Prophylactic removal of impacted mandibular third molars: a systematic review and economic evaluation

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Plain English summary

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Third molars, commonly known as wisdom teeth, may come through the gum (erupt) without any problems, usually during young adulthood (aged 18–24 years). However, in some cases they are unable to erupt because they are poorly aligned or obstructed by other teeth, gums or bone. They are then referred to as ‘impacted’. Historically, dentists often recommended that these teeth be removed, so as not to cause problems later in life. This is referred to as ‘prophylactic’ removal. In 2000, the National Institute for Health and Care Excellence reviewed this practice and recommended that these teeth should not be removed if they are not bothersome to the person. Many dentists and oral surgeons have disagreed with this decision, believing that it is more difficult to remove these teeth later in life, and that there are more complications for the patient if they are removed later in life.

Our review group carried out a systematic review of the available clinical effectiveness and cost-effectiveness evidence of the prophylactic removal of impacted third molars.

The review identified four clinical studies, none of which provided strong evidence for or against the prophylactic removal of these teeth. These findings are similar to those of nine previous reviews. There is also very little research reported that relates to the cost-effectiveness of the procedure, with only three studies identified.

With the available evidence on the rates of extraction and the symptoms experienced by people who keep their impacted mandibular third molar, we built an exploratory economic model to assess the cost-effectiveness of recommending prophylactic removal compared with that of recommending watchful waiting. Results from the model suggested that a prophylactic removal strategy costs more than a watchful waiting strategy, but leads to improvements in quality of life. When the costs and quality-of-life measures that are associated with the two strategies are compared, the resulting statistic is £11,741 per quality-adjusted life-year gained, which would probably be good value for money for the NHS.
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This report

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