EUROPEAN REGIONAL ORGANIZATION
OF THE FEDERATION DENTAIRE INTERNATIONALE FDI

WG Digitalisation in Dentistry- E-Health- Artificial Intelligence (WG DD,eH,AI)

Limassol Meeting April 202

SURVEY	Definition of digital dentistry?	SUMMARY	Armenia	Azerbaijan	Belgium - CMD	Belgium - Leuven	Croatia	Cyprus	Czech Republic	Estonia	Germany - Berlin	Germany - Greifswald	Italy - Brescia	Italy - Firenze	Kazakhstan	Kosovo	Kyrgyzstan	Latvia	Latvia - Riga	Lebanon - Beirut Arab University	Lithuania	Luxembourg	Netherland - ACTA	Netherland - Radboudumc	Poland - Bialystok	Poland - Gdansk	Poland - Lodz	Poland - Lublin	Poland - Poznan	Poland - Wroclaw	Poland - Zabrze	Portugal - Lisboa	Romania - Carol Davila Univ. of Medicine and Pharmacy	Romania	Spain - Universidad Cardenal Herrera	Sweden	Turkey	United Kingdom - Bristol	United Kingdom - Plymouth	United Kingdom - Sheffield	United Kingdom - Scotland - Aberdeen	United Kingdom - Wales - Cardiff
	No. of responses:	40																																								
1	**Please choose the most suitable answer concerning the place of education in digital dentistry in your school**																																								
a	Education in digital dentistry is included in current curriculum and taught as a separate subject	3																					x							x						x					
b	Education in digital dentistry is included in current curriculum but the effects of learning are included in different subjects	34	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			x	x	x	x	x	x		x	x	x	x	x		x	x	x	x	x
c	There is no education in digital dentistry delivered but there are plans to include it in the curriculum	2														x	x																									
d	There is no education in digital dentistry delivered and there are no plans to include it in the curriculum	0																																								
2	**How many hours in the curriculum are dedicated to digital dentistry education**																																									
a	Less than 10	6					x								x																			x	x			x				x
b	10 to 19	9						x	x							x		x		x					x		x				x					x						
c	20 to 29	11	x	x	x	x				x									x		x		x			x			x												x		
d	30 to 39	4																						x				x		x				x								
e	More than 40	7									x	x	x	x																	x				x			x				
f	None of the above	1															x																										
3	**Please choose the most suitable answer regarding the form of education in digital dentistry in your school, if applicable**																																									
a	Digital dentistry is delivered as mandatory classes	18	x		x	x		x		x	x			x									x	x		x				x	x			x	x		x	x	x		x
b	Digital dentistry is delivered partly as mandatory and partly as elective classes	13		x			x					x	x		x			x	x	x	x				x		x		x							x						
c	Digital dentistry is delivered as elective classes	4														x												x		x			x									
d	Not applicable	4							x								x																		x								
4	**Please choose all the answers that best describe the education on digital dentistry in your school**																																									
a	Education is delivered on the basis of lectures	25	x	x	x	x	x		x	x				x		x		x	x	x	x			x		x	x		x				x	x	x	x	x	x	x	x	x	x
b	Education is delivered on the basis of seminars	16				x			x									x	x	x					x	x	x	x	x	x	x			x				x			x	x
c	Education is delivered on the basis of practical classes, workshops, hands on etc.	26		x		x		x	x	x	x	x	x	x	x			x	x	x			x	x		x			x			x		x	x	x	x		x	x	x	x
d	Not applicable	1															x																										
5	**Please choose all the answers that describe the facilities for teaching in digital dentistry**																																								
a	Dedicated labs in the dental school	17		x									x	x				x		x						x	x		x	x			x	x		x	x	x			x	x	x
b	Facilities of dental clinics within the dental school	32	x	x		x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	x	x	x	x	x	x		x			x	x	x	x	x	x	x	x	x
c	Dental offices outside the dental school	6			x	x	x			x																x										x						
d	Not applicable	2															x																					x					

prof. Ingrid Różyło-Kalinowska, MD, PhD

The study on pre-graduate education in digital dentistry in Europe

ERO FDI Working Group Digitalisation in Dentistry-E-Health-AI

Background

In view of current important role of digital dentistry it can be hypothesised that entering the era of digital dentistry after graduation is too late for dentists. Therefore the aim of the study is to investigate status of pre-graduate education in digital dentistry in Europe.

Material and methods

The study was conducted by means of a survey questionnaire distributed online in 2023 that included 11 multiple choice questions and 1 open question (concerning the number of dental faculties in the country of residence of the respondent). In total responses were obtained from 24 countries and 42 faculties. The results were analysed by means of descriptive statistics methods.

