FDI POLICY STATEMENT

Minimally Invasive Intervention for Caries Management (MIICM)

Revised version adopted by the FDI General Assembly: 2026, Prague, Czech Republic

Revised version adopted by the FDI General Assembly: 2016, Poznań, Poland

Original version adopted by the FDI General Assembly: 2002, Vienna, Austria

CONTEXT

Dental caries remains one of the most prevalent noncommunicable diseases worldwide. Since the 2016 revision of this policy statement, significant advances in evidence-based caries management and a refined understanding of Minimal Intervention Dentistry have emerged. Minimally Invasive Intervention for Caries Management (MIICM) prioritizes the early detection of carious lesions, prevention and control of carious lesions, minimally invasive conservative treatment strategies and personalized recall assessment to maintain tooth integrity (biology and biomechanical resistance) while improving patient outcomes. This sustainable approach aligns with contemporary demands for patient-centered dental care using preventive protocols and minimally invasive therapeutic interventions.

Dental caries is caused by an imbalanced demineralization process. It can be arrested or reversed in its early stages through patient-centered, self-administered strategies, including dietary sugar reduction, twice-daily biofilm removal with tooth brushing and interdental cleaning, and use of fluoride toothpaste along with evidence-supported remineralizing materials. Strategies which address social determinants of health and barriers to preventive care that influence caries risk and activity should also be implemented. Professionally applied fluoride therapies (gel, mouthrinse, toothpaste, varnish, or silver diamine fluoride) and dental sealants remain foundational. Researchers continue to explore advanced dental materials to remineralize, repair or regenerate initial carious lesions[1].

MIICM integrates contemporary diagnostic tools, risk assessment protocols, and preventive-therapeutic strategies to manage dental caries at its earliest stages. MIICM focuses on early detection and prevention/management of initial caries. Visual-tactile examination and bitewing radiographs, if indicated, with the aid of advanced technologies such as LASER fluorescence or quantitative light-induced fluorescence (QLF), facilitates precise detection of carious lesions and assessment of carious risk and activity[2]. Validated risk assessment tools guide clinicians in

selecting evidence-based interventions and tailoring intervals of supporting care for active monitoring of caries risk and progression[3].

SCOPE

Minimally invasive dentistry focuses on selective caries removal in deep carious lesions to preserve pulp vitality and avoid unnecessary pulp exposure [4,5]. When clinically appropriate, this approach intentionally leaves and seals carious-affected dentin, as evidence shows such retained lesions may remain arrested, when sealed under a well-placed restoration and appropriately monitored, without causing clinical complications[6]. In its early stages, the demineralization process can be arrested or even reversed[7]. Evidence supports repairing defective restorations over replacement, reducing unnecessary treatment, preserving tooth integrity and creating less waste to the environment[8].

The MIICM approach focuses on conserving tooth structure through six core principles: (1) preventive strategies to maintain sound teeth, (2) early detection of carious lesions, (3) assessment of caries risk and activity, (4) remineralization of non-cavitated lesions, (5) minimally invasive operative techniques such as selective caries removal and restoration repair over replacement, where clinically appropriate, and (6) personalized recall intervals.

UNIVERSAL POLICY PRINCIPLES

MIICM is a prevention-oriented, patient-centered, evidence-based practice. Its core principles include equitable access, affordability, clinical and environmental sustainability, and scientific integrity, ensuring treatments are both biologically and biomechanically effective, as well as socially responsible across all population groups.

POLICY

The FDI supports the integration of MIICM into prevention-focused, person-centred oral healthcare systems. MIICM aligns with evidence-based practice by prioritizing early identification, risk-based decision making, and minimally invasive care. Stakeholders at all levels are encouraged to promote MIICM through education, research, workforce training, interdisciplinary implementation, and school or community-based services that strengthen equitable access and long-term oral-health outcomes.

KEYWORDS

Minimal Intervention Dentistry, dental caries, caries prevention, caries management, minimally invasive restoration.

DISCLAIMER

This statement reflects the best available evidence at the time of publication. Implementation should consider cultural, economic, and clinical contexts.

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