

## OPEN HEART

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### UK heart failure patients twice as likely to die as their Japanese counterparts

*Gap still evident after accounting for sicker hospital patients in UK*

Patients with heart failure in the UK are twice as likely to die six months after a hospital admission for their condition as their Japanese counterparts, finds the first analysis of its kind published in the online journal **Open Heart**.

This gap persisted even after taking account of the fact that those admitted to hospital with heart failure in the UK tended to be sicker, the findings show.

Heart failure is common, and becoming more so as populations age. It is the primary diagnosis in more than 80,000 admissions to hospital in the UK; more than 200,000 in Japan; and more than 1 million in the US.

It's thought that cultural differences may have a role in differences in death rates for heart failure around the globe. To look at this in more detail, the researchers compared the death rates of 894 heart failure patients admitted to hospital in the UK with 3781 admitted to hospital in Japan.

To compare patients with a similar severity of heart failure, the researchers looked at the risk factors associated with a heightened risk of death in patients with the condition in previously published studies.

The five factors most strongly associated with the risk of death were systolic blood pressure (the amount of pressure in the arteries when the heart muscle contracts) and levels of sodium, urea (a measure of protein turnover and kidney function) and creatinine (a measure of kidney function) in the blood.

They then compared death rates in hospital, and 1, 3, and 6 months after admission.

Although both UK and Japanese patients were of similar age, UK patients had more severe heart failure, as judged by the five most important risk factors. They were also more likely to have ischaemic heart disease (narrowed arteries) and COPD (chronic lung disease).

UK patients were much more likely to die at all the time points measured than were Japanese patients. Much of this difference could be attributed to British patients being sicker at the time of admission. The threshold for hospital admission in the UK seems to be higher than it is in Japan, note the researchers.

But even after accounting for observed differences in risk, British patients were more than twice as likely to have died at 6 months than patients in Japan.

This is an observational study, and as such, can't establish exactly why British patients fared so much worse than patients in Japan. Differences in the quality of care after discharge, attitudes to medical advice and taking medicines, lifestyle, diet or genes might all have influenced outcomes, suggest the researchers.

"Explaining the differences in outcome among countries, cultures and health services might provide insights that could improve care and outcome and inform healthcare policy decisions," they conclude.