s): <input type="checkbox"/> Yes <input type="checkbox"/> No	
14. The most RECENT date this patient returned to peritoneal dialysis following: transplant failure, an episode of regained kidney function, or switched modality. <input type="checkbox"/> Date ____/____/____ <input type="checkbox"/> N/A (NOTE: Check N/A if patient has remained on peritoneal dialysis since the beginning of a regular course of dialysis; date given in item 8 above) <div style="display: flex; justify-content: space-around; font-size: small;"> month day year beginning of a regular course of dialysis; date given in item 8 above) </div>	
Individual Completing Form (Please print) : First name: _____ Last name: _____ Title: _____ Phone number: (____) _____ - _____ Fax number (____) _____ - _____	

INSTRUCTIONS FOR COMPLETING THE PERITONEAL DIALYSIS CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM 2000

The label on the top left side of this form contains the following patient identifying information (#'s 1-8). If the information is incorrect make corrections to the right of the label.

- | | |
|---|--|
| 1. LAST and first name.
3. SOCIAL Security Number (SSN).
5. SEX (1=Male; 2=Female; 3=Unknown).
7. PRIMARY cause of renal failure by HCFA-2728 code.
9. ESRD Network number. Do not make corrections to this item. | 2. DATE of birth (DOB) as MM/DD/YYYY.
4. HEALTH Insurance Claim Number (HIC).
6. RACE (1=American Indian/Alaskan Native; 2=Asian; 3=Black; 4=White; 5=Unknown; 6=Pacific Islander; 7=Mid East Arabian; 8=Indian Subcontinent; 9=Other Multiracial).
8. DATE, as MM/DD/YYYY, that the patient began a regular course of dialysis.
10. Facility's Medicare provider number.
10a. Is the patient Hispanic? Check either Yes, No, or Unknown, as appropriate. |
|---|--|

11. Review the patient and facility specific information contained on the pre-printed label. Please verify the patient's race, item 6 above. If any of the information is incorrect, write corrections in the space to the right of the label. If the patient is unknown or if the patient was not dialyzed in the unit at any time during Oct 1999 through Mar 2000, send the blank form back to the ESRD Network office with the name and address of the facility providing services to this patient on March 31, 2000, if known.
- 12a. Enter the patient's height in inches or centimeters. HEIGHT MUST BE ENTERED, do not leave this field blank, you may ask the patient his/her height to obtain this information. If the patient had both legs amputated, record pre-amputation height and check YES for item 13.
- 12b. Enter the patient's weight (abdomen empty) in pounds or kilograms. Use the FIRST CLINIC VISIT weight on or after October 1, 1999.
13. For the purpose of this study, check NO if this patient has had toe(s), finger(s), or mid-foot (Symes) amputation; but **check YES if this patient has had a below-knee, below-elbow, or more proximal (extensive) amputation.**
14. Enter the most recent date this patient returned to peritoneal dialysis following: transplant failure, an episode of regained kidney function, or switched modality. Check N/A if patient remained on peritoneal dialysis since the date of FIRST dialysis given in item 8 on Patient Data Label above.

PLEASE COMPLETE ITEMS 15 THROUGH 21 ON PAGES 2, 3, AND 4 OF THIS DATA COLLECTION FORM.

INSTRUCTIONS FOR COMPLETING THESE ITEMS ARE ON PAGES 5 AND 6.

PERITONEAL DIALYSIS CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

LAB DATA. The following data are requested for each 2-month time period: OCT-NOV1999, DEC 1999-JAN 2000, FEB-MAR 2000. For each question, where appropriate, use the first lab values obtained in each time period. ENTER THE FOLLOWING CODES IN THE SPACES BELOW IF LAB VALUES CANNOT BE LOCATED: NF if Not Found. HOSP if patient was hospitalized during the entire time period. TRANS if patient was absent during the entire time period.

15. HEMOGLOBIN: Enter the **FIRST Hemoglobin (HGB)** determined by the laboratory **FOR EACH 2-MONTH TIME PERIOD: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000.** Also enter the prescribed **WEEKLY EPO** dose and the route of administration, the first **Serum Ferritin** concentration and **Transferrin Saturation**, and the route of iron administration for each time period.

	OCT-NOV 1999	DEC 1999-JAN 2000	FEB-MAR 2000
A. First laboratory hemoglobin during the two month time period:	_____ . _____ g/dL	_____ . _____ g/dL	_____ . _____ g/dL
B. Was there a prescription for EPO immediately before the above HGB was drawn?	<input type="checkbox"/> Yes <input type="checkbox"/> No(go to 15E)	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 15E)	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to 15E)
C. What was the PRESCRIBED WEEKLY EPO dose at the time immediately BEFORE the above	_____ units/wk	_____ units/wk	_____ units/wk
D. What was the prescribed route of EPO administration related to item 15C?	<input type="checkbox"/> IV <input type="checkbox"/> SC	<input type="checkbox"/> IV <input type="checkbox"/> SC	<input type="checkbox"/> IV <input type="checkbox"/> SC
E. First Serum Ferritin concentration during the two month time period:	_____ ng/mL	_____ ng/mL	_____ ng/mL
F. First Transferrin Saturation during the two month time period:	_____ %	_____ %	_____ %
G. Was iron prescribed at any time during the two month time period?	<input type="checkbox"/> Yes <input type="checkbox"/> No(go to 16)	<input type="checkbox"/> Yes <input type="checkbox"/> No(go to 16)	<input type="checkbox"/> Yes <input type="checkbox"/> No(go to 16)
H. If yes, what was the route of iron administration? (check all that apply)	<input type="checkbox"/> IV <input type="checkbox"/> P.O.	<input type="checkbox"/> IV <input type="checkbox"/> P.O.	<input type="checkbox"/> IV <input type="checkbox"/> P.O.

