

Quality criteria for training settings in postgraduate medical education – Supplement

KCE reports 1305

The Belgian Health Care Knowledge Centre

Introduction: The Belgian Health Care Knowledge Centre (KCE) is an organization of public interest, created on the 24th of December 2002 under the supervision of the Minister of Public Health and Social Affairs. KCE is in charge of conducting studies that support the political decision making on health care and health insurance.

Administrative Council

Actual Members: Pierre Gillet (President), Dirk Cuypers (Vice-president), Jo De Cock (Vice-president), Frank Van Massenhove (Vice-president), Yolande Avondtroodt, Jean-Pierre Baeyens, Ri de Ridder, Olivier De Stexhe, Johan Pauwels, Daniel Devos, Jean-Noël Godin, Floris Goyens, Jef Maes, Pascal Mertens, Marc Moens, Marco Schetgen, Patrick Verertbruggen, Michel Foulon, Myriam Hubinon, Michael Callens, Bernard Lange, Jean-Claude Praet.

Substitute Members: Rita Cuypers, Christiaan De Coster, Benoît Collin, Lambert Stamatakis, Karel Vermeyen, Katrien Kesteloot, Bart Ooghe, Frederic Lernoux, Anne Vanderstappen, Paul Palsterman, Geert Messiaen, Anne Remacle, Roland Lemeye, Annick Poncé, Pierre Smiets, Jan Bertels, Catherine Lucet, Ludo Meyers, Olivier Thonon, François Perl.

Government commissioner: Yves Roger

Management

Chief Executive Officer: Raf Mertens

Assistant Chief Executive Officer: Jean-Pierre Closon

Information

Federaal Kenniscentrum voor de gezondheidszorg - Centre fédéral d'expertise des soins de santé – Belgian Health Care Knowledge Centre.

Centre Administratif Botanique, Doorbuilding (10th floor)

Boulevard du Jardin Botanique 55

B-1000 Brussels

Belgium

Tel: +32 [0]2 287 33 88

Fax: +32 [0]2 287 33 85

Email : info@kce.fgov.be

Web : <http://www.kce.fgov.be>

Quality criteria for training settings in postgraduate medical education - Supplement

KCE reports 130S

ROY REMMEN, ANNELIES DAMEN, IMGARD VINCK, JULIEN PIERART,
CLAIRE DE BURBURE, DOMINIQUE PESTIAUX, MARIE-MADELEINE COUTTENYE,
DOMINIQUE PAULUS

KCE reports I30S

Title:	Quality criteria for training settings in postgraduate medical education - Supplement
Authors:	Roy Remmen (Centre for General practice, UA), Annelies Damen (Centre for General Practice, UA), Imgard Vinck (KCE), Julien Piérart (KCE), Claire de Burbure (Administration for PME training settings, UCL), Dominique Pestiaux (Centre for General Practice, UCL), Marie-Madeleine Couttenye (Cell for innovation and quality of education, faculty of medicine, UA), Dominique Paulus (KCE)
External experts:	Jacques Boniver (Anatomopathology, ULG), Yvan Bottu (vice-president of the Superior Council), Sandra De Brouwer (Ministry of Public Health), Guy Deroy (vice-president of the Superior Council), Pierre Firket (Centre for General Practice, ULG), Jan Heyrman (Centre for General Practice, KULeuven), Kristel Kierczynski (Ministry of Public Health), Michel Roland (Centre for General Practice, ULB), Bernard Spitz (Department for Women and Children, KULeuven), Xavier Van Cauter (Ministry of Public Health), Thierry Van der Schueren (GP trainer, Bioul), Brigitte Velkeniers (Internal Medicine, Academic Hospital UZ Brussels)
Acknowledgements:	Yvan Bottu, Marleen Bronders (Vlaamse Interuniversitaire Raad- VLIR), Ken Harris (Royal College of Physicians and Surgeons of Canada), Jan Heyrman, Xavier Van Cauter, all key informants who were interviewed, the presidents of the recognition commissions
External validators:	Danielle Fréchette (Royal College of Physicians and Surgeons of Canada), Jean-Jacques Rombouts (Directeur Médical, Clinique Sainte Anne Saint Remi, Bruxelles), Christophe Segouin (Groupe Hospitalier Lariboisière, Assistance Publique- Hôpitaux de Paris)
Conflict of interest:	Jan Heyrman declared to be administrator of ICHO and to have links with other universities; Thierry Van der Schueren declared to be GP trainer in the UCL network; Jean-Jacques Rombouts declared to have ceased his functions at the UCL Medical Faculty (since 2007), to have ended his membership to the Superior Council (December 2008), to work a few hours per week on a voluntary basis at the UCL academic hospital, to be elected member of the National council of Physicians since 2008, to be medical director of an hospital that employs trainees in GP and in other specialties.
Disclaimer:	The external experts were consulted about a (preliminary) version of the scientific report. Subsequently, a (final) version was submitted to the validators. The validation of the report results from a consensus or a voting process between the validators. This report has been approved by common assent by the board of managing directors. Only the KCE is responsible for errors or omissions that could persist. The policy recommendations are also under the full responsibility of the KCE..
Layout:	Ine Verhulst
Brussels, 9 July 2010	
Study nr 2008-27	
Domain: Health Services Research (HSR)	
MeSH: Professional Practice, Training ; Quality Indicators ; Accreditation ; Education, Medical, Graduate ; Internship and Residency	
NLM Classification: W18 (Education)	
Language: English	
Format: Adobe® PDF™ (A4)	

Legal depot: D/2010/10.273/36

Any partial reproduction of this document is allowed if the source is indicated.
This document is available on the website of the Belgian Health Care Knowledge Centre.

