Lay summary of study results

Many people only visit the dentist when they have a problem, such as toothache. This is more common among people with poorer backgrounds. Poorer people also tend to have more dental disease as well. People who visit the dentist regularly for check-ups and have fillings and preventive care, tend to end up with healthier mouths, fewer fillings and keep their teeth for longer. This means that visiting the dentist regularly is one aspect of a gap in health between people who are poor and other people who are better off.
Changing the habits of people who only go to the dentist because of problems would help improve oral health and reduce health inequalities. Despite this being a widespread issue across the world, very few research studies have tested how to help people move from urgent-only dental visits to regular check-ups and routine care.
The RETURN study was created to fill that gap. It tested a new approach to help people who had not seen a dentist for routine care in at least two years and who did not have their own dentist. The idea was to catch people at an "urgent" dental visit – when they were already seeking help for a problem – and use that moment to encourage them to think about changing their behaviour.

What was the RETURN intervention?

The RETURN intervention was based on behaviour change theories and shaped with the help of people who had found it hard to keep up regular dental visits, especially those from poorer backgrounds. It was designed to support people in thinking differently about dental care and to make it easier to take that first step back.

The intervention was delivered by dental nurses who were specially trained to talk to patients using a technique called motivational interviewing principles, which is a supportive way of talking that helps people explore their own reasons for change and build confidence to act.
During urgent dental appointments, the nurses spoke with patients about the barriers that had made it hard to go for regular check-ups and what might help them start changing. They showed short videos of real people sharing similar stories, gave patients easy-to-read information booklets, and helped them make a simple plan to attend a future dental visit. Later, a text message reminded them of the goal they had set. They encouraged people to look at the booklets again at home.

How was the study run?

- **Participants**: 1,179 adults in the North-West of England took part. They were all attending an urgent dental appointment and had not had a routine appointment for at least 2 years.
- **Trial Design**: People were randomly assigned to one of two groups:
    - The **intervention group**, who received the RETURN intervention.
    - The **control group**, who received standard care (the urgent dental treatment they came for, without extra support).
- **Where**: The trial took place in 13 NHS dental practices in Cheshire and Merseyside and Liverpool Dental Hospital.

- **Follow-up**: Participants were followed up at 6, 12 and 18 months to see if they made and attended routine dental appointments, how their oral health changed, and other related outcomes like use of antibiotics and dental anxiety.

What did the study measure?

1. The main things the researchers looked at were: Whether participants went for a routine dental appointment within 12 months.

2. Whether their oral health-related quality of life improved.

They also measured things like how often people *tried* to make a dental appointment, whether they got dental treatment, their anxiety about the dentist, and whether they used antibiotics for dental problems.

The study was carefully designed to make sure the results were reliable, and it used NHS records as well as questionnaires to track outcomes.

What did the study find?

Over half of the people involved in the trial lived in the 10% most deprived type of area.
People who received the RETURN intervention were slightly more likely to start attending routine dental appointments, although the difference was relatively small. After 12 months, people who received the intervention had a 20% higher odds of attending an NHS dental appointment for routine rather than urgent care. What stood out more clearly was that they were much more likely to *try* to book a routine appointment, especially as time went on. Eighteen months after receiving the intervention, they had between two and six times higher odds of trying to make an appointment compared to those who didn't receive it. The gap between people who had received the intervention and those who did not, in the chances of them attempting to get a routine appointment was bigger for people who lived in the most deprived areas compared to people who lived in the least deprived areas.

The intervention group also reported slightly better oral health and fewer problems with their teeth and mouth. The study used records held centrally by the NHS based on how dentists are paid for what treatment they provide. These records showed that slightly fewer people in the RETURN intervention group returned had urgent dental care and more people received care within payment Bands which involved check-ups, fillings and things like dentures and crowns, although differences were fairly small. The RETURN intervention group also had a slightly lower chance of being prescribed antibiotics for dental problems over the follow-up period. The chances of having dental anxiety was also slightly lower for people who had received the intervention compared to people who didn't, and the gap between the intervention group and the others tended to get wider as time went on. In other words, people in the RETURN intervention group had a higher chance of their dental anxiety decreasing over time, whereas the people who didn't get the intervention, had a higher chance of their dental anxiety getting worse over time, although again differences were relatively small.

All of this happened during a time when getting a routine dental appointment was especially tough because of the COVID-19 pandemic. In September 2019 before the study started asking people to be involved in the trial, over 100 NHS dental practices in Cheshire and Merseyside were accepting new NHS patients, however this fell to just a couple of practices half-way during the follow up period.

This is the first study of its kind in dentistry, and it shows that even a short, supportive chat during an urgent visit to the dentist, backed up by supportive written materials, can help people take steps toward regular dental care and feel better about their oral health as a result.