16. SERUM ALBUMIN: Enter the **FIRST serum albumin FOR EACH 2-MONTH TIME PERIOD: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000.** Check the method used (green or purple) by the lab to determine the serum albumin. If method unknown, please call lab to find out. Do not leave blank.

	OCT-NOV 1999	DEC 1999-JAN 2000	FEB-MAR 2000
A. First serum albumin during the two month time period:	_____ . _____ gm/dL	_____ . _____ gm/dL	_____ . _____ gm/dL
B. Check lab method used: BCG = bromcresol green; BCP = bromcresol purple	<input type="checkbox"/> BCG <input type="checkbox"/> BCP	<input type="checkbox"/> BCG <input type="checkbox"/> BCP	<input type="checkbox"/> BCG <input type="checkbox"/> BCP

17. PERITONEAL DIALYSIS ADEQUACY: The remainder of this form lists a series of questions regarding adequacy measurements for this patient. Please answer questions 17A and B FOR EACH 2-MONTH TIME PERIOD indicated. Then continue to pages 3 and 4.

	OCT-NOV 1999	DEC 1999-JAN 2000	FEB-MAR 2000
A. Was the patient on peritoneal dialysis at any time during this period?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
B. Was the patient on hemodialysis or did patient receive a transplant at any time during this period?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

PERITONEAL DIALYSIS CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM: (CONTINUED)

18. ADEQUACY: The following data are requested for each adequacy determination during the months OCTOBER 1999 through MARCH 2000. Starting with the first adequacy measurement in these months, enter the adequacy measurements/results listed below that were obtained. (Please DO NOT record more than one adequacy measurement done for any one month.) Please read instructions on pages 5 and 6 before completing this section.

19. PERITONEAL DIALYSIS PRESCRIPTION: For the following questions – record the PD prescription in effect immediately prior to the time the adequacy measures/results recorded in Question 18 were performed. In addition, if the prescription was changed following the adequacy measurement, please record the new prescription in the column indicated. Please read instructions on Page 6 before completing this section.

	<input type="checkbox"/> Check box if adequacy measurement was not done during OCT 1999-MAR 2000		Prescription prior to date in 18A _____ (# days)	➔ New Prescription ____/____/____ (mm) (dd) (yy)
18.A. Date of first adequacy measurement between 10-1-99 to 3-31-2000	____ / ____ / ____ (mm) (dd) (yy)	19.A. Number of dialysis days per week	_____ (# days)	_____ (# days)
18.B. Patient's dialysis modality when adequacy measures were performed	<input type="checkbox"/> CAPD <input type="checkbox"/> Cycler	19.B. CAPD PRESCRIPTION (this includes patients with one overnight exchange using an assist device)		
18.C. Patient's weight at the time of this adequacy assessment (abdomen empty) (Circle lbs or kgs)	_____ lbs /kgs	1. Total dialysate volume infused per 24 hours	_____ mL/24 hrs	_____ mL/24 hrs
18.D. Weekly Kt/V _{urea} (dialysate and urine clearance)	_____ . _____	2. Total number of exchanges per 24 hours (including overnight exchange)	_____ (# exchanges)	_____ (# exchanges)
18.E. Method by which V above was calculated: Check one. (See instructions on page 5)	<input type="checkbox"/> %BW <input type="checkbox"/> Hume <input type="checkbox"/> Watson <input type="checkbox"/> Other	19.C. CYCLER PRESCRIPTION		
18.F. Weekly Creatinine Clearance (dialysate and urine clearance)	_____ . _____ L/wk	1. Total dialysate volume infused per 24 hours	_____ mL/24 hrs	_____ mL/24 hrs
18.G. Is this Creatinine Clearance corrected for body surface area, using standard methods? (See instructions on page 6)	<input type="checkbox"/> Yes <input type="checkbox"/> No	2. Total dialysis dwell time (Note: 2a+b+c = 24hours)		
18.H. 24 hr DIALYSATE volume (prescribed and ultrafiltration)	_____ mL	a. Total nighttime dialysis dwell time	____ hrs ____ min	____ hrs ____ min
18.I. 24 hr DIALYSATE urea nitrogen:	_____ . _____ mg/dL	b. Total daytime dialysis dwell time	____ hrs ____ min	____ hrs ____ min
18.J. 24 hr DIALYSATE creatinine:	_____ . _____ mg/dL	c. Total amount of time the patient is dry during 24 hours	____ hrs ____ min	____ hrs ____ min
18.K. 24 hr URINE volume: (If 24 hr urine was not collected check NP. If patient's urine production was negligible, i.e., <200 cc of urine/24 hr, then check anuric and go to question 18N)	_____ mL <input type="checkbox"/> NP <input type="checkbox"/> anuric	3. Nighttime Prescription (excluding last bag option)		
18.L. 24 hr URINE urea nitrogen:	_____ . _____ mg/dL	a. Volume of a single nighttime exchange	_____ mL/nighttime	_____ mL/nighttime
18.M. 24 hr URINE creatinine:	_____ . _____ mg/dL	b. Number of dialysis exchanges during the nighttime	_____ (#/nighttime)	_____ (#/nighttime)
18.N. SERUM BUN at the time this adequacy assessment was done	_____ mg/dL	4. Daytime Prescription (including last bag option)		
18.O. SERUM creatinine at the time this adequacy assessment was done	_____ . _____ mg/dL	a. Volume of a single daytime exchange	_____ mL/daytime	_____ mL/daytime
		b. Number of dialysis exchanges during the daytime	_____ (#/daytime)	_____ (#/daytime)
		19.D. Does the prescription described above include TIDAL dialysis?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		19.E. Based on this adequacy result,		
		1. Was the collection repeated?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		2. Was the prescription changed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Note: If this prescription was changed, enter the new prescription date and information in the adjacent column. _____				

