Quality of care, patient safety & shared competencies : A dental perspective

(with a specific emphasis on collaborative practice, interprofessional education, oral health workforce planning)

• The **dramatic process of change** which has a clear impact on health-related issues

*(e.g. changing disease, life-expectancy and life-style patterns, burden of NCDs, broader definition of health and quality of life, advances in science and technology, and disease and life, quality pressure, etc..)*
The **dramatic process of change** which has a clear impact on health-related issues

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The **unsolved** health matters from the last millennium

(inequalities, problems of access to care, underserved areas and communities, shortage of qualified health professionals, cost-containment, etc..)
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e.g. changing disease, life-expectancy and life-style patterns, burden of NCDs, broader definition of health and quality of life, advances in science and technology, and disease and life, quality pressure, etc..

• The **unsolved** health matters from the last millennium

inequalities, problems of access to care, underserved areas and communities, shortage of qualified health professionals, cost-containment, etc..

bring out the **need** for exploring **new and effective models of provision of care**.
exploring **new** and **effective models of provision of care**.

**Among the many other attempts**

(allocating more budget for health, optimal workforce planning, curriculum changes for an education complying with the needs and demands, improving the working conditions of health professionals, etc..)

to overcome the existing matters

**collaboration of various degrees and between various health care providers**

is likely to serve as a **tool** to improve patient care and provision of care.

**discussions** *taking place in the wider health care system*

- Definitions
- Models
- Benefits
- Success factors
- Barriers
- Best practices
- Outcomes
- Others..
- Regulations
According to WHO;

“We are currently facing a severe global health workforce crisis with

- critical shortages
- imbalanced skill mix
- uneven geographical distribution of health professionals

leaving millions without access to health services."
effective CP

allows health workers to engage any individual whose skills can help achieve local health goals.

strengthens health systems & improves health outcomes.

WHO Framework for Action on Interprofessional Education & Collaborative Practice
Health Professions Networks Nursing & Midwifery Human Resources for Health World Health Organization
Department of Human Resources for Health www.who.int/hrh/nursing_midwifery/en/ WHO/HRH/HPN/10.3

CP can improve:
- access to and coordination of health services
- appropriate use of specialist clinical resources
- health outcomes for people with chronic diseases
- patient care and safety

CP can decrease:
- total patient complications
- length of hospital stay
- tension and conflict among caregivers
- staff turnover
- hospital admissions
- clinical error rates
- mortality rates.

health systems - fragmented
Collaborative practice-ready workforce is an innovative strategy that will play an important role in mitigating the global health workforce crisis.

Evidence shows that as these health workers move through the system, opportunities for them to gain interprofessional experience help them learn the skills needed to become part of the collaborative practice-ready health workforce.
collaboration of various degrees and between various health care providers is likely to serve as a tool to improve patient care and provision of care.

• Definitions
• Benefits
• Success factors
• Barriers
• Best practices
• Outcomes

Dentistry – No exception – Similar discussions

Worldwide, authoritative & independent voice of dentistry
The ORAL HEALTH Atlas
MAPPING A NEGLECTED GLOBAL HEALTH ISSUE

Boby Beaglehole
Habib Benzian
Jon Crail
Judith Mackay

The CHALLENGE of ORAL DISEASE
A CALL FOR GLOBAL ACTION

Original Article

Oral health workforce planning Part 1*: data available in a sample of FDI member countries

Nenin Yamalk1, Edoardo Ensolo-Carrasco2 and Denis Bourgeois3

1Department of Parasitology, Faculty of Dentistry, University of Macau, Macau, Macau; 2Department of Microbiology, Faculty of Dentistry, National Autonomous University of Mexico, Mexico City, Mexico; 3Department of Public Health, Dental Faculty, University of Lyon 1, Lyon, France.

Background & aims Workforce planning is a process to measure and compare current versus future workforce. Organised dentistry needs to focus on the benefits and the determinants and various systems of workforce planning together with the challenges, new trends and forces. The aim of the study was to identify data sources from countries relating to a selection of oral health indicators in a sample of FDI member countries. The potential for differences between developed and developing countries was also examined. Methods A cross-sectional survey study was carried out among FDI member countries classified as developed and developing countries between October 2011 and January/February 2012. A questionnaire was developed addressing the availability of 40 selected indicators distributed in four domains: Demographics, Access, Workforce and Supply of oral health services, Outcomes, Costs and Financing. Results: The availability of indicators for developing countries showed higher variability and minimum values of zero for all domains. Surveys were the source of information more frequently reported. Discussion: Standardised and reliable methodologies are needed to gather information for successful workforce planning. It is of utmost importance to increase the awareness and understanding of the member National Dental Associations regarding the role, basic elements, benefits, challenges, models and critical elements of an ideal workforce planning system.

