



Erasmus +

eC-EBD

Intellectual Output O1

Report on teaching of EBD in partner institutions and countries

Turkey, Ankara, Gazi University

Belgium, Leuven, KU Leuven

France, Paris, University Paris Diderot – Paris 7

Norway, Tromsø, Arctic University of Norway

The Netherlands, Nijmegen, Radboud University Medical
Center



Undergraduate curriculum and e-course on Evidence-Based Dentistry, eC-ebd

Intellectual Output I

Report on teaching of EBD in Gazi University and Turkey

Prof. Dr. Cansu Alpaslan

I- Report on teaching of EBD in Gazi University

Evidence Based Dentistry course has been included in both undergraduate and postgraduate curriculum since Academic year 2004-2005.

In undergraduate curriculum it is given at the second semester of 4th grade for 16 weeks. The EBD course is compulsory subject with 1 ECTS- credit. Every year around 100-120 students take this course. The course includes both theoretical lectures and practical applications.

At the very beginning of the course 2 hours are dedicated to subjects “scientific research , “ethics” and “critical thinking”.

The following theoretical lectures cover the subjects as definition of EBD, emergence and development of EBD, principles of EBD, and decision making process in EBD, database searching, evidence pyramid, the importance of EBD before and after graduation.

Practical applications aimed to acquire the skills to the student and directed on how to find the best available evidence on a given clinical question by using the tools of EBD.

As part of the face-to-face teaching, home works are given to students in group of 10 students on clinical decision making in a given case scenario.

Home works

1. On the second week after the 2-hours lecture, students are asked to find an advertisement related with e.g. dental materials, toothpastes, tooth-brushes. Students are asked to critically appraise the information given in this advertisement.

After then, students are asked to search Pub-Med on the similar topic and assess if the information given in the advertisement is scientific based or not.

2. After the lecture on the 7th week students are asked to look for the Cochrane Reviews in the Oral health Group, pick a review, read it and report what they have learned and if the review contained different information from what they know.
3. The last homework is given after all topics are covered by lectures.
A different case scenario is given to each group by the tutor. Students are asked

- a. To form a well-focused clinical question using the PICO format
 - (P) The population or participants
 - (I) the intervention or indicator
 - (C) The alternative method/treatment or control
 - (O) The outcome
- b. To search for relevant articles using the EBD tools and EBD pyramid.
- c. To appraise the validity of the results of their search.
- d. To apply the new knowledge that is acquired by search to answer the given clinical question.

Each group is asked to present the whole process as a 10 minute presentation to whole classmates and the tutor in the classroom and we made discussions on this process.

The aim of this homework is helping the students to acquire the skills of forming a well-focused clinical question related to diagnosis, treatment, prognosis or etiology to give answer to the questions: is this test is appropriate, is this test reliable, which procedure is more reliable, which material is more appropriate, which medicine I can prescribe, what is the outcome of this procedure, what will be the prognosis in a determined follow-up period, what is the etiology of the current situation and so on.

II- Report on teaching of EBD in Turkey

Currently there are Dental Schools in Turkey and EBD course is present in the curriculum of only in 3 schools except Gazi University. Those are Medipol University School of Dentistry in Istanbul, Hacettepe University School of Dentistry in Ankara and Erciyes University School of Dentistry in Kayseri.

In Erciyes University there is not a separate EBP course in the curriculum but integrated to other courses in the subject level in undergraduate dental education.

In two of these schools (Hacettepe & Medipol Universities) EBD course has been present in undergraduate dental curriculum since 2013-2014 Academic year. The course is given 14 weeks in second semester of 4th class for 14 weeks in Hacettepe University and also in the 4th grade in Erciyes University.

There is EBD course in postgraduate level in all universities given by different departments at different levels.

The problems encountered in those 3 dental schools related to this course are mainly on these 2 issues:

1. Lack of knowledge and awareness of teaching staff on EBD
2. Lack of proficiency in English

Week	Subject
1	Scientific research, ethics, critical thinking
2	Scientific research, ethics, critical thinking
3	General principles of evidence based practice
4	Evidence hierarchy
5	General principles of evidence based dentistry
6	Sources for evidence based dentistry
7	Cochrane database
8	Other evidence based web sites
9	Principles of evidence based search of Pub Med
10	Evidence based search of Pub Med
11	Evidence based analysis of a case
12	Discussion on homework
13	Discussion on homework
14	Discussion on homework
15	Discussion on homework
16	Discussion on homework



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Kick-off meeting ANKARA

17-18/11/2014

**Current situation of EBD teaching
@ KU Leuven**

Naert Ignace & Vandamme Katleen
KU Leuven - Department of Oral Health Sciences -
Prosthetic Dentistry



OVERVIEW

- Toolbox available
 - CEBAM
 - Cebam Digital Library of Health
 - EBMPpracticeNet
- EBMed. teaching @ KU Leuven
- EBDent. teaching @ KU Leuven

eC-EBD

CEBAM

**CEBAM**
Belgian Centre for Evidence-Based Medicine
Belgian Branch of the Dutch Cochrane Centre

[Naar de CDLH](#) | [NL](#) | [Fr](#)

Zoeken op deze site...

[Home](#) | [EBM](#) | [Cursussen](#) | [Richtlijnen](#) | [Cochrane](#) | [CDLH](#) | [Voor Patiënten](#) | [Stafliden](#)

Welkom bij het

Belgisch Centrum voor Evidence-Based Medicine



CURSUSSEN

Cursussen

Neem een kijkje in het uitgebreid cursusaanbod van CEBAM: vaste opleidingen & workshops,