PERITONEAL DIALYSIS CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM: (CONTINUED)			
<p>20. ADEQUACY: The following data are requested for each adequacy determination during the months NOVEMBER 1999 through MARCH 2000. Starting with the first adequacy measurement in these months, enter the adequacy measurements/results listed below that were obtained. (Please DO NOT record more than one adequacy measurement done for any one month.) Please read instructions on pages 5 and 6 before completing this section.</p>		<p>21. PERITONEAL DIALYSIS PRESCRIPTION: For the following questions – record the PD prescription in effect immediately prior to the time the adequacy measures/results recorded in Question 20 were performed. In addition, if the prescription was changed following the adequacy measurement, please record the new prescription in the column indicated. Please read instructions on Page 6 before completing this section.</p>	
	<input type="checkbox"/> Check box if adequacy measurement was not done during NOV 1999-MAR 2000	Prescription prior to date in 20A	➔ New Prescription ____/____/____ (mm) (dd) (yy)
20.A. Date of first adequacy measurement between 11-1-99 to 3-31-2000	____/____/____ (mm) (dd) (yy)	21.A. Number of dialysis days per week	_____ (# days)
20.B. Patient's dialysis modality when adequacy measures were performed	<input type="checkbox"/> CAPD <input type="checkbox"/> Cycler	21.B. CAPD PRESCRIPTION (this includes patients with one overnight exchange using an assist device)	
20.C. Patient's weight at the time of this adequacy assessment (abdomen empty) (Circle lbs or kgs)	_____ lbs /kgs	1. Total dialysate volume infused per 24 hours	_____ mL/24 hrs
20.D. Weekly Kt/V _{urea} (dialysate and urine clearance)	_____ . _____	2. Total number of exchanges per 24 hours (including overnight exchange)	_____ (# exchanges)
20.E. Method by which V above was calculated: Check one. (See instructions on page 5)	<input type="checkbox"/> %BW <input type="checkbox"/> Hume <input type="checkbox"/> Watson <input type="checkbox"/> Other	21.C. CYCLER PRESCRIPTION	
20.F. Weekly Creatinine Clearance (dialysate and urine clearance)	_____ . _____ L/wk	1. Total dialysate volume infused per 24 hours	_____ mL/24 hrs
20.G. Is this Creatinine Clearance corrected for body surface area, using standard methods? (See instructions on page 6)	<input type="checkbox"/> Yes <input type="checkbox"/> No	2. Total dialysis dwell time (Note: 2a+b+c = 24hours)	
20.H. 24 hr DIALYSATE volume (prescribed and ultrafiltration)	_____ mL	a. Total nighttime dialysis dwell time	____ hrs ____ min
20.I. 24 hr DIALYSATE urea nitrogen:	_____ . _____ mg/dL	b. Total daytime dialysis dwell time	____ hrs ____ min
20.J. 24 hr DIALYSATE creatinine:	_____ . _____ mg/dL	c. Total amount of time the patient is dry during 24 hours	____ hrs ____ min
20.K. 24 hr URINE volume: (If 24 hr urine was not collected check NP. If patient's urine production was negligible, i.e., <200 cc of urine/24 hr, then check anuric and go to question 20N)	_____ mL <input type="checkbox"/> NP <input type="checkbox"/> anuric	3. Nighttime Prescription (excluding last bag option)	
20.L. 24 hr URINE urea nitrogen:	_____ . _____ mg/dL	a. Volume of a single nighttime exchange	_____ mL/nighttime
20.M. 24 hr URINE creatinine:	_____ . _____ mg/dL	b. Number of dialysis exchanges during the nighttime	_____ (#/nighttime)
20.N. SERUM BUN at the time this adequacy assessment was done	_____ mg/dL	4. Daytime Prescription (including last bag option)	
20.O. SERUM creatinine at the time this adequacy assessment was done	_____ . _____ mg/dL	a. Volume of a single daytime exchange	_____ mL/daytime
		b. Number of dialysis exchanges during the daytime	_____ (#/daytime)
		21.D. Does the prescription described above include TIDAL dialysis?	<input type="checkbox"/> Yes <input type="checkbox"/> No
		21.E. Based on this adequacy result,	
		1. Was the collection repeated?	<input type="checkbox"/> Yes <input type="checkbox"/> No
		2. Was the prescription changed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Note: If this prescription was changed, enter the new prescription date and information in the adjacent column. _____			

PERITONEAL DIALYSIS CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

INSTRUCTIONS FOR COMPLETING QUESTIONS 15 THROUGH 17 (continued from page 1): To answer questions 15 through 17 review the patient's clinic or facility medical record FOR EACH 2-MONTH TIME PERIOD: OCT 1, 1999 through NOV 30, 1999, DEC 1, 1999 through JAN 31, 2000, and FEB 1, 2000 through MAR 31, 2000. Do not leave any items blank. Enter the following if the information cannot be located: NF if not found, HOSP if hospitalized during the entire time period, TRANS if patient was absent during the entire time period.