How to refer to this document?

KCE reports are published under a “by/nc/nd” Creative Commons Licence (http://kce.fgov.be/index_en.aspx?SGREF=5212&CREF=16141).

How to refer to this document?

Remmen R, Damen A, Vinck I, Piérart J, de Burbure C, Pestiaux D, Couttenye MM, Paulus D. Quality criteria for training settings in postgraduate medical education - Supplement. Health Services Research (HSR). Brussels: Belgian Health Care Knowledge Centre (KCE). 2010. KCE Reports vol 130S. D/2010/10.273/36



Supplement

Table of contents

I	APPENDIX CHAPTER 2: SYSTEMATIC LITERATURE REVIEW	3
1.1	DESCRIPTION OF THE SEARCH STRATEGY	3
1.1.1	Search in the databases	3
1.1.2	Selection procedure.....	4
1.1.3	Hand search.....	5
1.1.4	Full text screening and final selection	5
1.1.5	Quality appraisal	5
1.2	TOOLS FOR QUALITY APPRAISAL	6
1.2.1	SIGN checklists.....	6
1.2.2	Modified evidence based rating scale	6
1.2.3	GRID used for the analysis of articles on full text	6
1.3	TABLES OF EVIDENCE	8
1.3.1	Reviews.....	8
1.3.2	Primary articles (adjuvant search).....	23
1.4	COMPREHENSIVE DESCRIPTION OF THE RESULTS OF THE SYSTEMATIC LITERATURE REVIEW ACCORDING TO THE WFME DOMAINS	27
1.4.1	WMFE area 1: Mission and outcomes	27
1.4.2	WMFE area 2: Training process	27
1.4.3	WMFE area 3: Assessment of trainees	29
1.4.4	WMFE area 4: Trainees	30
1.4.5	WMFE area 5: Staffing	32
1.4.6	WMFE area 6: Training settings and educational resources	32
1.4.7	WMFE area 7: Evaluation of training process.....	32
1.4.8	WMFE area 8: Governance and administration.....	32
1.4.9	WMFE area 9: Continuous renewal.....	33
1.5	DISCUSSION OF ALL RESULTS OF THE SYSTEMATIC REVIEW	33
1.5.1	Limits of the studies: design and population.....	33
1.5.2	WFME areas: classification and gaps in the literature.....	33
1.5.3	Lessons to learn from the available literature.....	33
1.5.4	Strengths and limitations of this systematic review	34
1.5.5	What can we learn for Belgium?.....	35
2	APPENDICES CHAPTER 3: INTERNATIONAL COMPARISON: OVERVIEW OF RECOGNITION PROCESS IN FIVE COUNTRIES	36
2.1	DESCRIPTION OF THE RECOGNITION PROCESS BY COUNTRY	36
2.1.1	France	36
2.1.2	Switzerland	38
2.1.3	The Netherlands.....	41
2.1.4	United Kingdom	44
2.1.5	Canada.....	47
2.2	WEBLINKS.....	50
2.2.1	France	50
2.2.2	The Netherlands.....	50
2.2.3	United-Kingdom	50
2.2.4	Canada.....	50
2.2.5	European associations	51
2.2.6	International organizations.....	51
2.3	LEGAL FRAMEWORK BY COUNTRY	51
2.3.1	France	51
2.3.2	Canada.....	56
2.3.3	United Kingdom	61
2.3.4	Switzerland	69
2.3.5	The Netherlands.....	76

3	APPENDIX CHAPTER 4 LEGISLATION: OVERVIEW OF THE SPECIFIC REGULATIONS OF MEDICAL SPECIALTIES OTHER THAN GENERAL PRACTICE	84
3.1	DURATION OF TRAINING FOR BASIC SPECIALIZATIONS AND PROFESSIONAL TITLES	84
3.1.1	Basic specializations	84
3.1.2	Particular professional titles.....	85
3.2	TRAINERS: APPOINTMENT POLICY AND OBLIGATIONS	86
3.2.1	Appointment	86
3.2.2	Obligations and development of trainers.....	86
4	APPENDIX CHAPTER 5: BELGIAN SITUATION.....	87
5	APPENDIX CHAPTER 6: RESULTS OF THE SURVEY AMONG RECOGNITION COMMISSIONS.....	88
5.1	SPECIALTIES	88
5.2	FORMATION PEDAGOGIQUE DES MAITRES DE STAGE?.....	89
5.3	TEMPS MINIMUM PAR SEMAINE SPECIFIE PAR LA COMMISSION	89
5.4	EVALUATION DE LA QUALITE DES MAITRES DE STAGES PAR LA COMMISSION	90
5.5	EVALUATION DE LA QUALITE DES LIEUX DE STAGE PAR UN ORGANISME EXTERNE	90
5.6	EVALUATION DE LA QUALITE DES LIEUX DE STAGE PAR LA COMMISSION.....	90
5.7	ORGANISME EXTERNE POUR L'EVALUATION DE LA QUALITE DES LIEUX DE STAGES	91
5.8	EVALUATION DES MEDECINS ASSISTANTS AU SUJET DE LA QUALITE DU LIEU DE STAGE.....	91
5.9	EVALUATION A LA FIN DU PARCOURS	91
5.10	SUPPORT AUX ASSISTANTS EN CAS DE PROBLEME.....	92
6	APPENDIX CHAPTER 7. KEY INFORMANTS	93
6.1	KEY INFORMANT LIST	93
6.2	WHO-WFME GUIDELINES FOR ACCREDITATION	94

I APPENDIX CHAPTER 2: SYSTEMATIC LITERATURE REVIEW

I.1 DESCRIPTION OF THE SEARCH STRATEGY

The systematic literature search was performed from 1995 onwards, using language limits (English, French and Dutch). The following databases have been consulted : Medline Ovid (April 23, 2009), EMBASE (June 9, 2009), ERIC database (July 30, 2009) and RDRB database (August 1, 2009). The detailed search strategies for each database are available upon request.