RICHTLIJNEN

COCHRANE

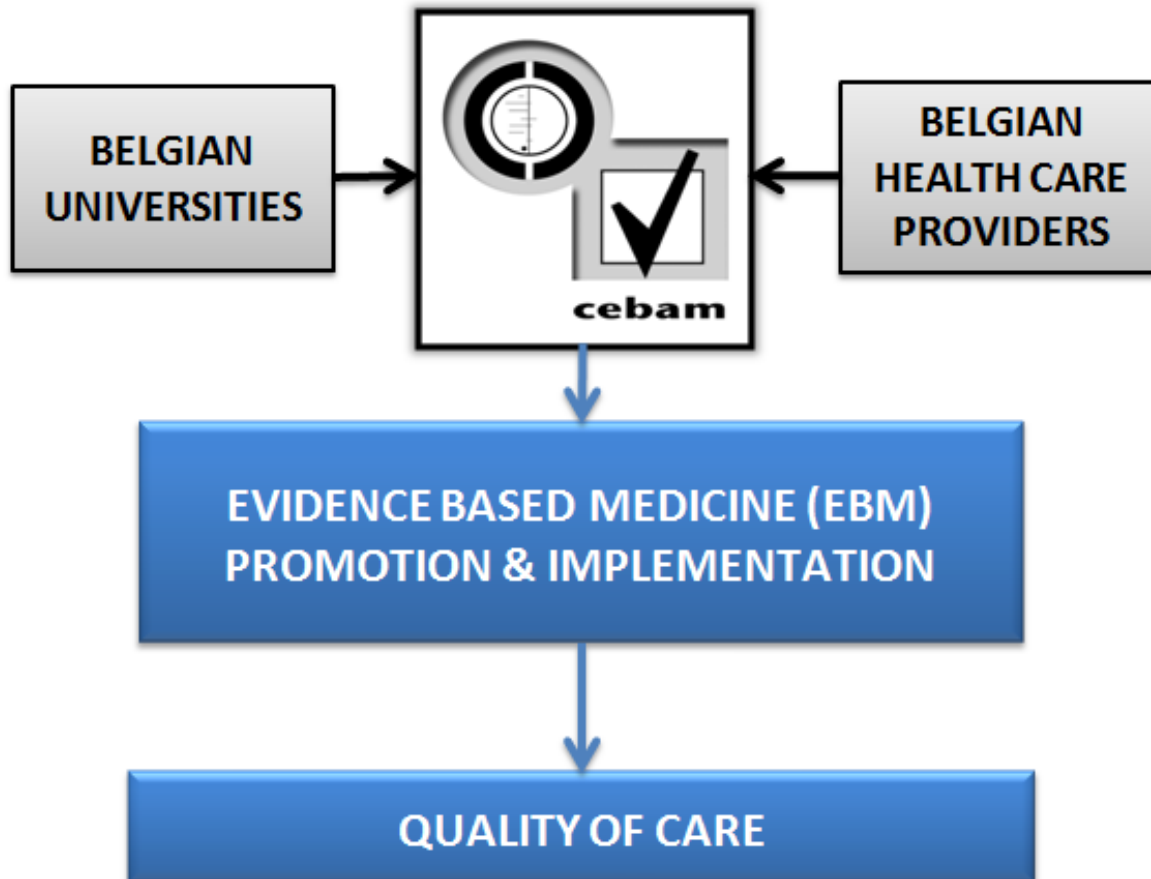
ALLE BIBLIOTHEEK

KU LEUVEN

eC-EBD

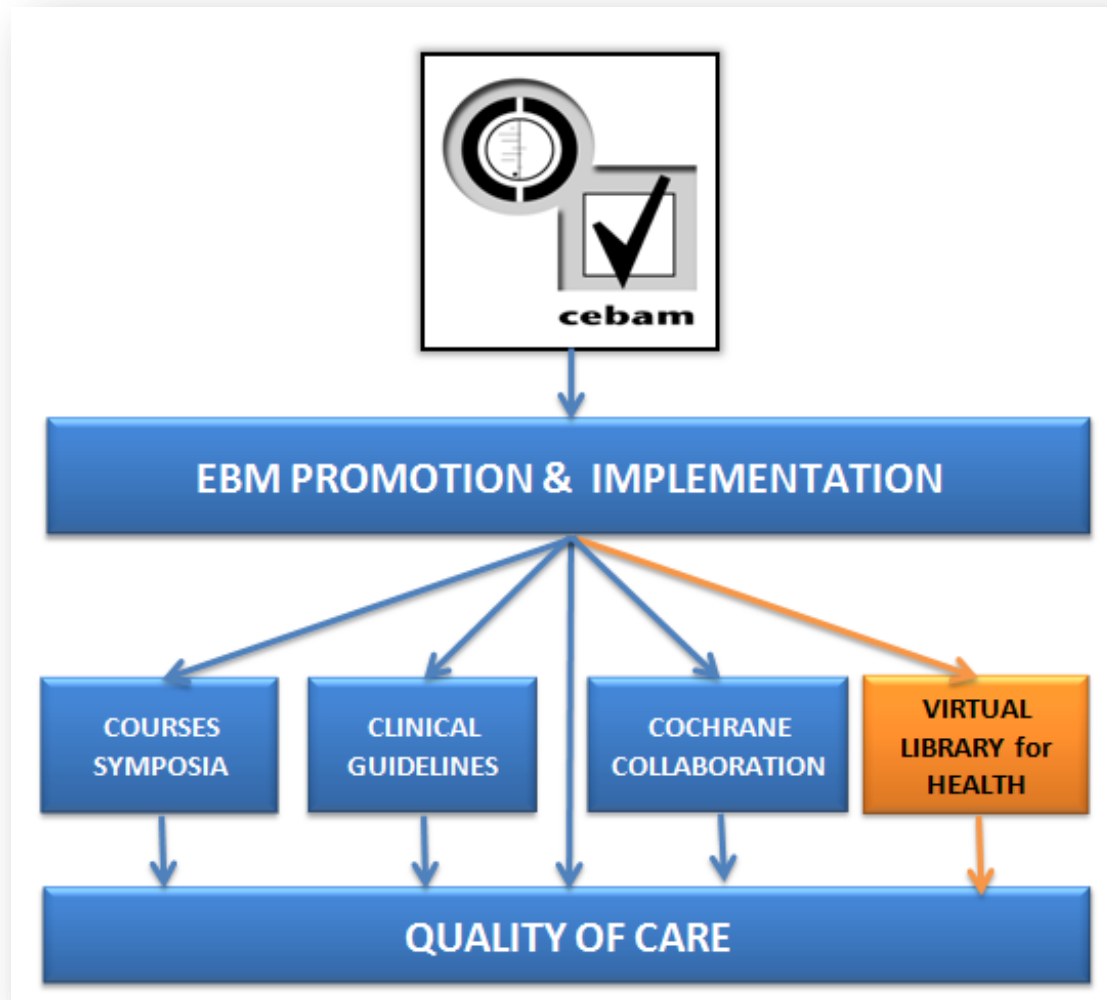
CEBAM

cebam: centre for **e**vidence **b**ased **m**edicine



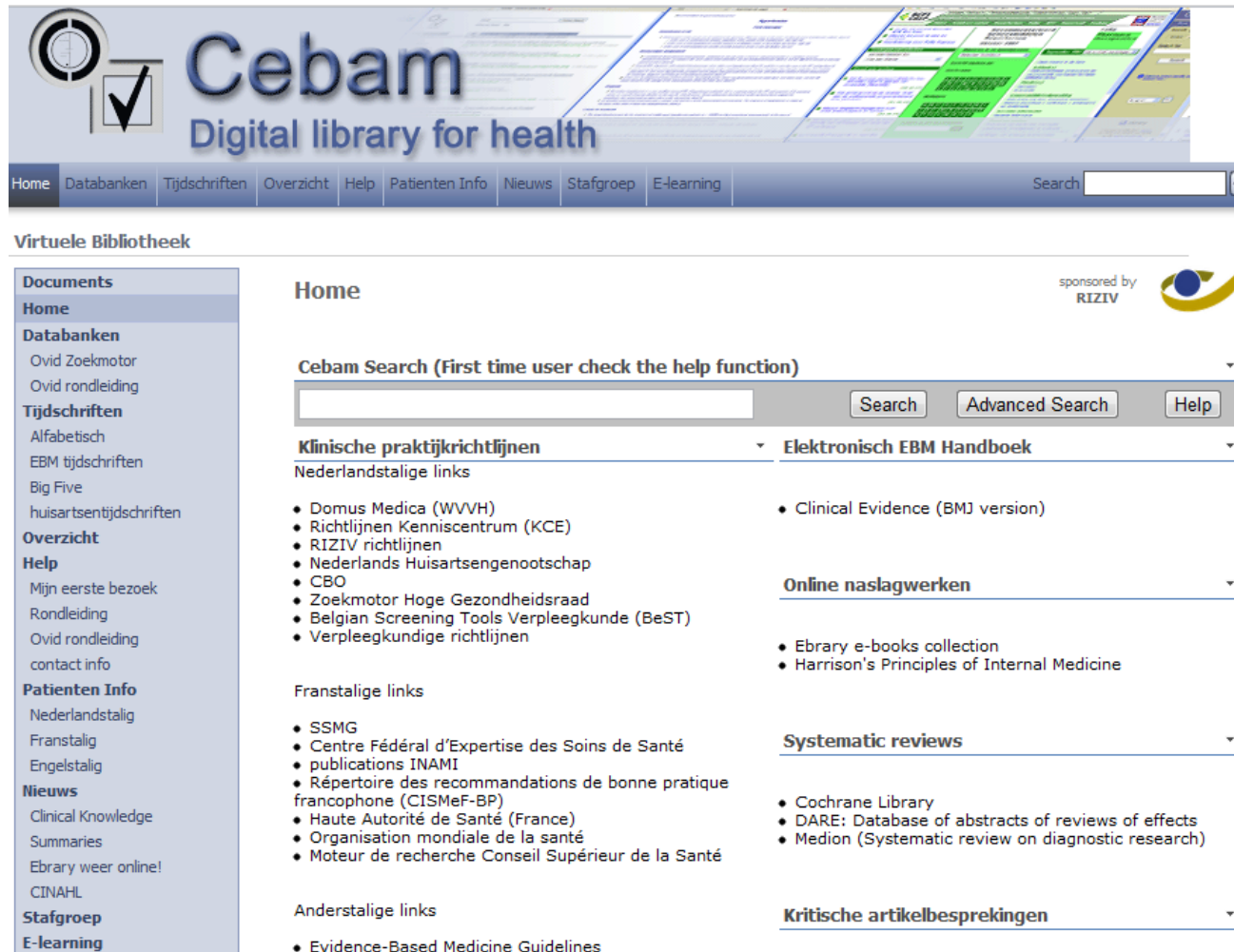
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CEBAM Digital Library of Health (CDLH)



eC-EBD

CEBAM Digital Library of Health (CDLH)



The screenshot displays the Cebam Digital Library of Health (CDLH) website. At the top, the header features the Cebam logo (a stylized 'C' with a checkmark) and the text 'Cebam Digital library for health'. Below the header is a navigation bar with links: Home, Databanken, Tijdschriften, Overzicht, Help, Patienten Info, Nieuws, Stafgroep, E-learning, and a search bar. The main content area is titled 'Virtuele Bibliotheek' and is divided into two columns. The left column contains a sidebar with categories: Documents, Home, Databanken (with sub-links: Ovid Zoekmotor, Ovid rondleiding), Tijdschriften (with sub-links: Alfabetisch, EBM tijdschriften, Big Five, huisartsentijdschriften), Overzicht, Help (with sub-links: Mijn eerste bezoek, Rondleiding, Ovid rondleiding, contact info), Patienten Info (with sub-links: Nederlandstalig, Franstalig, Engelstalig), Nieuws (with sub-links: Clinical Knowledge, Summaries, Ebrary weer online!, CINAHL), Stafgroep, and E-learning. The right column is titled 'Home' and features a search bar with buttons for 'Search', 'Advanced Search', and 'Help'. Below the search bar are several sections: 'Klinische praktijkrichtlijnen' (with sub-section 'Nederlandstalige links' and a list of links including Domus Medica, Richtlijnen Kenniscentrum (KCE), RIZIV richtlijnen, Nederlands Huisartsengenootschap, CBO, Zoekmotor Hoge Gezondheidsraad, Belgian Screening Tools Verpleegkunde (BeST), and Verpleegkundige richtlijnen), 'Franstalige links' (with a list of links including SSMG, Centre Fédéral d'Expertise des Soins de Santé, publications INAMI, Répertoire des recommandations