15.A: Enter the patient's FIRST hemoglobin (HGB) value determined by the laboratory for EACH 2-month time period: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000.

15.B and 15.C: Check the appropriate box to indicate if there was a prescription for EPO IMMEDIATELY BEFORE the hemoglobin measurement reported in 15.A was obtained. If there was no prescription for EPO go to question 15E. Enter the **PRESCRIBED WEEKLY EPO DOSE** at the time IMMEDIATELY BEFORE the hemoglobin measurement reported in 15.A was obtained, even if the patient did not receive the EPO dose ("**Immediately before**" refers to the week prior to the test). If prescribed less frequently than weekly, divide the prescribed EPO dose by the number of weeks in the dosing interval to obtain weekly EPO dose. If the EPO dose is prescribed by the number of days, divide the dose by the number of days and multiply by 7 to obtain weekly EPO dose (example-EPO 5000 units every 10 days. 5000 units divided by 10 days and multiplied by 7 days equals 3500 units per week). If using the sliding scale for EPO dosing, total all the doses given during the week and enter the value. Enter 0 units if the patient was on "hold" immediately before the hemoglobin measurement (**for the purposes of this collection, a "hold" order will be considered a 0 unit prescribed dose**).

15.D: Check the appropriate space to indicate the prescribed route of administration for EPO (intravenous (IV) or subcutaneous (SC)).

15.E: Enter the patient's FIRST serum ferritin concentration recorded EACH 2-month time period: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000. If a serum ferritin concentration test was not performed every 2-month time period, enter the value for the time period when performed and record "NP" for the other time period(s).

15.F: Enter the patient's FIRST transferrin saturation recorded EACH 2-month time period: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000. If a transferrin saturation test was not performed every 2-month time period, enter the value for the time period when performed and record "NP" for the other time period(s).

15.G: Check either "Yes" or "No" to indicate if iron was prescribed at any time during the 2-month time periods.

15.H: If the answer to 15.G is "Yes," please check the appropriate space to indicate the route of iron administration (intravenous (IV) or by mouth (P.O.)) for each 2-month time period. If patient received iron by mouth and IV, please check both spaces.

16.A: Enter the patient's FIRST serum albumin value recorded EACH 2-month time period: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000.

16.B: Check the method used by the laboratory to determine the serum albumin levels (bromocresol green or bromocresol purple). If you do not know what method the laboratory used, call the laboratory to find out this information. **DO NOT LEAVE THIS QUESTION BLANK.**

17.A: Check the appropriate response (yes or no) for each 2-month time period, indicating whether this patient was on peritoneal dialysis at any time during each of the specified 2-month time periods: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000.

17.B: Check the appropriate response (yes or no) for each 2-month time period, indicating whether this patient was on hemodialysis or received a transplant at any time during each of the specified 2-month time periods: OCT-NOV 1999, DEC 1999-JAN 2000, FEB-MAR 2000.

INSTRUCTIONS FOR COMPLETING QUESTIONS 18 THROUGH 21: To answer questions 18 through 21 review the patient's clinic or facility medical record and provide the requested data for each of the first two adequacy measurements and PD prescriptions in effect immediately prior to the adequacy measurements during the months OCTOBER 1999 through MARCH 2000. DO NOT record more than one adequacy measurement done for any one month.

18.A: Enter the first date on which adequacy of dialysis was assessed for each measure obtained between OCT 1, 1999 through MAR 31, 2000. DO NOT record more than one adequacy measurement done for any one month. Check the labeled box above date area if an adequacy measurement was not done during the time frame.

18.B: Check the modality of peritoneal dialysis this patient was on at the time the corresponding adequacy of dialysis measure was obtained. CHECK either CAPD or Cycler.

18.C: Enter the patient's weight (with abdomen empty) at the clinic/facility visit when the adequacy measurements were obtained, circle lbs or kgs as appropriate.

18.D: Enter the TOTAL WEEKLY Kt/V_{urea} for the first adequacy measurement indicated on 18.A between OCT 1, 1999 through MAR 31, 2000. NOTE: If you have a value for weekly Kt/V_{urea} for this adequacy assessment, please complete the corresponding values for questions 18H-18.J for 24-hour dialysate volume, 24-hour dialysate urea (or creatinine) and question 18.K for 24-hour urine volume. If the patient is not anuric, complete the corresponding values for questions 18.L-18.M, the 24-hour urine urea (or creatinine), if these values are available. Enter NP for all values when not performed. If your unit calculates a daily Kt/V_{urea} , multiply this result by 7.0 and enter the result in the appropriate space(s). If this patient did not dialyze each day of the week, then multiply the daily Kt/V_{urea} by the number of days the patient did dialyze.

18.E: Check the method used to calculate the V in the Kt/V_{urea} measurement; % BW = percent of body weight; Hume and Watson are two nomograms used to calculate V based on several of these parameters - weight, height, age, gender. If method used to calculate V is not known, please call lab to ascertain method. Please do not leave blank.

