

## FDI DRAFT POLICY STATEMENT (revision)

# Minimal Intervention Dentistry (MID) for Managing Dental Caries

Revision submitted for adoption by the General Assembly: September 2016, Poznan, Poland Original version adopted by the FDI General Assembly: October 2002, Vienna, Austria

**CONTEXT** 

Since the appearance of the first policy statement on MID in 2002, its understanding has evolved and evidence-based outcomes of new and existing preventive and restorative treatments have become available.

**SCOPE** 

Visual/tactile assessment instruments and electronically driven devices are available to detect carious lesions and to assess caries risk and activity<sup>1</sup>. The development and progression of carious lesions can be controlled. The outcome of the caries activity assessment, together with the usage of predictive power of validated caries risk assessment tools, will guide the dental practitioner in deciding which evidence-based carious lesion controlling measures to use and to determine the tailor-made recall sessions.

The demineralisation process of dental caries can be halted largely by the patient reducing the intake and frequency of sugar in the diet and removing the biofilm twice daily with a toothbrush and fluoride-containing toothpaste and dental floss. Evidence-based measures to prevent carious lesions include fluoride in water, in gel, in varnish and paste, and in pits and fissures sealants. Some recently developed measures such as resin infiltration and CPP-ACP paste are promising<sup>2</sup>.

Minimally invasive operative interventions are limited to the removal of friable enamel and soft dentine, which minimalises the cavity size. Sealing such a treated cavity with a quality adhesive dental material will prolong tooth survival<sup>3</sup>. Evidence has shown that the long-term survival of repaired defective restorations is as good as that of replaced defective restorations. Replacement is therefore considered over-treatment in many cases while refurbishment and repairing are considered an appropriate minimal invasive operative intervention<sup>2,4</sup>.

#### **DEFINITIONS**

The concept of MID dental caries management is to conserve remineralisable and intact tooth tissue to help retain teeth throughout life. Tooth tissue should not be removed unnecessarily. The major MID components include: 1) early detection of carious lesions and assessment of caries risk and activity; 2) remineralisation of demineralised enamel and dentine; 3) optimal measurements to keep sound teeth sound; 4) tailor-made dental

recalls; 5) minimally invasive operative interventions to ensure tooth survival; 6) repairing rather than replacing defective restorations<sup>1.</sup>

#### **PRINCIPLES**

The aim of MID is to maintain as much healthy tooth structure as possible and - keep teeth functional for life. This has become all the more important as life expectancy is increasing steadily. People should be able to continue enjoy the full function of a good

natural dentition in old age<sup>5-8</sup>.

#### POLICY

FDI World Dental Federation supports Minimal Intervention Dentistry (MID) as the contemporary manner to manage dental caries.

#### **KEYWORDS**

Minimal Intervention Dentistry, dental caries, caries prevention, restoration, caries assessment.

### **DISCLAIMER**

The information in this Policy Statement was based on the best scientific evidence available at the time. It may be interpreted to reflect prevailing cultural sensitivities and socio-economic constraints.

#### REFERENCES

- 1. Tassery H, Levallois B, Terrer E, Manton DJ, Otsuki M, Koubi S, Gugnani N, Panayotov I, Jacquot B, Cuisinier F, Rechmann P. Use of new minimum intervention dentistry technologies in caries management. Aust Dent J 2013; 58: 40-59.
- 2. Frencken JE, Peters MC, Manton DJ, Leal SC, Gordan VV, Eden E. Minimal intervention dentistry for managing dental caries a review: report of a FDI task group. Int Dent J 2012; 62: 223–243.
- 3. Schwendicke F, Frencken JE, Bjørndal L, Maltz M, Manton DJ, Ricketts D, Van Landuyt K, Banderjee A, Campus G, Doméjean S, Fontana M, Leal S, Lo E, Machiulskiene V, Schulte A, Splieth C, Zandona AF, Innes NPT. Managing carious lesions: Consensus recommendations on carious tissue removal. Adv Dent Res. 2016; 28(2):58-67.
- 4. Fernández E, Martín J, Vildósola P, Oliveira Junior OB, Gordan V, Mjor I, Bersezio C, Estay J, de Andrade MF, Moncada G. Can repair increase the longevity of composite resins? Results of a 10-year clinical trial. J Dent. 2015 Feb;43(2):279-86.
- 5. Banerjee A, Doméjean S. The contemporary approach to tooth preservation: minimum intervention (MI) caries management in general practice. Prim Dent J. 2013 Jul;2(3):30-7.
- 6. Leal SC. Minimal intervention dentistry in the management of the paediatric patient. Br Dent J. 2014 Jun 13;216(11):623-7.
- 7. Ngo H, Opsahl-Vital S. Minimal intervention dentistry II: part 7. Minimal intervention in cariology: the role of glass-ionomer cements in the preservation of tooth structures against caries. Br Dent J. 2014 May;216(10):561-5.
- 8. Hayes M, Allen E, da Mata C, McKenna G, Burke F. Minimal intervention dentistry and older patients part 2: minimally invasive operative interventions. Dent Update. 2014 Jul-Aug;41(6):500-2, 504-5.