Study designs were limited first to good quality reviews and further to good quality studies (RCTs, CCTs and cohort studies) for the sub areas not covered by the reviews.

I.1.1 Search in the databases

I.1.1.1 *Search for reviews in MEDLINE Ovid*

Firstly, relevant medical subject headings (MeSH) terms were identified and combined with "OR": "Education, Medical, Graduate or Education" OR "Internship and Residency" OR "Family Practice/ ed [Education]". The results of this combination have been combined with two free entry terms of interest i.e., "quality" OR "standards". This search resulted in 216 hits.

A second search used the same MeSHs and focused on subheadings i.e., legislation, education, standards and organization. This search resulted in 338 papers.

A combination of both databases gave 554 papers i.e. 460 papers after eliminating duplicates.

In the third Medline search the three MeSH terms ("Education, Medical, Graduate, or Education", "Internship and Residency", "Family Practice/ed [Education]") were combined with free terms (train* OR staff*) and MeSHs to reflect the WFME grid items i.e. *"organization and administration"/ or *annual reports as topic/ or *"constitution and bylaws"/ or governing board/ or management audit/ or management information systems/ or mandatory programs/ or organizational innovation/ or program development/ or public health administration/ or total quality management/ . This search resulted in 646 papers.

The search in MEDLINE resulted in 790 papers after eliminating the duplicates.

I.1.1.2 *Search for good quality research papers in MEDLINE Ovid*

Using identical criteria, a search for RCTs, comparative studies and controlled clinical trials was performed. This yielded 964 papers.

I.1.1.3 *Search for reviews and RCTs in Embase*

Three Emtree terms ("Medical Education" OR "Education" OR "Family Practice") AND 2 free terms ("quality" OR "standards") were combined in a first Embase search. This resulted in 392 hits. The second and third searches similar to the Medline ones yielded 95 and 391 papers respectively. After discarding duplicates the search in Embase resulted in 615 references.

I.1.1.4 *Search for papers in ERIC*

In the ERIC database, the search was performed using the Thesaurus descriptors: "Graduate Medical Education" OR "Family Practice" AND keywords quality OR train* OR staff* OR standards OR organization OR legislation. This search resulted in 303 papers.

1.1.1.5 *Search for papers in RDRB (Research and Development Resource Base)*

In the RDRB database, the search was performed using the key words: graduate medical education OR internship OR family practice combined with the key words: quality OR train* OR staff* OR standards OR organization OR legislation. After merging all RDRB searches and discarding the duplicates, this yielded 459 papers.

1.1.2 Selection procedure

1.1.2.1 *Identifying reviews; screening of titles and abstracts*

After eliminating duplicates, a total of 3022 unique references were identified and this formed the reference managing database that was used during the entire project. This listing was saved in one ENDNOTE and EXCEL file.

A first selection of reviews was performed on the basis of title and abstract by two independent readers (in combinations AD, RR, JW). Many papers were excluded using the following *exclusion* criteria:

- out of scope, not related to postgraduate clinical training;
- not part of the WMFE areas;
- programmes to enhance technical specific competencies within a specialty;
- description of personal views, comments, strategies to be implemented;
- not related to western world.

The selection of reviews used the following *inclusion* criteria:

- scope: quality of training programs/training practices / trainers;
- description of national, regional or official postgraduate programmes;
- study design: systematic reviews

After selection based on title and abstract the percentage of agreement was 95,1 percent. Disagreement was solved by discussion by the two readers. No intervention of a third reader was needed. Finally, 188 reviews were selected for full reading and quality appreciation.

1.1.2.2 *Identifying primary papers; screening of titles and abstracts*

An adjuvant search was performed because not all the sub areas of the WFME were covered by reviews from the first (initial) search. So, a more specific search for RCT's and other good quality studies was performed in our reference managing database (3022 unique references) to cover the blind spots from the review search. For each blank sub area key words from the areas' description were used for searching the reference managing database (see table appendix) .

Besides, we also selected primary studies published after the last review in a covered sub area.

Because the WMFE Global Standards for Quality Improvement was published in 2003, data limits were used from 2003 onwards. This search resulted in 625 papers.

Selection was performed by 2 reviewers after independent evaluation and by the same exclusion criteria as the search for reviews, extended with two adjuvant exclusion criteria:

- study design: qualitative papers, expert panels and papers or studies without comparison/control group
- number of participants/residents: 40 or less per intervention group

Percentage of agreement for this selection was 98,4 percent. Disagreement was solved by discussion by the two readers. No intervention of a third reader was needed. This search for primary papers based on title and abstract resulted in 68 references. After eliminating 12 reviews already included in the review search (we could not limit the study design in the reference managing database (Endnote), this second search resulted in 56 references which were then appreciated for their quality. In the end, 7 papers were fit for further analysis.

1.1.3 Hand search

At the end of the project we performed a hand search in five core Journals (The Lancet, JAMA, New England Journal of Medicine, British Medical Journal, Annals of Internal Medicine) and other medical education journals (Medical Education, BMC Medical Education, Medical Teacher, Teaching and Learning in Medicine, Education for Health).

