

Multimorbidity has a greater impact on risk of all causes of death in middle aged men

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Multimorbidity – the presence of two or more long-term health conditions – has a greater impact on risk of all causes of death in middle aged men, as opposed to older populations, according to new research.

The study, led by the University of Glasgow and published today in *BMC Medicine*, also found that multimorbidity is associated with a higher risk of death from cancer, vascular [conditions](#) and all causes of death – even after accounting for lifestyle or demographic factors. Although, absolute [mortality](#) remains higher in the 60 to 73 age group.

The effect of multiple long-term conditions to increase mortality risk was largest among men between 37-49 years. While a link between cardiovascular multimorbidity and cancer death was also found.

The researchers, from the University's Institute of Health and Wellbeing, also found that the type of long-term condition a person has – as opposed to the number of long-term conditions – may have an important role to play in understanding the relationship between multimorbidity and death.

Corresponding author of the study Professor Frances Mair, Norie Miller Professor of General Practice, said: "This study is significant because it presents novel findings regarding what we know about multimorbidity.

"This is the first study to examine the relationship of multimorbidity with cancer mortality and we have shown a dose-response relationship between number of Long Term Conditions and cancer mortality."

Lead author Dr. Bhautesh Jani, said: "Younger participants, especially men, were observed to have a relatively higher risk of mortality with increasing number of Long Term Conditions, and that certain combinations of conditions were associated with a particularly higher risk of death. Going forward, further research is needed to study the impact and management of multimorbidity in middle aged adults, as they may be at higher risk of early death."

Overall, the study found that for those with four or more long-term conditions (LTCs), morbidity, combinations that included

cardiometabolic conditions, [chronic kidney disease](#), cancer, epilepsy, [chronic obstructive pulmonary disease](#), depression, osteoporosis and connective tissue disorders had the greatest impact on all causes of [death](#).

In comparison to participants with no LTCs, participants with 1 LTC were nearly one and a half times more likely to die, participants with 2 LTCs were more than one and a half times more likely to die, participants with 3 LTCs were more than twice as likely to die, and participants with four or more LTCs were nearly three times more likely to die, over the median seven years of follow up.

While [socioeconomic status](#) remained an independent and significant predictor of all-cause mortality, the relationship between multimorbidity and mortality risk was consistent across all categories of socioeconomic status.

The study was a prospective population-based cohort study which included 502,640 participants enrolled in the UK Biobank from 22 different assessment centres across England, Scotland and Wales between 2006 and 2010.

The study, "Relationship Between Multimorbidity, Demographic Factors and Mortality: Findings from the UK Biobank Cohort," is published in *BMC Medicine*.

More information: Bhautesh Dinesh Jani et al. Relationship between multimorbidity, demographic factors and mortality: findings from the UK Biobank cohort, *BMC Medicine* (2019). [DOI: 10.1186/s12916-019-1305-x](https://doi.org/10.1186/s12916-019-1305-x)

Provided by University of Glasgow

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