Assessment of Glycated Hemoglobin Using A1CNow+[™] Point-of-Care Device as Compared to Central Laboratory Testing

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Abstract

Background:

Hemoglobin A1c monitoring is routine care for patients with diabetes and may be obtained as often as every 3 months. Most family practice clinics are not equipped to evaluate a hemoglobin A1c result in the office. Obtaining a hemoglobin A1c result from a central laboratory can result in a delay, added expense, and inconvenience for the patient. To date, there are no published studies on the accuracy of the A1CNow+TM, a point-of-care hemoglobin A1c monitoring device.

Methods:

Seventy patients having type 1 or type 2 diabetes were enrolled from three pharmacy-managed diabetes clinics. Subjects were required to have a venous blood draw within 1 week of the point-of-care test. The study then evaluated the statistical and clinical significance between both tests.

Results:

A good correlation was seen between the A1CNow+ and laboratory values with a correlation coefficient of r = 0.893. The best correlation between the A1CNow+ and the laboratory was seen among hemoglobin A1c values in the range of 7–8.5%.

Conclusion:

The access of the A1CNow+ device at point of care makes a hemoglobin A1c evaluation economically and therapeutically beneficial after proving its accuracy in a primary care setting. Advantages of this device may go beyond convenience and economic benefit by allowing patients to acknowledge their level of glucose control at the point of care and to be counseled appropriately.

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Abbreviations: (NGSP) National Glycohemoglobin Standardization Program, (SMBG) self-monitored blood glucose

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