Here, we identified 19 additional references using identical inclusion and exclusion criteria as before starting from April 2009 (first Medline search April 23, 2009) until October 2009 of which only one systematic review was identified.

1.1.4 Full text screening and final selection

Based on title and abstract, initially 188 reviews, secondly 56 primary articles and at the end one review from the hand search were selected for full reading by one author (RR or JW) and was checked by the first author (AD). All full texts could be collected.

1.1.5 Quality appraisal

This work was performed on the full texts by one author (RR or JW) and was checked by the first author (AD). The researchers used the grids of Scottish Intercollegiate Network Group (SIGN) (see appendix) for reviews, RCTs and cohort studies. They give a score of 3 for well covered criteria, a score of 2 for adequately addressed criteria, a score of 1 for poorly addressed criteria and a score 0 for not addressed criteria, not reported criteria or not applicable criteria. The researchers excluded studies with scores equal to 0 or 1 on three or more items out of a total of 5 items. This strategy resulted in 3 excluded reviews.

Evidence was subsequently graded using the criteria of the 'Modified evidence based rating scale' (see appendix). This tool has been used in a former KCE report on policies for increasing the attractiveness of the GP profession¹. This grid has been deemed more appropriate than the grade system designed for evidence on clinical topics for which many RCTs have been published.

For the appreciation of the quality of primary articles (n = 7), the researchers used the grid already used in another KCE project (report 118). Data extraction

32 reviews were selected and we also identified 7 primary articles to complement the evidence from our data set using search strings. For each reference and item the content was agreed upon by AD, RR and JW.

I.2 TOOLS FOR QUALITY APPRAISAL

I.2.1 SIGN checklists

SIGN methodology: checklists for systematic reviews and meta analysis, randomised controlled trials and cohort studies:

<http://www.sign.ac.uk/methodology/checklists.html>

I.2.2 Modified evidence based rating scale

See http://www.kce.fgov.be/index_nl.aspx?SGREF=5268&CREF=11784

Level of Evidence and criteria:

I - 1 High level systematic review of randomised control trials (no instance)

I - 2 Low level systematic review of randomised control trials (no instance)

II - 1 High level systematic literature review (eg : cohort studies)

II - 2 Low level systematic literature review (available literature)

III - 1 High level randomised control trial (no instance)

III - 2 Low level randomised control trial (no instance)

IV - 1 High level cohort study (comparison groups)

IV - 2 Low level cohort study (no comparison groups)

V - 1 High level survey-based

V - 2 Low level survey-based

VI - 1 High level qualitative studies (including narrative literature review)

VI - 2 Low level qualitative studies

I.2.3 GRID used for the analysis of articles on full text

I.2.3.1 General information and selection

1. Reviewer s' name
2. Title
3. 1st author - year
4. Country – region (if applicable)
5. Type of study **include** Meta analysis– SR – Reviews with systematic methodology– RCT-Cohort studies with outcome data
6. Type of study **exclude** personal opinions- Reviews with non systematic methodology - studies with no outcome data, other
7. Essentials of this study
8. Interesting information

Stop here if excluded, see next paragraph if included

If included: summary of findings

9. Source of citation? Embase, Pubmed, ERIC , RDRB, other
10. Setting university hospital – hospital-GP practice-rural GP- other (explain)
11. Population : institution-trainee – trainers-other
12. If study; number of participants
13. Describe measure for quality which is addressed (discuss which data)
14. Which WFME criteria addressed? (explain briefly)

- Mission and outcomes
- Training process
- Assessment of trainees
- Trainees
- Staffing
- Training settings and educational outcomes
- Evaluation of the training process
- Governance and administration
- Continuous renewal

15. Evidence of the intervention on the outcomes measured

16. Main conclusions

17. Lessons for Belgium

18. Remarks

I.3 TABLES OF EVIDENCE

I.3.1 Reviews

NR.	REFERENCE	RESEARCH QUESTION/ AIM OF THE STUDY	STUDY DESIGN	INSTRUMENTS USED	COUNTRY FIRST AUTHOR	SETTING	SIGN	AREA OF WMFE	OUTCOME MEASURES	MAIN RESULTS	CONCLUSIONS	LESSONS FOR BELGIUM	LEVEL OF EVIDENCE
5	Issenberg SB, McGaghie WC, Petrusa ER, Gordon DL, Scales RJ: Features and uses of high-fidelity medical simulations that lead to effective learning: A BEME systematic review. Medical Teacher 2005, 27(1):10-28.	What are the features and uses of high- fidelity medical simulations that lead to effective learning?	Systematic Review	* data sources: ERIC, Medline, PsycINFO, Web of Science and Timelit * published between 1969 and 2003 * 109 eligible journal articles → slightly more than 40% referred to postgraduate students	USA	Hospital	14/15	2. Training process 2.1 Learning approaches		Most important feature of simulation based medical education = Providing feedback - 51 (47%); followed by repetitive practice -43 (39%); curriculum integration - 27 (25%); range of difficulty level - 15 (14%); multiple learning strategies - 11 (10%); capture clinical variation - 11 (10%); controlled environment - 10 (9%); individualized learning - 10 (9%); defined outcomes - 7 (6%); simulator validity - 4 (3%)	High-fidelity medical simulations are educationally effective and simulation - based education complements medical education in patient care settings.	Rate use of stimulators may be supplied by existing skill labs in Belgium	II-1
6	Byrne AJ, Pugsley L, Hashem MA: Review of comparative studies of clinical skills training. Medical Teacher 2008, 30(8):764-767.	To undertake a systematic review of the comparison of the methodes used to train staff in clinical skills.	Systematic Review	* data sources: Medline, Pubmed and publisher specific databases of Synergy, Science Direct and Wiley Interscience * published: ? * 9 papers met the inclusion criteria * Skills: intubation, venous cannulation and central line insertion → n = 5 related to intubation, n = 3 relating venous cannulation, n = 2 relating to central venous line insertion (most papers evaluating a single teaching method)	UK	Hospital	13/15	2. Training process 2.1 Learning approaches		* A wide range of teaching methodes were used, including lectures, computer based teaching, manikins and video assisted feedback. * The studies included nurses, doctors, paramedics and medical students (only one study with residents)	* No clear conclusions can be drawn from the studies * Teaching methodes have little effect on outcomes ↔ better outcomes are associated with workplace- based training and a course which provided repeated episodes of training spaced out over a period of weeks/months with the facility for practice of the skill. * Factors associated with succes were periodic feedback, setting the course within the hospital and using clinical trainers and providing training for difficult procedures where none was given previously * These findings are important as many current clinical skills training courses do not use the techniques associated with		II-1

