

# The first presentation of CARDIOVASCULAR DISEASE

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For decades there has been an emphasis on the first presentation of cardiovascular disease (CVD) as a myocardial infarction (MI) and stroke and subsequently the effort in prevention was on these two conditions. This strategy was very effective and the decline in MI and stroke achieved was about 33% over the past decade.

## The incidence rates for chronic CVD

presentations such as angina or heart failure (HF) do not appear to have similarly declined. It was also noted that these chronic CVD events were less studied.

Cohort studies mainly report fatal endpoints (final presentations) with less information on primary prevention of initial presentations of CVD. It is also unclear how women and men differ in first lifetime presentations of CVD.

## NEW STUDY

This study involved approximately two million people aged >30 years free from initial CVD (51% women). The authors used electronic health records covering primary care, hospitalisations, acute coronary syndrome registries and mortality. They followed all

these people for an average of six years for all CV outcomes including death.

## RESULTS

There were 114 859 people that experienced an incident CVD event in the study period. The majority (66%) did not first present with a MI or a stroke. **The majority of first presentation of CVD was more often HF, angina, transient ischaemic attack and peripheral artery disease (PAD).**

Chronic CVD, such as HF and PAD, account for a substantial proportion of initial CVD presentation. These diseases are associated with marked increased risk for subsequent CVD events and death.

Yet, in risk assessment algorithms these more chronic forms of CVD are commonly excluded. There were also differences noted between the sexes on first presentations and age also influenced these associations. For instance, with increasing age HF and stroke became more common in both sexes.

Men <60 years had a four-fold higher risk for MI or unheralded cardiac death than women of similar age. Although male sex dominated for most CVD outcomes, these associations disappeared with increasing age. This study also found that 51.3% of men

and 41.2% of women experienced some form of CVD during their lifetime.

## REFERENCE:

George J, Rapsomaniki E, Pujades-Rodriguez M *et al*. How does cardiovascular disease first present in women and men? *Circulation*, 2015. **SF**

## KEY MESSAGES

- 1 In this modern era of CVD prevention we tend to focus on MI and stroke.
- 2 This very large study on almost two million people has showed that CVD commonly first present with HF, transient ischaemic attack, stable angina and PAD.
- 3 These diseases seldom become the focus of primary prevention studies and have been neglected in risk prediction models.
- 4 When predicting CVD risk with risk engines, such as Framingham, they should take account of a wide range of CVD events and also account for differing event rates in the sexes and age differences.
- 5 More research is needed on the first presentations of CVD and also how to incorporate these more chronic presentations of CVD into risk prediction models.



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