

## **Changing Outcomes: A Reflection of Focused Attention on Clinical Practice Guidelines**

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Since 1998, CDA has introduced 2 sets of clinical practice guidelines (CPG); the Diabetes Care Program of Nova Scotia (DCPNS) has helped to translate them into general use in NS. We assessed how well the CPG practice and outcome targets were achieved in Diabetes Centres (DCs) and whether improvements occurred over time.

In 1998-2002, DCPNS audited 100 randomly selected charts from each of 9 DCs ( $n_1=900$ ), looking at relevant practices and outcomes of care (e.g., A1c, BP, lipids). In 2007, a new random selection of 100 charts each was audited from the same 9 DCs ( $n_2 = 900$ ). The selections were limited to patients  $\geq 19$  yrs with Type 1 or 2 DM for  $>1$  yr and who were seen for  $\geq 15$  months prior to the data collection point.

Mean age did not differ across time (98-02: 64.4 vs 2007: 65.5 yrs;  $p=0.08$ ). Mean duration of DM was longer in 2007 (10.0 vs 8.5 yrs;  $p<0.001$ ). BMI was higher in 2007, among women only (32.3 vs 30.6;  $p<0.001$ ). Treatment type differed across time ( $p<0.001$ ). In 2007, patients were less likely to be treated with diet alone (21 vs 35%) and were more likely to be treated with a combination of OHA and insulin (10.9 vs 2.9%). The % of patients with a mean A1c  $>8.5\%$  dropped from 18.6% in 98-02 to 12.1% in 2007 ( $p<0.001$ ). Mean systolic and diastolic BP decreased from 139/76 in 98-02 to 129/72 in 2007 ( $p$ 's  $<0.001$ ). The % of subjects with BP  $<130/80$  increased from 23% in 98-02 to 50% in 2007 ( $p<0.001$ ). The % of subjects with LDL  $<2.5$  mmol/L increased from 22.3% in 98-02 to 63.6% in 2007 ( $p<0.001$ ). The rate of use of lipid-lowering and antihypertensive medications in 2007 was 1.4 and 1.6 times higher than in 98-02 (46.9 vs 33.9% & 79.9 vs 48.9%, respectively). The % of patients with a documented eye assessment increased in 2007 (87 vs 68%;  $p<0.001$ ). Documented foot assessment increased ( $p<0.001$ ) from 35% in 98-02 but remained low at 47% in 2007. Findings for a subset of 79 cases present in both time periods mirrored that of the whole group.

This analysis shows a significant improvement in important indicators of DM care for DC patients in NS. It suggests that recent research and guidelines are changing practice and improving patient outcomes. This analysis allows the DCPNS and local DCs to set goals for continued improvement and to target areas of relative weakness such as the documentation of foot assessments.

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