7	Di Francesco L, Pistoria MJ, Auerbach AD, Nardino RJ, Holmboe ES: Internal medicine training in the inpatient setting. A review of published educational interventions.. J Gen Intern Med 2005, 20(12):1173-1180.	To review the available literature on specific internal medicine inpatient educational interventions and proposes recommendations for improving internal medicine training in this setting.	Systematic Review	* data source: Medline * published between 1966 and August 2004 * 13 studies met inclusion criteria. All 13 were single institution studies and 3 used a rigorous randomized design.	USA	Hospital	12/15	2. Training process 2.1 Learning approaches 2.6 Management of training		* 13 studies of inpatient internal medicine educational interventions included an outcome assessment. * all were single institution studies * the majority of these studies was of poor methodological quality and focussed on specific content areas of internal medicine. * none assessed the effectiveness or impact of internal medicine core inpatient experiences or curriculum. * the review demonstrate that there is little data on the effectiveness of internal medicine in inpatient education.	* pressing need for the entire education community to perform a comprehensive and rigorous assessment of the current structure of inpatient education. * the Society of Hospital Medicine (SHM) is developing a core curriculum of inpatient medicine. * new inpatient team structures and skills will be required to enhance the link and training in both the inpatient and outpatient settings. * multi-institutional collaborations are needed and should be researched.		II-2
8	Coomarasamy, A. and K.S. Khan, What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. BMJ, 2004. 329(7473): p. 1017.	What is the evidence that postgraduate teaching in evidence based medicine changes anything?	Systematic review	* data sources: Medline, Embase, ERIC, Cochrane Library, DARE, HTA database, Best Evidence, BEME, SCL * 23 studies: 4 RCTs, 7 non RCTs, 12 before and after comparison studies * 18 studies: standalone teaching method * 5 studies: clinically integrated teaching	UK	Not specified	15/15	2. Training process 2.2 Scientific methods	Knowledge, critical appraisal skills, attitudes and behaviour	* 46 studies met inclusion criteria: standalone teaching improved knowledge but not skills, attitudes or behaviour. Clinically integrated teaching improved knowledge, skills and behaviour.	Teaching of evidence based medicine should be moved from classrooms to clinical practice to achieve improvements in substantial outcomes.		II-2

9	Flores-Mateo, G. and J.M. Argimon, Evidence based practice in postgraduate healthcare education: a systematic review. BMC Health Services Research, 2007. 7(119).	To systematically review studies that assessed the effectiveness of EBP (Evidence-based-practice) teaching to improve knowledge, skills, attitudes and behaviour of postgraduate healthcare workers, and to describe instruments available to evaluate EBP teaching.	Systematic review	* Datasources: Medline, Cochrane Library, Embase, Cinahl and ERIC * published between 1966 and 2006 * 24 studies met inclusion criteria: Randomised (n = 11), non randomised controlled studies (n = 5) and before-after studies (n = 8)	Spain	Not specified	15/15	2. Training process 2.2 Scientific methods		* 24 studies met inclusion criteria: 15 outcomes within the 10 studies to which E-S (Standardized effect sizes) should be calculated. Studies assessing skills, behaviour and/or attitudes had a small to moderate E-S. Only 1 of the 2 studies assessing knowledge had E-S of 0,57 and 2 of the 4 studies that assessed total test scores had large E-S. There were 22 instruments used, but only 10 had 2 or more types of instruments used.	Small improvements in knowledge, skills, attitudes or behaviour are noted when measured alone. A large improvement in skills and knowledge in EBP is noted when measured together in a total score. Very few studies used validated measures tests.		II-1
10	Carraccio C, Englander R: Evaluating competence using a portfolio: a literature review and web-based application to the ACGME competencies. Teaching and learning in medicine 2004, 16(4):381-387.	Evaluate competence using a portfolio: a literature review and web-based application to the ACGME competencies	Systematic Review	* data sources: MEDLINE (1966-2004), ERIC (1967-2004) and Academic Search Premier (1975-2004)	USA	Not specified	10/15	2. Training process 2.3 Training content 3. Assessment of trainees 3.1 Assessment methods		* 30 articles met criteria for relevance * The use of a portfolio allows one to incorporate a variety of assessment tools needed to evaluate the diverse domains of competence and also fosters reflective learning, which is the key to professional development. * ACGME: 6 domains of competence: 1. patient care 2. medical knowledge 3. interpersonal and communication skills 4. professionalism 5. practice-based learning and improvement	* Web-based portfolio assessment provides an idea venue for the evaluation of competence and has the ability to provide educators with a research infrastructure to practice evidence-based education. * The portfolio must have an creative component that is learner driver. * The creative component must be balanced with a quantitative assessment of the learner performance.	Portfolio in USA is the corner stone of assessment	II-2