18.F: Enter the TOTAL WEEKLY CREATININE CLEARANCE for the first adequacy measurement indicated on 18.A between OCT 1, 1999 through MAR 31, 2000. NOTE: If you have a value for weekly creatinine clearance for this adequacy assessment, please complete the corresponding values for questions 18.H-18.J for 24-hour dialysate volume, 24-hour dialysate urea (or creatinine) and question 18.K for 24-hour urine volume. If the patient is not anuric, complete the corresponding values for questions 18.L-18.M, the 24-hour urine urea (or creatinine), if these values are available. Enter NP for all values when not performed. If your unit calculates a daily creatinine clearance multiply this result by 7.0 and enter the result in the appropriate space(s). If this patient did not dialyze each day of the week, then multiply the daily creatinine clearance by the number of days the patient did dialyze.

PERITONEAL DIALYSIS CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM (CONTINUED)

- 18.G:** Check Yes or No if the weekly creatinine clearance was normalized for body surface area (i.e., the result is multiplied by 1.73m² and divided by the patient's body surface area (BSA)). Standard methods for establishing BSA are: the DuBois and DuBois method; the Gehan and George method; and the Haycock method. If you do not have this information, call the laboratory that provided the creatinine clearance value for this information. Please do not leave blank.
- 18.H, I, and J:** Enter the measured 24-hour DIALYSATE volume (includes prescribed and ultrafiltration volumes), urea nitrogen and creatinine obtained for the first adequacy measurement obtained between OCT 1, 1999 through MAR 31, 2000. If a 24-hour dialysate volume, urea nitrogen or creatinine were NOT measured in this time period, enter NP (for not performed) in the appropriate spaces. **ONLY ENTER ACTUAL MEASURED 24-HOUR DIALYSATE VOLUME. DO NOT ENTER AN EXTRAPOLATED DIALYSATE VOLUME.** Please report the 24-hour dialysate volume as a combination of the prescribed fill volume and the ultrafiltration volume.
- 18.K, L, and M:** Enter the 24-hour URINE volume, urea nitrogen and creatinine obtained for the first adequacy assessment obtained between OCT 1 1999 through MAR 31, 2000. **ONLY ENTER ACTUAL MEASURED 24-HOUR URINE VOLUME—DO NOT ENTER AN EXTRAPOLATED URINE VOLUME.** If 24-hour urine volume was not collected check NP for not performed, OR if the patient's urine production was negligible, i.e., <200 cc of urine/24 hours, then check anuric. If NP or anuric is checked, **SKIP TO QUESTION 18N.** If urine urea nitrogen and creatinine were NOT measured in this time period, enter NP in the appropriate spaces.
- 18.N, O:** Enter the SERUM BUN and SERUM CREATININE obtained for the first adequacy assessment obtained between OCT 1, 1999 through MAR 31, 2000. Enter NP in the appropriate spaces for all time periods when not performed.
- 19.:** To respond to questions 19.A through 19.F record the peritoneal dialysis (PD) prescription in effect immediately prior to the first adequacy measures/results recorded in question 18 performed between OCT 1, 1999 through MAR 31, 2000. In addition, if the prescription was changed following the adequacy measurement, please record the new prescription in the column labeled "New Prescription" as well as indicating the date that the new prescription was initiated. Complete all items that are applicable.
- 19.A:** Enter the number of days per week for which this patient undergoes peritoneal dialysis.
- 19.B: CAPD PRESCRIPTION.** Use the CAPD prescription category for all CAPD patients including patients with one overnight exchange using an assist device. **(1)**Enter the total dialysate volume in mL infused over a 24-hour period and **(2)** the number of exchanges per 24-hour period **PRESCRIBED** for CAPD at the time the first adequacy measurements were performed.
- 19.C: CYCLER PRESCRIPTION.** **(1)**Enter the total dialysate volume in mL infused over a 24-hour period. **(2)**Total dialysis dwell time - (Note: 2a+b+c = 24 hours): **(2a)**Enter the total nighttime dialysis dwell time, **(2b)**the total daytime dialysis dwell time, and **(2c)**the total amount of time the patient is dry during 24 hours. If the patient is never dry in 24 hours enter a value of 0 hours. The hours entered in 2a,b,&c should equal 24 hours. **(3)**Nighttime Prescription (excluding last bag option): **(3a)**Enter the volume of a single nighttime exchange and **(3b)**the number of dialysis exchanges during the nighttime **PRESCRIBED** for CYCLER NIGHTTIME at the time the first adequacy measurements were performed. Include in the CYCLER NIGHTTIME prescription only those exchanges provided by an automated device. **DO NOT** include in this category any wet day prescriptions (i.e., a last bag fill or option that the patient carries after unhooking from the cyclor or any daytime dwells) as these exchanges are recorded in the DAYTIME PRESCRIPTION information. If different inflow volumes are used, report average inflow volume. **(4)**Daytime Prescription (including last bag option): **(4a)**Enter the volume of a single daytime exchange and **(4b)**the number of dialysis exchanges during the daytime **PRESCRIBED** for CYCLER DAYTIME at the time the first adequacy measurements were performed. Include in the CYCLER DAYTIME prescription only those exchanges performed after the patient disconnects from the cyclor and/or a last bag fill or option that the patient carries during the day (e.g., WET DAY PRESCRIPTION). **ANY OTHER EXCHANGES PERFORMED USING THE CYCLER SHOULD BE INCLUDED UNDER CYCLER NIGHTTIME PRESCRIPTION.** If different inflow volumes are used, report average inflow volume.
- 19.D:** Check the appropriate box, yes or no, whether this patient's peritoneal dialysis prescription included TIDAL dialysis. TIDAL patients are cyclor patients for whom the dialysate is partially drained between some exchanges.
- 19.E:** Check the appropriate box, yes or no, indicating whether the adequacy collection was repeated, or the prescription changed, following the first adequacy measurement performed between OCT 1, 1999 through MAR 31, 2000. If the prescription was changed enter the new prescription in the column to the right.
- 20.A-O:** See instructions for 18.A-18.O and complete for first adequacy measurement performed between NOV 1, 1999 through MAR 31, 2000. **DO NOT** record more than one adequacy measurement done for any one month. Check the labeled box above date area if an adequacy measurement was not done during the time frame.
- 21.A-E:** See instructions for 19.A-19.O and complete for the peritoneal dialysis (PD) prescription in effect immediately prior to the first adequacy measures/results recorded in question 20 performed between NOV 1, 1999 through MAR 31, 2000.