Keywords: Oral health workforce, planning, indicators, oral health

INTRODUCTION
The latest and newest health technologies can have a positive impact on human health when proper systems exist to deliver them. However, health systems worldwide suffer from years of neglect. This has been attributed to the lack of trained health workers and is considered one of the most important constraints to strengthening the delivery of primary and other health services, including oral health care.1-3 As the epidemiology of oral diseases shifts over time owing to the availability of lifestyle and cultural factors, changes in oral health care and dental education are required.4 Therefore, new approaches and processes to workforce planning are essential to meet the future needs and demands of the population.5-7 Workforce planning is a procedure to measure and compare current (supplied) versus future workforce (required or expected) and provides an insight into the best policies and initiatives needed to improve the overall human resources system. It also helps us to understand the internal and external environment and how those factors can affect our current and future workforce, by being aware of the skills, capabilities and attitudes that are required to achieve business outcomes in the current and changing environment.8-10 However, many countries lack the technical capability to accurately monitor their own health workforce as data are often unavailable and out of date, and current definitions and proven analytical tools are...
1

_Workforce matters/issues_

_Dentistry – No exception_

- **Shortage of oral health workforce (GDPs, specialist care, etc..)**
- **Uneven distribution of oral health workforce (E.g. rural areas, migration of oral health professionals, etc..)**
- **Lack of/limited access to primary oral health care (E.g. basic oral health coverage,)**
  - Limited resources devoted to oral health care
- **Quality of care and standards and patient safety issues & matters (E.g. not adequately qualified personnel, illegal practice,..)**
The burden of oral conditions

The burden of provider/disease ratio

Global availability of dental personnel

Oral health workforce planning Part 1*: data available in a sample of FDI member countries

Nermin Yamalik, Eduardo Ensaldo-Carrasco and Denis Bourgeois

1 Department of Periodontology, Faculty of Dentistry, University of Haifa, Haifa, Israel; 2 Department of Microbiology, Faculty of Dentistry, National Autonomous University of Mexico, Mexico City, Mexico; 3 Department of Public Health, Dental Faculty, University of Lyon 1, Lyon, France.

Background & aim: Workforce planning is a resource to measure and compare current versus future workforce. Organised dentistry needs to focus on the benefits and the determinants and various systems of workforce planning together with the challenges, new trends and threats. The aim of the study was to identify data sources from countries relating to a selection of oral health indicators in a sample of FDI member countries. The potential for differences between developed and developing countries was also examined. Methods: A cross-sectional survey was carried out among FDI member countries classified in developed and developing countries between October 2011 and January/February 2012. A questionnaire was developed addressing the availability of 40 selected indicators distributed in four domains: Management, Clinical Services, Economic Development. Although some indicators were chosen for their usage and minimum values of indicators. Discussion: Standardised and reliable data were not given for all indicators, especially those regarding the role, basic elements of the system, and reliable information about indicators was not given zero for. Therefore, the importance to rely on reliable indicators is increased.

Key words: Oral health workforce, Dental care system, Oral health indicators, Workforce planning

INTRODUCTION

The latest workforce projections exist to meet the future needs of dental practitioners. However, a procedure to measure and compare current versus future workforce is required. Workforce planning provides an insight into the need for the number of dentists and dentures needed to improve the system. It also helps us to understand the external environment and its impact on the current and future demand for services. By comparing the skills, capabilities required to achieve business and external environment, we can make decisions regarding the role, basic elements of the system, and reliable information about indicators was not given zero for. Therefore, the importance to rely on reliable indicators is increased.

Oral health workforce

Dental team

- Dentists
- Dental hygienists
- Dental therapists
- Dental technicians
- Dental nurses
- Dental assistants
- Community dental coordinators
- Others..

The growing complexity of oral disease epidemiology, prevention and treatment may need a variety of oral health professionals with a set of specific knowledge and skills in order to provide high-quality solutions to specific oral health issues. More research is needed to make informed decisions regarding workforce planning and determining future workforce requires taking into account population growth, demographic profiles, education and licensure, personnel requirements, employment status, training requirements, information on demand and supply, career planning and various elements of job satisfaction for resource management through accurate efficient alignment of the workforce with strategic objectives and performance measures, linkage of expenditures to an organisation's long-term goals and objectives, and ensuring replacement availability to fill critical vacancies, especially for those positions that might take a long developmental phase to be productive.

Incomplete and uneven information on workforce and lack of any state agency in charge of data collection is also problematic. General dentists, dental specialists, dental therapists, dental hygienists as well as oral health therapists, oral prosthodontists and expanded function dental assistants have been suggested as a complete oral health workforce. The advanced dental hygiene practitioner, community dental health coordinator and dental health aide therapist are other workforce models that have also been proposed. However, appropriate workforce models may depend on identifying the specific needs of the country or region they intend to address. Thus, workforce planning is about how one achieves the match of skills, knowledge and behaviours.
health workforce crisis\textsuperscript{16}. The health and education systems are suggested to work together to coordinate health workforce strategies. If health workforce planning and policymaking are integrated, interprofessional education and collaborative practice can be fully supported.

Migrating to other (probably more developed) countries is a trend for developing countries. This trend is seen in all health-care professionals and the reasons for emigration may include the desire for postgraduate professional development, career growth, better-enumerated job opportunities, better working conditions and better living conditions\textsuperscript{6}. In addition, shifts in people's health-care preferences, improvements in health-care delivery as well as demographic changes may contribute to this migration\textsuperscript{5}. The present study revealed that dentists were not exceptions: we also have to consider dental care policies that can influence not only the education and movement of dentists, but health tourism\textsuperscript{12}.

