

Sheets

Introduction to dentistry

➤➤➤➤➤ Lecture #2



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هبة الأسنان

Roles of Dentists in Society

Introduction

Treat the patients as a **whole** not a **hole**:

- Dentists should not view patients as just teeth and cavities, but as complete human beings.
- Dentistry is closely connected to the other systems of the human body, making it far more than a simple 'drill and fill' procedure. Dentists should take on multiple roles and responsibilities, such as:
 1. Prevention: Preventing oral diseases.
 2. Education: Educating patients on oral hygiene.
 3. Research: Advancing dental knowledge.

Dentists as Oral Healthcare Providers

Clinical Importance:

1. **Prevent and treat oral diseases.**

Dentists identify, manage, and prevent oral diseases such as cavities and gum infections to protect overall oral and systemic health.

2. **Restores function and aesthetics.**

Mainly in Orthodontics: Treatment focuses on correcting irregularities of teeth and jaws, such as crowding or overlapping.

3. **Improves quality of life and patient confidence.**

Healthy, well-aligned teeth and a nice smile make daily life easier and help patients feel more confident.

4. **Maintains proper occlusion and prevents future complications.**

Dentists anticipate future oral issues and intervene early to avoid complications.



Key Dental Procedures:

<p>Restorative Dentistry (fillings) طب الأسنان الترميمي</p>	<p>Restorative dentistry involves any dental process which focuses on repairing or restoring damaged oral structures. This can include procedures such as fillings (restorations), bridges, and implants among many other services.</p>
<p>Edodontics (Root canal therapy) طب لب الأسنان</p>	<p>The specialty dealing with the diagnosis, prevention, and treatment of diseases of the dental pulp and periapical tissues, including root canal therapy.</p>
<p>Prosthodontics (dentures, implants, crowns, bridges) طب الأسنان التعويضي</p>	<p>The branch of dentistry focused on the design, manufacture, and fitting of artificial replacements for teeth and other parts of the mouth, including crowns, bridges, dentures, and implants.</p>
<p>Orthodontics for occlusion correction طب تقويم الأسنان</p>	<p>The specialty that diagnoses, prevents, and corrects misaligned teeth and jaws using braces, aligners, and other orthodontic appliances.</p>
<p>Periodontics (scaling and polishing) طب اللثة</p>	<p>The study and treatment of diseases affecting the supporting structures of teeth, such as gingiva, periodontal ligament, and alveolar bone. It includes procedures like scaling, root planning, and gingival grafts.</p>
<p>Paediatric Dentistry طب أسنان الأطفال</p>	<p>Specializes in the oral healthcare of infants, children, and adolescents, including preventive care, behaviour management, and treatment of developmental dental issues.</p>
<p>Oral and Maxillofacial Surgery (Extractions and maxillofacial surgery) جراحة الوجه والفم والفكين</p>	<p>Focuses on surgical procedures involving the mouth, jaws, face, and skull, including extractions, dental implants, corrective jaw surgery, and treatment of facial trauma.</p>
<p>Oral Medicine and Oral Pathology طب الفم وأمراض الفم</p>	<p>A specialty that deals with the diagnosis and management of complex oral diseases, including those related to systemic conditions, such as oral cancer and autoimmune disorders.</p>



Oral medicine is more **clinically oriented**, focusing on **diagnosing and managing** diseases affecting the oral cavity.

Oral pathology is more **laboratory-based**, dealing with **disease identification and research** through biopsy analysis.

Dentists as Preventive Care Advocates

Prevention is more effective and cost-efficient than treatment.

- Key preventive measures:

1. Patient education: Oral hygiene, diet, and lifestyle.
2. Fluoride treatments: Prevents decay in high-risk populations.
3. Routine check-ups & early detection: Identifies caries, periodontal disease early.

Impact :

1. Reduces disease burden.
2. Encourages lifelong oral hygiene habits.
3. Prevent systemic diseases linked to poor oral health.

Dentists in Public Health

-> Dentists contribute to community health initiatives. They reduce costs by preventing oral diseases.

-> Public health dentistry is a crucial yet often **overlooked aspect of the profession.**

-> Governments rely on dentists for **policy recommendations**, such as **water fluoridation and affordable care programs.**





School programs
Oral health programs for
school children.



Mobile Clinics
Dental clinics for underserved
areas.



Water Fluoridation
Initiatives for water fluoridation.



Advocacy
Advocating for better policies.

• School Programs

Local or international campaigns

FDI World Dental Federation (FDI) serves as the principal representative body for more than one million dentists worldwide and has a bold vision to lead the world to optimal oral health.

FDI headquarters in Geneva, Switzerland.

