CONFERENCE ABSTRACT

Long term outcomes and mortality among patients enrolled in a structured primary care-led diabetes programme

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Fiona Riordan[1], Sheena McHugh[1], Velma Harkins[2], Patricia Kearney[1]

1: University College Cork, Ireland;
2: Midlands Diabetes Structured Care Programme, Ireland

Introduction: Limited data exists, internationally and in Ireland, on long-term outcomes among people with diabetes who are managed in primary care. The Midlands Diabetes Structured Care Programme takes a multifaceted approach to primary-care-led management, encompassing evidence-based strategies to integrate diabetes management within general practice (clinical integration) and with other disciplines (professional integration), including patient registration and recall, regular diabetes review visits, active role of the practice nurse in coordination and ongoing management, multidisciplinary specialist access (e.g. nurse specialists, dietetics, ophthalmology, chiropody), professional education, and remuneration. Our aim was to examine mortality, complications and clinical outcome targets among patients with diabetes enrolled in the programme since its establishment in 1998.

Methods: Data were collected in 1998 and 2015, on patient outcomes (mortality (2015), complications (2008–2015), and clinical parameters (1998, 2015)), among patients with diabetes (≥18 years) registered with participating practices. Data were extracted from patient notes by clinical nurse specialists using a paper-based data collection form. Using Stata, chi-square tests were used to test differences in clinical outcomes over time and to examine baseline factors associated with mortality.

Results: Overall 376 patients (10 practices) were followed up to 2015. Among survivors (n=192, 51%), 23% (n=30) had experienced a macrovascular complication; primarily heart failure (n=9, 7%) or CVA (n=7, 5%), and 2% (n=1) had a minor amputation. In 1998, 15% (n=14) had retinopathy, increasing to 72% (n=118) by 2015. The proportion of patients with a recommended blood pressure target (<130/80mmHg) increased from 9% in 1998 to 26% in 2015 (P<0.001), as did the proportion with a total cholesterol of <4.5mmol/L (22% vs.71%, P<0.001), and triglycerides <2.0mmol/L (47% vs.81%, P<0.001). There was a decline in the percentage achieving optimal glycaemic control (HbA1c≤7.0%) (52% vs. 34%). In total, 184 (49%) had died. Where recorded (n=46, 25%), the main causes were MI (n=12, 26%) or cancer (n=10, 22%). Decedents were older at baseline (69.5±11.2 years) than survivors (56.6±11.7 years). Gender, diabetes type, smoking status and clinical parameters at baseline were not associated with mortality.

Discussion: The findings indicate the progress which has been made in clinical outcomes among patients enrolled since the initiation of the programme.

Conclusions: The proportion of patients meeting targets increased over time. There was a high incidence of macrovascular complications. The proportion of patients with retinopathy had increased over time, reflecting the increasing age of the cohort, and potentially improvements in screening during the study period.

Lessons learned: Improvements in the clinical profile of patients enrolled in the programme since its inception suggests primary-care-led diabetes management can perform favourably in the long-term. The incidence and prevalence of complications indicates the importance of effective management and achieving clinical outcome targets.

Limitations: Changes observed in patient outcomes cannot be attributed directly to the programme and may reflect improvements in clinical guidance, self management, and medication during the study period.

Suggestions for future research: Future work should explore factors associated with mortality and survival in this cohort, including establishing cause of death to facilitate comparisons the national population.