11	Lynagh M, Burton R, Sanson-Fisher R: A systematic review of medical skills laboratory training: Where to from here? Medical Education 2007, 41(9):879-887.	To evaluate the effectiveness of medical skills laboratories or simulators. Is performance in medical skills laboratories transferable to actual clinical performance and maintained over time?	Systematic Review	* data sources: Medline, PubMed, Expanded Academic Index, Australian Education Index, Proquest, Annual Reviews, Aust-Health, Cachrane and Health Reference Centre * published between 1998 and June 2006 * 44 RCT's were identified for inclusion in this review * participants: undergraduate medical students + postgraduate medical trainees.	Australia	Not specified	14/15	2. Training process 2.3 Training content	* 32 studies (70%): simulator training significantly improved procedural skills performance in comparison with standard or no training. * 20 RCT's (45%): assessed the transfer of simulator performance to clinical skills performance; however 8 of these used animal models, not real patients. * only 2 studies assessed the maintenance of skills post-intervention, both at 4-month follow-up periods.	* Medical skills laboratories do lead to improvement in procedural skills compared with standard or no training at all when assessed by simulator performance and immediately post training. * There is a lack of well designed trials addressing the crucial issues of transferability to clinical practice and retention of skills over time → further research must be carried out to address these matters if medical skills laboratories are to remain an integral component of medical education. (long term maintenance beyond	Skills lab interuniversity (or at university) across specialties	II-1
12	Chakraborti C, Boonyasai RT, Wright SM, Kern DE: A systematic review of teamwork training interventions in medical student and resident education. Journal of General Internal Medicine 2008, 23(6):846-853.	To assess the characteristics and efficacy of published curricula designed to teach teamwork to medical students and house staff.	Systematic Review	* data sources: Medline, ERIC, Excerpta Medica Database, PsychInfo, Cumulative Index of Nursing and Allied Health Literature, and Scopus * published between January 1980 and July 2006 * 13 studies fulfilled all criteria for inclusion * 11 studies: published in 2004-2005 * 13 articles: teaching a total of 3,137 learners (primarily internal medicine, anesthesiology and emergency medicine)	USA	Mixed (hospital + GP)	15/15	2. Training process 2.3 Training content	ALL CURRICULA EMPLOYED ACTIVE LEARNING METHODES * the majority (77%) included multidisciplinary training; * 10 curricula (77%) used an uncontrolled pre/post design * 3 (23%) used controlled pre/post design; * ONLY 3 curricula reported outcomes beyond end of program * only 1 (8%) > 6 weeks after program completion * 1 program evaluated a clinical outcome (patient satisfaction), which was unchanged after the intervention.	* Reported curricula employ some sound educational principles and appear to be modestly effective in the short term. * Curricula may be more effective when they address more teamwork principles	Must teamwork be part of any curriculum?	II-1

13	Bowen JL, IrbyDM: Assessing quality and costs of education in the ambulatory setting: a review of the literature. Acad Med 2002, 77(7):621-680.	1. Are students and residents learning in ambulatory settings? 2. What characterises an optimal ambulatory learning environment? 3. Are teachers and learners satisfied with their ambulatory care learning experiences? 4. What are the costs of teaching in these settings?	Review with systematic methodology (thematic review because of the diverse nature of methodes and studies included)	* data sources: Medline, ERIC and Psychlit * published between 1995-1999 *140 journal articles: - internal medicine (40%), family medicine (29%), primary care (9%), remaining 14% combinations of these and others educational foci: medical students (43%), residents (32%) , faculty (8%), combinations of these (14%)	USA	Outpatient setting	10/15	2. Training process 2.4 Training structure, composition and duration 3. Assessment 3.1 Assessment methods 8. Governance and administration 8.3 Funding and resource allocation	Difficult to generalize: 40% internal medicine, 43% medical students, 77% single program	* 140 studies met inclusion criteria: 1. Students and residents are learning in ambulatory environments (patient care outcomes = measure of learning) 2. Teachers may be the single most important factor, yet they lack self-confidence as teachers 3. Clinical teaching in ambulatory settings receives high ratings from students and residents. 4. Teaching settings costs about one third more than non teaching settings to ~~residents~~	The predominance of single institution studies limits the generalizability of current findings	It is possible to train residents in an outpatient settings.	II-2
14	Kennedy, T.J.T., et al., Progressive independence in clinical training: a tradition worth defending? Acad Med, 2005. 80(10 Suppl): p. S106-11.	To review empirical evidence and theory pertaining to the role of progressive autonomy in clinical learning	Systematic Review	* data sources: Medline (1966-feb 2005), PsycINFO (june 2004), Social Sciences Citation Index (to feb 2005), and ERIC (to June 2004) * Not intended to provide a comprehensive bibliographic review, but rather a synthesis of the most emperical and theoretical concepts related to progressive independance in clinical learning (no systematic meta-analysis)	Canada	Mixed (hospital + outpatient)	15/15	2. Training process 2.4 Training structure, composition and duration	* 74 studies met inclusion criteria * The clinical psychology and medical education literatures provide evidence that clinical trainees act more independently as their training progresses, but have not yet evaluated the educational efficacy of providing progressive independence, or the consequences of failing to do so.	* Limited empirical support for the current model of progressive independence in the clinical learning. * Diverse theoretical perspectives raise concern about the potential educational consequences of eroding progressive independence * These perspectives could inform future research programs that would create a creative and effective response to the social and economic forces impacting clinical education.			II-2