<https://www.fdiworlddental.org/>

**TEACHING CHILDREN TO
ACT ON MOUTH HEALTH**

486 million children suffer from tooth decay of primary teeth

MORE THAN 50 million school hours lost each year due to poor oral health

71% of parents agree that schools should teach children about good oral care*

MOUTH HEROES FOR SCHOOLS provides teachers with the tools to help educate children on the importance of good oral health

SAY Ahh ACT ON MOUTH HEALTH

www.who.org

World Oral Health Day 20 March

*FIGURES: YouGov Plc. Sample Size: 16,477 adults of which 4,367 were parents with children aged 0-6. FIELDWORK: 18 February-4 March 2019. COUNTRIES SURVEYED: Australia, Brazil, Germany, UK, USA, Mexico, Poland, Algeria, China, India, Indonesia, Morocco and Saudi Arabia.



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• Mobile Clinics

Mobile clinics provide healthcare services to people living in isolated or underserved areas. They also deliver medical care to elderly individuals in nursing homes who may have difficulty traveling to traditional healthcare facilities.

The University of Jordan operates a mobile clinic that conducts outreach campaigns and provides medical services to nursing homes.



• Water Fluoridation

Water fluoridation is the process of adding fluoride to public drinking water at a safe level to help prevent tooth decay.

Fluoride strengthens the enamel, making teeth more resistant to acids and bacteria that cause cavities.

Figure 3: Mean DMFT 12 Year olds in Ireland by Water Fluoridation Status

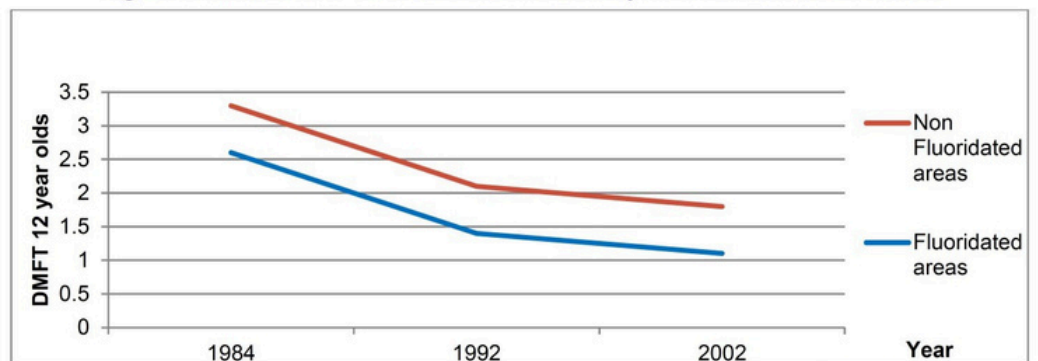


Figure 3: Data from the World Health Organization database. Available at <http://www.mah.se/CAPP/Country-Oral-Health-Profiles/>

DMFT stands for Decayed, Missing, and Filled Teeth, and it is used to measure tooth decay. The graph compares fluoridated areas vs. non-fluoridated areas in Ireland over several years.

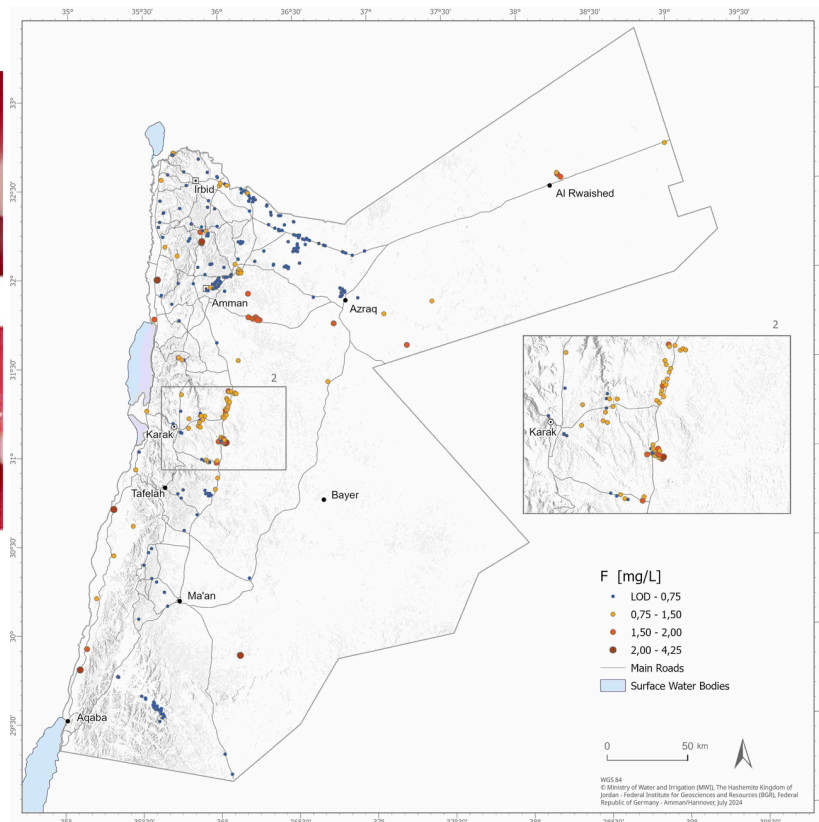
Non-fluoridated areas (red line) show **higher levels of tooth decay**.

