Towards international curriculum standards

Abstract: In 1998, the House of Delegates of the International Federation of Dental Hygiene requested that the education committee of the federation develop curriculum guidelines to serve as models for countries that were initiating dental hygiene educational programmes. This article reviews the process of guideline development, identifies challenges and directions for the future. A review of topics, goal and descriptions of 2, 3 and 4 years is presented. The process of development of the guidelines provided an opportunity for discussion of differences in dental hygiene paradigm from various countries. Participants began to understand the legal, cultural and educational differences that have an impact on curriculum for health care. It is a beginning in the process of developing international educational standards in dental hygiene education.

Key words: curriculum development; international educational standards; dental hygiene curriculum

Introduction

More countries are assessing oral health needs and recognising the need for and value of dental hygiene services. After identifying the need, many are struggling with developing educational programmes to train dental hygienists in their home countries. Well-intentioned groups of dentists or government workers are beginning to develop a curriculum for a profession that is not their own. In 1998, in order to facilitate curriculum development, the House of Delegates of The International Federation of Dental Hygiene charged the education committee with formulating a model curriculum for a 2-, 3- and 4-year dental hygiene programme. Countries that wanted to develop an educational programme for dental hygiene could then use these models as a foundation for programme development.
The process

The education committee consisted of 11 dental hygienists from 11 different countries. Three subcommittees were formed to work on 2-, 3- and 4-year models, respectively. The process of developing a curriculum model provided many challenges.

The first challenge for committee members was to find ways to communicate with each other over a period of 3 years. This was a significant challenge, as all the members did not have access to e-mail. Some, who did have access, still could not connect with others who did. Because of differences in time zones and languages, communication became difficult. Everyone on the committee also had a demanding work schedule. Because there was no funding for the project, there was no specific time to meet and discuss and the project often got put-off in favour of the demands of paid employment.

The second challenge became the work itself. When developing a curriculum for a particular country, not only is it important to consider the topics for the discipline, but also it is imperative to consider the culture, educational system, oral health care needs and health care roles of the country for which the programme is being developed. There is a wide variation in each of these arenas in different countries. The committee decided it could not complete a curriculum document that would be appropriate for each culture, and narrowed its scope to developing goals, topics and descriptions for each of the three programmes.

During the first 3 years of the project, the committee collected and studied information and references including the accreditation standards for dental hygiene education programmes from the Commission on Dental Accreditation of the American Dental Association, curricular guidelines for dental hygienist education from the European Federation of Periodontology and curriculum documents from education committee member countries. The committee then drafted topics to be included in a model curriculum and submitted it to the House of Delegates of the IFDH for input and revision. The topics were also presented in a workshop for all interested delegates attending the International Symposium on Dental Hygiene in Sydney, Australia, in August 2001. The purpose of the workshop was to gain feedback from many participants from many countries. Each country had its own idea of what constituted a successful dental hygiene programme. The discussion provided a catalyst for exchanging ideas and enhancing understanding of various paradigms of dental hygiene around the world. At the end of the workshop, the guidelines were revised to include results of the workshop. These guidelines are the result of the process.

Proposed guidelines for 2-, 3-, and 4-year dental hygiene education programme as developed by the education committee of the IFDH

The International Federation of Dental Hygiene definition of a dental hygienist is used as the foundation for the curriculum.

‘A dental hygienist is a health professional and is graduated from a recognised school of dental hygiene, who, through clinical services, education, consultative planning and evaluation endeavors, seeks to prevent oral disease, provides treatment for existing disease and assists people in maintaining an optimum level of oral health. Dental hygienists are health professionals whose primary concern is the promotion of total health through the prevention of disease’ (1).

The definition of dental hygiene by Michele Darby is used as the foundation for the process of care within the curriculum.

‘Dental hygiene is the study of oral health practices and the management of adaptive behaviors required to perform these practices in order to assist clients in fulfilling their human need for wellness. Dental hygiene involves assessment, diagnosis, planning, interventions and evaluation, through oral disease prevention, health promotion, treatment and collaboration’ (2).

All curriculum models should be based on the process of care: assessment, planning, intervention and evaluation of client care.

Assessment

For the systematic collection and analysis of the following data to identify patient needs and oral health problems, the hygienist should be able to perform the following tasks:

1. Review and evaluate medical, dental and social history.
2. Take vital signs.
3. Extra/intraoral examination.
4. Periodontal and dental examination.
5. Determine the need to take radiographs (according to national standards).
6. Interpret and discuss radiographs with dental practitioner.
7. Take and record indices.
8. Risk assessments (i.e. tobacco, systemic, caries, etc.) and management.
9. Use appropriate communications skills.
10. Evaluate health programmes.
11. Assess psychological and cultural attitudes toward health.
Diagnosis

The dental hygienist should be able to produce a dental hygiene diagnosis based on the assessments to be used as the foundation for dental hygiene treatment.

Planning

For the establishment of realistic goals and treatment strategies to facilitate optimal oral health, the hygienist should be able to do the following:
1 Formulate a dental hygiene diagnosis.
2 Develop a dental hygiene treatment plan.
3 Discuss client conditions and proposed solutions.
4 Gain informed consent.

Implementation

For the provision of treatment as identified in the assessment and planning phase, the hygienist should be able to do the following:
1 Infection control.
2 Periodontal debridement and scaling.
3 Pain management.
4 Application of chemotherapeutic agents.
5 Fluoride therapy.
6 Application of pit and fissure sealants.
7 Coronal polishing.
8 Care of oral prosthetic devices.
9 Care and maintenance of restorations (including dental implants).
10 Health education and preventive counselling at individual and community levels.
11 Nutritional counselling.
12 Orthodontic functions.
13 Services for special-needs patients.

