Background Stroke is a leading cause of neurological disability and mortality worldwide. Diabetes is a risk factor for stroke, conferring up to four times the risk. We aimed to estimate the incidence rate ratio (IRR) and trends over time.

Methods Data were extracted from the national Hospital Inpatient Enquiry (HIPE) database. Incidence rates (IR) and IRR rates in people with and without diabetes were calculated. Poisson regression models, adjusted for age, were used to calculate the incidence rate ratio (IRR) and trends over time.

Results In males with diabetes there was an average decrease in IR of 1.7% per year (IRR 0.983 (95% CI 0.974–0.991), p<0.001) over the 11 years. In males without diabetes, the IR remained unchanged (IRR 0.998 (95% CI 0.994–1.00), p=0.25). In females, there was an average decrease in IR of 3.3% per year in those with diabetes (IRR 0.967 (95% CI 0.957–0.976), p<0.001) and 1% per year in those without diabetes (IRR 0.99 (95% CI 0.985–0.994), p<0.001).

The IRR for the association between diabetes and IS was 2.0 (95% CI 1.95–2.06), p<0.001) for males and 2.2 (95% CI 2.12–2.27), p<0.001) for females over the study period. The IRR of IHM is higher in males (IRR 1.81 (1.67–1.97) and females (IRR 2.0 (95% CI 1.84–2.18) with diabetes compared to those without diabetes. Over the 11-years, 8.2% of incident cases were attributable to diabetes.

Conclusion This study provides evidence of the significant contribution of diabetes to IS incidence and mortality in Ireland. Estimates of national trends are necessary to deliver public health interventions targeted at high risk groups.

REFERENCES