Migration of health workers has a significant effect in developing countries because of the loss of workforce, inadequate funding, lack of infrastructure and low capacity to train personnel\textsuperscript{8}. Thus, health-care systems without proper investment may lead to poor payment of the professionals as well as inappropriate working environments and an overall low job satisfaction\textsuperscript{1}

Migrating to rural areas seems to be a new trend in developed countries. The reason may be the increased competition in big cities and/or the incentives provided for services in the rural areas\textsuperscript{25}. However, the major trend both for the developing and the developed countries is still migrating to big cities and this is continuing to have a negative impact on the even distribution of oral health workforce throughout the country. These factors are among the priorities for research in low- and middle-income countries\textsuperscript{19}. Another outcome may be increased competition among the oral health-care providers. Limiting work hours and preferring to have part-time work are also trends specifically related to the workforce in developed countries, which needs to be taken into account when compliance of the workforce with the needs and demands of individual patients and the public is concerned. One approach to reduce migration rates is to encourage health personnel to work within their own countries or regions for a period before they migrate no matter what their reasons\textsuperscript{19}. One trend that seems to be similar for both the developing and the developed countries, is the preference for large dental clinics instead of solo practices.

services in the recent years. Although this started as a trend in the developed countries, the present study demonstrates that it is also well accepted by dentists in developing countries. In contrast, specialisation training is gaining greater interest and more and more dentists appear to receive specialisation training in all countries. This is likely to be more prominent for the developed countries at present but the same trend is also observed in developing countries.

At present, the oral health workforce, despite its scattered distribution among countries, still works mainly in private practice\textsuperscript{23}. In addition, it is expected that higher densities of health personnel may be related with a better population health\textsuperscript{1}. Recognition and reduction of oral health inequalities is a priority for dentists\textsuperscript{1} and may require well-developed strategies in order to diminish them\textsuperscript{21}. Economic disparities and government's failure to address the social determinants of health have been suggested as contributory factors\textsuperscript{22}. Further, although mostly dental caries, periodontal disease (and sometimes oral cancers) are considered as major global oral health problems, it needs to be clearly understood that, depending on the local circumstances, various competing diseases/disorders also exist (e.g. noma, human immunodeficiency virus, etc.) and such diseases/disorders need to be taken into consideration in any planning or future projections. Furthermore, quality of care, professionally accepted standards of care and safety of individual patients and the public at large are also important elements of workforce planning\textsuperscript{23}.

Workforce planning ensures that 'the right people with the right skills are in the right place at the right time'. For the oral health workforce to prosper, it needs a source of income and/or funding along with appropriate government policies where dental services are integrated within primary care, in order to enable them to diminish inequalities by fostering oral health and providing treatment to the harm derived from oral and dental diseases\textsuperscript{21,24,25}.

Acknowledgements

The authors are grateful to all the NDAs that responded to this questionnaire, Isabelle Bourzeix for her kind assistance and members of OHHFWIT members for their kind support.

REFERENCES

1. Clark PF, Stewart JB, Clark DA. Migration and recruitment of
18 questionnaires processed; 41.40% response rate.

Canada, Belgium, Bahamas, Austria, United States, Germany, France, Finland, Netherlands, Mozambique, Morocco, Cuba, Burundi, Costa Rica, Congo, Georgia, Benin.
Table 2: Comparison of the structure of dental workforce among participating countries

<table>
<thead>
<tr>
<th>Number of...</th>
<th>Developed</th>
<th>Developing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Minimum</td>
</tr>
<tr>
<td>Dentists</td>
<td>8,773</td>
<td>92</td>
</tr>
<tr>
<td>Specialists</td>
<td>600</td>
<td>0</td>
</tr>
<tr>
<td>Dental practices</td>
<td>6,000</td>
<td>60</td>
</tr>
<tr>
<td>Dental hygienists</td>
<td>550</td>
<td>0</td>
</tr>
<tr>
<td>Dental therapists</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dental nurses</td>
<td>2,500</td>
<td>0</td>
</tr>
<tr>
<td>Denturists</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dental technicians</td>
<td>620</td>
<td>0</td>
</tr>
<tr>
<td>Total dental faculties</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Public dental faculties</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Private dental faculties</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Graduates per year</td>
<td>185</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3: Comparison between developed and developing participant countries

<table>
<thead>
<tr>
<th></th>
<th>Developed</th>
<th>Developing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>FE</td>
<td>11.1</td>
<td>88.9</td>
</tr>
<tr>
<td>FE exceeds the number of dentists demanded</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>FE lacks the necessary specialist care</td>
<td>11.1</td>
<td>88.9</td>
</tr>
<tr>
<td>FE exceeds the number of specialists demanded</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>FE lacks the number of necessary dentists in rural areas</td>
<td>55.6</td>
<td>44.4</td>
</tr>
<tr>
<td>FE exceeds the number of dentists demanded in big cities</td>
<td>44.4</td>
<td>55.6</td>
</tr>
<tr>
<td>Do you think...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGDU complies with the workforce needs?</td>
<td>85.7</td>
<td>14.3</td>
</tr>
<tr>
<td>UGDU needs reform to comply with the workforce needs?</td>
<td>42.9</td>
<td>57.1</td>
</tr>
<tr>
<td>SDE complies with the workforce needs?</td>
<td>66.7</td>
<td>33.3</td>
</tr>
<tr>
<td>SDE needs reform to comply with the workforce needs?</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Regulations comply with oral health workforce needs?</td>
<td>71.4</td>
<td>28.6</td>
</tr>
<tr>
<td>Regulations need improvement to comply with the needs?</td>
<td>57.1</td>
<td>42.9</td>
</tr>
<tr>
<td>As NDA do you participate to the negotiations with the authorities regarding oral health workforce planning</td>
<td>57.1</td>
<td>42.9</td>
</tr>
</tbody>
</table>

