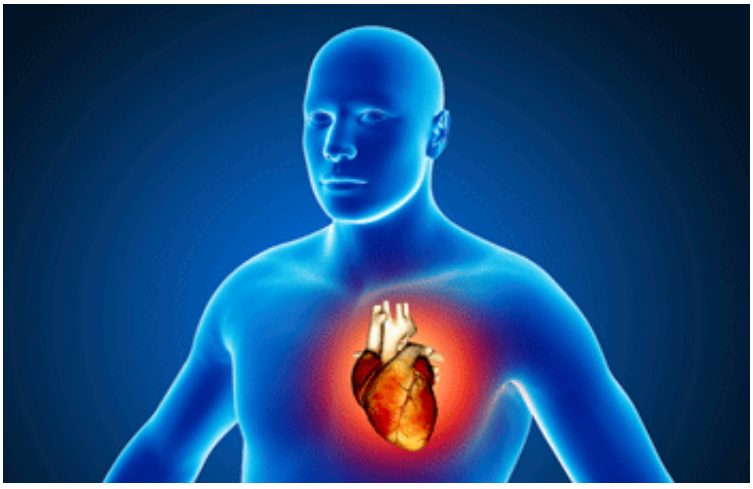
# Antibiotic prophylaxis proves cost-effective for patients at risk of fatal heart infection

November 16 2016, by Amy Pullan



A new study has shown guidelines from the National Institute for Health and Care Excellence (NICE) advising dentists to stop prescribing antibiotics before invasive treatment may not have been efficient or cost-effective.

A team of international researchers, led by Professor Martin Thornhill from the University of Sheffield's School of Clinical Dentistry, along with health economists Professor Allan Wailoo and Dr Matthew Franklin from the School of Health and Related Research (ScHARR) also at the University of Sheffield, discovered the decision made by NICE in 2008 recommending dentists should stop prescribing antibiotic

prophylaxis (AP) for those at risk of the life-threatening infective endocarditis (IE) is likely to be less cost-effective than providing the treatment.

The new economic evaluation showed that prescribing AP could save £5.5 million to £8.2 million annually for the NHS.

Professor Thornhill and his team previously estimated there had been 35 extra cases of IE every month in the UK in the period since the NICE guidelines were introduced.

IE is a rare but serious infection of the heart lining caused by infectious agents, or pathogens, which are largely bacterial.

"In 2008 NICE issued guidance that the use of antibiotic prophylaxis completely stop in the UK – despite it still being recommended everywhere else in the world," said Professor Thornhill.

"One of the main reasons NICE gave against prescribing AP was a health-economic analysis that showed it not to be cost-effective. The problem was they had very little data on which to base their analysis and assumed the AP was not effective and that it was associated with frequent and severe side effects. This study shows that neither is true."

Professor Thornhill added: "We replicated the NICE health-economic analysis using up to date data and the results show that AP is probably highly cost-effective and would save the NHS millions of pounds each year as well as improving the quality of life of and reducing death rates for those at risk of IE."

The findings, which are presented today at the American Heart Association Meeting in New Orleans, show that only a marginal reduction in annual rates of infective endocarditis – 1.44 cases in high-

risk and 33 cases in all at-risk patients – would be required for AP to be considered cost-effective.

Provided by University of Sheffield