de bonne pratique francophone (CISMeF-BP), Haute Autorité de Santé (France), Organisation mondiale de la santé, and Moteur de recherche Conseil Supérieur de la Santé), 'Anderstalige links' (with a list including Evidence-Based Medicine Guidelines), 'Elektronisch EBM Handboek' (with a list including Clinical Evidence (BMJ version)), 'Online naslagwerken' (with a list including Ebrary e-books collection and Harrison's Principles of Internal Medicine), 'Systematic reviews' (with a list including Cochrane Library, DARE: Database of abstracts of reviews of effects, and Medion (Systematic review on diagnostic research)), and 'Kritische artikelbesprekingen'.

Cebam
Digital library for health

Home Databanken Tijdschriften Overzicht Help Patienten Info Nieuws Stafgroep E-learning Search

Virtuele Bibliotheek

Documents
Home
Databanken
Ovid Zoekmotor
Ovid rondleiding
Tijdschriften
Alfabetisch
EBM tijdschriften
Big Five
huisartsentijdschriften
Overzicht
Help
Mijn eerste bezoek
Rondleiding
Ovid rondleiding
contact info
Patienten Info
Nederlandstalig
Franstalig
Engelstalig
Nieuws
Clinical Knowledge
Summaries
Ebrary weer online!
CINAHL
Stafgroep
E-learning

Home

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Cebam Search (First time user check the help function)

Search Advanced Search Help

Klinische praktijkrichtlijnen
Nederlandstalige links

- Domus Medica (WVH)
- Richtlijnen Kenniscentrum (KCE)
- RIZIV richtlijnen
- Nederlands Huisartsengenootschap
- CBO
- Zoekmotor Hoge Gezondheidsraad
- Belgian Screening Tools Verpleegkunde (BeST)
- Verpleegkundige richtlijnen

Franstalige links

- SSMG
- Centre Fédéral d'Expertise des Soins de Santé
- publications INAMI
- Répertoire des recommandations de bonne pratique francophone (CISMeF-BP)
- Haute Autorité de Santé (France)
- Organisation mondiale de la santé
- Moteur de recherche Conseil Supérieur de la Santé

Anderstalige links

- Evidence-Based Medicine Guidelines

Elektronisch EBM Handboek

- Clinical Evidence (BMJ version)