Evaluation

For the measurement of the extent to which goals identified in the treatment plan were achieved, the hygienist should be able to do the following:
1 Effectively use indices.
2 Re-evaluate oral and periodontal health status.
3 Determine subsequent treatment needs.
4 Provide continuing care (recall).
5 Refer for additional treatment.
6 Provide patient satisfaction.

Dental hygiene education should be evidence based. Competencies should be defined and listed. Dental hygiene practice should not be done in isolation but in collaboration with other health professionals. Teaching staff must include a dental hygienist, preferably with a baccalaureate degree or teaching qualification, who graduated from an accredited dental hygiene programme.

Goals for a dental hygiene programme

1 Provide sufficient knowledge in basic and dental sciences to enable the students to use and build on that knowledge in providing patient care.
2 Define and model professional qualities that include ethical decision making, therapeutic communication and collaborative relationships.
3 Provide sufficient information and experience in dental and dental hygiene science to allow students to demonstrate competent knowledge and psychomotor skills in assessing patient condition, planning, providing and evaluating dental hygiene care.
4 Provide sufficient knowledge and experience in health promotion and community dental health to enable students to develop and implement programmes to improve the oral health of the community.
5 Use systems of teaching and assessment that encourage critical thinking and evidence-based care.
6 List and define competencies needed for graduation.

Content for a 2-year curriculum

The curriculum should include educational content in the following areas:
1 General education:
1.1 Oral, written and electronic communications.
1.2 Psychology (including patient motivation, child development and pain management).
1.3 Sociology.
2 Biomedical sciences:
2.1 Anatomy.
2.2 Physiology.
2.3 Chemistry.
2.4 Biochemistry.
3 Dental sciences:
3.1 Tooth morphology.
3.2 Head, neck and oral anatomy.
3.3 Oral embryology and histology.
3.4 Oral pathology.
3.5 Radiology.
3.6 Periodontology.
3.7 Pain control.
3.8 Dental materials.
3.9 Dental caries.
3.10 Non-carious tooth wear.

4 Dental hygiene sciences:
4.1 Oral health education.
4.2 Preventive and nutritional counselling.
4.3 Health promotion.
4.4 Patient management.
4.5 Comprehensive clinical dental hygiene.
4.6 Provision of services for special-need patients.
4.7 Community oral health.
4.8 Medical and dental emergencies (with CPR).
4.9 Legal and ethical aspects of dental hygiene practice.
4.10 Infection and hazard control management.
4.11 Intraoral photography.
4.12 Implant maintenance.

5 Vocational practice:
5.1 Professional practice.
5.2 Ethics.
5.3 Legislation.
5.4 Team dentistry, safe practice.
5.5 Quality care.

Clinical practice

Clinical hours should be distributed throughout the curriculum. First-year students should have practice on a manikin during the first term. Students should treat patients for a minimum of 8 h per week. Second-year students should treat patients at least 12 h per week. Dental hygiene tutors should teach clinical skills. There should be an adequate number of and variety in patients so that students have enough experience to develop clinical judgment and evaluation of their care at the end of their schooling. It is recommended that first-year students complete a planning and evaluation process on at least three patients and the second-year students complete on at least nine patients. The concept of teamwork should be included in clinical instruction.

Total clinical hours with clinical instruction by dental hygienists should be approximately 500. Total hours of study should be approximately 1600.

Three-year programme

In addition to the content of the 2-year curriculum, the 3-year programme should contain the following:

1 General sciences:
1.1 Statistics.
1.2 The interpretation of data.
1.3 Application of data into practice.
1.4 Evaluation of current scientific literature.
1.5 Self-assessment skills.
1.6 Peer-assessment skills.
1.7 Practice management skills.

2 Dental sciences:
2.1 Dental epidemiology.
2.2 Pedodontics.
2.3 Orthodontics.
2.4 Psychopathology.
2.5 Administration of local anaesthesia.

3 Dental hygiene science:
3.1 Teamwork.
3.2 Quality systems for patient care.
3.3 Clinical self-evaluation.
3.4 Cultural competency.
3.5 Variety of patient groups.
3.6 Cooperation with other health groups.

4 Areas of special interests:
4.1 Hospital dentistry.
4.2 Restorative.
4.3 Special needs.
4.4 Dental hygiene education.
4.5 Public health.
4.6 Orthodontics.
4.7 Pedodontics.

Clinical practice should continue with emphasis on different work settings, special-need patients, advanced periodontal cases and advanced communication skills.

Four-year programme

In addition to the above, the curriculum would provide more in-depth education and clinical experience. It would also include courses in education to develop dental hygiene educators. General sciences would include evidence-based workshops.
1 Dental hygiene science:
   1.1 Research.
   1.2 Entrepreneurial skills.

   Clinical practice should continue with emphasis on evidence-based care. Several patients should be presented before and after treatment. Diagnostics could include saliva tests, caries tests, bacterial tests, oral photographs as well as indices, etc. Use of literature study and research could be evidenced by the production of a thesis.

2 Career path opportunities:
   2.1 Hospital specialty.
   2.2 Community and public health.
   2.3 Education.
   2.4 Entrepreneurial referral.

3 Oral health programmes:
   3.1 Implementation and testing of evidence-based oral health programmes.

Discussion

The proposed guidelines are a small part of what this process accomplished. The process itself provided a forum for exploration of differences in dental hygiene paradigms. There was discussion on differences in legal, cultural and educational issues that influenced the curriculum in health care education among various countries. It became obvious that one model could not be made to fit all countries. Yet, the discussion and listening that took place raised the level of awareness and respect among participants from member countries.

With improvements in technology and communication as well as ease of travel, our world is becoming smaller. It is time for barriers to come down and sharing to take place. I would see this project as a first step toward international standards in dental hygiene education.

References