DIALYSIS FACILITY CLINICAL PERFORMANCE MEASURES DATA COLLECTION FORM 2000

<p>FACILITY IDENTIFICATION</p>	<p style="text-align: center;">MAKE CORRECTIONS TO FACILITY INFORMATION ON LEFT IN THE SPACE BELOW</p>						
<div style="background-color: #e0e0e0; width: 80%; margin: 0 auto; padding: 10px; border: 1px solid #ccc;"> <p>Place Facility Label Here</p> </div>							
<p>1. Does your facility have a written policy for the TIMING of the post-dialysis BUN sample collection? <i>(This question refers to any written policy, endorsed by your facility's management and to which adherence is expected, regarding the timing of blood draws for the assessment of post-dialysis BUN samples).</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>If yes, which of the following would best describe your facility's written policy for the TIMING of the post-dialysis BUN sample collection as of October 1, 1999? [CHECK ONLY ONE ANSWER]</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Immediately, without slowing blood flow</td> <td style="width: 50%;"><input type="checkbox"/> Immediately after slowing or stopping blood flow</td> </tr> <tr> <td><input type="checkbox"/> 15 to 60 seconds after slowing or stopping blood flow</td> <td><input type="checkbox"/> 61 to 120 seconds after slowing or stopping blood flow</td> </tr> <tr> <td><input type="checkbox"/> >2 to 15 minutes after slowing or stopping blood flow</td> <td><input type="checkbox"/> >15 minutes after slowing or stopping blood flow</td> </tr> </table>		<input type="checkbox"/> Immediately, without slowing blood flow	<input type="checkbox"/> Immediately after slowing or stopping blood flow	<input type="checkbox"/> 15 to 60 seconds after slowing or stopping blood flow	<input type="checkbox"/> 61 to 120 seconds after slowing or stopping blood flow	<input type="checkbox"/> >2 to 15 minutes after slowing or stopping blood flow	<input type="checkbox"/> >15 minutes after slowing or stopping blood flow
<input type="checkbox"/> Immediately, without slowing blood flow	<input type="checkbox"/> Immediately after slowing or stopping blood flow						
<input type="checkbox"/> 15 to 60 seconds after slowing or stopping blood flow	<input type="checkbox"/> 61 to 120 seconds after slowing or stopping blood flow						
<input type="checkbox"/> >2 to 15 minutes after slowing or stopping blood flow	<input type="checkbox"/> >15 minutes after slowing or stopping blood flow						
<p>2. During the time period January 1, 1999 to December 31, 1999, did your facility conduct and document an audit of adherence to the written policy for post-dialysis BUN sample collection? <i>(An audit refers to an actual physical observation and verification of post-dialysis BUN blood sample draws in order to assess compliance with the policy identified in question 1).</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p>							
<p>3. During the time period October 1, 1999 to December 31, 1999 did your facility re-process (re-use) dialyzers? <i>(Please answer "Yes" if your facility re-used ≥ 1 dialyzer(s) between October 1, 1999 and December 31, 1999.)</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p><i>If yes, please check the box(es) which most accurately represents the proportion of reprocessed dialyzers for which total cell volume (TCV) is measured in your facility prior to first use: [CHECK ALL THAT APPLY]</i></p> <p><input type="checkbox"/> < 95 % <input type="checkbox"/> 95 - 100 %</p> <p><input type="checkbox"/> We use the dialyzer manufacturer's product information to infer TCV</p> <p><input type="checkbox"/> We use batch testing and/or an average TCV for a group of hemodialyzers to infer TCV</p> <p><input type="checkbox"/> Other _____</p>							
<p>Individual Completing Form (Please print):</p>							
<p>First name: _____ Last name: _____ Title: _____</p> <p>Phone number: (____) _____ - _____ Fax number (____) _____ - _____</p>							

Appendix 5. HCFA Offices and ESRD Networks

HCFA Offices

Office of Clinical Standards and Quality,
Quality Measurement and Health Assessment Group
S3-02-01
7500 Security Boulevard
Baltimore, MD 21244
(410) 786-5785

Health Care Financing Administration - Region I
Division of Clinical Standards and Quality,
Clinical Standards Branch
Room 2275
JFK Federal Building
Boston, MA 02203-0003
(617) 565-3136

Health Care Financing Administration - Region VI
Division of Clinical Standards and Quality
Room 714
1301 Young Street
Dallas, TX 75202
(214) 767-4405

