Prevention is a core element of the practice of dentistry in the 21st century. Of course the provision of evidencebased dental treatment and surgical intervention are the main clinical roles for dentists, but, as health professionals, prevention is also a key responsibility. Adopting a preventive orientation is relevant to all aspects of clinical care, from diagnosis and treatment planning to referral and monitoring procedures. Dentists and their team members have an important role in helping their patients prevent, control, and manage their oral health. Prevention is important for all patients, but support needs to be tailored to the needs and circumstances of each individual. It is also essential that any preventive advice and support is informed Prevention is a core element of the practice of dentistry in the 21st century. Of course the provision of evidencebased dental treatment and surgical intervention are the main clinical roles for dentists, but, as health professionals, prevention is also a key responsibility. Adopting a preventive orientation is relevant to all aspects of clinical care, from diagnosis and treatment planning to referral and monitoring procedures. Dentists and their team members have an important role in helping their patients prevent, control, and manage their oral health. Prevention is important for all patients, but support needs to be tailored to the needs and circumstances of each individual. It is also essential that any preventive advice and support is informed by scientific evidence to ensure maximum benefit is gained. Effectiveness reviews of preventive interventions have shown that many are ineffective and may increase oral health inequalities unless they are supported by broader health promotion interventions. Prevention in clinical settings therefore needs to be part of a more comprehensive oral health promotion strategy that addresses the underlying causes of dental disease through public health action, as well as helping patients and their families prevent oral diseases and maintain good oral health through self-care practices.

Definition of health education

Health education is defined as any educational activity that aims to achieve a health-related goal (WHO 1984). Activity can be directed at individuals, groups, or even populations. There are three main domains of learning:

- Cognitive : understanding factual knowledge (for example, knowledge that eating sugary snacks is linked to the development of dental decay).
- Affective : emotions, feelings, and beliefs associated with health (for example, belief that baby teeth are not important).
- Behavioural : skills development (for example, skills required to effectively floss teeth).

Formulate SMART objectives

Once a person has decided that he/she wants to change, it is important to negotiate and agree with the patient a clearly defined objective or goal.

Objectives should be SMART:

Specific — clear and precise goals provide focus and clarity of purpose.

Measurable — setting goals that can be easily measured and quantified is important.

Achievable — set goals that are challenging but within the patient's reach. Setting unachievable goals merely demotivates people.

Relevant — it is essential that the goal is considered relevant to the patient's circumstances, motivations, and needs.

Timely — it is important to check that the goal is the right thing for the patient to achieve right now. Setting a clear time frame is also important to help maintain motivation and to monitor progress

Health education methods and materials

In addition to providing preventive advice in a clinical setting, a wide variety of health education methods can be used, with the final selection depending upon the aim of the intervention and the most appropriate means of meeting it.

A vast array of oral health education materials are produced each year by a wide selection of both commercial and health organizations. There are different types of health education materials. Each of these resources has certain advantages and disadvantages depending on how they are used.

It is essential that the best quality and most appropriate materials are used in clinical settings. Box 10.4 presents a set of criteria that can be used to assess the quality of materials and therefore facilitate the selection of the best.

ADULT HEALTH EDUCATION

Adults have unique learning needs influenced by a wealth of experience and established practices that work. The goals of this section are to introduce some concepts about adult learning and to give some suggestions for using the previously discussed health education models for adult patient education.

Adults come to health providers with well-established habits and preexisting knowledge. Adults have achieved a concept of self-direction gained by knowledge and experience accumulated throughout their lives from various sources. As such, adults must be considered autonomous and self-directed. In a situation in which a self-directing adult is not perceived as autonomous, tension and resentment can develop and education might not be effective. Adults have been taught in school, had education from health care providers, and practiced health behaviors. Their current practices are a result of incorporating knowledge into practices that work for them. Adults will seldom change a behavior just from gaining new knowledge. When participating in an educational activity, adults know what goals they want to achieve. Therefore, information should be presented in a results-oriented manner so that adults will have a valid reason to change behaviors. Even with expanded knowledge, adults will need some help putting new knowledge into practice.

A key point of adult learning is relevance. This concept applied here means that adults must understand why new information or a changed behavior is needed before true learning can take place. Self-directing adults must be considered partners in learning; successful clinicians will consider the adult's values, preferences, and biases of previous knowledge and experience. Adults must be ready to learn and might learn only those things that they perceive to be a benefit to daily life. The second key point is that information must be practical, which means the information presented meets the patient's readiness to learn and can be put to immediate use.

Putting these concepts to work in a health education situation, the provider must, through talking with and observing the patient, determine the patient's interests, attitudes, and current knowledge. The provider must also assess what the patient is ready to learn and what information can be put to immediate use. Determining appropriate topics of education at any point in time might be tricky because the provider must first determine what those topics are. The counselor will have to interview the patient to determine current level of knowledge, interests, and needs. The provider must also refrain from giving the patient everything! If information is relevant and practical, it is more likely that the patient will try out the knowledge, observe success, and gain self-efficacy. Using these techniques empowers the patient, honors her or his autonomy, and allows her or him to gain self-efficacy. An example could be that a patient presents for emergency dental care to relieve pain. The dental provider provides the emergency treatment, proceeds to counsel the patient on additional oral health needs, and recommends a comprehensive dental examination. The provider can make the counseling relevant by linking oral health to other patient concerns such as possible diabetes or cardiovascular complications.

