Clinical Laboratory Test Update

Oxygen Saturation

Effective December 17, 2018, University of Colorado Hospital Laboratory will change the value reported as the Oxygen Saturation result. Historically the value for this parameter reported as part of a blood gas determination at UCH has been the ratio (FO2Hb) of oxyhemoglobin to total hemoglobin concentration. The preferred value that will be reported, is the ratio (sO2) of oxyhemoglobin to the concentration of functional hemoglobin capable of carrying oxygen.

Increased carboxyhemoglobin or methemoglobin results in a reduction in FO2Hb but leaves sO2 unchanged. Because dyshemoglobins are normally only present in small amounts (<3% of total hemoglobin), sO2 and FO2Hb differ by only slightly in healthy individuals and most pathological conditions, with sO2 being 1–3% higher than FO2Hb. In the absence of dyshemoglobinemia (COHb and/or MetHb) FO2Hb and sO2 are equivalent.

Please contact Dr. Greg Bocsi at 720-848-7050 if you have any questions or visit our website at https://www.uchealth.org/professionals/uch-clinical-laboratory/ for additional information.

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