Online naslagwerken

- Ebrary e-books collection
- Harrison's Principles of Internal Medicine

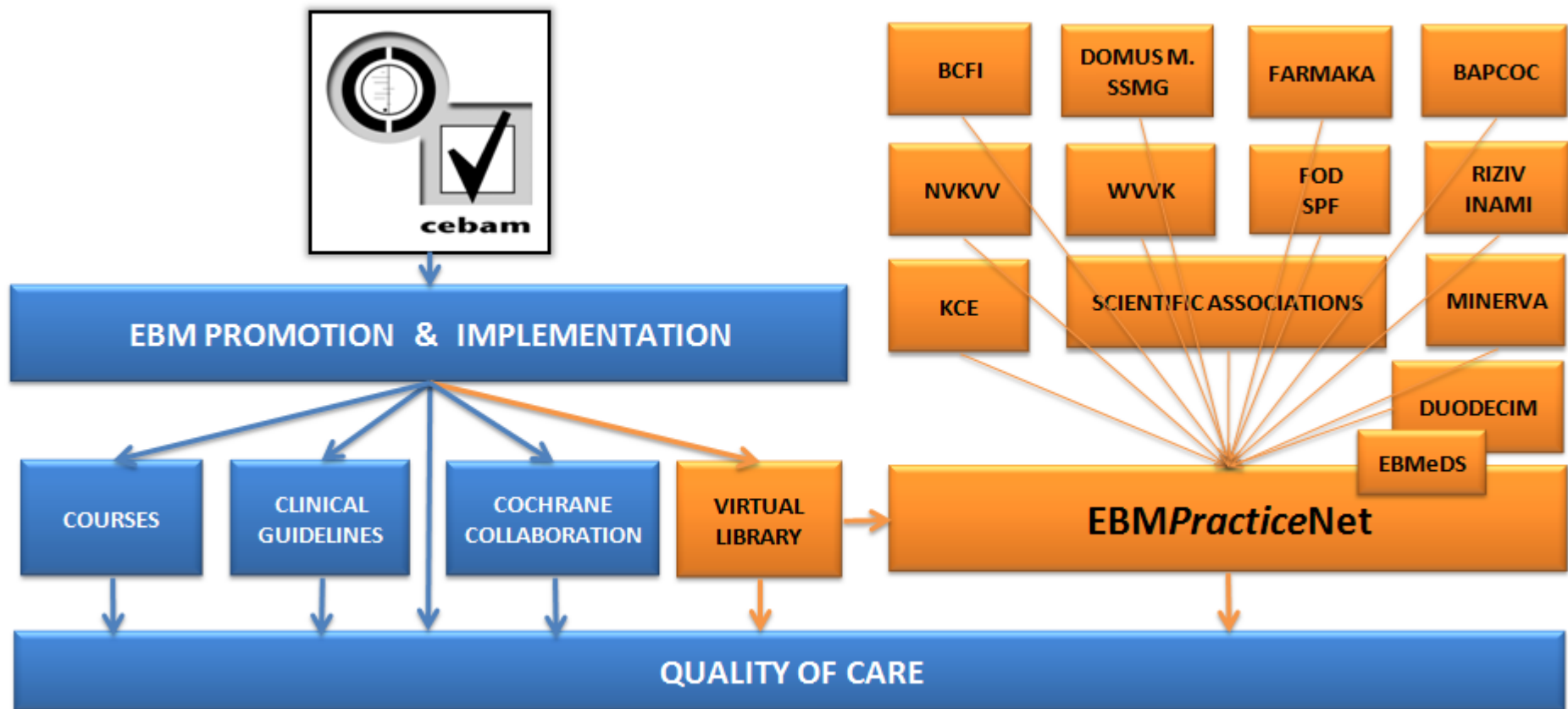
Systematic reviews

- Cochrane Library
- DARE: Database of abstracts of reviews of effects
- Medion (Systematic review on diagnostic research)

Kritische artikelbesprekingen

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EBMPracticeNet



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EBMPracticeNet

EBMPracticeNet

L'accès le plus rapide vers des guides de bonne pratique EBM
De snelste en meest betrouwbare weg naar evidence-based richtlijnen

Welkom ▶ Welkom

WELKOM

NIEUWS

WIE ZIJN WE

DOEL

ONZE METHODES

GEBRUIKERSGIDS

MEEWERKEN

ONZE PLANNEN

LOGIN

CONTACT EN HELP

DISCLAIMER

Welkom

Het RIZIV neemt initiatieven voor een goede kwaliteit van zorgverlening, gebaseerd op evidence. Zo nam het RIZIV in 2010 het initiatief tot de uitbouw van een databank van evidence-based praktijkrichtlijnen voor zorgverleners: EBMPracticeNet.

Het RIZIV financiert dit project volledig, via het Kaderakkoord voor kwaliteit van de zorg. Alle zorgverleners kunnen er gratis gebruik van maken. De coördinatie van EBMPracticeNet wordt toevertrouwd aan [CEBAM](#) om, samen met de Belgische producenten van evidence-based informatie en de Nationale Raad voor Kwaliteitspromotie (NRKP), een uitgebreide en op de Belgische zorgorganisatie afgestemde databank van praktijkrichtlijnen ter beschikking te stellen. Ebmpracticenet.be is vlot toegankelijk en helpt de zorgverlener om 'at the point-of-care' op eenvoudige en efficiënte wijze de juiste informatie te vinden in het brede EBM-aanbod. Deze wetenschappelijke gegevens worden ook vanuit een Elektronisch Medisch Dossier (EMD) rechtstreeks toegankelijk. [Lees meer ...](#)

U bent niet aangemeld. Om de inhoud van de guidelines te zien moet u zich bovenaan aanmelden.

[Klik hier voor meer informatie.](#)

Zoek per thema

- [EBM Guidelines](#)
- [Evidence summaries](#)
- [Foto's](#)
- [Audio](#)
- [Video](#)

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EBMPracticeNet

<https://www.ebmpracticenet.be/nl/Paginas/Welkom.aspx>

“EBMPracticeNet is a national website with **clinical practice** guidelines in Dutch and French for doctors, made possible through the Belgian security system (**RIZIV**).

This **free of charge database** contains an extensive collection of compact and easy browsable guidelines for doctors based on evidence-based guidelines of Domus Medica, SSMG, Bapcoc, KCE,... In short, all Belgian guidelines that are validated by Cebam.

In addition, there are also **international** accredited directives of the Finnish medical association **DUODECIM** which are translated and adapted to the Belgian context.”

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EBMPracticeNet

- Not only the **scientific references** can be found (ex. full text via the Cebam Digital Library for Health) but also the **levels of evidence** are shown. This to support the physician in taking well-founded decisions. In addition to the guidelines, there are also **evidence summaries** available in english, as well as an extensive collection of **photographs, audio- and videomaterial**.
- In addition, there are also **patient guidelines** available which can be printed by the physician for his/her patient (through the link with www.gezondheidenwetenschap.be) and a **link** is possible **with the electronic patient file** and a **system to support decision making** (ex. a warning to measure certain values).

eC-EBD

EBM Undergraduate teaching @ KU Leuven: *Medicine*



The CanMEDS 2005 Physician Competency Framework

Better standards. Better physicians. Better care.

Scholar

Definition:

As *Scholars*, physicians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

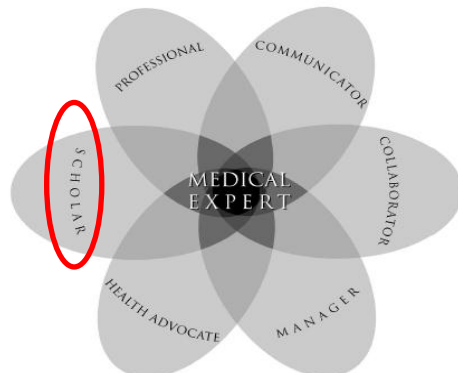
Description:

Physicians engage in a lifelong pursuit of mastering their domain of expertise. As learners, they recognize the need to be continually learning and model this for others. Through their scholarly activities, they contribute to the creation, dissemination, application and translation of medical knowledge. As teachers, they facilitate the education of their students, patients, colleagues, and others.

