

Best-practice prevention alone or with conventional or biological caries management for 3- to 7-year-olds: the FiCTION three-arm RCT

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Plain English summary

The FiCTION three-arm RCT

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What was the question?

Tooth decay is common; it can lead to pain, days off school for children and days off work for parents and is a financial burden to the NHS. There is uncertainty about the best way of managing decay in young children. This trial aimed to find out whether or not there was a difference in the amount of pain and/or infection suffered by children having their decay treated with one of the following: fillings, having decay sealed in or using preventative treatment alone. Which method represented the best value was also explored.

What did we do?

For young children with decay, the Filling Children's Teeth: Indicated Or Not? (FiCTION) trial compared the difference between fillings, sealing in the decay and using preventative treatment alone over 3 years in NHS dental practices in Scotland, England and Wales. We recruited 1144 children aged 3–7 years with one or more holes in their baby back teeth (molars), but without pain/infection, and placed them at random into one of three groups: (1) tooth numbing, removing decay and filling(s) with preventative treatment; (2) sealing in decay with fillings or caps and preventative treatment but no numbing; or (3) preventative treatment alone.

What did we find?

Recruitment was challenging but was achieved. There was no evidence of a difference in children's experience of pain or infection, quality of life or dental anxiety between groups. All three ways of treating decay were acceptable to children, parents and dental professionals. Sealing in with preventative treatment was most likely to be considered the best way of managing children's decay if we are willing to pay a minimum of £130 to avoid an episode of pain or infection.

What does this mean?

As there was no evidence of a difference between the three treatment groups in pain/infection experienced, treatment choice should continue to be based on shared decision-making between the child, parent and clinician to agree the best option for the individual child.

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This report

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