

Effect of familial diabetes status and age at diagnosis on type 2 diabetes risk: a nation-wide register linkage study from Denmark

Methods

- Register-based open cohort study of all individuals living in Denmark at any point between 1995 and 2012.
- Population under study consisted of all individuals age 30 years or older, who were diabetes free at the beginning of the follow-up and had available parental information
- **Outcome:** incidence of diabetes in the index individual
- **Exposure: (time updated)**
 - Parental diabetes status
 - Full sibling and half sibling diabetes status

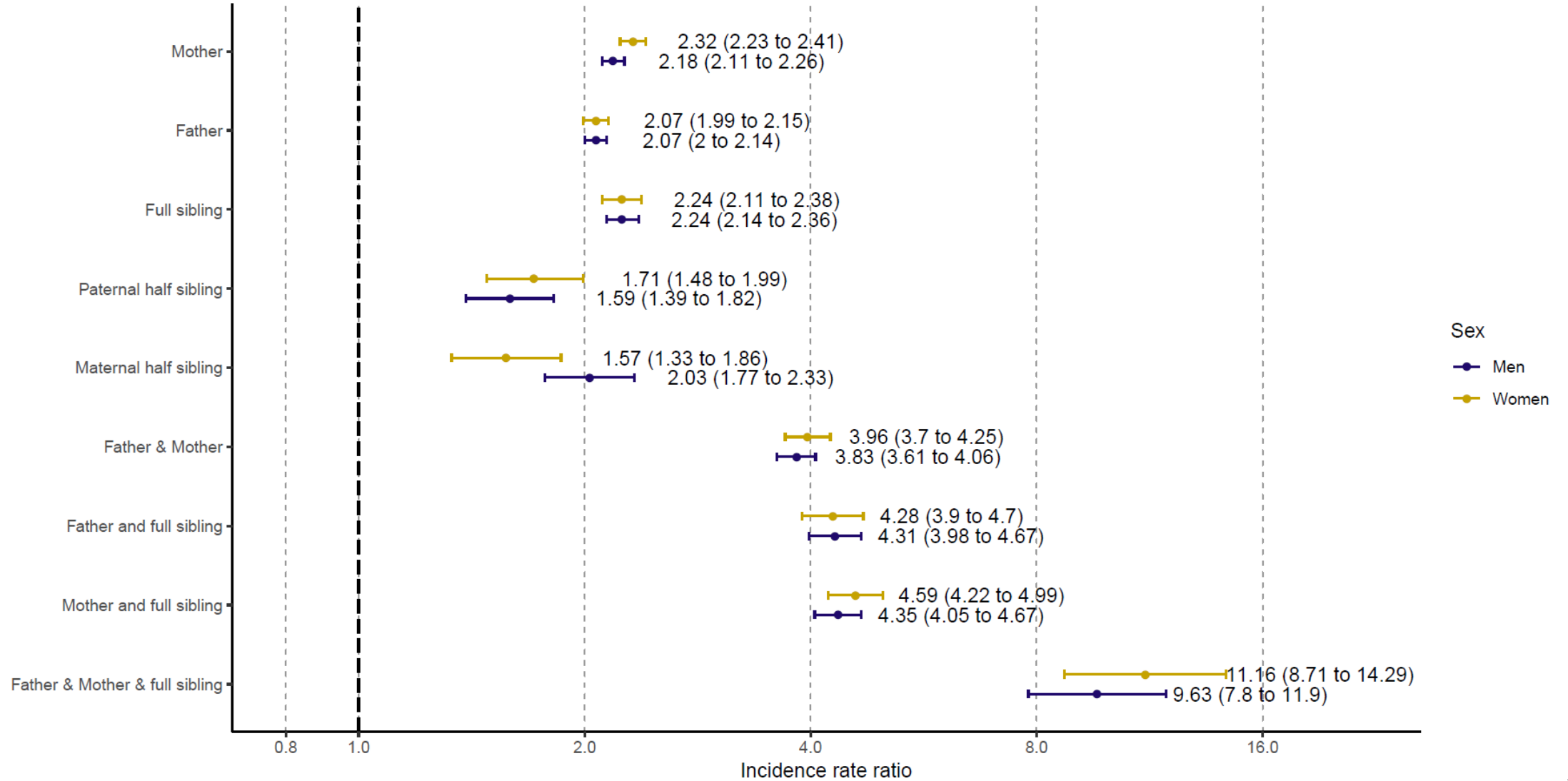
Methods

- **Sex-stratified Poisson regression models** adjusted for family members' diabetes status, index individuals' baseline age, highest educational attainment and the standardized annual equivalent family income.
- We tested interaction terms to determine whether the risk for those with diabetes in both parents and siblings exceeded the contribution from each family member.

