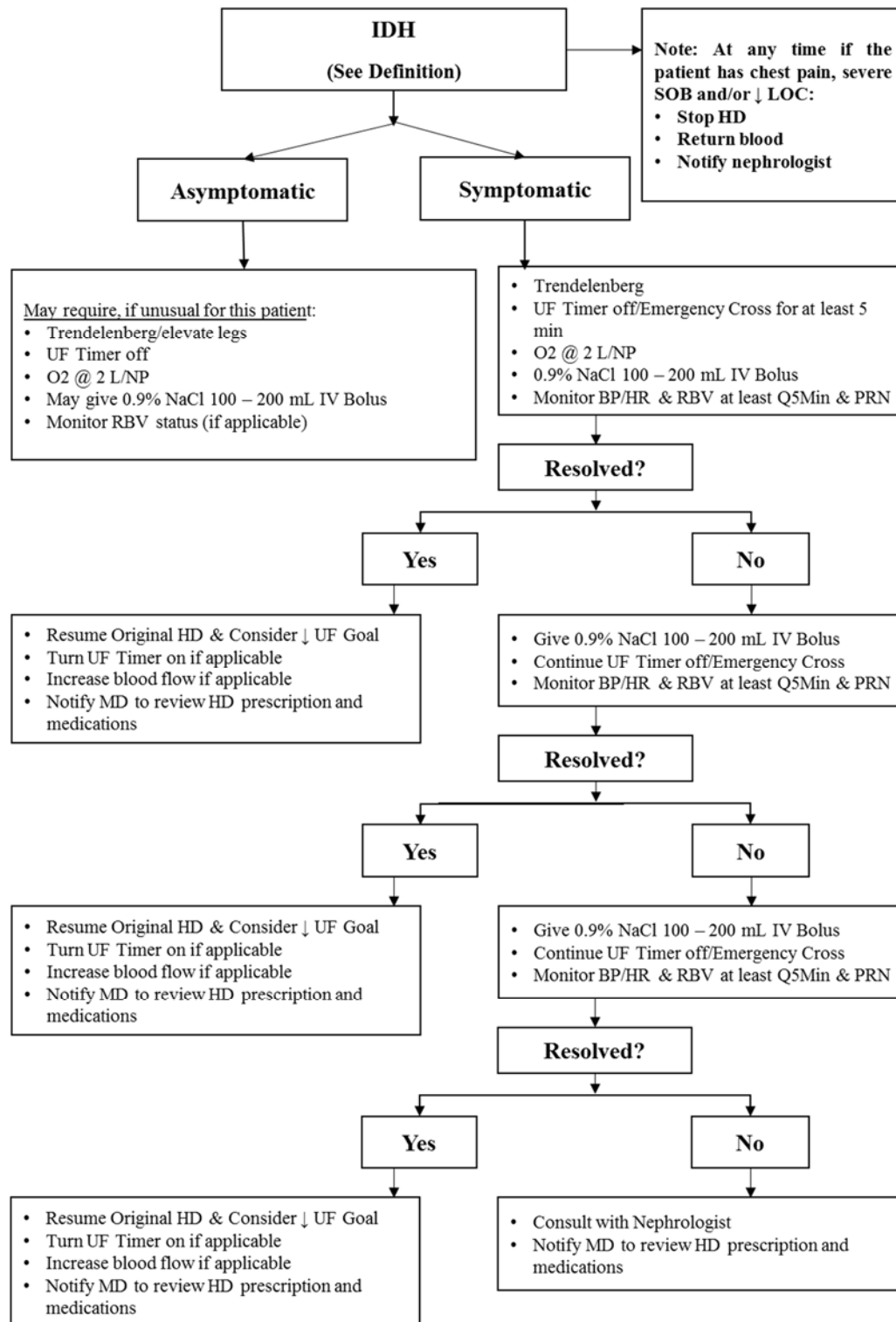
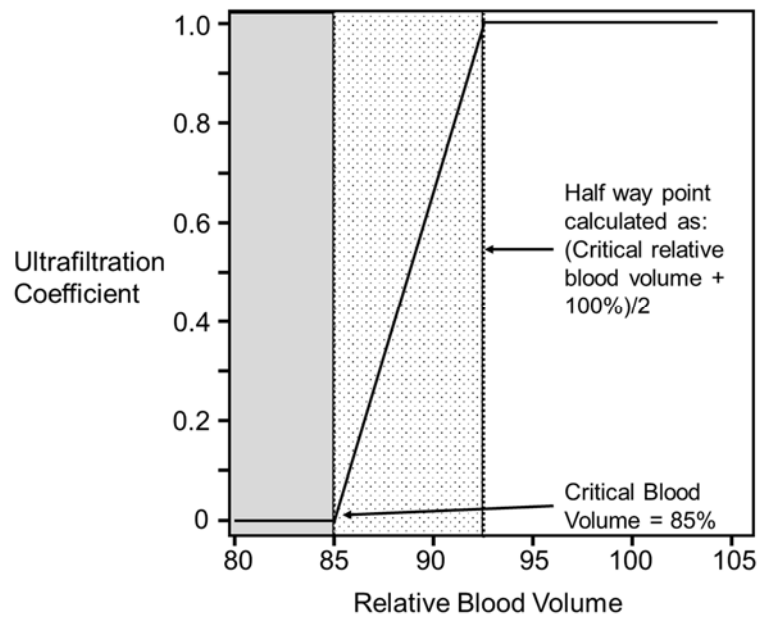


Supplemental Figure 1: Nursing IDH Management Algorithm



BP = blood pressure; HD = hemodialysis; HR = heart rate; IV = intravenous; LOC = level of consciousness; NP = nasal prongs; PRN = as needed; Q5 = every 5; SOB = short of breath; TW = target weight; UF = ultrafiltration; RBV = relative blood volume.

Supplemental Figure 2: Blood volume monitoring ultrafiltration guided biofeedback algorithm



The biofeedback algorithm first calculates the maximum rate of ultrafiltration, which is defined as twice the initial ultrafiltration volume divided by the remaining time. The actual ultrafiltration rate is the maximum ultrafiltration rate multiplied by a variable known as the ultrafiltration coefficient (ranging from zero to one). At the beginning of HD, the ultrafiltration coefficient equals one until the relative blood volume is halfway towards the critical relative blood volume. Once past the halfway point, the ultrafiltration coefficient decreases linearly (thus slowing the actual ultrafiltration rate) until the critical relative blood volume is reached, when the coefficient equals zero to effectively stop ultrafiltration. In our example, the blood volume monitoring algorithm uses a critical blood volume of 85%. When the actual relative blood volume is less than 85%, the ultrafiltration coefficient is 0, ceasing ultrafiltration (gray area). When the relative blood volume is more than half way between 100% and the critical blood volume (92.5% in this example), the ultrafiltration coefficient follows a linear path between 0 and 1 (dotted area). When the relative blood volume is above the half way point, the ultrafiltration coefficient is 1 and the ultrafiltration is maximal (white area).