MOTIVATING PATIENTS

Learning is a dynamic process that involves motivation to learn and knowledge retention, reinforcement, and transference. All learners must have a motivation to accept new information or skills. Once the learner has a degree of incentive to learn or change behavior, the information or skills must be presented in a manner that will allow the learner to retain the knowledge and reinforce skills. Positive reinforcement occurs with a positive outcome and can lead to increased self-efficacy. Negative reinforcement occurs with a bad outcome and can come from the instructor or from natural results of behavior. For example, a dental provider can instruct a patient to floss daily. If the patient does not adopt that behavior and the gum tissue continues to bleed, that is a negative consequence of the patient's behavior. It is then the provider's responsibility to persuade the patient to continue daily flossing so that positive results can be achieved.

Transference occurs when new knowledge or skills are applied to a different setting. It can be evident if a young mother learns about brushing and flossing and then teaches her children similar practices.

Motivating the adult learner requires certain considerations. Six sources of adult motivation are as follows:

- Social relationships: Changing behavior to meet people or improve social activities.
- External expectations: Desire to please someone in authority.
- Social welfare: Desire to improve society.
- Personal advancement: Improvement on the job or achievement of a personal goal.
- Escape stimulation: Avoidance of boredom.
- Cognitive interest: Learning for the sake of learning.

Adults also have many barriers to learning. These barriers can include lack of time, interest, money, confidence, or failure to see the need to change. The challenge of the health educator is to minimize barriers and increase the reason for learning. A specific method of achieving this goal is through the use of motivational interviewing.

METHODS IN HEALTH COMMUNICATION

The methods in health education may be grouped into three main types. These include individual, group and mass approach. Anyone or a combination of these methods can be used selectively at different times, depending upon the objectives to be achieved, the behaviour to be influenced and available funds.

Individual Approach - it may be given in personal interviews in the consultation room of the doctor or in health centre or in homes of the people. The people involved are the public health nurses, dental hygienist, dentist.

Individual approach	Group approach	Mass approach
Personal contact	Lectures	Television
Home visit	Demonstrations	Radio
Personal letters	Discussion methods	News papers
	- Group discussion	Printed materials
	- Panel discussion	Direct mailing
	- Workshop and conferences	Posters
	- Seminars	Health museum and exhibition
	- Role play	Internet

The biggest advantage of individual health teaching is that we can discuss, argue and persuade the individual to change his behaviour. It provides opportunities to ask questions in terms of specific interests. The limitation of individual health teaching is that the numbers we reach are small, and health education is given only to those who come in contact with us.

THE SITE OF ORAL HEALTH EDUCATION

In the office or clinic: The process of education for oral health applies in the one-to-one setting with a patient. First, of course, is the advantage of working with one person at a time. Second, the dental professional often sees these same persons periodically over longer periods of time, perhaps for many years permitting the development of high levels of trust and allowing reinforcement and gradually refinement of desirable skills, knowledge and attitudes. It is not necessary to teach everything at once, a reasonable long-range educational plan can be developed and implemented for each patient.

In the school: An atmosphere in which the pursuit of knowledge prevails would seem the ideal location to bring about extensive changes in oral health behaviours, attitudes and knowledge. Recent teaching has focused on developing the knowledge and skills needed to brush and floss the teeth. Attention also has been directed to establishing desired habits by including supervised plaque removal in the class. Should a classroom session be planned, several factors must be remembered.

First, the visit should be cleared with all persons who have responsibility for monitoring instructions by non-school personnel. Prior to the visit the process of planning, including a careful identification of needs for instruction should be conducted and appropriate objectives established-preferably jointly with the teacher and the students. Finally after instruction has been given, it should be evaluated against the objective.

In the community: Education for oral health in the community often seems limited to activities such as puppet shows, smile contests or public service announcements on television, radio, or newspaper. The dental health professional should pursue the planning process particularly when the objective is to improve oral health status. The content should emphasis the known effective preventive measures, e.g. fluorides and sealants, and educational methods should encompass activities such as community organization and community development.

PLANNING A DENTAL HEALTH EDUCATION PROGRAMME

Collect background information: The first stage is to collect relevant information on the problem. It is necessary to establish the correct scientific facts which are to be communicated.

Define the target population: The target population will ensure efficient utilisation of resources by preventing the inclusion of irrelevant groups.

Assessment of baseline knowledge: Too often health educators tell people what they already know and fail to give information that the target group wants.

Anchorage attitude: These are basic to a person's way of life and are a form of personal identity. People strongly resist the attempt to change them. Health educators should try to utilize these believes and opinions in a positive way.

Level of literacy: Before using visual or written presentation, it is essential to assess population levels of literacy so that the appropriate educational techniques are utilized.

Define objective: It is necessary to have precise objectives stated in terms of the knowledge or behaviour that are expected from the target group.

Assess resources: It is important to ensure that the necessary facilities and personnel are available to carry out the programme. It is necessary to consider the possible effects of programme on other professional groups.

Pilot study: Ideas are put into practice on a small scale so that problems can be discovered and necessary modifications made before the main programme is initiated.

Timing of a programme: It is important to give careful consideration to the timing of a health education. This will reduce the possibility of the target population not being available and receptive.

Evaluation: This should occur during the conduct of the programme and at the end.

Mid-term evaluation: It is important to monitor the programme as it is being conducted to ensure that it is proceeding as designed and planned.

End-term evaluation: The evaluation of the health education programme can be done at the end of the programme, provided the objectives of the programme are clearly defined. It is possible to measure the change in knowledge and attitudes by well-designed questionnaire.