Caries Risk Assessment Checklist

Dentist's name: _____ **Date:** _____

Child's name: _____ **School:** _____ **First assessment Y / N**

Risk Factors/Indicators **A "YES" in the shaded section indicates that the child is likely to be at high risk of or from caries**	Please circle the most appropriate answer	
• Age 0–3 with caries (cavitated or non-cavitated)	**Yes**	No
• Age 4–6 with dmft>2 or DMFT>0	**Yes**	No
• Age 7 and over with active smooth surface caries (cavitated or non-cavitated) on one or more permanent teeth	**Yes**	No
• New caries lesions in last 12 months	**Yes**	No
• Hypomineralised permanent molars	**Yes**	No
• Medical or other conditions where dental caries could put the patient's general health at increased risk	**Yes**	No
• Medical or other conditions that could increase the patient's risk of developing dental caries	**Yes**	No
• Medical or other conditions that may reduce the patient's ability to maintain their oral health, or that may complicate dental treatment	**Yes**	No
The following indicators should also be considered when assessing the child's risk of developing caries		
• Age 7–10 with dmft>3 or DMFT>0	**Yes**	No
• Age 11–13 with DMFT>2	**Yes**	No
• Age 14–15 with DMFT>4	**Yes**	No
• Deep pits and fissures in permanent teeth	**Yes**	No
• Full medical card	**Yes**	No
• Sweet snacks or drinks between meals more than twice a day	**Yes**	No
Protective Factors **A "NO" in this section indicates the absence of protective factors which may increase the child's risk of developing caries**		
• Fissure sealants	Yes	**No**
• Brushes twice a day or more	Yes	**No**
• Uses toothpaste containing 1000 ppm F or more	Yes	**No**
• Fluoridated water supply	Yes	**No/Don't know**

Is this child at high risk of or from caries?	**YES**	**NO**

Introduction

The approach taken during the development of this checklist was that all children are at risk of developing caries but some children are at high risk, and these are the ones we want to identify. The assessment of caries risk is something that every dentist does, usually informally or implicitly. The aim of the checklist is to encourage a formal, systematic approach to identifying individual children who may be at high risk of developing decay. Caries risk assessment should form the basis of a risk-based approach to patient treatment and recall, with repeat assessments indicating if the child's risk status is changing over time.

The checklist is divided into 2 main sections: risk factors/indicators and protective factors. The shaded part contains the risk factors/indicators that the Guideline Development Group considered most important for identifying high caries risk children. A score in the shaded part indicates that a child is likely to be at high risk of or from caries. Other indicators that should be taken into account when assessing the child's risk status complete this section. The second section contains protective factors that should also be considered. The checklist combines the two most consistent predictors of future caries: previous caries experience[23] and the dentist's own assessment. The dentist makes the final decision about caries risk status, based on their overall assessment of the patient. The following notes give some pointers on filling in the checklist.

Risk Factors/Indicators

Age 0–3: Any child under the age of 4 who shows any evidence of caries – with or without cavitation – should be considered high risk, as the consequences of any caries for this age group can mean recourse to general anaesthesia for treatment.

Age 7 and over: Caries is a dynamic process that can progress or arrest. The concept of lesion activity is becoming increasingly important in assessing a patient's risk of developing future caries. There is currently no international consensus on the diagnosis of active lesions, and for the purposes of this checklist, we are suggesting a modified version of the criteria defined by Nyvad et al. An active lesion is one which is likely to progress if nothing is done. It is more than just a "white spot" lesion. An active, non cavitated enamel lesion is characterised by a whitish/yellow opaque surface with loss of lustre and exhibiting a "chalky" appearance. Inactive lesions tend to be shiny and smooth.

New lesions: New caries in the last 12 months, or progression of non-cavitated lesions (clinical or radiographic) is a good indicator of high caries activity. It would be a key factor to assess, particularly on repeat caries risk assessments for children deemed to be high risk.

Smooth surface caries: At least 70% of caries in permanent teeth in Irish children occurs on pit and fissure surfaces. The occurrence of caries on smooth surfaces, i.e. proximal, buccal or palatal (excluding the respective pits) or lingual surfaces, indicates a different pattern of disease and potentially a greater risk of developing further decay. The presence of approximal lesions on bitewing (if available) should also be considered when assessing smooth surface lesions (although it will not be possible to assess the activity of the lesion from radiographs taken at a single timepoint).

Hypomineralised molars: Molar hypomineralisation varies in severity, and some hypomineralised molars can disintegrate rapidly, making early detection and monitoring of these teeth essential. In more severe cases, hypomineralised molars present a restorative and long-term management challenge. Other developmental disorders of tooth formation, e.g. amelogenesis imperfecta, which can predispose to caries, should also be considered in this category.

Deep pits and fissures: The morphology of the occlusal surface has been shown to be a good predictor of caries risk.

Medical or other conditions: This section considers factors from the medical history that you normally take for your patient, that may put the person at risk of or from caries. Some examples of conditions that could be included in each of the categories are shown below.

Medical or other conditions Conditions where dental caries could put the patient's general health at increased risk	Examples Cardiovascular disease Bleeding disorders Immunosuppression
Conditions that could increase the patient's risk of developing dental caries	Salivary hypofunction Medications that reduce saliva flow Long term use of sugar-containing medicine
Conditions that may reduce the patient's ability to maintain their oral health, or that may complicate dental treatment	Certain physical and intellectual disabilities, Cleft lip/palate Anxious*, nervous* or phobic conditions, Behavioural problems

Over and above what would be considered "normal" anxiety or nervousness for children

DMFT (Decayed/Missing/Filled Teeth): In calculating dmft/DMFT, only teeth that have been extracted due to caries should be counted as missing. Similarly, only fillings that have been placed due to caries should be counted. The DMFT cut-offs in the checklist are based on the mean DMFT of the top one third of children with the highest caries levels from the North South survey. In the North South survey, caries was recorded without the use of (bitewing) radiographs; therefore caries detected on (bitewing) radiographs should not be included in the dmft/DMFT calculation.

Dietary habits: Diet is one of the main risk factors for dental caries, and it can be the most difficult and sensitive area on which to get accurate information. We are suggesting that the question could be phrased along the lines of the question on diet that was included in the North South survey.

Dietary habits	Suggested question
Sweet snacks or drinks between meals more than twice a day	How often does your child eat sweet food or drinks e.g. biscuits, cakes, sweets, fizzy drinks/squash, fruit drinks etc between normal meals?

Medical Card: There is fairly strong evidence of an inverse relationship between socio-economic status and oral health in children under 12 years of age. Medical card status has been used in Irish studies as an indicator of disadvantage. Medical card status may be a particularly useful indicator of caries risk where children are too young for their risk to be based on caries history. Since the introduction of the GP Visit card, which has higher income thresholds for eligibility, it is necessary to establish if the patient has a Full medical card. Very often this data is collected as part of the medical history or patient details, and data from these sources can be used to complete the checklist.

Protective Factors

The effectiveness of the protective factors listed in the checklist at reducing caries has been established in various systematic reviews. The absence of protective factors could increase a child's risk of developing caries.