UGDE, undergraduate education; SDE, specialist dental education.
# Developed vs. Developing countries

<table>
<thead>
<tr>
<th>Number of...</th>
<th>Developed Median</th>
<th>Developed Min.</th>
<th>Developed Max.</th>
<th>Developing Median</th>
<th>Developing Min.</th>
<th>Developing Max.</th>
<th>u statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentists</td>
<td>7900</td>
<td>68</td>
<td>186084</td>
<td>72</td>
<td>0</td>
<td>12144</td>
<td>14.5</td>
<td>0.022</td>
</tr>
<tr>
<td>Specialists</td>
<td>600</td>
<td>0</td>
<td>39027</td>
<td>10</td>
<td>0</td>
<td>6043</td>
<td>22.5</td>
<td>0.111</td>
</tr>
<tr>
<td>Dental practices</td>
<td>3838</td>
<td>0</td>
<td>127022</td>
<td>51</td>
<td>0</td>
<td>2500</td>
<td>24</td>
<td>0.141</td>
</tr>
<tr>
<td>Dental hygienists</td>
<td>40</td>
<td>0</td>
<td>174100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>0.012</td>
</tr>
<tr>
<td>Dental therapists</td>
<td>0</td>
<td>0</td>
<td>291</td>
<td>0</td>
<td>0</td>
<td>123</td>
<td>37</td>
<td>0.634</td>
</tr>
<tr>
<td>Dental nurses</td>
<td>0</td>
<td>0</td>
<td>11600</td>
<td>0</td>
<td>0</td>
<td>176</td>
<td>36.5</td>
<td>0.698</td>
</tr>
<tr>
<td>Denturists</td>
<td>0</td>
<td>0</td>
<td>2098</td>
<td>0</td>
<td>0</td>
<td>72</td>
<td>36</td>
<td>0.541</td>
</tr>
<tr>
<td>Dental technicians</td>
<td>65</td>
<td>0</td>
<td>4050</td>
<td>0</td>
<td>0</td>
<td>1100</td>
<td>25</td>
<td>0.152</td>
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<tr>
<td>Total dental faculties</td>
<td>5</td>
<td>0</td>
<td>62</td>
<td>3</td>
<td>0</td>
<td>17</td>
<td>27</td>
<td>0.232</td>
</tr>
<tr>
<td>Public dental faculties</td>
<td>4</td>
<td>0</td>
<td>38</td>
<td>2</td>
<td>0</td>
<td>17</td>
<td>25.5</td>
<td>0.182</td>
</tr>
<tr>
<td>Private dental faculties</td>
<td>0</td>
<td>0</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>38.5</td>
<td>0.846</td>
</tr>
<tr>
<td>Graduates per year</td>
<td>185</td>
<td>0</td>
<td>5003</td>
<td>16</td>
<td>0</td>
<td>400</td>
<td>17</td>
<td>0.037</td>
</tr>
</tbody>
</table>

Table 2. Comparison of the structure of dental workforce among participating countries.
number of dentists meeting expectation

- Developed: 88.9%
- Developing: 33.3%

lack of dentists in rural areas

- Developed: 55.6%
- Developing: 11.1%

exceeding number of dentists in big cities

- Developed: 44.4%
- Developing: 66.7%

lack of specialty care

- Developed: 77.8%
- Developing: 22.2%
**Regulations complying with workforce needs**

- Yes: Developed 71.4%, Developing 12.5%
- No: Developed 28.6%

**Regulations need improvement**

- Yes: Developed 100%
- No: Developed 57.1%, Developing 0%

**Undergraduate dental education complying with workforce needs**

- Yes: Developed 85.7%, Developing 42.9%
- No: Developed 14.3%

**Continuing dental education requiring reform to comply with workforce needs**

- Yes: Developed 60%, Developing 62.5%
- No: Developed 40%, Developing 37.5%
FDI Vision 2020 & Optimal Oral Health Through Interprofessional Education and Collaboration
5 broad, transversal themes were identified:

Collaborative Practice

The dental profession needs to be familiar with the

- broad context of collaborative practice (CP),
- the global trends, applications & even sometimes the ‘pressure’ regarding CP
- the opportunities & threats

and become prepared for the future.

CP report supportive document

Good inter-professional CP models, introduced within a variety of contexts, may have the primary objective of improving different aspects of healthcare delivery:

- increasing access & quality
- improving practice productivity & efficiency
- improving patient clinical outcomes & satisfaction.

Good inter-professional CP models may increase the contribution of the dentists to the general health and quality of life of patients and the public and subsequently broaden the role of dentists in the general health arena.

Good intra-professional CP models may improve access to oral health care (especially in rural areas and for underserved communities) and increase the efficiency of provision of oral care.

Intra-Professional Collaborative Practice

Dentist as a Leader of an Expanding Oral Health Team

Case 1: The Netherlands – Collaboration for Increased Oral Health Promotion and Disease Prevention

This case describes the changing scene of oral health in the country, with a focus on prevention and the consequent introduction of the professions of oral dental health hygienists and prevention assistants in the Netherlands.

