Conclusion In contrast with existing research, we find that the majority of rises and falls in deaths during the Great Depression was unrelated to economic shocks. Spurious correlations can occur when immediate effects are not decoupled from long-term trends, especially problematic with trending variables, such as GDP. Consistent with existing work, we observed that bank suspensions led to rapid rises in suicides and falls in road traffic fatalities. Further research should investigate alternative explanations for the reductions in infectious diseases and their marked variations across cities and states, such as nutrition, sanitation, the New Deal, Prohibition and other public health measures at the time.

Diabetes

S Wild, for the Scottish Diabetes Research Network Epidemiology Group. Centre for Population Health Sciences, University of Edinburgh, UK

Background RRs of mortality associated with type 2 diabetes (T2DM) have declined in recent years but are higher in women than men in many populations. The role of socio-economic status (SES) in risk of mortality among people with diabetes is not clear.

Methods We used data from a population-based national diabetes register to investigate the associations between T2DM, SES and mortality. SES was categorised with Q5 and Q1 representing the most deprived and most affluent quintiles from an area-based measure. Age-standardised incidence for 2004 and RRs for all-cause mortality among people with incident T2DM of 55 to 84 years of age between 2001 and 2007 were estimated using general population data, the European standard population and Poisson regression models.

Results Complete data were available for 111,441 people who developed type 2 diabetes between 2001 and 2007 and there were 8775 deaths before the end of 2007. SES had a more marked effect on age-standardised incidence of T2DM among women (717.5 vs 357.2 per 100,000, age-adjusted RR for Q5 vs Q1 (95% CI) 1.91 (1.62 to 2.25)) than men (comparable estimates 918.6 vs 568.9 per 100,000, 1.59 (1.38–1.84)). Age and SES adjusted RR (95% CI) for mortality were 0.97 (0.93 to 1.01) for men and 1.11 (1.07 to 1.16) for women. Age and sex adjusted RR for mortality associated with type 2 diabetes was lower for Q5 (0.93 (0.89–0.97) than for Q1 (1.19 (1.12 to 1.27)).

Conclusion RRs for mortality associated with incident T2DM were lower in this population than reported in previous studies. Incident diabetes was not associated with increased mortality among men but was associated with higher mortality in women compared to women without diabetes. SES modifies the effect of T2DM on mortality but does not explain sex differences in RR. Further work is required to establish whether these findings can be explained by risk factor patterns.

Methods The model integrates population, obesity and smoking trends to estimate future diabetes prevalence. From three starting states (healthy, obese and smokers) the number of people with diabetes and deaths by diabetes status are estimated using a Markov approach. The transition probabilities and RR associated with risk factors were obtained from the literature, except for diabetes incidence that was estimated using DISMOD. For validation purposes, we developed a model for the England and Wales population (1993–2006), and compared model outputs with diabetes prevalence reported by the Health Survey for England (HSE) and the English Longitudinal Study of Ageing (ELSA).

Results The prevalence of diabetes mellitus in England and Wales in 1993 was 3% in men and 2% in women (HSE; adjusted for self-reporting, 3.9% and 2.6% respectively) and increased to 6% and 4% (7.3% and 5.5%, adjusted) by 2006. Obesity prevalence almost doubled and smoking trends showed a more complex pattern. Comparisons with the HSE showed almost parallel trends, over a period of 15 years. Prevalence as estimated from the model was 7.5% for men and 5.7% for women for 2006 and 8.9% and 7.2% for 2012. The model tends to slightly overestimate prevalence but accuracy improved in later years. The estimated prevalence compared well with that reported in ELSA (Men: model: 9.9%, ELSA: 11.6%; women: 8.3% and 6.8%).

Conclusions The model provide a reasonably close estimate of diabetes prevalence for England over the 1993–2006 period, compared with contemporary independent prevalence surveys in the same population. Although the model seems to slightly overestimate prevalence, the observed and modelled trends are almost parallel. Further testing and validation in a range of populations would be desirable but the model appears to provide reasonably accurate estimates of diabetes prevalence that could be used by policymakers.

Methods The model integrates population, obesity and smoking trends to estimate future diabetes prevalence. From three starting states (healthy, obese and smokers) the number of people with diabetes and deaths by diabetes status are estimated using a Markov approach. The transition probabilities and RR associated with risk factors were obtained from the literature, except for diabetes incidence that was estimated using DISMOD. For validation purposes, we developed a model for the England and Wales population (1993–2006), and compared model outputs with diabetes prevalence reported by the Health Survey for England (HSE) and the English Longitudinal Study of Ageing (ELSA).

Results The prevalence of diabetes mellitus in England and Wales in 1993 was 3% in men and 2% in women (HSE; adjusted for self-reporting, 3.9% and 2.6% respectively) and increased to 6% and 4% (7.3% and 5.5%, adjusted) by 2006. Obesity prevalence almost doubled and smoking trends showed a more complex pattern. Comparisons with the HSE showed almost parallel trends, over a period of 15 years. Prevalence as estimated from the model was 7.5% for men and 5.7% for women for 2006 and 8.9% and 7.2% for 2012. The model tends to slightly overestimate prevalence but accuracy improved in later years. The estimated prevalence compared well with that reported in ELSA (Men: model: 9.9%, ELSA: 11.6%; women: 8.3% and 6.8%).