Elements:

- Lifelong learning
- Moral and professional obligation to maintain competence and be accountable
- Reflection on all aspects of practice
- Self-assessment
- Identifying gaps in knowledge
- Asking effective learning questions
- Accessing information for practice
- Critical appraisal of evidence
- Evidence-based medicine
- Translating knowledge (**evidence**) into practice
- Translating knowledge into professional competence
- Enhancing professional competence
- Using a variety of learning methodologies
- Principles of learning
- Role modeling
- Assessing learners
- Giving feedback
- Mentoring
- Teacher-student ethics, power issues, confidentiality, boundaries
- Learning together
- Communities of practice
- Research / scientific inquiry
- Research ethics, disclosure, conflicts of interests, human subjects and industry relations

Introduction: A Framework of Essential Physician Competencies



THE
CANMEDS
ROLES FRAMEWORK



3

© 2005 The Royal College of Physicians and Surgeons of Canada

- Medicine @ KU Leuven
 - Bachelor: Phase 1 – Phase 2 – Phase 3
 - Master: Phase 1 – Phase 2 – Phase 3
- EBM teaching in Bachelor Phase 1 “Initiation to the medical scientific research”
 - Lesson 1. The empirical cycle, the scientific hypothesis, observe, report, peer review, Evidence Based Medicine principles, applicability, PICO (Patient, Intervention, Comparison, Outcome), fraud, plagiarism
 - Lesson 2: Knowledge and art in the search for information: layers of information, use of Pubmed (clinical and basic)(searching)
 - Lesson 3: The correct setting up of experiments and collecting data, randomization, blinding, variability (design)
 - Lessons 4-9: Biostatistics
 - Lesson 10: Critical reading of an article from the basic sciences (critical review)
 - Lesson 11: Critical reading of an article from the medical sciences (critical review)

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EBM Undergraduate teaching @ KU Leuven: *Medicine*

- ‘Scientific teaching’ in Bachelor Phase 2 “Scientific questioning”
- ‘Scientific teaching’ in Bachelor Phase 3 “Scientific report” (bachelorpaper)

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EBM Undergraduate teaching @ KU Leuven: *Medicine*

- EBM teaching in **Master Phase 1** “Clinical scientific education Part 1”
 - Module 1. Introduction to EBM: outline of the learning method
 - Module 2. Efficient searching of relevant scientific literature
 - Module 3. Critical appraisal of literature: RCT and SR of RCT
 - Module 4. Critical appraisal of literature: diagnostics and epidemiology
 - Module 5. Multivariate statistics
 - Module 6. Critically evaluating a clinical EB-clinical practice guideline

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EBM Undergraduate teaching @ KU Leuven: *Medicine*

- EBM teaching in *Master Phase 2* “Clinical scientific education Part 2”
 - *Module*: creating of a Critically Appraised Topic (**CAT**). Setting out from Problem Oriented Evidence that Matters (**POEM**) you create a CAT. You process your results in a Powerpoint presentation that you can present afterwards.
 - *Method of working*: Via Toledo you'll get some clinical problems presented. In small groups you make a CAT of one of these problems. Then you present your work to the group and this will then be discussed. The instructor will be the moderator of this meeting.

eC-EBD

EBD teaching @ KU Leuven: *Dentistry*

- Till today insufficient EBD teaching in the undergraduate curriculum @ KU Leuven
- However, implementation of Scientific Teaching in the dental curriculum @ KU Leuven is under investigation
 - In analogy with EBM teaching in *Medicine*
 - Start in 2015-2016 Bachelor Phase 1: limited EBD teaching
 - Start in 2018-2019 Master 1: Core of EBD teaching

Undergraduate curriculum and e-course on Evidence-Based Dentistry, eC-ebd

Intellectual Output I

Pr. Philippe Bouchard, director of the post-graduate program in periodontology and implant dentistry (University Paris Diderot/ Rothschild Hospital)

Pr. Yves Boucher, vice Dean for International Relations (University Paris Diderot/ Pitié Salpêtrière Hospital)

Pr Laurence Jordan, vice Dean for Education.

I. Overview of dental Education in France

The curriculum leading to the diploma of “docteur en chirurgie dentaire” is organized according to the Bologna process (ECTS credits) and consists of 3 cycles (Fig. 1 and annexe), allowing students to complete each cycle with a diploma. Professional practice requires obtaining a thesis, which must be passed no later than one year after graduation. The curriculum also includes a Diplôme d’études spécialisées (DES) (*internship*) available at the end of the third year and lasting 6 or 8 semesters depending on the chosen DES. Dental Education is provided in 16 UFR (Unités de Formation et de Recherche, *Units of Education and Research*) integrated into public universities. Teaching in first year (Y1, PACES) is done in a Medical School and access to 2nd year is regulated by a *numerus clausus*.

Since 16th May 2013, the organization of dental studies has been amended and requires "teachings on training the scientific process, regulatory considerations and organization of research, the methodology of experimental and clinical research": these provisions have been included in the current model.

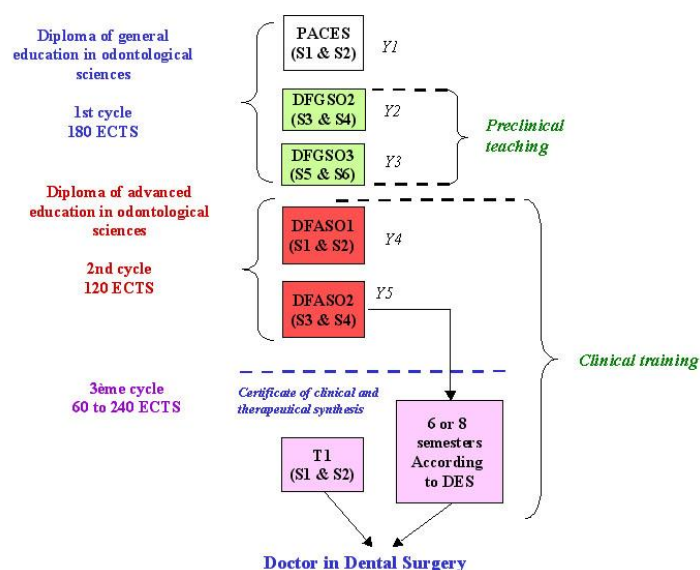


Fig.1. Dental education in France

II. EBD in the UFR d'odontologie de l'Université Paris Diderot

EBD is not *per se* an academic disciplinary field. Thus, EBD is not taught as a whole but as part of other programs such as Public Health . This translational approach may allow each decision maker to build his/her own program. The pros and cons of this approach are numerous. The major advantage is the adaptation of EBD in the learning phase of the students. However, this also may lead to a lack of homogeneity in terms of EBD program.

- Y1. (PACES)

Dental students in Paris Diderot integrate the Dental School after one year of teaching in a medical school, mainly from 7 medical schools in Paris and some other outside. Typically the curriculum includes a few hours (2-4) [UE 7, Public Health], including proof levels in clinical trials and documentary sources in EBM (Cochrane etc.). However there is a heterogeneity : teaching depends on the medical school.

