Methods Retrospective cohort analysis was performed on all patients admitted to the coronary care unit (CCU) between January 2011 and September 2019. A review of the electronic health records of patients with new or established type 2 DM, who had been admitted with acute coronary syndrome (ACS) or heart failure (HF) as their primary diagnosis code was performed. Discharge prescriptions were analysed to determine which patients had been prescribed a SGLT2 inhibitor. The admission creatinine and estimated glomerular filtration rate (eGFR) for all patients were recorded. eGFR ≥60 was used as the eligibility threshold for initiation of treatment with SGLT2 inhibitor as per summary of product characteristics. This data was analysed to determine whether there was a temporal change in prescriptions of this drug class. Statistical analysis was performed using standard Bayesian statistics.

Results There were 6870 patients admitted to the CCU between January 2011 and September 2019. 1054 patients had a diagnosis of type 2 DM and were admitted with ACS or HF. 77 patients were excluded from the study due to incomplete data. Thus, 977 patients were included in the final data set for analysis. There were 54 newly diagnosed diabetics and 923 with established type 2 DM. 865 patients were admitted with ACS and 112 patients with HF. The ratio of male to female was 2.6:1. The mean age of the patient cohort was 65.

There was a total of 40 patients prescribed SGLT2 inhibitors. Prior to the EMPA-Reg study in 2015, there were 4 of 387 eligible patients prescribed SGLT2 inhibitors, compared to 36 of 221 eligible patients thereafter. Chi-square statistic 45.1429 (p <0.00001). Temporal analysis from 2015 to 2019 showed increase in use from 5.5% to 20.5% (figure 1).

Conclusion There was a statistically significant increase in the use of SGLT2 inhibitors since the EMPA-Reg study. Recent published data on the benefits this drug class confers on HF management further strengthens the evidence for this change in practice. The new ESC guidelines were published in September 2019, which we suspect will result in even more widespread use of these drugs.

Interventions

Chronic kidney disease (CKD) is an important risk factor for cardiovascular disease (CVD). The EUROASPIRE V study, conducted across 27 European countries (2016–2017), investigated whether the European guidelines on secondary CVD prevention were being met.

Aims The aim of this secondary analysis of the EUROASPIRE V data was to compare the CVD event-rate in those with and without CKD (defined as an eGFR <60 ml/min/1.73 m²).

Methods A cohort study was conducted of patients who were interviewed between 6–24 months after an index event. The prevalence of cardiovascular risk factors in the participants is shown in Table 1. The mean eGFR in relation to recurrent CV events is shown in Table 2. There was a statistically significant increase in the use of SGLT2 inhibitors since the EMPA-Reg study. Recent published data on the benefits this drug class confers on HF management further strengthens the evidence for this change in practice. The new ESC guidelines were published in September 2019, which we suspect will result in even more widespread use of these drugs.
hospitalisation for coronary heart disease (CHD). Follow-up was subsequently performed at least 12 months after the interview to record new CVD events. The primary outcome was a composite of fatal and non-fatal CVD. Multivariable-adjusted Cox regression analysis was performed.

Results Of the 8251 participants who attended the interview, 2126 (25.8%) were female. The majority (7060, 86%) were Caucasian. In total, 1303 (16.7%) had CKD. The prevalence of CVD risk factors are outlined in table 1. At follow-up 7509 (98.5%) were alive. Of those that died, 37 (51.39%) deaths were due to CHD (figure 1). Regarding non-fatal events, 135 (1.8%) were hospitalised for myocardial infarction (MI) during follow-up and 84 (1.1%) were hospitalised for a stroke/TIA. Among those with recurrent CVD events (i) mean eGFR (95% CI) was 14.9 ml/min/1.73 m² lower in persons suffering fatal CVD vs. others (6.5, 23.4) p= 0.001 (ii) eGFR was 7.23 ml/min/1.73 m² lower in stroke than no stroke (2.16, 12.31) p= 0.006 (iii) eGFR was 1.56 ml/min/1.73 m² lower in MI than no MI (-3.03, 6.14) p= 0.503. (Table 2, figure 2) Adjusted hazard ratio (95% CI) for CV events in those with CKD versus those without: (i) CVD Death 1.305 (0.519, 3.279) p= 0.572 (ii) MI 1.228 (0.753, 2.000) p= 0.342 (iii) Stroke 1.563 (0.864, 2.828) p= 0.14.

Conclusion A sixth of the European CHD population has CKD. Participants who had a stroke or died from CVD over follow-up had a statistically significantly lower baseline eGFR than those who did not. The HR suggest an increased risk for CV events in CKD but this was not statistically significant. Further studies with a longer follow-up period are needed in this area.

Abstract 27 Figure 1 Known cause of death (n=72). CHD, coronary heart disease

Abstract 27 Figure 2 Kaplan meier analysis

There is a statistically significant association between CKD and stroke (Log Rank test p value 0.012), indicating an increased likelihood of having a stroke over follow-up in months in those with CKD versus those without.