Session B
Periodontal Risk Management (PRM)

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The overall goal of periodontal risk management (PRM) is to prevent disease from occurring and to substantially lower the risk for future progression of periodontitis in patients with evidence of disease.

Oral healthcare must be delivered with specific cost-benefits in mind (utility) and with a holistic approach recognized by:

1. The patient
2. Third party (the community/health insurance)
3. Health Care providers.

Successful PRM can only be achieved if accurate information is made available and if the ability of any diagnostic test to correctly identify patients with disease is appreciated in relation to:

Disease prevalence in the population
The nature of disease (etiology/infection)
The host response (a genetically driven host immune response)
The efficacy of therapy.

The likelihood of successful prevention of periodontitis or successful management of patients who have been treated with initial cause related therapy (ICRT) must significantly exceed the effect of chance alone (OR 1:1).

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Scope and Questions

The expert group assignment was to address a series of question related to didactic and practical training of dental hygiene students in the area of risk management of patients seeking periodontal care within the scope of current and anticipated future clinical responsibilities of a dental hygienist.

The position paper was reviewed and accepted by the group.

1) WHAT IS THE RATIONALE AND PRIORITY FOR RISK MANAGEMENT IN THE DENTAL HYGIENE SCHOOL CURRICULUM?

The dental hygienist is an oral healthcare provider and who with appropriate training should have the ability to adequately:

- Collect information associated with systemic conditions to be considered in the care of any patient with dental treatment needs.
- Gather relevant background information about factors associated with periodontitis (i.e. cardio-vascular diseases, stroke, diabetes mellitus and osteoporosis) within the scope of periodontal medicine
- Gather clinical dental (periodontal information) consistent within principles of best practice (standards of care)
- Communicate such information to the clinician in charge of patient care with the overall objective to reduce disease (periodontitis) risk, and risk of complications as a consequence of periodontal care in relation to systemic health conditions.

It is, therefore, imperative that the training of a dental hygienist includes formal education in all aspects associated with PRM at a level consistent with the scope of job definition and responsibility of a dental hygienist as defined by appropriate legislation.

2) WHAT IS THE CURRENT SYSTEM OF RISK ASSESSMENT IN PERIODONTOLOGY?

A stratified PRM approach must be included and consistent with best practice (standard of care) and use of current scientific patient based evidence.

Prior to Therapy?

PRM is based on data collected on:

1. Background information on periodontitis prevalence in the patient area uptake
2. Presence of pathogens associated with periodontitis assuming an infectious disease etiology
3. Information on host (immune) response to infection. This may be identified based on routine clinical parameters (i.e. bleeding on probing or probing depth, radiographic information), or by specific immune assays
4. Information on patient behavioral characteristics (e.g. smoking habits, drug use, self-perception, oral hygiene performance)
5. Information on socio-economic, ethnic and other factors currently considered to be significant in PRM
6. Information on genetic factors associated with periodontitis risk (e.g. family history Il-1 gene polymorphism test, specific systemic diseases).

Following Therapy?

1. Patients with adequate acceptable response to Initial Cause related Therapy (ICRT) (e.g. BOP < 16%, no remaining probing depths exceeding 5.0 mm, 18 or more remaining teeth, no clinical evidence of sub-gingival calculus). These patients should be placed on extended recall intervals to be adjusted as appropriate
2. Patients with marginal response to ICRT should be further evaluated to address whether the patient has received the adequate level and quality of ICRT, or if the patient carries a risk condition that may require additional attention (e.g. smoking, plaque control, diagnostic tests as available)
3. Patients with inadequate response to routine ICRT should be further evaluated and the responsible care provider may consider:
   a. Behavioral assessments
   b. Microbial testing
   c. Genetic testing and counseling
   d. Immunological and other blood chemistry assays
   e. Use of chemical antimicrobial and/or anti-inflammatory drugs as guided by test results and adjunct to routine mechanical ICRT
   f. Communication with other healthcare providers about overall health issues.

During Supportive Periodontal Therapy: Same as under ICRT

The Dental Hygienist's role in identifying risk conditions

Based on clinical observations consistent with issues identified for PRM processing during any phase of active therapy and SPT, additional biochemical or other adjunct tests should be considered relative to informative value and cost efficacy (e.g. microbiological assays, antibiotic resistance testing, smoking cessation efficacy-cotinine assay). The dental hygienist should have the formal training to aggregate and disseminate relevant information to the clinician in charge of patient care as defined by clinical policy and state legislation.

3) HOW DOES RISK ASSESSMENT AFFECT THE DELIVERY OF SUPPORTIVE PERIODONTAL THERAPY (SPT)?

There are few studies to be used as background evidence in PRM of patients under SPT therapy. There is ample evidence in the scientific literature that individual clinical parameters, etiological and host response related factors have relatively poor predictive value considered, or that data available can not be used in the clinical context.

There are, however, also studies to suggest that risk modeling using composite data in risk profiling can be used to identify subjects who would, or would not respond to routine SPT. Furthermore such approaches may allow the use of specific therapeutic strategies to reduce periodontitis risk.

4) WHAT IS THE IMPLICATION OF RISK MANAGEMENT IN THE DENTAL HYGIENE CURRICULUM?

The dental hygiene student should be given the appropriate training to ensure that he/she can aggregate all the background information necessary to allow identification of patient risks for periodontitis or potential failure of response to routine ICRT.

The dental hygiene student should be given the appropriate training to ensure that at graduation he/she can adequately disseminate relevant information to the clinician with the overall responsibility of patient care.

The dental hygiene student should also be given the appropriate training to ensure that he/she has the appropriate background training to understand the relevance of any diagnostic test applicable to PRM.

5) WHAT METHODS SHOULD BE USED IN DENTAL HYGIENE TRAINING PROGRAMS TO ENSURE THAT THE GRADUATE DH CAN RELIABLY FUNCTION AS A SIGNIFICANT MEMBER OF THE ORAL HYGIENE TEAM OF CARE PROVIDERS?

1. Routine components of didactic and clinical training in diagnostic periodontal procedures could/should be coordinated with those of dental students
2. Dental hygiene students should be adequately trained and proficient in the collection and preliminary assessment of behavioral risks to periodontitis
3. Dental hygiene students should be adequately trained to communicate, in diagnostic terms, information on periodontitis risk.

A variety of educational tools should be used, such as:

- Lectures and laboratory/simulation models should be used at a level related to the objectives of the DH education
- Online didactic information should be considered when expertise in specific disciplines may be restricted
- Problem based learning, and case studies may be considered in collaboration with dental students in order to develop tools of communication between future dentists and dental hygienists within the scope of PRM
- Continuing dental hygiene update education in PRM should be established.