

# Study reveals worrying survival gap between rich and poor after heart surgery

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People from the most deprived areas of England have a far higher risk of death after cardiac surgery than people from the least deprived areas, finds a large study published on [bmj.com](http://bmj.com) today.

Cardiovascular disease is the commonest cause of early death in the Western world and is closely related to social and economic deprivation. Cardiac surgery has significant benefits, but it is not clear whether they apply equally to all patients, irrespective of their social and economic circumstances.

So a team of researchers set out to assess the effects of social deprivation on survival following a range of cardiac surgical procedures.

They analysed data on 44,902 patients, with an average age of 65 years, who underwent cardiac surgery between 1997 and 2007 at five hospitals in Birmingham and North West England. Social deprivation was calculated for all patients based on their postcode at the 2001 census for England and Wales.

A total of 1,461 patients (3.25%) died in hospital following their surgery and 5,563 patients (12.4%) died during five year follow-up.

Social deprivation was a strong independent predictor of death.

Smoking, obesity and [diabetes](#) were all associated with social deprivation, and were each responsible for a significant reduction in

survival following surgery. For example, diabetes carried a 31% increased risk and smoking a 29% increased risk of death.

Adjusting for these factors did reduce the impact, but deprivation remained a strong predictor of increased [mortality risk](#), suggesting that some other factors related to deprivation are having this negative effect on survival.

In summary, people from deprived socioeconomic groups not only have a shorter life expectancy but also spend a greater proportion of their lives affected by disability or illness, say the authors. This study raises the concern that the effect of proven healthcare interventions, like cardiac surgery, may not be equally distributed across socioeconomic boundaries.

But the real challenge lies in developing a coherent health conscious approach to education and to the environment. This is essential to maximise the benefits of expensive and complex healthcare interventions such as cardiac surgery, they conclude.

The fact that socially deprived people are more likely to be obese, smoke, and have diabetes highlights the need to target rehabilitation processes at these patients after cardiac surgery, say two cardiac specialists at Edinburgh Royal Infirmary in an accompanying editorial.

They point out that, under the quality and outcomes framework (QOF) - a system where general practitioners receive financial benefits on achieving specific targets - use of statins in socially deprived areas has increased significantly, and they suggest that this may help to narrow the health gap between rich and poor for coronary heart disease and other conditions.

But ultimately, decent education, adequate housing, and adequate

employment opportunities are what are needed to narrow the gap between the health of the rich and the poor, they conclude.

Source: British Medical Journal ([news](#) : [web](#))

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