

Effect of Point of Care Diabetic Testing in a Large Residency Program

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Background

Standard of care for diabetic patients includes routine laboratory testing for glucose and lipid levels. Until recently, this testing required follow-up by telephone or a subsequent visit by the patient. Point-of-care testing was initiated in July of 2004 for hemoglobin A1c with results being available to the physician and patient during the visit.

Methods

HbA1c levels for patients tested between July 2004 and March 2005 were recorded. Average HbA1c levels were determined, as well as the percentage of patients with levels considered to be at goal. Results were compared between the quarterly testing periods as well as against summary data collected prior to the initiation of POC testing.

Results

Over the 9 month study, we tested between 31 and 52 patients per month. Monthly average A1c values ranged from 6.83 to 8.51. An unpaired t-test showed no significant improvement over the course of the study. The percentage of patients at or below the goal value of 7.0 ranged from 31% to 68%. Again, a chi-squared test showed no significant improvement over the time of the study. The average A1c over the nine-month period was 7.29 and an average of 54.7% of the values were at or below goal.

Conclusion

The immediate availability of hemoglobin A1c results did not improve either the average A1c value or the percentage of patients at goal during this study period. Review of patient data indicates that this is most likely due to inconsistent use of the test results during the office visit. However, it must be noted that we are, by the results of this study, maintaining slightly over 50% of our patients at goal for glycemic control.