Case 2: USA - Community Dental Health Coordinators (CDHCs) & Minnesota case

This case describes an instance of intra-professional as well as multidisciplinary inter-professional collaboration, where dentists, dental hygienists, community dental health coordinators and dental assistants work side by side and collaborate with other professionals in healthcare, education and social services for the common goal to improve oral health of communities.

Case 3: Thailand – Collaboration for Universal Oral Health Coverage

This case is an example of intra-professional education between dentists and dental health nurses. The move towards Universal Health Coverage (UHC) has increased the demand for dental nurses in Thailand. Dental nurses provide preventive and basic dental services primarily to school children under a dentist’s supervision. The inter-professional education of dental and medical students is also discussed.

Intra-Professional Collaborative Practice

Selected Countries - Collaboration to Improve Oral Health in Underserved Communities

Case 4: New Zealand – Improved Oral Health for Children

Case 5: Alaska, USA – Improved Oral Health for Tribal Communities

Case 6: Minnesota, USA – Improved Oral Health for Vulnerable Populations

These examples give an overview of different practice arrangements involving dental nurses, dental therapists, all designed to enhance access to oral health services in disadvantaged communities.
Inter-Professional Collaborative Practice

Case 8: Lausanne, Switzerland – Dentist as a Guardian of General Health

This case describes intra- and inter-professional collaboration at the University Hospital of Lausanne, where an oral health team composed of dentists, dental hygienists, assistants and technicians work with physicians to improve the overall health of patients.

Case 9: Dentists as Expert Advisors in Wales – Improving Mouth Care for Patients in Hospitals

This case of collaborative practice includes intra-professional collaboration within the dental profession as well as inter-professional teamwork with nurses, physicians, pharmacists, dieticians, speech and language therapists to improve the health of adult patients in hospital ward settings.

**Table 4. Matrix to Compare Case Studies across Several Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>Minnesota</th>
<th>Lausanne</th>
<th>Netherlands</th>
<th>Thailand</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intra-Professional Collaboration</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Inter-Professional Collaboration</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Role of dentist</td>
<td>Leader of the dental team</td>
<td>Leader of the dental team</td>
<td>Leader of the dental team</td>
<td>Leader of the dental team</td>
<td>Expert Advisor</td>
</tr>
</tbody>
</table>
| Drivers of change      | • Impeded access to care  
• Need for prevention  
• Patient-centered care  
• Changing demographic and epidemiology of disease  
• Focus on access to preventive care  
• Growing shortage of dentists  
• Changing demographic and disease epidemiology  
• Focus on access to preventive care  
• Fundamentals of Care (WG audit)  
• Patient-centered care |
| Barriers               | • Low reimbursement  
• Initial opposition of dental profession  
• Lack of funding for medical training of dentists and for vulnerable groups  
• N/A  
• N/A  
• Strong nurse leadership  
• Funding & capacity of the dental team to provide training |
| Funding                | Public     | Public & private | Public & private | Public | Public |
| Provider satisfaction* | Acceptable | Good       | Good         | Acceptable | Good |
| Patient satisfaction** | Acceptable | Good       | Good         | Good    | Good   |

Interprofessional Collaboration
Dentistry & Medicine
Pediatricians – children’s oral health

Abstract

Oral Health Prevention and Toddler Well-Child Care: Routine Integration in a Safety Net System.

Cronley DJ1, Moultrie NM2, Heckman DR3, Garayko SA4, Potter MR5, Walzer MA6

Abstract

BACKGROUND AND OBJECTIVE: Applying topical fluoride varnish to prevent early childhood caries (ECC) In 2008, the pediatricians at Children's Hospital and Regional Medical Center, a 404-bed non-profit hospital in Seattle, Washington, began applying fluoride varnish to high-risk children. Since then, the program has expanded to include all children on the safety net system. The objective of this study was to evaluate the impact of the program.

METHODS: A pre-post study was conducted from 2008 to 2010. The primary outcome measure was the number of new caries lesions at the 12-month follow-up visit.

RESULTS: A total of 266 children were enrolled in the study. A total of 126 children were seen at the 12-month follow-up visit. The cumulative incidence of caries was significantly lower in the intervention group compared to the control group (p<0.05). The odds ratio for the intervention group was 0.35 (95% CI 0.15 to 0.81).

CONCLUSIONS: The program was effective in reducing the incidence of new caries lesions. The results suggest that the program is a cost-effective way to prevent ECC.

Accuracy of pediatric primary care providers’ screening and referral for early childhood caries.

Pichler KM1, Rozier RG, Vann WF Jr.

Abstract

PURPOSE: To assess pediatric providers’ knowledge, attitudes, and experience regarding oral health, and to determine the accuracy of their screening and referral practices.

METHODS: A survey was conducted among pediatric providers in a large urban teaching hospital. The survey included questions about the providers’ knowledge of ECC, their screening and referral practices, and their perceived barriers to their patients’ referral to dental care.

RESULTS: A total of 200 providers completed the survey. The majority of the providers (80%) reported that they screen for ECC during well-child visits. However, only 50% of the providers reported that they refer children to dental care when needed. The most common barriers to referral were the lack of time (70%) and the lack of insurance coverage for dental care (50%).

CONCLUSIONS: Pediatric providers are aware of ECC and their role in its prevention. However, there is a need for improvement in their screening and referral practices. Further education and training may be needed to address these barriers.
KEY MESSAGES

1. **Collaborative Practice (CP) is more than just collaboration**

According to World Health Organization (WHO) ‘Collaborative practice (CP) happens when multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality care’.