Fluoridated areas (blue line) have **lower DMFT scores**, meaning people have fewer cavities.



-> The National Groundwater Quality Baseline study is based on data from a one-off sampling campaign, which was conducted between 2021 and 2023, comprising in total 520 sampling locations.

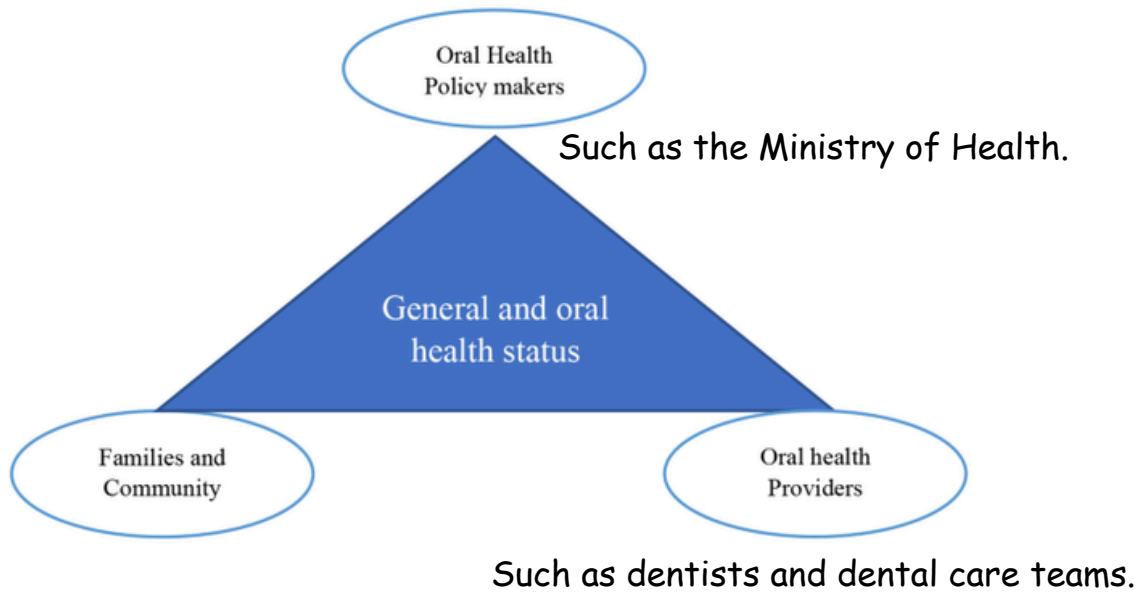
-> The ideal fluoride concentration in drinking water is about 1 mg/L, which is enough to prevent tooth decay without causing **fluorosis** (consuming too much fluoride).



• Advocacy for Better Policies

Oral health policymakers affect the mechanism for funding dental care and supporting schemes, affordability of oral health services, regulations and standards and public education.

- As dentists, we can lead public awareness campaigns focusing on dental caries, oral cancer, and the risks of smoking.
- Smoking significantly increases the risk of developing oral cancer and negatively affects the *periodontium*, leading to tooth mobility and weakening of the supporting bone.



Dentists in Research and Innovation

-> Dentistry is continuously evolving. Key advancements enhance patient outcomes. They reduce procedural time and costs. They improve early disease detection.



Restorative Materials: Advances in research have created more durable and biocompatible materials, significantly reducing allergic reactions to composites compared to past practices.



Digital Dentistry: The integration of CAD/CAM technology allows for precise restorations, while laser dentistry reduces post-operative pain and bleeding during surgeries.



Minimally Invasive Approaches: Modern techniques focus on treating caries without traditional drilling, and smart diagnostics have reduced human error in analyzing dental rays.



AI Integration: Artificial intelligence is being utilized for automated treatment planning and improved diagnostic accuracy.



Conclusion:

-> Dentists are educators, advocates and researchers.

Restoration
Restoring function and
aesthetics.

Prevention
Preventing oral diseases.

Advancement
Advancing dental technology.