Results

Teaching of digital dentistry is carried out mostly on the basis of university facilities. In vast majority of faculties education in digital dentistry is included in current curriculum but the learning objectives are spread between different subjects. In 42% digital dentistry is delivered as mandatory classes, in one third partly as mandatory and partly as elective, and in the remaining institutions as elective classes only. In 90% pre-graduate education in digital dentistry is delivered to dental students.

Discussion and conclusions

To the best authors' knowledge this is the first study that aims at investigation of status of pre-graduate education in digital dentistry in Europe. The obtained results point out that the need of education in digital dentistry is perceived by university educators, however the curricula are far from standardization in every aspect. They vary considerably regarding years of studies in which digital technologies are introduced, educational forms, facilities, target groups, mandatory or elective subjects. It can be assumed that nowadays implementation of teaching of digital dentistry progresses at a very fast pace, which means that changes of curricula also must be frequent and follow trends of digitization in dental practice.

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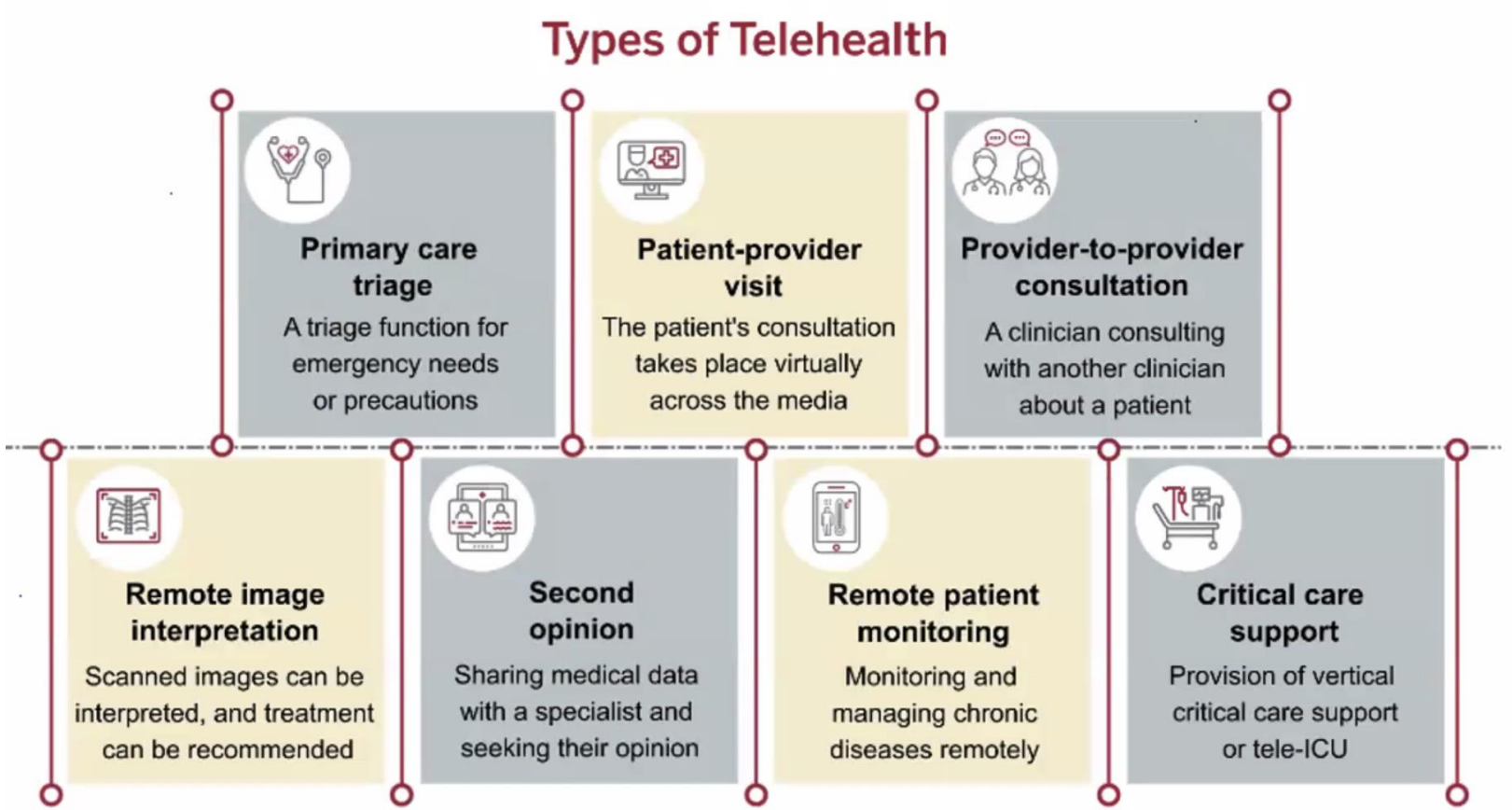
AI - development