15	Fletcher KE, Underwood W, 3rd, Davis SQ, Mangrulkar RS, McMahon LF, Jr., Saint S: Effects of work hour reduction on residents' lives: a systematic review. JAMA 2005, 294(9):1088-1100.	To summarize the literature regarding the effect of interventions to reduce resident work hours on residents' education and quality of life. (Context: the ACGME implemented mandatory work hour limitations in July 2003, partly out of concern for residents' well being in the setting of sleep deprivation. These limitations are likely to also have an impact on other aspects of the lives of residents)	Systematic Review	* data sources: Medline, Embase, and Current Contents * published between 1966 and April 2005 * Focus: internal medicine: 12; obs & gyn: 6; pediatrics: 7; surgery: 25; family medicine: 1; psychiatry: 1; radiology: 2	USA	Mixed (hospital + GP)	15/15	2. Training process 2.6 Management of training 4. Trainees 4.4 Working conditions	*54 articles met inclusion criteria * INTERVENTIONS TO DECREASE RESIDENT WORK HOURS varied, but included: night and day float teams, extra cross coverage, and physician extenders. * OUTCOMES included: resident education (operative experience, test scores, satisfaction), and quality of residents' lives (amount of sleep, well being) * INTERVENTIONS TO REDUCE WORK HOURS resulted in mixed effects on both operative experience and on a perceived educational quality but generally improve residents' quality of life * Many studies had major limitations in their design	* Residents' quality of life may improve with work hour limitations, but interpretations of the outcomes of these studies is hampered by suboptimal study design and the use of nonvalidated instruments. * The long-term impact of reducing resident work hours on education remains unknown. * Current and future interventions should be evaluated with more rigorous methods and should investigate links between residents' quality of life and quality of patient care.		II-1
17	McKinley RK, Strand J, Ward L, Gray T, Alun-Jones T, Miller H: Checklists for assessment and certification of clinical procedural skills omit essential competencies: A systematic review. Medical Education 2008, 42(4):338-349.	1. Is it possible to identify generic criteria which would encapsulate the criteria in existing checklists? 2. To quantify the extent to which existing checklists allow assessment of humanistic and team competencies (i.e. to examine the validity of current checklists for holistic assessment of clinical procedural skills).	Systematic Review	* data sources: 18 * published between 1990 and June 2005 * English language papers * 88 unique checklists: - 31 < USA, 24 < UK, 9 < Canada, 5 < Australia, and 1 from each of Germany, India, Israel, Norway, Pakistan and Sweden. - Checklists professional groups: doctors 44(50%), interns or residents 27 (31%)	UK	Not specified	12/15	3. Assessment of trainees 3.1 Assessment methodes	* 75 papers included * 7 themes are identified: ('Procedural competence in 85 cheklists (97%); 'Preparation, 65 (74%); 'Safety, 45 (51%); 'Communication and working with the patient', 32 (36%); 'Infection Control', 28 (32%); 'Post procedural care', 24 (27%); Team working, 13 (15%) and 37 subthemes, which encapsulated all identified checklists.	1. It is possible to develop generic criteria for the global assessment of clinical procedural skills. 2. A third and a half of checklists, respectively, do not enable explicit assessment of the key competencies 'Infection control' and 'Safety'. Their assessment may be inconsistent in assessment wich use such checklists.	Checklists to assess trainees could use a generic framework.	II-1

18	Lurie SJ, Mooney CJ, Lyness JM: Measurement of the general competencies of the accreditation council for graduate medical education: a systematic review. Acad Med 2009, 84(3):301-309.	To evaluate published evidence that the ACGME's six competencies can each be measured in a valid and reliable way. 1. PATIENT CARE 2. MEDICAL KNOWLEDGE 3. PRACTICE BASED LEARNING AND IMPROVEMENT 4. INTERPERSONAL AND COMMUNICATION SKILLS 5. PROFESSIONALISM 6. SYSTEM-BASED PRACTICE	Systematic Review	* data sources: Medline and ERIC * published between 1999 until March 2008 * 56 articles met inclusion criteria: SUBDIVISION 1. Quantative/ psychometric evaluations of the 6 general competencies (5: global rating forms; 6: 360-degree evaluations, 2: direct observations) 2. preliminary studies: 18 3. studies of "System-based-practice" and "Practice based learning and improvement": 14	USA	Mixed (hospital + GP)	15/15	3. Assessment of trainees 3.1 Assessment methodes		* 56 articles met inclusion criteria: 1. Quantative/psychometric studies evaluation tools failed to develop measures reflecting the 6 competencies in a reliable or valid way. 2. Few preliminary studies led to published quantitative data regarding reliability or validity. 3. Studies of SBP and PBLI generally operationalized these competencies as properties of systems, not of individual trainees. 4. Only 2 published surveys met quality criteria.	* Peer-reviewed literature provides no evidence that current measurement tools can assess the competencies independently of one another. (No method can assess the 6 ACGME competencies, because they deal with single dimensions) * Authors recommend using the competencies to guide and coordinate specific evaluation efforts, rather than attempting to develop instruments to measure the competencies directly.		II-2
19	Epstein RM, Hundert EM: Defining and assessing professional competence. JAMA 2002, 287(2):226-235.	To propose a definition of professional competence, to review current means for assessing it, and to suggest new approaches to assessment.	Review with systematic methodology	* data source: Medline * published between 1966 and 2001 * 195 relevant citations → 124 references on assessment of physicians	USA	Not specified	13/15	3. Assessment of trainees 3.1 Assessment methodes		*Inclusive definition of competence: the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community is being served. * Aside from protecting the public and limiting access to advances training, assessment should foster habits of learning and self reflection and drive institutional change. * Subjective, multiple choice, and standardized patient assessments, although, underemphasize important domains of professional competence: integration of knowledge and skills, context of care, information mangement, teamwork,, health systems, and patient-physician relationships. * Few assessments observe trainees in real life situations, incorporate	In addition to assessments of basic skills, new formats that assess clinical reasoning, expert judgement, management of ambiguity, professionalism, time management, learning strategies, and teamwork promise a multidimensional assessment while maintaining adequate reliability an validity. Institutional support, reflection, and mentoring must accompany the development of assessment programs.		II-1

