Abstract

Rigorous glucose control is essential for prevention of diabetes-related complications in diabetes patients. Even without diabetes, tight glucose control is beneficial in hospitalized, critically ill patients.

Actually, three different glucose measurement methods are used: (1) hand held devices, (2) blood-gas analyzers, and (3) laboratory analyzers in core laboratories. Each method is subject to specific challenges and limitations that can affect the overall system performance.

In this article, we aim to demonstrate that even glucose measurement results from core laboratories (professional laboratory systems) do not necessarily reflect the absolute “true” glucose level of a patient.