

Recognition and Correction of Fluid Alterations – RECOVA

1. Symptom Score

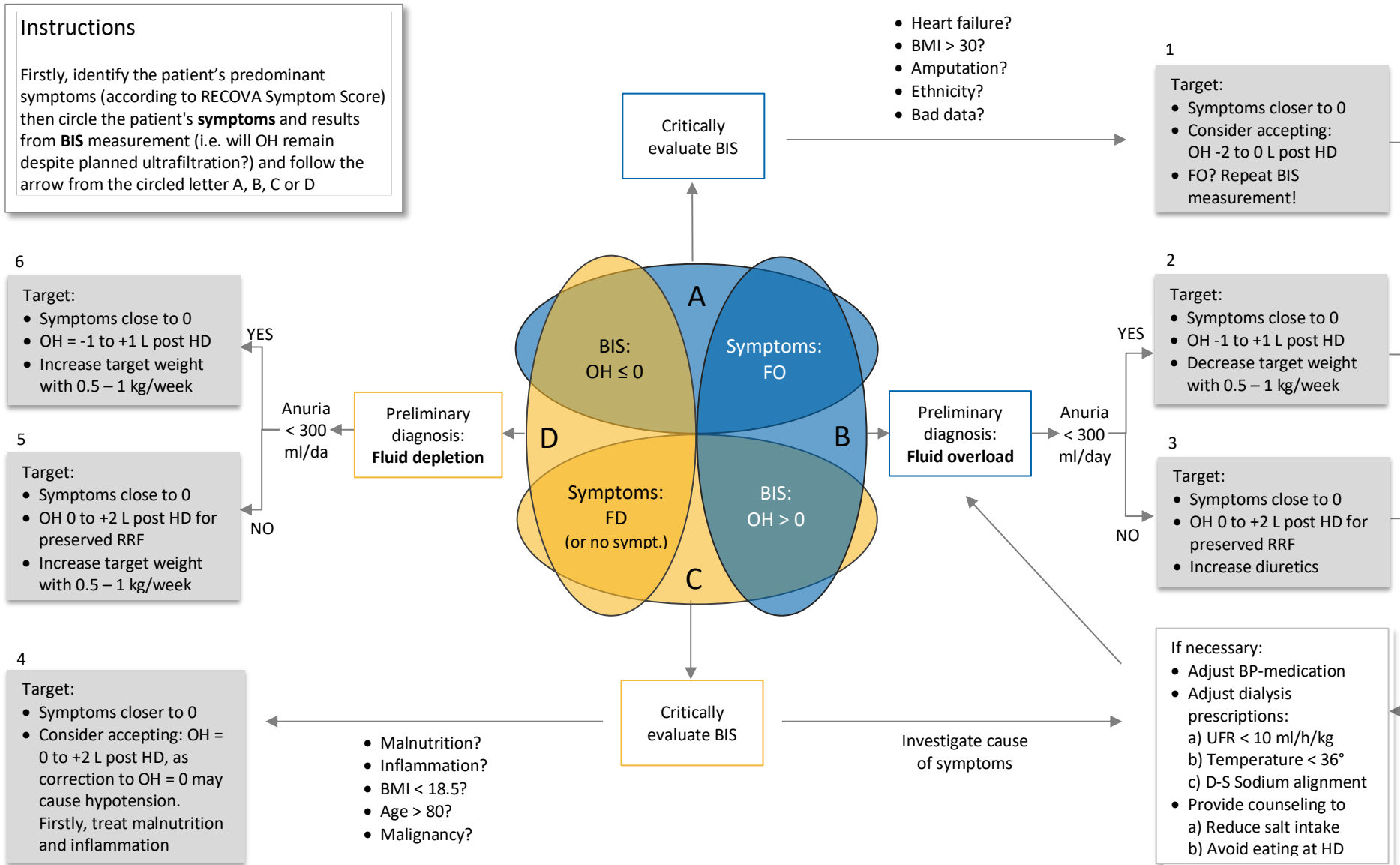
	Symptoms of fluid depletion (0-8 points)				Symptoms of fluid overload (0-8 points)		
	3	2	1	0	1	2	3
Dyspnea at rest				Absence of symptoms	Recumbent	Two cushions	Sitting
Pretibial edema					Weak	Severe	
Symptoms of FO between HD sessions					Unexpectedly low weight gain	Chronic coughing (new)	
Blood pressure increase					BP increase after UF		
Muscle cramps (calf)		Severe	Moderate				
Symptomatic IDH and ≥ 20 mmHg sBP decrease	Vomiting or unconsciousness	Requiring saline infusion or stopped UF	Requiring position change				
Symptoms of FD between HD sessions	Dizziness, symptomatic hypotension	Limpness /tiredness	Thirst directly after HD				

FO: fluid overload; HD: hemodialysis; IDH: intradialytic hypotension, sBP: systolic blood pressure; FD: fluid depletion

2. Thresholds and triggers

SVS Score	Response	Action
0	Evaluation of target weight (DW) every second week	Bioimpedance measurement 2 – 4 times/year for assessment of hydration status and nutritional status
1 – 4	Target weight should be questioned	Inform registered nurse, who must assess the patient, and decide whether initiation of DW change is required or if symptoms may be explained by other known conditions (such as heart failure or advanced chronic obstructive pulmonary disease). Perform Bioimpedance measurement and evaluate according to decision aid. Repeat measurement at three occasions or until target weight is achieved.
5-6 or 3 in a single parameter	Target weight should be adjusted	Inform clinician for assessment. Perform Bioimpedance measurement without delay and evaluate according to decision aid. Repeat on three occasions or until achievement of target weight goal.
7 or more	Immediate need for evaluation of hydration status and target weight adjustment	Registered nurse to immediately inform the clinician

3. RECOVA - Decision aid



BIS: bioimpedance spectroscopy, BMI: body mass index, BP: blood pressure, D-S Sodium alignment: Prescribed dialysate sodium concentration should be equivalent to serum sodium concentration; DW: dry weight; HD: hemodialysis, FD: fluid depletion, FO: Fluid overload, OH: overhydration, RRF: residual renal function; UFR: ultrafiltration rate, UFV: ultrafiltration