Results

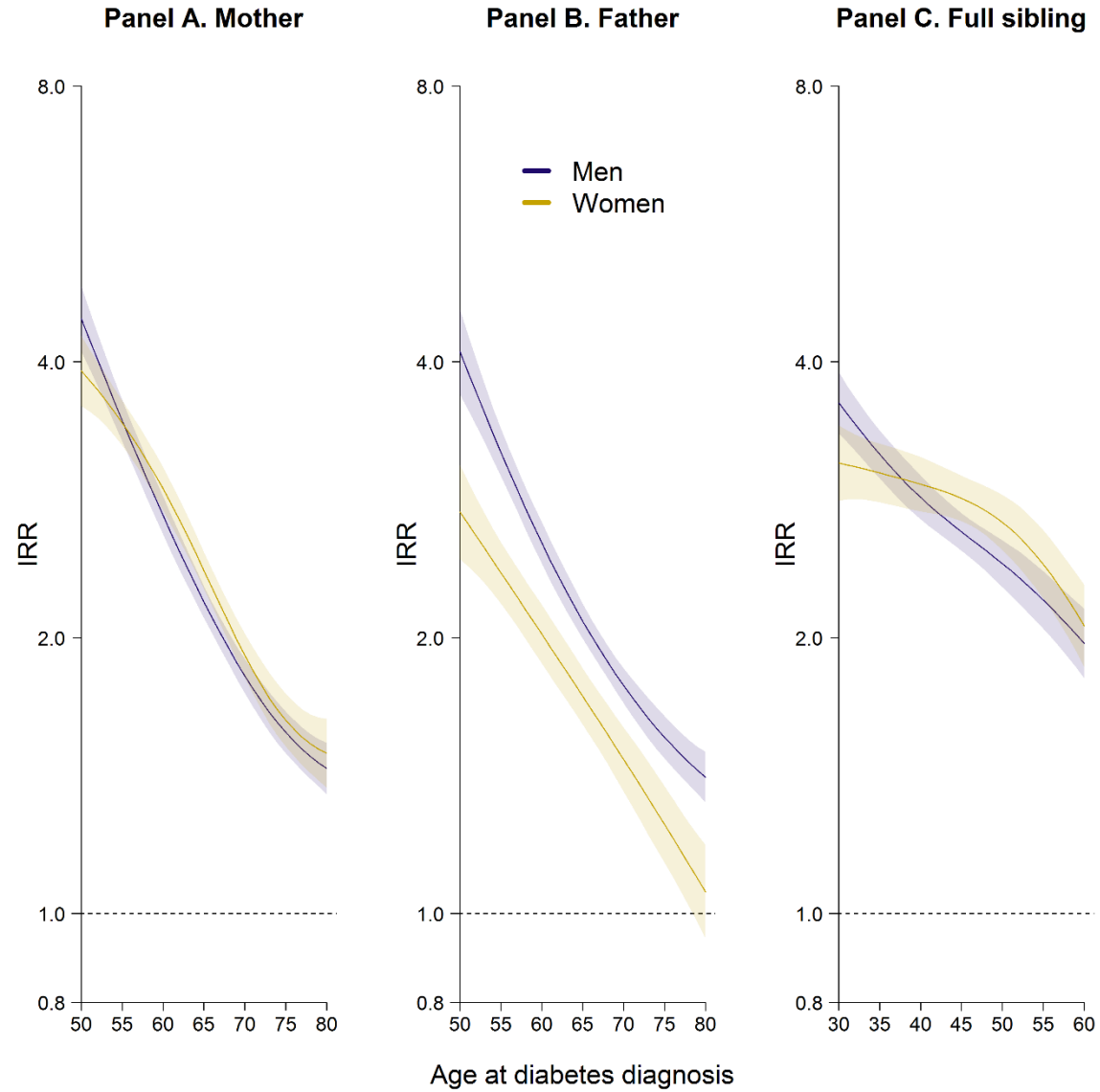
- N=1,962,733
- Diabetes cases 75,565
- Risk time 23,606,208 pry
- IR 50 year-old male 5.7/1000pryr
- IR 50 year-old male 4.4/1000pryr

Sex stratified familial diabetes incidence rate ratios



*Age was centered to 50 years for interpretation

Incidence rate ratios by familial age at diabetes diagnosis



Take home message

- The impact of familial diabetes is markedly higher when affected parents or full siblings contracted the disease at an earlier age.