Health Care Financing Administration - Region VII
Division of Clinical Standards and Quality,
Medical Review Branch
Richard Bolling Federal Building
601 East 12th Street, Room 242
Kansas City, MO 64106-2808
(816) 426-5746

Health Care Financing Administration - Region X
Division of Clinical Standards and Quality
2201 Sixth Avenue, Mail Stop (RX-42)
Seattle, WA 98121-2500
(206) 615-2317

ESRD Networks

ESRD Network Organization No. 1
ESRD Network of New England, Inc.
P.O. Box 9484
New Haven, CT 06534
Region I: ME, NH, VT, MA, CT, RI
(203) 387-9332

ESRD Network Organization No. 2
ESRD Network of New York, Inc.
1249 Fifth Avenue A-419
New York, NY 10029
Region I: NY
(212) 289-4524

ESRD Network Organization No. 3
TransAtlantic Renal Council
Cranbury Gates Office Park
109 South Main Street, Suite 21
Cranbury, NJ 08512-9595
Region I: NJ, PR, VI
(609) 490-0310

ESRD Network Organization No. 4
University of Pittsburgh Medical Center
200 Lothrop Street
Pittsburgh, PA 15213-2582
Region I: PA, DE
(412) 647-3428

ESRD Network Organization No. 5
Mid-Atlantic Renal Coalition
1527 Huguenot Road
Midlothian, VA 23113
Region I: DC, MD, VA, WV
(804) 794-3757

ESRD Network Organization No. 6
Southeastern Kidney Council, Inc.
1000 St. Albans Drive
Suite 270
Raleigh, NC 27609
Region VI: GA, NC, SC
(919) 788-8112

Appendix 5 (continued)

ESRD Network Organization No. 7
ESRD Network of Florida, Inc.
One Davis Boulevard, Suite 304
Tampa, FL 33606
Region VI: FL
(813) 251-8686

ESRD Network Organization No. 8
Network Eight, Inc.
P.O. Box 55868
Jackson, MS 39296-5668
Region VI: AL, MS, TN
(601) 936-9260

ESRD Network Organization No. 9 & 10
The Renal Network, Inc.
911 East 86th Street, Suite 202
Indianapolis, IN 46240-1858
Region VII: KY, IN, OH, IL
(317) 257-8265

ESRD Network Organization No. 11
Renal Network of the Upper Midwest, Inc.
970 Raymond Avenue, Suite 205
St. Paul, MN 55114
Region VII: MI, MN, WI, ND, SD
(651) 644-9877

ESRD Network Organization No. 12
7505 NW Tiffany Springs Parkway, Suite 230
Kansas City, MO 64153
Region VII: MO, IA, NE, KS
(816) 880-9990

ESRD Network Organization No. 13
6600 N Meridan Ave, Ste 155
Oklahoma City, OK 73116-1411
Region VI: AR, LA, OK
(405) 843-8688

ESRD Network Organization No. 14
ESRD Network of Texas, Inc.
14114 Dallas Parkway, # 660
Dallas, TX 75240-4349
Region VI: TX
(972) 503-3215

ESRD Network Organization No. 15
Intermountain ESRD Network, Inc.
1301 Pennsylvania Street, Suite 750
Denver, CO 80203-5012
Region X: NM, CO, WY, UT, AZ, NV
(303) 831-8818

ESRD Network Organization No. 16
Northwest Renal Network
4702 42nd Avenue, SW
Seattle, WA 98116
Region X: MT, AK, ID, OR, WA
(206) 923-0714

ESRD Network Organization No. 17
TransPacific Renal Network
25 Mitchell Boulevard
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(415) 472-8590

ESRD Network Organization No. 18
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Appendix 6. ESRD CPM Quality Improvement Committee Members

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Appendix 7. List of Publications/Abstracts/Presentations of ESRD CPM and Core Indicators Data Publications

1. McClellan WM, Frederick P, Helgerson S, Hayes R, Ballard D, McMullan M. A Health Care Quality Improvement Program for end-stage renal disease (ESRD). *Health Care Financing Review*, 1995. 16;129-140.
2. McClellan WM, Helgerson S, Frederick P, Wish J. Implementing the Health Care Quality Improvement Program in the Medicare End-Stage Renal Disease Program: A new era of quality improvement. *Advances in Renal Replacement Therapy* 1995; 2:89-95.
3. McClellan Wm. Quality of patient care in the Medicare End-Stage Renal Disease (ESRD) Program: The basis and implementation of the 1994-1997 ESRD Health Care Quality Improvement Program (HCQRP). *Nephrology and Hypertension*. 1996; 5:224-229.
4. Helgerson SD, McClellan WM, Frederick PR, Beaver SK, Frankenfield DL, McMullan M. Improvement in adequacy of delivered dialysis for adult in-center hemodialysis patients in the United States, 1993 to 1995. *Am J Kidney Dis* 1997;29:851-861.
5. Rocco MV, Flanigan MJ, Beaver S, Frederick P, Gentile DE, McClellan WM, Polder J, Prowant BF, Taylor L, Helgerson SD. Report From the 1995 Core Indicators for Peritoneal Dialysis Study Group. *Am J Kidney Dis* 1997;30:165-173.
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Appendix 7 (continued)