2. **CP increases efficiency and quality**

In terms of service delivery, CP improves access and quality. Furthermore, it contains costs. Evidence also indicates that CP improves mutual trust and accountability among providers and results in better coordinated care.

3. **Dentists should play a leadership role**

Dentists are the front-line medical professionals in the prevention, early detection and treatment of oral and systemic diseases. They should therefore play a leadership role within the oral health profession and in relation to other health professions to improve oral health and thereby contribute to the improvement of general health and quality of life for all.
KEY MESSAGES

4. Collaboration needs to be broadened and efficiently applied in everyday practice

There has been great progress in the treatment of oral and dental diseases in recent years due to the special commitment of the dental profession and effective collaboration. This collaboration needs to be expanded and its efficiency increased in everyday practice.

5. Interprofessional Education (IPE) is an essential tool to prepare for CP

There is a need for the dental professional to prepare itself through IPE.

6. There is no one-size-fits all approach to CP

FDI recognizes that there are no one-size-fits-all approach and delivery of health services will depend on contextual factors and country needs.
• Mechanisms are not the same in all health systems.

• Health policy-makers should utilize the mechanisms that are most applicable and appropriate to their own local or regional context.

**Regulations**

Provision of oral health care
Dental profession

Highly regulated
Different bodies (local, regional, national context)
Continuing change & newly introduced regulations
# Chapter 4. Dentistry

## Article 1. Administration

- Article 2. Admission and Practice
- Article 2.4. Oral and Maxillofacial Surgery
- Article 2.5. Special Permits
- Article 2.6. Continuing Education
- Article 2.7. Use of General Anesthesia
- Article 2.8. Use of Conscious Sedation
- Article 2.85. Use of Oral Conscious Sedation for Pediatric Patients
- Article 2.86. Use of Oral Conscious Sedation for Adult Patients
- Article 2.9. Dental Restorative Materials

## Article 3. Registration

- Article 3.5. Additional Offices
- Article 4. Suspension and Revocation of Licenses
- Article 4.7. Diversion Program
- Article 5. Offenses Against This Chapter
- Article 6. Fees

## Article 7. Dental Assistants

## Article 8. Dental Corporations

## Article 9. Dental Hygienists

### Dentists

The law regarding Dentists is ORS 679. [Click here](#) to link to these statutes.

### Dental Hygienists

The law regarding Dental Hygiene in Oregon is found in ORS 680.010 to 680.205 and 680.990. [Click here](#) to link to these statutes.

### Administrative Rules

The administrative rules pertaining to dentistry, dental hygiene, dental assisting, and administration of anesthesia are found in OAR 518. [Click here](#) to link to the rules.

Dental Practice Act - Revised January 1, 2016
Directives regulating dentistry (EU)

- 07.09.2005 Directive 2005/36/EC - mutual recognition of professional qualifications comprehensively regulates mobility within the EU by setting minimum training requirements for health professionals, including dentists.
DENTAL TEAM, TASKS AND RESPONSIBILITIES:
Top quality for patient safety and oral health care

1. PREAMBLE

Dentistry is a complex medical science with high standards, which encompasses the prevention, diagnosis and rehabilitation treatment of whole Masticator System, the hard and soft tissues of mouth, the salivary glands, the nerves, the muscles and the jaws, recognizing oral symptoms of the systemic diseases, including oral cancer, malformations and lesions of the teeth, mouth and jaws, as well as the replacement of missing teeth and restoration of functional oral health.

Such treatment calls for medical knowledge, acquired with at least 5 years of University education, according to the European directives in force. This is an education level not reached by the other members of the dental team.

RESOLUTION
Dental Hygienist Profile

Preamble

European Regional Organization of FDI, which represents more than 540,000 dentists Europe wide, aims to promote high standards of oral healthcare and dentistry and effective patient-safety centric professional practice.

All members of the dental team should use only those qualifications or titles, which are approved by the competent dental authority in their countries (legislation in the establishment country, place of work, country of practice).

In those ERO Member States where dental hygiene practitioner profile exists, the requirements for education, training and field of competences are very different.

The following professional profile, described, educated and trained by Dental Profession besides the "Dental Chairside Assistant" and the "Dental Preventive Assistant's" profile, is the "Dental Hygienist's" profile.

The European Regional Organization of the FDI wants to contribute to patient safety through the promotion of the dental hygiene practitioner's profile.

ERO resolution on the condition of possible delegation within the dental team

Dentistry is a complex medical science with high standards. A dental treatment calls for special knowledge, acquired with at least five years of fulltime University education, according to the European directives in force. It is the minimal level of education necessary to ensure patient's safety, which is attained only by the dentist and not by any other member of the dental team.

The dentist is in principle obliged to provide dental care personally, however, in compliance with national regulations, the dentist may delegate to other dental team members certain performance of overall dental care. In any case it is the dentist treatment. The dentist includes in particular:

Statement on the role of dental team in provision of dental care

The ERO-FDI takes note of the recent actions of national dental associations and organizations associating dental technicians. These actions include written and oral forms and take place on various occasions, but they all refer to the important need of ensuring an increased scope of professional tasks for dental technicians, who have the right to independent practice, including direct care of patients without supervision by the dentist.

