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Census-based follow-up study of over 1 million people  
[abstract only]**

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## Does physical ill-health increase the risk of suicide? A Census-based follow-up study of over 1 million people

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### Background/main aim

Prior poor mental ill-health is a recognised risk factor for suicide but the relationship between multiple physical health conditions and suicide risk is less clear.

### Methods

Data of 1,196,364 adults (18-90years+) enumerated in Northern Ireland's 2011 Census records were linked to death registrations until the end of 2015. Logistic regression models were generated to determine association between physical health status and both all-cause mortality and death from suicide, with adjustment for census-based attributes including the presence of mental health status. Physical health conditions severity was assessed using limiting long-term illness (LLTI: none, a little, a lot) and number of physical health conditions.

### Results

About 14% of the cohort (n=164,473) had physical multimorbidity (two or more conditions) and 51,672 individuals died during follow-up; 877 due to suicide. A dose-response relationship was evident between number of physical conditions and all-cause death reaching an adjusted odds ratio (AOR) of 3.79 (95%CI: 3.65–3.94) in those with 4-or-more conditions (compared to those with no physical condition), but the association between number of physical conditions and suicide risk disappeared with adjustment for mental health. LLTI however, was an independent risk factor for suicide even after adjustment for mental health (AOR 1.52, 95%CI: 1.25–1.87 for those with daily activities limited a lot). The relationship between LLTI and suicide risk was only evident at younger ages (people aged less than 60).

### Conclusion

This study demonstrates that the number of physical conditions is not an independent risk for suicide but that activity limitation is, though only at younger ages.

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