Abstracts

1. Frankenfield DL, Frederick PR. Epoetin alfa (EPO) Dosing Patterns for In-Center Hemodialysis Patients - a National and Regional Snapshot. *International Pharmaceutical Abstracts* 1996;33(21):2283.
2. Rocco M, Flanigan M, Frederick P, Gentile D, Helgerson S, Krisher J, McClellan W, Polder J, Prowant B, Taylor L. 1995 ESRD Peritoneal Dialysis Core Indicators Study (PD-CIS): Serum Albumin and Dialysis Adequacy. *J Am Soc Nephrol* 1996;7 (September):1067A.
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Appendix 7 (continued)
Abstracts (continued)

19. Frankenfield DL, Rocco MV, Frederick PR, Owen WF. Adequacy of Dialysis for Adult (≥ 18 years) In-Center Hemodialysis Patients: Results from the 1998 ESRD Core Indicators Project. *J Am Soc Nephrol* 1999;10 (September):164A.
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Appendix 7 (continued) Presentations

1. Frankenfield DL, Frederick PR. Epoetin alfa (EPO) Dosing Patterns for In-Center Hemodialysis Patients - a National and Regional Snapshot. Poster presentation at the 31st Annual American Society of Health System Pharmacists Midyear Clinical Meeting, New Orleans, LA. 1996.
2. Rocco M, Flanigan M, Frederick P, Gentile D, Helgerson S, Krisher J, McClellan W, Polder J, Prowant B, Taylor L. 1995 ESRD Peritoneal Dialysis Core Indicators Study (PD-CIS): Serum Albumin and Dialysis Adequacy. Poster Presentation at the 29th Annual Meeting of the American Society of Nephrology, New Orleans, LA. 1996.
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7. Frankenfield DL, Frederick PR. Comparison of Epoetin Alfa (EPO) Dosing Patterns for In-Center Hemodialysis and Peritoneal Dialysis Patients - the 1996 End Stage Renal Disease (ESRD) Core Indicators Project. Poster presentation at the 32nd Annual American Society of Health System Pharmacists Midyear Clinical Meeting, Atlanta, GA. 1997.
8. Frederick PR, Frankenfield DL. ESRD Core Indicators Project - A Health Care Quality Improvement Program Project Focused on Improving Care for Hemodialysis Patients. Poster presentation at the Ninth Annual National Forum on Quality Improvement in Health Care, Orlando, FL. 1997.
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14. Frankenfield DL, Johnson CA, Baillie GR. Management of Anemia in End-Stage Renal Disease (ESRD) Patients in the U.S.: Results from the 1997 ESRD Core Indicators Project. Poster presentation at the 33rd Annual American Society of Health System Pharmacists Midyear Clinical Meeting, Las Vegas, NV. 1998.
15. Frederick PR, Frankenfield DL, Hall K. Changes in Practice Patterns following Quality Measurement Instrument Poster presentation at the 8th Annual National Kidney Foundation Clinical Nephrology Meeting. Washington, DC. 1999.

Appendix 7 (continued) Presentations (continued)

16. Frederick PR, Prowant BF, Russell KA. ESRD-DOQI Clinical Performance Measures. Oral presentation at the American Nephrology Nurses' Association 30th National Symposium. Baltimore, MD. 1999.
17. Frederick PR, Frankenfield DL. Gender Analysis of the 1998 ESRD Core Indicators Project Data. Poster presentation at the National Institutes of Health NIDDK Women and Renal Disease Conference. Bethesda, MD. 1999.
18. Frankenfield DL, Eggers PW, Greer JW, Rocco MV, Frederick PR, Owen WF. Comparison of Intermediate Outcomes for Fee-For-Service and HMO In-Center Hemodialysis Patients: Results from the 1998 ESRD Core Indicators Project. Poster presentation at the 32nd Annual Meeting of the American Society of Nephrology. Miami, FL. 1999.
19. Frankenfield DL, Rocco MV, Frederick PR, Owen WF. Adequacy of Dialysis for Adult (≥ 18 years) In-Center Hemodialysis Patients: Results from the 1998 ESRD Core Indicators Project. Poster presentation at the 32nd Annual Meeting of the American Society of Nephrology. Miami, FL. 1999.
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26. Frankenfield DL, Johnson CA. Management of Anemia in End-Stage Renal Disease (ESRD) Patients in the US: Results from the 1998 ESRD Core Indicators Project. Poster presentation at the 34th Annual American Society of Health System Pharmacists Midyear Clinical Meeting, Orlando, FL. 1999.
27. Rocco M, Frankenfield D, Frederick P, Flanigan M, Prowant B. Predictors of Death in Anuric Peritoneal Dialysis Patients. Poster presentation at the 33rd Annual Meeting of the American Society of Nephrology. Toronto, Canada. 2000.
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Appendix 7 (continued)
Presentations (continued)

32. Reddan D, Klassen P, Szczech L, Frankenfield D, Owen W. Monitoring of Synthetic Dialysis Grafts is not associated with Other Measures of Better ESRD Care – Initial findings from the 1999 Clinical Performance Measures Project (CPM). Poster presentation at the 33rd Annual Meeting of the American Society of Nephrology. Toronto, Canada. 2000.
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35. Frankenfield DL, Johnson CA. Management of Anemia in End-Stage Renal Disease (ESRD) Patients in the U.S.: Results from the 1999 ESRD Clinical Performance Measures Project. Poster presentation at the 35th Annual American Society of Health System Pharmacists Midyear Clinical Meeting, Las Vegas, NV. 2000.

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