

INDUSTRY UPDATE

New Fluid Management Guidelines from the Centers for Medicare and Medicaid Services (CMS) Increase the Necessity of CRIT-LINE's Capabilities.

New changes to the Interpretive Guidelines from Centers for Medicare and Medicaid Services (CMS) serve to hold Hemodialysis facilities more accountable for improving fluid management outcomes.

The new guidelines are much more specific and actually define Estimated Dry Weight (EDW) and the inter/ intradialytic measures that will be used to evaluate the outcomes:

- *A patient at their EDW should be asymptomatic and normotensive on minimum blood pressure medications, while preserving organ perfusion and maintaining existing residual renal function.*
- *A patient at their EDW attains normotension for most of the interdialytic period, while avoiding orthostatic hypotension or postural symptoms either during or after dialysis.*
- *Excess fluid accumulation may have adverse effects (e.g., hypertension, left ventricular hypertrophy, cardiovascular complications and hospitalizations).*
- *Removal of too much fluid or removing it too fast in one dialysis treatment or going below the patient's target weight may cause hypotension, muscle cramping, and clotting of the vascular access. Each patient should be weighed before and after each treatment.*
- *The ultra-filtration component of the hemodialysis prescription should be optimized with a goal to render the patient euvolemic and normotensive.*
- *With successful fluid management, the number of medications a patient needs for blood pressure control may be able to be reduced. There should be a target weight identified for each patient, and evidence that failure to achieve the target weight through the dialysis treatment is addressed.*

The new conditions of coverage elevate the importance of fluid management as an indicator for adequacy of dialysis as well as emphasize its effect on cardiac mortality, intradialytic morbidities, anemia, nutritional status, and access patency.

The new guidelines are also more specific on what needs to be assessed and reassessed for root cause analysis of why the goals can not be met, and why patients are experiencing intradialytic symptoms:

- *The comprehensive assessment should include evaluation of the patient's pre/intra/post and interdialytic blood pressures, interdialytic weight gains, target weight, and related intradialytic symptoms (e.g., hypertension, hypotension, muscular cramping) along with an analysis for potential root causes.*

A facility can no longer just give saline to a patient to treat a symptom – they need to go the next step to find out why it happened. The CRIT-LINE helps with identifying – and eliminating root causes:

- *low Hct*
- *volume overload*
- *hypovolemia*
- *hypoxemia*
- *UFR is too fast*
- *patient is at dry weight*
- *position issues*
- *low cardiac output*

The CRIT-LINE is unique in that it provides the root caused analysis. Treatments for symptoms without the CRIT-LINE do not accurately or clinically define the underlying problem(s).

While the new guidelines mandate BVM for one patient population, it states the claim that it is needed to evaluate fluid vs. body weight changes, opening the door to why it is not equally as important for all patients:

For pediatric patients weighing less than 35 kg., blood volume monitoring during hemodialysis should be available in order to evaluate body weight changes for gains in muscle weight vs. fluid overload

The new guidelines also describe an “unstable patient” as one who has experienced:

- Hypotension, restlessness, or other symptoms severe enough to prevent completion of the majority of dialysis treatments;
- Sudden onset of recurrent cardiac arrhythmias
- Chronic congestive heart failure

These patients will require reassessment and plan of care changes monthly until stable. This has not been the case to date. The **CRIT-LINE** is the tool to help assess, and prevent the above.

The new guidelines also include fluid management more specifically as related to adequacy:

Inadequate dialysis would also include symptoms related to fluid management such as volume overload or depletion; intradialytic symptoms such as syncope or congestive heart failure; hypertension; or the need for extra treatment(s) for fluid removal.

The intent of QAPI in addressing adequacy of dialysis is to maximize the number of patients who achieve the goals for adequate dialysis, which include **both successful fluid volume management and clearance of toxins:**

Added to the Measurement Assessment Tool (MAT) –V543 Dose of Dialysis – Management of volume status- Value monitored: Euvolemic and normotensive: BP 130/80 (adult); lower of 90% of normal for age/ht/wt or 130/80 (pediatric)

The new guidelines require that evidence of reaching target weight be documented:

Evidence of implementation of the plan of care for this aspect would include treatment records reflecting attaining the target weight at the end of each treatment or documentation acknowledging the target weight was not attained with an assessment of the reason for not attaining it, and a plan to correct this issue

The only evidence based method to accomplish this today is with the **CRIT-LINE** dry weight check at the end of the treatment.

Accountability of the team to meet the goals is highlighted- and cannot be solely blamed on the patient. If the expected outcome is not achieved, the interdisciplinary team must adjust the patient's plan of care to achieve the specified goals.

This requirement is not satisfied if the only reason documented for failure to achieve goal(s) is “patient non-compliance” or “non-adherence.”

For the first time ever, intradialytic morbidities are listed under medical injury and root cause analysis is mandated vs. acceptance as an expected part of the dialysis treatment. The **CRIT-LINE** can help with the analysis and proactive prevention.

“Similarly, occurrences such as treatment prescription errors, intradialytic morbidities, and staff needle sticks should be identified, reviewed and trended. “Intradialytic morbidities” is any adverse symptom that occurs during the dialysis treatment to include but not be limited to seizures, chest pain, hypotension and cardiac arrest. Other events which should be tracked include hospitalizations, deaths, acute allergic-type reactions, blood loss >100 ml, and patient transfers by ambulance from the dialysis facility to a hospital emergency room”.

V640 The facility must immediately correct any identified problems that threaten the health and safety of patients. Examples of conditions which could pose a threat to the health and safety of dialysis patients and require immediate correction include but are not limited to:

- Failure to conduct an accurate pre-assessment
- Setting an inaccurate fluid removal rate
- Failure to provide adequate observation of patient, patient vascular access, patient equipment;

Staff education is now mandated to include:

“Specific competencies expected to be able to be demonstrated by staff assigned to these tasks include, but are not limited to...identifying and treating intradialytic morbidities, and monitoring patients and equipment alarms during treatment.

