

Usefulness of Point-of-Care Testing in the Treatment of Diabetes in an Underserved Population

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Abstract

Background:

The purpose of this article was to communicate our experience with point-of-care testing (POCT) using Bayer's A1CNow+[®] device to test glycated hemoglobin (A1C) in the management of diabetes and to share the observations of our quality control efforts.

Methods:

Forty-seven patients' POCT samples were compared with laboratory samples to determine the validity of the POCT sample being drawn. Data collected represent a 10-month time period that were drawn on-site with the following distribution: 36 samples were drawn the same day, 7 samples were drawn 1 day later, 3 samples were drawn within 3 days, and 1 sample was drawn 4 days later. Although all samples were collected on-site, some of the samples were sent to other local branches of nationally recognized laboratories for analysis.

Results:

The range of A1C results for the POCT group was 5.6 to >13%. The range of A1C results for the laboratory-drawn group was 5 to 12.6%. Twenty-four patients had laboratory results that read lower than the result obtained in the clinic, with an A1C range of 5 to 12.6%, and two patients had laboratory results that read exactly the same as the result obtained in the clinic when using POCT. These two individuals had A1C results of 9.1 and 12.6%. Analysis of data collected determined an *r* value of 0.918 demonstrating agreement between the POCT samples and the laboratory samples.

Conclusions:

POCT with the A1CNow+ is an effective, economical tool for use in a pharmacist-based diabetes clinic that serves a high-risk underserved population. POCT allows the pharmacist the ability to use on-site results to inform patients of their progress, modify their therapy immediately with an immediate face-to-face opportunity to assure understanding, and provide a self-management goal.

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Abbreviations: (A1C) glycated hemoglobin, (HCP) health care professional, (POCT) point-of-care testing

Keywords: diabetes, patient-centered care, pharmacist-based care, point-of-care testing, underserved

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