- Y2. (DFGSO2)

EBD related teaching includes 6 hours related during S4 (UE8, Public Health Oral health) : (different types of epidemiological studies, statistics and biases in studies, critical reading of scientific articles). These lectures are completed by a directed teaching in small groups : 2h how to understand epidemiological studies with critical lecture of articles (prepared before the directed teaching). There is also a teaching module EU14 (ECUE2 10h) including a training in documentary methodology, organized by the library (knowledge and use of medical databases and scientific literature search strategy)

- from Y2 to Y5. (DFGSO2) (DFGSO3) (DFASO1) (DFASO2)

Each student can choose additional optional ECTS (30h) selected out of the UFR or in the UFR as his own choices and especially for research training which includes introduction to research methods. The Faculty offers EU (EU10), 30h lectures. More than half of the students complete this education.

- Y5. (DFASO2)

One teaching unit (UE10) of this year includes critical reading of scientific article related to clinical dental science (4h).

- Y6. (TCEO1)

6th year includes a preparation to professional life and the preparation of the thesis which includes training at the library research in medical database (PUBMED, Cochrane etc). The students are mentored by a senior throughout the year which teaches them how to analyse scientific articles and categories of recommendations and evidence for medical data. This training depends both on the senior and on the topics.

In addition to this, some teachers refer to EBD during specific lectures. For example, in Y5, there is an EBD appraisal of Temporomandibular Disorders. However this does not appear formally in the curriculum.

ANNEXE 1. Dental Education in Paris Diderot

DFGS02 (Secrétariat Laetitia Michel)			
Semestre 3		Semestre 4	
UE 1	Biologie oro-faciale ECUE 1 : Biologie cellulaire, biochimie & génétique ECUE 2 : Histologie & odontogenèse	UE 8	Santé bucco-dentaire ECUE 1 : Santé publique ECUE 2 : Santé orale
UE 2	Appareils et fonctions ECUE 1 : Physiologie générale ECUE 2 : Microbiologie	UE 9	Sémiologie & immunologie ECUE 1 : Sémiologie médicale ECUE 2 : Immunologie
UE 3	Odontologie restauratrice ECUE 1 : Odontologie conservatrice ECUE 2 : Biomatériaux ECUE 3 : Anatomie dentaire (théorie)	UE 10	Anatomie cervico-céphalique & physique radiologique ECUE 1 : Anatomie cervico-céphalique ECUE 2 : Physique radiologique & médicale
UE 4	Odontologie prothétique ECUE 1 : Initiation prothèse fixée ECUE 2 : Prothèse amovible (théorie)	UE 11	Réhabilitation oro-faciale ECUE 1 : Odontologie conservatrice (théorie) ECUE 2 : Prothèse fixée (théorie)
UE 5	Anatomie dentaire Enseignement pratique	UE 12	Odontologie conservatrice Enseignement pratique
UE 6	Prothèse amovible Enseignement pratique	UE 13	Prothèse fixée Enseignement pratique
UE 7	Initiations aux soins Stage infirmier	UE 14	Anglais & méthodologie documentaire ECUE 1 : Anglais ECUE 2 : Méthodologie documentaire
		UE 15	Enseignement complémentaire - 1 UE librement choisies (1 parmi 4) - ou 1 UE libre

DFGS03 (Secrétariat Laetitia Michel)			
Semestre 5		Semestre 6	
UE 1	Sciences chirurgicales ECUE 1 : Anatomie cervico céphalique ECUE 2 : Anatomie pathologique ECUE 3 : Chirurgie orale	UE 7	Sciences médicales ECUE 1 : Médecine orale ECUE 2 : Pharmacologie ECUE 3 : Physiologie oro-faciale
UE 2	Odontologie restauratrice ECUE 1 : OCE (théorie) ECUE 2 : biomatériaux	UE 8	Santé bucco-dentaire ECUE 1 : Parodontologie ECUE 2 : Santé publique ECUE 3 : Anglais médical
UE 3	Odontologie prothétique 1 ECUE 1 : Prothèse fixée 1 (théorie) ECUE 2 : Prothèse amovible partielle (théorie)	UE 9	Odontologie prothétique & imagerie ECUE 1 : prothèse fixée 2 (théorie) ECUE 2 : prothèse amovible complète (théorie) ECUE 3 : Imagerie
UE 4	Odontologie pédiatrique & ODF ECUE 1 : Pédiodontie ECUE 2 : Orthodontie	UE 10	Odontologie conservatrice endodontie 2 <i>Enseignement pratique</i> ECUE1 : Odontologie restauratrice 2 ECUE 2 : Endodontie 2
UE 5	Odontologie conservatrice endodontie 1 <i>Enseignement pratique</i> ECUE1 : Odontologie restauratrice 1 ECUE 2 : Endodontie 1	UE 11	Odontologie prothétique 2 <i>Enseignement pratique</i> ECUE 1 : Prothèse fixée 2 ECUE 2 : Prothèse amovible complète
UE 6	Odontologie prothétique 1 <i>Enseignement pratique</i> ECUE 1 : Prothèse fixée 1 ECUE 2 : Prothèse amovible partielle	UE 12	Enseignement complémentaire - 1 UE librement choisies (1 parmi 6) - ou 1 UE libre

DFASO1 (Secrétariat Laetitia Michel)			
Semestre 1		Semestre 2	
UE 1	Réhabilitation orale 1 ECUE 1 : OCE ECUE 2 : Odontologie prothétique 1 ECUE 3 : Parodontologie	UE 6	Réhabilitation orale 2 ECUE 1 : Biomatériaux ECUE 2 : Odontologie prothétique 2 ECUE 3 : Anatomie dentaire
UE 2	Sciences biologiques ECUE 1 : Pharmacologie clinique ECUE 2 : Immunologie ECUE 3 : Anesthésiologie	UE 7	Sciences médicales 2 ECUE 1 : Chirurgie orale ECUE 2 : Risque infectieux
UE 3	Sciences médicales 1 ECUE 1 : Pathologie spéciale ECUE 2 : Médecine orale	UE 8	Croissance & développement ECUE 1 : Orthopédie dento-faciale ECUE 2 : Odontologie pédiatrique ECUE 3 : Santé publique
UE 4	Enseignement complémentaire 1 1 UE librement choisies ou 1 UE libre : - parcours odontologie - parcours hors odontologie - parcours recherche	UE 9	AFGSU-2 Attestation de formation aux gestes & soins d'urgence niveau 2, en accord avec l'alinéa 3 de l'article 1 de l'arrêté du 3 mars 2006
UE 5	Odontologie clinique 1 Stage clinique Hôpital Rothschild	UE 10	Enseignement complémentaire 2 1 UE librement choisies ou 1 UE libre : - parcours odontologie - parcours hors odontologie - parcours recherche
		UE 11	Odontologie clinique 2 Stage clinique Hôpital Rothschild

