**Impact of multidisciplinary rounds on intravenous fluid administration in the intensive care unit**

**Authors:** Bosko K, PharmD1; Gurganious C, PharmD, BCPS, BCCCP1;

Grant M, PharmD, BCPS, BCCCP1; Ledford E, PharmD, BCPS, BCCCP, BCCP1

**Practice site:** WakeMed Health & Hospitals1

**Purpose/Background:** The widespread use of intravenous fluids (IVF) has become a mainstay of therapy among critically ill patients. Fluid stewardship principles have been proposed to improve volume status and prevent adverse outcomes associated with fluid overload (FO). In the multi-disciplinary setting, IVF management may be further enhanced through pharmacist-driven stewardship interventions.

**Objective:** To evaluate the impact of pharmacist interventions on initial fluid administration before and after the implementation of a multi-disciplinary rounding (MDR) structure in the intensive care unit (ICU).

**Methods:** A retrospective single-center chart review was conducted before and after the implementation MDR from October 2017 to March 2018 and January 2020 to March 2021, respectively. Adult patients who received maintenance IVF within 24 h of ICU admission were included. Patients were excluded if they had an indication necessitating aggressive resuscitation, had strict IVF requirements, chronic kidney disease, or were pregnant. The primary outcome measure was the median change in total IVF intake within 72 h of ICU admission.

**Results:** A total of 211 patients were included. The median total IVF intake at 72 h was lower in the post-MDR group (8196 mL [4763-12135]) compared to the pre-MDR group (9398 mL [6469-14147]; *p*=0.007). Maintenance IVF intake at 72 h was also reduced following MDR implementation (4185 mL [2412-6341] vs 6223 mL [2412-6341]; *p*<0.0001). In the post-MDR group (n=96), 75% of patient had fluid-related pharmacist interventions compared to 25% in the pre-MDR group (n=115) which was significant (*p*<0.0001).

**Conclusion:** The implementation of MDR in the medical and surgical ICU was associated with a significant reduction in total IVF administration within the first 72 h of ICU admission.