Similar concerns have been raised in relation to AI systems for caries detection. A *BDJ Open* scoping review reported that data bias and equity issues were central ethical themes in the literature on AI-driven caries detection, warning that biased datasets can produce flawed models and uneven benefits for different patient groups.[3] That review screened 351 abstracts but included only seven studies; diversity was identified as the main ethical concern, with accountability, equity and transparency issues reported in two of the included papers and privacy concerns in four. Such findings suggest that without attention to demographic representation, AI tools may systematically perform less well for some populations than for others.[3]

At the level of oral health systems, Khoury *et al.* describe AI as a double-edged sword: if developed and implemented responsibly, AI has the potential to help reduce disparities in oral healthcare, but if introduced without addressing structural bias it may entrench or worsen existing inequities.[4] The policy statement on AI in dentistry from the FDI World Dental Federation similarly stresses that AI should reduce rather than increase inequity, and links this goal to the representativeness and quality of the underlying data.[5]

Clear reporting of dataset demographics and subgroup performance, together with explicit discussion of fairness-related limitations, may therefore be important when evaluating dental AI tools in both research and clinical settings. Such an approach could help to ensure that systems are not only accurate, but also fair to the diverse patients who rely on them.

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Paediatric dentistry

Unexpected pain following SDF application

I am writing to share an interesting observation from our recent Dentaid mission to Cambodia, in October 2025, regarding the application of silver diamine fluoride (SDF) for dental caries management in children. I represent the clinical team on the trip and we, collectively, would like to draw attention to an unexpected clinical finding. Dentaid missions offer a rare opportunity to see large numbers of children, with high rates of decay, in a compressed timeframe and under these conditions we noticed some cases of pain during SDF application. The aim of this letter is to highlight the findings and encourage further studies that Dentaid missions could potentially facilitate.

Our team, consisting of five dentists and two dental therapists, visited four schools in the Kampong Region, treating over 1,000 children aged between five and ten. The high prevalence of dental caries in this area is, in part, attributable to sugar cane cultivation and persistent traditional beliefs such as 'tooth worms' causing decay.

During the mission, we applied SDF to 334 children. This was done as per protocol. Any teeth with visible or exposed pulps naturally did not have SDF placement. In most cases this treatment was applied to primary teeth but, due to the expeditionary nature of our clinical environment, we also needed to treat permanent molars often using SDF and glass ionomer cement together as part of the SMART treatment regime.

Despite our primary focus on treatment rather than clinical research, unexpected pain observations during SDF application emerged. 4.2% of treated children experienced sharp pain lasting up to a minute – incidences that provoked distress. Also, it was interesting to note that 78% of the painful incidents were related to first permanent molars.

This unexpected observation underscored the potential complexity of SDF application in children's teeth with large cavities. Although a low percentage, these episodes highlighted the importance of pre-emptively informing patients about possible pain to enhance patient management and comfort.

We hope that this observation opens a dialogue on refining application techniques and patient management strategies for SDF. More systematic data collection and exploration during upcoming missions in Cambodia and Uganda, where sugar cane cultivation is common, are planned. These investigations aim to improve understanding and management of pain associated with SDF applications.

While SDF is vital in settings with limited dental care, awareness of potential pain during its application is crucial. I encourage your readership to consider these findings and highlight the need for further exploration and refinement in SDF practice.

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Primary care dentistry

Antibiotic prescribing in primary care

Dentists are responsible for around 10% of antibiotic prescriptions in primary care. In England, most are prescribed for acute dental conditions with many reported to be unnecessary.[1,2] Audit together with education has been found in studies to be an effective way of reducing antibiotic prescribing in dental practice.[3]

To explore antibiotic prescribing in the North East of England, the NHS funded an audit of urgent dental care, including an educational session.

One thousand and sixty emergency appointments delivered by 40 GDPs in NHS and private settings were initially included. After an educational session, a further 985 appointments were assessed. As expected, wide variation in results were identified. On average, before the intervention 38.7% of emergency appointments included antibiotics, which reduced to 30.6% afterwards.

The most commonly diagnosed conditions associated with antibiotics were periapical infection and pericoronitis. Concerningly there was a high rate of clearly inappropriate prescriptions, such as those for irreversible pulpitis, pain or patient expectation. The most commonly prescribed antibiotics were amoxicillin (55.3% before and 43.3% after), metronidazole (30.1% and 32.5%) and phenoxymethylpenicillin (12.7% and 22.2%) – demonstrating a change of antibiotic choice away from amoxicillin and towards the narrower spectrum penicillin.