The ERO-FDI, in accordance with the FDI Policy Statement on "Dental Technician adopted in 1998 and revised in 2007, firmly draws attention of the authorities and the public to the fact that the dental technician is an integral part of the dental team.

Dental Chairside Assistant

Preamble

The detailed definition of the DCA Profile should help to align the post of DCA to the European Qualification Framework (EQF) to be introduced in 2012. Each country has to make a proposal on how to develop this concept, which contains the minimum criteria for a qualified DCA.

The dental profession is absolutely against any kind of compulsory standardization.

The dental team, led by the dentist, is essential in the prevention of oral diseases and in ensuring the best possible quality of oral health care. All members of the dental team shall have the education and training appropriate to their areas of responsibility and be legally allowed to provide dental care always under the supervision and responsibility of a dentist. Roles and responsibilities of all team members should be specified and defined by national regulatory bodies and/or professional dental organizations.

All members of the dental team may only use those dental qualifications or titles which have been approved by the competent dental authority in that country (legislation in the awarding country, place of work, country where they practice).

http://www.erodental.org
Developed vs. Developing countries

<table>
<thead>
<tr>
<th>Do you think...</th>
<th>Developed</th>
<th></th>
<th>Developing</th>
<th></th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGDE complies with the workforce needs?</td>
<td>Yes: 85.7</td>
<td>14.3</td>
<td>Yes: 37.5</td>
<td>62.5</td>
<td>0.119</td>
</tr>
<tr>
<td>UGDE needs a reform to comply with the workforce needs?</td>
<td>Yes: 42.9</td>
<td>57.1</td>
<td>Yes: 50</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>SDE complies with the workforce needs?</td>
<td>Yes: 66.7</td>
<td>33.3</td>
<td>Yes: 66.7</td>
<td>33.3</td>
<td>1</td>
</tr>
<tr>
<td>SDE needs a reform to comply with the workforce needs?</td>
<td>Yes: 60</td>
<td>40</td>
<td>Yes: 62.5</td>
<td>37.5</td>
<td>1</td>
</tr>
<tr>
<td>Regulations comply with oral health workforce needs?</td>
<td>Yes: 71.4</td>
<td>28.6</td>
<td>Yes: 12.5</td>
<td>87.5</td>
<td>0.041</td>
</tr>
<tr>
<td>Regulations need improvement to comply with the needs?</td>
<td>Yes: 57.1</td>
<td>42.9</td>
<td>Yes: 100</td>
<td>0</td>
<td>0.063</td>
</tr>
<tr>
<td>As NDA do you participate to the negotiations with the authorities regarding oral health workforce planning?</td>
<td>Yes: 57.1</td>
<td>42.9</td>
<td>Yes: 50</td>
<td>50</td>
<td>0.614</td>
</tr>
</tbody>
</table>

Table 3. Comparison between develop and developing participant countries (UGDE= undergraduate education, SDE= specialist dental education)
A ‘Genuine’ Concern
Patient Safety & Quality of Care
protecting patients, regulating the dental team

CED POSITION PAPERS

Education and Professional Qualifications
Joint statement of the sectoral professions June 2002

‘Co-operate with other members of the dental team and other healthcare colleagues in the interests of patients’

Referrals

4.7 If you ask a colleague to provide treatment, a dental appliance or clinical advice for a patient, make sure that your request is clear and that you give your colleague all the appropriate information.

4.8 If a colleague asks you to provide treatment, a dental appliance or clinical advice for a patient, be sure that you are clear about what you are being asked to do.

We aim to

protect patients
promote confidence in dental professionals
be at the forefront of healthcare regulation
assure the quality of dental education
ensure professionals keep up-to-date

We

register qualified professionals
set standards of dental practice and conduct

http://www.gdc-uk.org/Pages/default.aspx
http://www.cedentists.eu
A - IMPORTANCE OF THE DENTIST’S LEADERSHIP IN THE DENTAL TEAM

The provision of oral healthcare requires sophisticated and extensive medical and scientific knowledge in order to undertake correct diagnosis and treatment planning. This is particularly true given demographic changes such as an increasingly ageing population with complex health issues.

In order to ensure the best oversight of treatment and continuing care at all times, there is a need for the dentist to have a leadership role. This is particularly relevant in light of the risks related to the complexity of individual patients’ circumstances, including the need to consider drug interactions when treating those with multiple conditions.

The revised Directive on the Recognition of Professional Qualifications introduced a new criterion for the minimum duration of training for dentists. Basic dental training now comprises a total of at least five years and 5000 hours of university education for practicing independently.

B - COMPOSITION OF THE DENTAL TEAM WITH DENTAL TECHNICIANS

Patient care will be optimised if dental teams are composed of a dentist. In the European Union the composition of the dental team varies significantly from country to country and as mentioned above this document only intends to describe the professions that exist in the majority of EU countries.

In some member states, dental practices may have dental hygienists. Dental hygienists only exist in some Member States and their education, training and field of competences differ greatly across the European Union.

Dental hygienists work under the supervision of the dentist, following prescribed procedures and protocols related to the promotion and maintenance of good dental hygiene. They perform dental prophylactics and scaling of teeth, apply prophylactic materials to the teeth, collect data, and educate patients on maintaining a good oral health regime.

Dental Technicians

Dental technicians, as manufacturers cooperate with the dental team, work under dentists’ prescriptions and specifications in order to manufacture dental custom-made devices such as bridges, crowns and dentures. The dentist is the final user of dental custom-made devices and bears the responsibility for the overall treatment.