Conclusions The model provide a reasonably close estimate of diabetes prevalence for England over the 1993–2006 period, compared with contemporary independent prevalence surveys in the same population. Although the model seems to slightly overestimate prevalence, the observed and modelled trends are almost parallel. Further testing and validation in a range of populations would be desirable but the model appears to provide reasonably accurate estimates of diabetes prevalence that could be used by policymakers.

Methods The model integrates population, obesity and smoking trends to estimate future diabetes prevalence. From three starting states (healthy, obese and smokers) the number of people with diabetes and deaths by diabetes status are estimated using a Markov approach. The transition probabilities and RR associated with risk factors were obtained from the literature, except for diabetes incidence that was estimated using DISMOD. For validation purposes, we developed a model for the England and Wales population (1993–2006), and compared model outputs with diabetes prevalence reported by the Health Survey for England (HSE) and the English Longitudinal Study of Ageing (ELSA).

Results The prevalence of diabetes mellitus in England and Wales in 1993 was 3% in men and 2% in women (HSE; adjusted for self-reporting, 3.9% and 2.6% respectively) and increased to 6% and 4% (7.3% and 5.5%, adjusted) by 2006. Obesity prevalence almost doubled and smoking trends showed a more complex pattern. Comparisons with the HSE showed almost parallel trends, over a period of 15 years. Prevalence as estimated from the model was 7.5% for men and 5.7% for women for 2006 and 8.9% and 7.2% for 2012. The model tends to slightly overestimate prevalence but accuracy improved in later years. The estimated prevalence compared well with that reported in ELSA (Men: model: 9.9%, ELSA: 11.6%; women: 8.3% and 6.8%).

Conclusions The model provide a reasonably close estimate of diabetes prevalence for England over the 1993–2006 period, compared with contemporary independent prevalence surveys in the same population. Although the model seems to slightly overestimate prevalence, the observed and modelled trends are almost parallel. Further testing and validation in a range of populations would be desirable but the model appears to provide reasonably accurate estimates of diabetes prevalence that could be used by policymakers.

Methods The model integrates population, obesity and smoking trends to estimate future diabetes prevalence. From three starting states (healthy, obese and smokers) the number of people with diabetes and deaths by diabetes status are estimated using a Markov approach. The transition probabilities and RR associated with risk factors were obtained from the literature, except for diabetes incidence that was estimated using DISMOD. For validation purposes, we developed a model for the England and Wales population (1993–2006), and compared model outputs with diabetes prevalence reported by the Health Survey for England (HSE) and the English Longitudinal Study of Ageing (ELSA).

Results The prevalence of diabetes mellitus in England and Wales in 1993 was 3% in men and 2% in women (HSE; adjusted for self-reporting, 3.9% and 2.6% respectively) and increased to 6% and 4% (7.3% and 5.5%, adjusted) by 2006. Obesity prevalence almost doubled and smoking trends showed a more complex pattern. Comparisons with the HSE showed almost parallel trends, over a period of 15 years. Prevalence as estimated from the model was 7.5% for men and 5.7% for women for 2006 and 8.9% and 7.2% for 2012. The model tends to slightly overestimate prevalence but accuracy improved in later years. The estimated prevalence compared well with that reported in ELSA (Men: model: 9.9%, ELSA: 11.6%; women: 8.3% and 6.8%).

Conclusions The model provide a reasonably close estimate of diabetes prevalence for England over the 1993–2006 period, compared with contemporary independent prevalence surveys in the same population. Although the model seems to slightly overestimate prevalence, the observed and modelled trends are almost parallel. Further testing and validation in a range of populations would be desirable but the model appears to provide reasonably accurate estimates of diabetes prevalence that could be used by policymakers.

Methods The model integrates population, obesity and smoking trends to estimate future diabetes prevalence. From three starting states (healthy, obese and smokers) the number of people with diabetes and deaths by diabetes status are estimated using a Markov approach. The transition probabilities and RR associated with risk factors were obtained from the literature, except for diabetes incidence that was estimated using DISMOD. For validation purposes, we developed a model for the England and Wales population (1993–2006), and compared model outputs with diabetes prevalence reported by the Health Survey for England (HSE) and the English Longitudinal Study of Ageing (ELSA).

Results The prevalence of diabetes mellitus in England and Wales in 1993 was 3% in men and 2% in women (HSE; adjusted for self-reporting, 3.9% and 2.6% respectively) and increased to 6% and 4% (7.3% and 5.5%, adjusted) by 2006. Obesity prevalence almost doubled and smoking trends showed a more complex pattern. Comparisons with the HSE showed almost parallel trends, over a period of 15 years. Prevalence as estimated from the model was 7.5% for men and 5.7% for women for 2006 and 8.9% and 7.2% for 2012. The model tends to slightly overestimate prevalence but accuracy improved in later years. The estimated prevalence compared well with that reported in ELSA (Men: model: 9.9%, ELSA: 11.6%; women: 8.3% and 6.8%).

Conclusions The model provide a reasonably close estimate of diabetes prevalence for England over the 1993–2006 period, compared with contemporary independent prevalence surveys in the same population. Although the model seems to slightly overestimate prevalence, the observed and modelled trends are almost parallel. Further testing and validation in a range of populations would be desirable but the model appears to provide reasonably accurate estimates of diabetes prevalence that could be used by policymakers.