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## Small Increase In Hospital Mortality Rates In First Week Of August, Research Shows

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Newly qualified junior doctors start their new positions in NHS hospitals in England on the first Wednesday in August. The authors of the study, from the Dr Foster Unit and the Department of Acute Medicine at Imperial College London, say the excess mortality rates may be linked to this influx of newly qualified doctors but more research is needed before they can draw any firm conclusions.

The study, which was supported by Dr Foster Intelligence and is the biggest study of its kind, looked at data for almost 300,000 patients admitted to hospitals in 175 NHS Trusts between 2000 and 2008. Researchers in the UK and the US have previously carried out smaller studies looking at the effect on mortality rates of junior doctors starting work but the results have often been inconclusive.

Mortality rates fluctuate throughout the year, with higher rates in the winter. However, the researchers behind today's study suggest that although the effect identified in their research is small, it is statistically significant and there appears to be a relatively consistent pattern over the nine years of the study.

The study did not analyse the causes of individual deaths. The researchers say further studies are needed before they can draw firm conclusions about why the apparent increase in mortality rates might be happening.

Dr Paul Aylin, the senior author of the study from the Dr Foster Unit at Imperial College London said: "We wanted to find out whether mortality rates changed on the first Wednesday in August, when junior doctors take up their new posts. What we have found looks like an interesting pattern and we would now like to look at this in more detail to find out what might be causing the increase.

"Our study does not mean that people should avoid going into hospital that week. This is a relatively small difference in mortality rates, and the numbers of excess deaths are very low. It's too early to say what might be causing it. It might simply be the result of differences between the patients who were admitted," added Dr Aylin.

The researchers looked at data for 299,741 patients who were admitted to hospital in an emergency between 2000 and 2008; over the nine years, a total of 151,844 people were admitted on the last Wednesday in July and 147,897 on the first Wednesday in August. The researchers followed both sets of patients up for a week, and examined the in-hospital death rate in each group with 2,182 deaths in patients admitted on the last Wednesday in July and 2,227 deaths in patients who had been admitted on the first Wednesday in August.

The researchers found a small, non-significant difference in the mortality rate using these figures. However, after taking into account factors such as age, sex, socio-economic deprivation, year and additional diagnoses, they found a six percent increase in mortality rates for the first Wednesday in August compared to the previous Wednesday.

Adapted from materials provided by Imperial College London, via EurekAlert!, a service of AAAS.

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