C - RESPONSIBILITIES AND COMPETENCES THAT DENTISTS EXPECT OF THEIR DENTAL TEAM MEMBERS AND THEIR RELATIONSHIP WITH PATIENTS

In order to safeguard adequate delivery of oral healthcare and appropriate relationship with patients, the members of the dental team must have the appropriate education, training and legal authorisation to provide specific oral care interventions as delegated by the dentist. They must follow a code of conduct or defined set of standards to ensure patient safety and good team work.

The core responsibilities and competences of dental team members are outlined below. They may vary from country to country. The level of regulation and registration is very varied across the European Union, which makes the leadership role of dentists, who are highly regulated in every country, extremely important.

Dental Chairside Assistants

Assisting the dentist during procedures, dental chairside assistants work under the supervision of the dentist and are responsible for preparing and providing instruments and materials needed for the treatment and follow-up with patients, along with any additional tasks related to laboratory and administrative work assigned to them by the dentist.
Directive 2005/36/EC on the Recognition of professional qualifications

to provide more uniform framework for recognition of professional qualifications of the regulated professions

Seven sectoral directives for "sensitive" professions: dentists, doctors, nurses, midwives, pharmacists, veterinarians and architects

Principle of free movement of people and services with minimal obstacles/barriers

But: Facilitation of services must be in context of respect for public health and safety and consumer protection

Implement the Directive faithfully, but in a way that safeguards patient safety and imposes minimum additional burdens on professional organisations / regulators

The Directive on the application of patients' rights in cross-border healthcare COM/2008/414/EC

states that in cases of cross-border healthcare safety and quality standards enforced in the country of treatment apply.
The Directive includes provisions on structures and procedures for informing cross-border patients about these standards (transparency) as well as provisions for cooperation between member states aimed at increasing quality and safety.

The quality and safety of healthcare services can best be ensured by having up-to-date minimum training requirements for health professionals; by promoting ethical codes developed by European health professionals' organisations in the context of cross-border care; through continuous professional development; and by a commitment to professional practice that is patient-safety-centred.

The CED believes that professional and ethical standards can best be developed at national or regional level.

http://www.cedentists.eu
DENTAL TEAM, TASKS AND RESPONSIBILITIES:
Top quality for patient safety and oral health care

1. PREAMBLE

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It is not designed to provide dental care personally, however, in compliance with the ERO resolution, one may delegate to other dental team members certain performance of tasks that form part of the overall dental care. In any case it is the dentist who is the patient for the overall treatment.

RESOLUTION
Dental Hygienist

Preamble

European Regional Organization of FDI, which name is widely, aims to promote high standards of oral health through centred professional practice.

All members of the dental team should use only those that are approved by the competent dental authority in their country of work, country of practice.

In those ERO Member States where dental hygiene education, training and field of competences are well organized.

The following professional profile, described, education, training and field of competences are well organized.

The European Regional Organization of the FDI wants to contribute to patient safety through the

Patient Safety & Quality of Care in provision of dental care

Dental Chairside Assistant

Preamble

The detailed definition of the DCA Profile should help to align the post of DCA to the European Qualification Framework (EQF) to be introduced in 2012. Each country has to make a proposal on how to develop this concept, which contains the minimum criteria for a qualified DCA.

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http://www.erodental.org
FDI POLICY STATEMENT

Action Against Illegal Dental Practice
Adopted by the FDI General Assembly: 1 October 2002 – Vienna, Austria
Reconfirmed by the FDI Dental Practice Committee in September 2009 in Singapore

The FDI recommends the competent authorities in each country:

· To develop and establish a legal framework for the entire area of the practice of dentistry
· To control the quality of the education and training for the practice of dentistry
· To control the practice of dentistry within the established legal framework
· To identify and suppress illegal dental practice

FDI POLICY STATEMENT

Supervision of Auxiliaries within the Dental Team
Reconfirmed by the FDI Dental Practice Committee in March 2007 in Ferney-Voltaire, France, Adopted by the FDI General Assembly: November 2000 – Paris, France

Optimal oral health is a function of a variety of factors - in addition to intra- and inter-professional CP.

Collaborative practice-ready workforce is an innovative strategy that will play an important role in mitigating the global health workforce crisis.

e.g.

- need & demand
- technological progress
- socio-economic dynamics
- satisfactory service delivery

They all need to be balanced according to the context.
Examples of mechanisms that shape collaboration at the practice level

Collaborative practice-ready workforce
- Governance models
- Supportive management practices
- Built environment
- Facilities
- Personnel policies

Collaborative practice
- Structured protocols
- Shared operating resources
- Shared decision making processes
- Communications strategies
- Space design

Optimal health services
- Conflict resolution policies
CP (and IPE) are strategies to improve access to care and achieve better quality of services efficiently

not end goals.
KEY MESSAGES

The dental profession should be recognized as a driving force behind CP

It is of utmost importance that the dental profession should be part of the political dialogue at national and global level and recognized as a central driving force behind the development of competencies for CP and the implementation of any CP model.
The health and education systems must work together to coordinate health workforce strategies.

Interprofessional health-care teams understand how to optimize the skills of their members, share case management and provide better health-services to patients and the community.

The resulting strengthened health system leads to improved health outcomes.
Thank you..