- Paper for Journal of FDI in preparation

Teledentistry – not so easy but complete revolution



Nadpis 4

Implementation of Teleconsultation in European Dentistry

Teledentistry refers to using telecommunication technology to provide dental care and services remotely. It encompasses a wide range of services, including patient consultation, diagnosis, treatment planning, education, and management of dental conditions. Teledentistry can be delivered through various means, such as video conferencing, telephone calls, and the exchange of digital images and clinical information. The goal of teledentistry is to improve access to dental care, especially for underserved populations or those living in remote areas, by reducing barriers related to distance, mobility, and resource distribution. It also aims to enhance the efficiency of dental care delivery and facilitate patient education and self-management of oral health. Teleconsultation is the possibility of conducting a medical consultation remotely through secure online communication.

Arguments for Teleconsultation:

- **Increased access to care:** Teleconsultation can reduce geographic barriers and improve access to care for individuals in remote areas or with mobility issues.
- **Improved efficiency and reduced costs:** Teleconsultations can save time and resources for both dentists and patients, potentially leading to reduced healthcare costs.
- **Enhanced continuity of care:** Teleconsultations can facilitate ongoing communication and monitoring between patients and dentists, improving care continuity.
- **Reduced risk of transmission of infectious diseases:** Teleconsultations can decrease the risk of exposure to communicable diseases in both clinical settings and public transportation.
- **Sustainability:** Teleconsultation can protect the environment.

Teleconsultation can be done:

- **Between doctors –** when a general practitioner seeks assistance from a specialist, such as a second opinion on the diagnosis, a more indicated medication, or even live guidance when performing a procedure. The patient may or may not be present. This modality is called tele-interconsultation.
- **Between doctor and patient –** directly, without the mediation of another doctor or healthcare professional.

Teleconsultation can be done in the following ways:

- **Synchronous –** the interaction is immediate, or the response is provided quickly. An example is the video consultation between a doctor and a patient.
- **Asynchronous -** takes place at different times and does not require direct interaction between the patient and the doctor.

Challenges and Considerations:

- **Regulation and legal frameworks:** Clear and consistent regulations regarding data privacy, security, and licensing requirements are necessary across Europe.
- **Reimbursement models:** Establishing appropriate reimbursement models for teleconsultation is crucial for their sustainability and accessibility.
- **Technology and infrastructure:** Ensuring equitable access to reliable technology and infrastructure across Europe is essential for inclusive implementation.
- **Dentist training and competency:** Dentists must be adequately trained and equipped to provide effective and safe teleconsultation.
- **Equity and inclusion:** Addressing potential disparities in access to technology and digital literacy to ensure equitable access to tele dentistry for all.

Legal and Regulatory Framework:

- **Health Policy Compliance:** Teleconsultation must align with European health policies and directives, particularly those relating to eHealth and cross-border healthcare.
- **Data Protection:** Address compliance with the General Data Protection Regulation (GDPR) for handling patient data and ensure privacy and security measures are in place.
- **Licensing and Professional Standards:** Dentists must be licensed according to local law to practice teleconsultations as an integral part of dentistry and ensure they meet professional standards, duties and regulations. Eventual cross-border teleconsultation must respect local regulation on both sides, FDI policies and ethical principles.

Ethical Considerations:

- **Patient Consent:** Emphasize the importance of informed consent, ensuring patients understand the nature and limitations of teleconsultations.
- **Quality of Care:** Ensure that teleconsultation does not compromise the quality of dental care and adheres to established clinical guidelines and standards.

Technical Requirements and Infrastructure :

- **Technology Standards:** Specify the technical standards and requirements for teleconsultation s, including interoperability, security, and usability.
- **Access and Equity:** Address measures to ensure equitable access to teleconsultation, including for patients with limited internet access or digital literacy.

Implementation Strategy :

- **Pilot Programs:** Propose initiating pilot programs to evaluate the efficacy, safety, and patient satisfaction of teleconsultation in various European regions.
- **Training and Education:** Highlight the need for training programs for dental professionals and awareness campaigns for patients.

Evaluation and Monitoring :

- **Performance Metrics:** Define metrics for evaluating the success of teleconsultation initiatives, including patient outcomes, access improvements, and cost-effectiveness.
- **Regulatory Oversight:** Outline a framework for ongoing regulatory oversight and quality assurance of teleconsultation.

What we have to do

1/ Second version of our material- review in WG until 31/5/2024

2/after that, we will send it to Board (or we will have an online meeting if changes are significant) to send it to NDA

3/ We will have another meeting of WG in Istanbul

4/The next day, a plenary session of ERO can vote about it.

Thank you to everybody from WG as well as from ERO Board for cooperation!