

To: Medical Staff, House staff, Nursing Staff, Patient Care Centers, and Outpatient Clinics

From: Clarence Chan, MD, PhD
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Date: 11/17/2025

Subject: New Instrumentation for Osmolality Testing

Effective Date: 11/20/2025

Laboratory Section: Chemistry

Summary:

Effective November 20, 2025, the Hyde Park Clinical Chemistry Laboratory will implement new osmometers (OsmoPro Max) for osmolality testing, replacing the current instrumentation.

The test principle for the two instruments is the same, and their performance characteristics are equivalent.

As part of this implementation, the serum/plasma osmolality reference range will be updated to a more conventional interval:

- Serum/Plasma Osmolality: 275–295 mOsm/kg¹⁻³ (*updated*)
- Urine Osmolality: 500–800 mOsm/kg (*unchanged*)
- Fluid Osmolality: Reference range not established (*unchanged*)

No changes to test ordering, specimen requirements, or result reporting are anticipated aside from the updated serum/plasma reference interval.

References:

¹Oh MS, Briefel G, Pincus MR. Evaluation of renal function, water, electrolytes, and acid-base balance. In: McPherson RA, Pincus MR, eds. Henry's Clinical Diagnosis and Management by Laboratory Methods. 24th ed. Philadelphia, PA: Elsevier; 2022:chap 15.

²Verbalis JG. Disorders of water balance. In: Yu ASL, Chertow GM, Luyckx VA, Marsden PA, Skorecki K, Taal MW, eds. Brenner and Rector's The Kidney. 11th ed. Philadelphia, PA: Elsevier; 2020:chap 15.

³Dorwart WV, Chalmers L. Comparison of methods for calculating serum osmolality from chemical concentrations, and the prognostic value of such calculations. Clin Chem. 1975 Feb;21(2):190-4.

If there are any questions regarding these updates, please contact:

The UCM Clinical Chemistry Lab – Hyde Park at 773-702-1772.

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