DFASQ2 (Secrétariat Laetitia Michel)			
Semestre 3		Semestre 4	
UE 1	Réhabilitation orale 3 ECUE 1 : OCE ECUE 2 : Odontologie prothétique 1	UE 7	Réhabilitation orale 4 ECUE 1 : Prothèse maxillo-faciale ECUE 2 : Odontologie prothétique 2
UE 2	Sciences médicales 3 ECUE 1 : Douleurs oro-faciales ECUE 2 : Sédatation	UE 8	Sciences médicales 4 ECUE 1 : Médecine orale ECUE 2 : Parodontologie
UE 3	Sciences chirurgicales ECUE 1 : Chirurgie orale ECUE 2 : Implantologie	UE 9	Soins spécifiques ECUE 1 : Besoins spécifiques ECUE 2 : Droit médical
UE 4	Croissance & développement ECUE 1 : Orthopédie dento-faciale ECUE 2 : Odontologie pédiatrique	UE 10	Préparation CSCT ECUE 1 : Lecture critique d'articles ECUE 2 : Préparation CSCT
UE 5	Enseignement complémentaire 1 1 UE librement choisies ou 1 UE libre : - parcours odontologie - parcours hors odontologie - parcours recherche	UE 11	Radioprotection En accord avec les annexes I et II-4 de l'arrêté du 18 mai 2004
UE 6	Odontologie clinique 3 Stage clinique Hôpital Rothschild	UE 12	Enseignement complémentaire 2 1 UE librement choisies ou 1 UE libre : - parcours odontologie - parcours hors odontologie - parcours recherche
		UE 13	Odontologie clinique 4 Stage clinique Hôpital Rothschild

TCE01 (Secrétariat Nassira Massaoudi)	
Semestre 1	Semestre 2
Insertion à la Vie professionnelle Enseignement complémentaire Stage praticien Stage de prévention d'intérêt général Stage clinique Hôpital Pitié-Salpêtrière	

Undergraduate curriculum and e-course on Evidence-Based Dentistry, eC-ebd
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Prepared by Professor Asbjørn Jokstad, Department of Clinical Dentistry, Faculty of Health Sciences

All students that wish to enter a university in Norway to study an advanced subject are required to pass the requirements of a mandatory course named Examen philosophicum (ex. phil.). The course, which has been in existence since 1675, focus mainly on philosophy, supplemented with subjects on philosophy- and history of science, as well as on ethics. All students of health sciences at the University of Tromsø, which include our 40 annual dental students, complete their 10 ECTS ex.phil course in their first fall semester together along with other subjects in the curriculum. The course is organized by faculty of the department of medicine and students need to pass a written exam.

During the first spring semester, i.e., the 2. semester, all health sciences students complete a 50 ECTS course named “Medicine and Dentistry (MED-1501)”. One of the six main themes is «Scientific competency» (Vitenskapelig kompetanse -Vitkom 1). The course is organized by faculty of the department of medicine and students need to pass a written exam.

The main bulk of topics in context to EBD is taught in the 3rd. semester in a course termed “Knowledge” (“VITEN”). This is a 30 ECTS course over 5 weeks for students in medicine and dentistry and integrates Epidemiology, Clinical epidemiology, Statistics, Critical appraisal of the literature, Preventive medicine, Case learning and cross-discipline cooperation. A course that is termed “PROMKOM” is run in parallel and focuses on professionalism and characteristics of the professional health care workers. (See course content below)

The anticipated learning objectives is that the student can

- Explain fundamental concepts in statistics, epidemiology and preventative medicine
- Describe scientific methods

The work requirements for completing the course are:

- To conduct a questionnaire survey
- To present a written synopsis of a project plan and in oral
- Complete a written exam

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After the end of semester 4, the dental students are split from the medical students and the teaching continues under the organization of faculty from the department of clinical dentistry.

In semester 5, the students receive 2 x 3 hours lecture on statistics with emphasis on application to a better understanding of biomaterials properties and –performance.

For the remaining study over 10 semesters, there are no formal classes in any topics pertinent to EBD as a separate subject. The responsible for the curriculum of different clinical disciplines decide to what extent literature seminars and critical appraisal of papers is included in the respective curriculums.

NATIONAL LEVEL

There are no consolidated joint courses for the dental students in the 3 dental schools in Norway, i.e., The Faculty of Dentistry in Oslo, the Medical-Dental faculty in Bergen and the Faculty of Health Sciences in Tromsø have different levels of joint teaching of medical and dental students.

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Appendix. **Description of the course «VITEN»**

Week 1 (week 33, Monday 12.08.13)

	Monday 12/8	Tuesday 13/8	Wedn.14/8	Thursday 15/8	Friday 16/8
08.15-09.00	Lecture: Inspiration	Lecture, Epidemiology: 1. Measures of health and disease.	Reading day*	Lecture, Clinical epidemiology: 1 sensitivity and specificity	Lecture, Epidemiology: 3 Risk estimates
09.15-10.00	Lecture: HIV Case# start	Lecture, Statistics:1.		Lecture, Clinical epidemiology: 2. predictive value	Lecture, Health prevention: 1 Introduction
10.15-11.00	Lecture: HIV Case# start.	Lecture, Statistics:2.		Lecture, Epidemiology: 2. RCT / Study design	FILM
11.15-12.00		Lecture, Knowledge management: 1, introduction OHF			
12.15-13.00	FILM	Group work: 1 (case#1) split class		Group work: 3 (stat#1/case#3)	Group work: 5 (stat#1/case#3)
13.15-14.00	FILM	Group work: 2 (case#2) split class		Group work: 4 (stat#2/case#4)	Group work: 6 (stat#2/case#4)
14.15-15.00	FILM	Group work: 1 (case#1) split class		Reading	Lecture, Statistics:3
15.15-16.00		Group work: 2 (case#2) split class			Lecture, Statistics:4

*Read a RCT-report. Read a guideline. Both papers will be distributed.

Week 2 (week 34, Monday 19.08.13)

	Monday 19/8	Tuesday 20/8	Wednesday 21/8	Thursday 22/8	Friday 23/8
08.15-09.00	Lecture, Epidemiology: 4 screening 1	PROFFKOM course	Reading day	Group work: 9 (stat#3/case#5)	Lecture, Epidemiology: 6 Age adjustments
09.15-10.00	Lecture, Epidemiology: 5 Designing questionnaire surveys*			Group work: 10 (stat#4/case#6)	Lecture, Epidemiology: 7 Observational study designs
10.15-11.00	Lecture, Clinical epidemiology: 3: Decision analysis			Lecture, Statistics:5	Lecture, Epidemiology: 8 Observational study designs
11.15-12.00	Lecture, Clinical epidemiology: 4: Decision analysis			Lecture, Statistics:6	
12.15-13.00				Reading	Group work: 11 (case#7) split class
13.15-14.00	Lecture, Knowledge management: 2. GRADE & guidelines				Group work: 12 (case#8) split class
14.15-15.00	Group work: 7 (stat#3/case#5)				Group work: 11 (case#7) split class
15.15-16.00	Group work: 8 (stat#4/case#6)				Group work: 12 (case#8) split class

*Students should during this week collect data per interviews in the questionnaire survey and return/punch on Friday.

