

Pandemic impact on routine diabetes care associated with poorer prognosis

Rates of non-COVID-related mortality in England, particularly in people with diabetes, were significantly increased in July to October 2021 compared to the same period in the previous 5 years. A population-based parallel cohort study aimed to quantify this excess mortality in people with diabetes, and used the National Diabetes Audit to explore any association between mortality and delivery of care processes in the preceding two years. An 11% higher non-COVID mortality rate was identified in those with diabetes in this 15-week period in 2021 compared to the all-cause mortality rate in the historical cohort of people with diabetes in England in the same time period in 2019. An association between significantly higher mortality risk in the 2021 group and not receiving all eight care processes in both of the preceding years (2019/20 and 2020/21) was identified compared with the group who had received all care processes, with lesser mortality risk increase associated with not receiving the eight care processes during either of the preceding two years, suggesting a dose–response relationship. This association between not receiving all eight care processes and all-cause mortality was similar in people with diabetes in the pre-COVID 2019 cohort. An association between missed care processes and mortality 4 and 7 years later had previously been identified in people with diabetes. The authors concluded that consistent associations between missed care processes and mortality strongly suggests people with diabetes who do not receive all eight care processes for whatever reason, are at higher risk of poor outcomes. Efforts should be made to preserve routine diabetes care delivery in future.

Previous studies have highlighted the increased risk of mortality from COVID-19 in those with diabetes, and exploration of indirect impacts of the pandemic on care (such as late diagnoses and reduced rates of care delivery) and outcomes are ongoing. Previous studies highlighted an association between delivery of routine diabetes care processes and mortality in people with diabetes in England 4 years (McKay et al, 2021) and 7 years (Holman et al, 2021) later. Between July and October 2021, the Office for Health Improvement and Disparities highlighted significantly increased non-COVID-19-related deaths in England compared with data from a similar period during the previous 5 years, with higher increases in those with diabetes, prompting this study by Valabhji and colleagues (2022).

Study method

A population-based parallel cohort design was used to quantify the excess mortality, and used the National Diabetes Audit (NDA) to explore the association between mortality and delivery of the eight care processes (HbA_{1c}, blood pressure, cholesterol, serum creatinine, urine albumen, foot surveillance, BMI and smoking status) in the preceding two years. The results from this 2021 cohort (3.2 million individuals) were compared with data from a 2019 comparator cohort (just under 3 million). For inclusion in each cohort, people had to have been included in the NDA for the preceding two years. Thus, in the cohort looking at non-COVID-19 related deaths from July 2021 to October 2021, people with diabetes had to have been included in the NDA from



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January 2019 to March 2020 and from January 2020 to March 2021. Likewise, when exploring all-cause mortality pre-pandemic in 2019, people with diabetes had to have been included in the NDA during the preceding two years (i.e. from January 2017).

Results

There was an 11% increase in non-COVID-19-related deaths in people with diabetes in the 15-week period in 2021 compared with all-cause mortality in those with diabetes during the same time period in 2019. This was associated with decreased completion of the care processes.

In the 2021 cohort with diabetes, 26.5% received all eight care processes in 2020/21 compared with 48.1% in 2019/20, a nearly 45% relative reduction. This compared with a 5% decrease between 2017/18 (48.3%) and 2018/19 (46.1%). Greater decreases in receiving all eight care processes occurred in those in the most deprived quintile versus those in the least deprived quintile in the index 2021 cohort, and in those of White ethnicity versus non-White ethnicity. As would be anticipated, foot surveillance decreased by more than one third during the pandemic but, interestingly, measurement of serum creatinine had the smallest decrease, at 12%. In the 2019 comparator cohort, only urinary albumin decreased significantly, which was identified previously, and other care processes remained fairly constant between 2017/18 and 2018/19.

Non-COVID-related mortality amongst people with diabetes in the 2021 cohort was highest in those who had not received all eight care processes in each of the preceding two years, with a lower but increased risk in those not receiving the care processes in 2020/21 but receiving them the previous year, and a lower but still increased risk in those receiving the care processes in 2020/21 but not in 2019/20. A similar gradient of increased risk of all-cause mortality was associated with not receiving the eight care processes in the 2019 cohort.

Increased non-COVID-related deaths occurred across all causes. If the proportions receiving all of the care processes had remained the same in 2021 versus 2019, more than 3000 fewer deaths

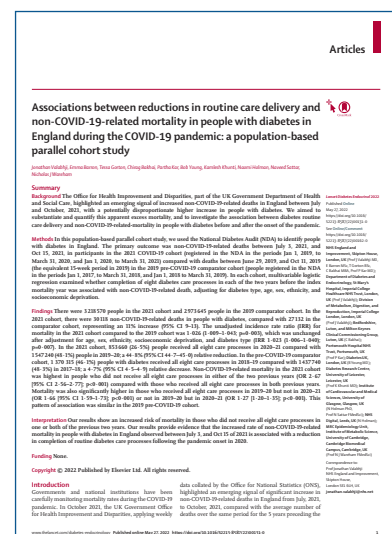
would have been expected, with an estimated mortality rate of 840/100 000 rather than the rate of 936/100 000 observed.

All of us aspire to deliver all eight care processes to the people with diabetes in our practices, but the competing workload demands of the pandemic and people with diabetes' reluctance to attend due to infection risk since early 2020 have decreased our ability to maintain routine care delivery. Our practice NDA data will clarify and quantify the impact of the pandemic. This study supports the importance of delivering all eight care processes, which is likely to impact not just on mortality but on all outcomes. It may take some time to get back to pre-pandemic levels of care delivery, but this study should prompt us to achieve and exceed these as soon as possible.

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