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## 1 Policy on Interim Therapeutic Restorations (ITR)

2

3 Originating Council

4 Council on Clinical Affairs

5 Review Council

6 Council on Clinical Affairs

7 Adopted

8 2001

9 Revised

10 2004, 2008, 2013, 2017

11

### 12 Purpose

13 The American Academy of Pediatric Dentistry (**AAPD**) recognizes that unique clinical circumstances  
14 can result in challenges in restorative care for infants, children, adolescents, and persons with special  
15 health care needs. When circumstances do not permit traditional cavity preparation and/or placement  
16 of traditional dental restorations or when caries control is necessary prior to placement of definitive  
17 restorations, interim therapeutic restorations (**ITR**)<sup>1</sup> may be beneficial and are best utilized as part of  
18 comprehensive care in the dental home.<sup>2,3</sup> This policy will differentiate ITR from  
19 atraumatic/alternative techniques (**ART**)<sup>4</sup> and describe the circumstances for its use.

20

### 21 Methods

22 This updated policy is based upon a review of current dental literature. Database searches were  
23 performed using key words dental caries, cavity, primary teeth, deciduous teeth, atraumatic  
24 restorative treatment, interim therapeutic restoration, and glass ionomer. Search limits used were  
25 humans, children 0-12 years, clinical trial, comparative study, controlled clinical trial, meta-analysis,  
26 multicenter study, randomized controlled trial, systematic review, and validation studies.

27 This document is an update of the policy adopted in 2001 and last revised in 2013. The update  
28 included electronic database and hand searches of medical and dental literature using the following  
29 parameters: Terms: dental caries, cavity, primary teeth, deciduous teeth, atraumatic restorative  
30 treatment, interim therapeutic restoration, AND glass ionomer. Fields: all; Limits: within the last 10  
31 years, humans, English, birth through age 18. Additionally, websites for the American Academy of  
32 Pediatric Dentistry and the American Dental Association were reviewed. Expert and/or consensus

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33 opinion by experienced researchers and clinicians was also considered.

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## 35 Background

36 ~~Atraumatic/alternative restorative technique (ART)~~ has been endorsed by the World Health  
37 Organization as a means of restoring and preventing caries in populations with little access to  
38 traditional dental care.<sup>4-6</sup> In many countries, practitioners provide treatment in non-traditional settings  
39 that restrict restorative care to placement of provisional restorations. Because circumstances do not  
40 allow for follow-up care, ART mistakenly has been interpreted as a definitive restoration. ITR utilizes  
41 similar techniques but has different therapeutic goals. Interim therapeutic restoration more accurately  
42 describes the procedure used in contemporary dental practice in the U.S.

43

44 ITR may be used to restore, arrest or ~~and~~ prevent the progression of carious lesions in young patients,  
45 uncooperative patients, or patients with special health care needs or when traditional cavity  
46 preparation and/or placement of traditional dental restorations are not feasible and need to be  
47 postponed.<sup>7,8</sup> Additionally, ITR may be used for step-wise excavation in children with multiple open  
48 carious lesions prior to definitive restoration of the teeth, in erupting molars when isolation conditions  
49 are not optimal for a definitive restoration, or for caries control in patients with active lesions prior to  
50 treatment performed under general anesthesia.<sup>9,10</sup> The use of ITR has been shown to reduce the levels  
51 of cariogenic oral bacteria (e.g., ~~M~~mutans ~~S~~streptococci, lactobacilli) in the oral cavity immediately  
52 following its placement.<sup>11-13</sup> However, this level may return to pretreatment counts over a period of  
53 six months after ITR placement if no other treatment is provided.<sup>12</sup>

54

55 The ITR procedure involves removal of caries using hand or rotary instruments with caution not to  
56 expose the pulp. Leakage of the restoration can be minimized with maximum caries removal from the  
57 periphery of the lesion. Following preparation, the tooth is restored with an adhesive restorative  
58 material such as glass ionomer or resin-modified glass ionomer cement.<sup>14</sup> ITR has the greatest  
59 success when applied to single surface or small two surface.<sup>15,16</sup> Inadequate cavity preparation with  
60 subsequent lack of retention and insufficient bulk can lead to failure.<sup>16,17</sup> Follow-up care with topical  
61 fluorides and oral hygiene instruction may improve the treatment outcome in high caries-risk dental  
62 populations, especially when glass ionomers (which have fluoride releasing and recharging  
63 properties) are used.<sup>18-20</sup>

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65 Policy statement

66 The AAPD recognizes ITR as a beneficial provisional technique in contemporary pediatric restorative  
67 dentistry. ITR may be used to restore and prevent the progression of dental caries in young patients,  
68 uncooperative patients, patients with special health care needs, and situations in which traditional  
69 cavity preparation and/or placement of traditional dental restorations are not feasible. ITR may be  
70 used for caries control in children with multiple carious lesions prior to definitive restoration of the  
71 teeth.

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