#Questionnaire distributed

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Week 3 (week 35, Monday 26.08.13)

	Monday 26/8	Tuesday 27/8	Wednesday 28/8	Thursday 29/8	Friday 30/8
08.15-09.00	Lecture, Health prevention: 2. Oral health introduction	Lecture: Case-work guidelines	Reading day	PROFFKOM course	Lecture, Epidemiology: 9. Confounding and bias
09.15-10.00	Group work: 13 (case#9) Split class	Lecture: Case-work guidelines			Lecture, Health prevention: 3 From epidemiology to prevention
10.15-11.00	Group work: 14 (case#10) Split class	Lecture, Knowledge management:3			Lecture, Health prevention: 4 Oral health, timing of interventions
11.15-12.00					
12.15-13.00	Group work: 13 (case#9) Split class	Group work: 15 (stat#5/case#11)			Group work: 17 (stat#5/case#11)
13.15-14.00	Group work: 14 (case#10) Split class	Group work: 16 (stat#6/case#12)			Group work: 18 (stat#6/case#12)
14.15-15.00	Lecture: HIV case#				
15.15-16.00					

Week 4 (week 36, Monday 02.09.13)

	Monday 2/9	Tuesday 3/9	Wednesday 4/9	Thursday 5/9	Friday 6/9
08.15-09.00	Lecture, Epidemiology: 10 Etiology and risk factors	Lecture, Statistics:7	Reading day	Group work: 23 (stat#7/case#17)	Group work: 25 (stat#7/case#17)
09.15-10.00	Lecture, Epidemiology: 11 Health registers	Lecture, Statistics:8		Group work: 24 (stat#8/case#18)	Group work: 26 (stat#8/case#18)
10.15-11.00	Lecture, Health prevention: 5 Timing of prevention	Lecture, Health prevention: 6 Perspectives on public health			Reading
11.15-12.00		Lecture, Health prevention: 7 Perspectives on public health		Lecture, Epidemiology: 12 screening 2	
12.15-13.00	Group work: 19 (case#13) Split class	Group work: 21 (case#15) Split class			
13.15-14.00	Group work: 20 (case#14) Split class	Group work: 22 (case#16) Split class		Lecture: Questionnaire survey: results	
14.15-15.00	Group work: 19 (case#13) Split class	Group work: 21 (case#15) Split class			Lecture, Statistics:9
15.15-16.00	Group work: 20 (case#14)	Group work: 22 (case#16)			Lecture, Statistics:10

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	Split class	Split class			
Week 5 (week 37, Monday 09.09.13)					
	Monday 9/9	Tuesday 10/9	Wednesday 11/9	Thursday 12/9	Friday 13/9
08.15-09.00	Lecture, Health prevention: 8 Cross-contamination	Lecture, Health prevention: 9 Methods for health prevention	Reading day	PROFFKOM course	Lecture, Health prevention: 11 Occupational health
09.15-10.00	Lecture, Knowledge management:4	Lecture, Health prevention: 10 Methods for health prevention			Lecture:/Seminar-Plenum present abstract
10.15-11.00	Group work: 27 (case#19) split class	Group work: 29 (case# 21) split class. Presentation of project by group*			Test
11.15-12.00	Group work: 28 (case#20) split class	Group work: 30 (case# 22) split class			
12.15-13.00	Group work: 27 (case#19) split class	Group work: 29 (case# 21) split class. Presentation of project by group*			
13.15-14.00	Group work: 28 (case#20) split class	Group work: 30 (case# 22) split class			
14.15-15.00					
15.15-16.00					

*One group will be selected at random to present

Undergraduate curriculum and e-course on Evidence-Based Dentistry, eC-ebd

Intellectual Output I

Report on teaching of EBD in Radboud university medical center (Nijmegen) and in the Netherlands

Prof. Dr. Nico Creugers

I- Report on teaching of EBD in Radboud umc

Dental students at the College of Dental Sciences in Nijmegen are educated to be lifelong learners, adept at critical thinking and evidence-based dental practice. The modular problem-based curriculum comprises six years (3-year Bachelor, 3-year Master). Teaching evidence-based dentistry is currently introduced in the first year and spreads out over the whole 6-years course of dental education.

The evidence-based education is also organized in modules and aims to promote understanding of both basic and applied science, management of the decision-making process, and development of new knowledge, as well. The total duration of the modules amounts 1400 hours of study, which is equivalent to 50 ECTS credit points (Table1). Students receive academic contact hours in the form of lectures, seminars, or discussion sessions with a personal supervisor.

Table 1 Distribution of ECTS credit points and hours of study per module

Year	Module	ECTS credit points	Hours of study		
			Academic hours	Self-reliant study	Total
1	Science I	6	44	116	160
2	Science II	6	35	125	160
3	Science III	11	10	310	320
4	Clinical decision-making	4	22	98	120
	Science IV	3	25	55	80
5	Science V	3	17	63	80
6	Science VI	17	40	440	480
Total		50	193	1207	1400

In the Bachelor phase, which occupies the first three years of dental education, students are prepared to use evidence in the clinical practise. The duration of the modules (Science I, II, and III) in the Bachelor phase amounts 640 hours of study, which is equivalent to 23 ECTS credit points. The modules cover the primary aspects of critical thinking and evidence-based dental practice, including:

- Ethical principles in scientific research
- Techniques for effective, quick and strategic searching for evidence using the internet
- Critical appraisal of the scientific literature
- Research methodology
- Basic descriptive and analytical statistical methods
- Analysis of research results and statistical inferences

In addition, students are given the task to draft a research proposal related to a preselected scientific topic and to actually conduct the study under supervision of a senior researcher. This includes performing a literature search, formulating research question, defining data needs and analytic techniques. At the end of the Bachelor phase, students prepare a written report and an oral presentation reflecting upon methodological issues as well as upon the research results and conclusions.

In the Master phase, which occupies the remaining three years of dental education, the training continues to build up on the principles of evidence-based dental practice, including:

- Clinical decision-making
- Dental epidemiology
- Critically appraisal of dental commercials
- Asking precise, structured clinical questions in actual clinical cases

The duration of the modules (Clinical decision-making, Science IV, V, and VI) in the Master phase amounts 760 hours of study, which is equivalent to 27 ECTS credit points. In this phase, the focus is on the process of evidence-based dentistry according to the following steps: (1) evaluation of patient or community needs, (2) formulation of searchable question using PICO strategy (Problem, Intervention, Comparison, Outcome), (3) search for the best evidence, (4) critical evaluation of the collected evidence, (5) integration of the evaluated evidence with own experience and patient`s needs and demands, and (6) evaluation of the EBD approach and outcomes of decisions made. Also in this phase, students are given the task to carry out a research project under supervision of a senior researcher and to prepare written report and oral presentation of the research methodology and results. In contrast to the Bachelor students, a higher degree of independence and self-reliance is expected from the Master students with respect to preparation and execution of the research work. Interim evaluations of the process and final assessment of the product are provided to the students.

II- Report on teaching of EBD in the Netherlands

Currently, beside Radboud university medical center Nijmegen, two other universities in the Netherlands provide dental education programmes: the Academic Centre for Dentistry Amsterdam and University

Medical Center Groningen. All three dental schools have recognized the increasing importance of an evidence-based approach in dental education. It can be stated that all dental students in the Netherlands have been educated in the theory of evidence-based dental practice since early 2000's. This includes the main steps of EBD: asking, acquiring, appraising, applying, and assessing, and the use of the 'PICO' approach in formulating clinical questions. Students also have to carry out a scientific research project. Nevertheless, each dental school has a unique curriculum and the application of EBD principles in clinical decision-making may differ from one school to another.