20	Kogan, J.R., E.S. Holmboe, and K.E. Hauer, Tools for Direct Observation and Assessment of Clinical Skills of Medical Trainees: A Systematic Review. JAMA, 2009. 302(12): p. 1316-1326.	To identify observation tools used to assess medical trainees' clinical skills with actual patients and to summarize the evidence of their validity and outcomes.	Systematic review	* data sources: Pubmed, ERIC, CINAHL, and Web of science * Published between 1965 and March 2009 * English language articles	USA	Mixed (Hospital + outpatient + not specified)	9/15	3. Assessment of trainees 3.1 Assessment mehodess		* 55 tools were identified * 32 tools: formative assessment * 11 tools: validity evidence based on internal structure and relationship to other variables * most commonly outcomes: trainee or observr attitudes about the tool * the strongest validity evidence has been established for the Mini	Although many tools are available for the direct observation of clinical skills, validity evidence and description of educational outcomes are scarce.		II-2
21	Lynch, D.C., P.M. Surdyk, and A.R. Eiser, Assessing professionalism: A review of the literature. Medical Teacher, 2004. 26(4): p. 366-373.	To extend and update the work of previous authors concerning assessing professionalism To provide a catalog of the many and varied assessments available in the literature	Systematic review	* data sources: 5 electronic databases (Medline, Eric, Timelit, Hapi, PsychInfo) * published between 1982 and 2002. * 88 assessments were retained and organized into content area addressed and type of outcome examined.	USA	Not specified	13/15	3. Assessment of trainees 3.1 Assessment mehodess		* 191 articles provided descriptions of 88 assessments that fit into one or more of the 12 categories: - ethics-affective (15) - ethics-cognitive (25) - ethics-behavioural (9) - ethics-environmental (14) - personal-characteristics-affective (15) - comprehensive professionalism-cognitive (2) - comprehensive professionalism- behavioural (21) - comprehensive professionalism-environmental (5) - diversity-affective (8) - diversity-cognitive (2) - diversity-behavioural (1) - diversity-environmental (1)	Useful approaches to assessing resident physician professionalism include a 360-degree assessment and a cognitive assessment. Instead of creating new professionalism assessments, existing assessments should be improved. Also, more studies on the predictive validity of assessments and their use as part of formative evaluation system are recommended		II-2

22	Hutchinson L, Aitken P, Hayes T: Are medical postgraduate certification processes valid? A systematic review of the published evidence.. Med Educ 2002, 36(1):73-91.	Purpose = to collate the published works on validation on assessments used in postgraduate medical certification.	Systematic Review	* data sources: Medline, ISI, Citation Index, Embase, ERIC and TIME * published between 1985 and 2000 * references of included papers were also checked * The examinations' officers of the UK Royal Colleges were contacted by letter to ask for a details of published or unpublished reports on reliability and validity of their assessment strategies (of the 17 contacted, 8 responded, of wich 2 offered meetings)	UK	Mixed (hospital + GP)	14/15	3. Assessment of trainees 3.1 Assessment methodes	* A wide range of approaches of validation were employed * Inter-rater reliability (correlations between scores from different raters) and internal consistency (homogeneity of the test) were the most reported foci for validation. * 2 papers on consequential validity (the effect the assessment has on learning, and the political use of test results) and only a few on construct validity (how accurately the test measures the unobservable qualities (the constructs) it is designed to elicit) → these 2 forms of validity are considered central in general education writing. * the majority of papers were from general and family practice. * ther was a noticeable lack of papers from the UK Royal Colleges (except general practice)	* Relative scarcity of published papers on validation of assessment for postgraduate medical certification * General and family practice institutions in a number of English speaking countries have set an example to others, by showing that rigour and transparency in assessment development and implementation can be reflected in publication.	II-2
24	Veloski J, Boex JR, Grasberger MJ, Evans A, Wolfson DW: Systematic review of the literature on assessment, feedback and physicians' clinical performance*: BEME Guide No. 7. Medical Teacher 2006, 28(2):117-128.	To summarize evidence related to the impact of assessment and feedback on physicians' clinical performance.	Systematic review	* data sources: Medline, HealthSTAR, the Science Citation Index and eight other elctronic databases * published between 1966 and 2003 (1) 41 studies met all selection criteria and evaluated the independant effect of feedback on physician performance. (2) Another subset of 132 studies examined the effects of feedback combined with other interventions such as educational programmes , practice guidelines and reminders. (3) Two additional subsets (29 feedback studies involving resident physicians in training and 18 studies examining proxy measures of physician performance across clinical sites or groups	USA	Not specified	15/15	3. Assessment of trainees 3.3 Feedback to trainees	(1) Of these, 32 (74%) demonstrated a positive impact. Feedback was more likely to be effective when provided by an authoritative source over an extended period of time. (2) Of these, 106 studies (77%) demonstrated a positive impact (3) The majority of these two subsets also reported that feedback had positive effects on performance. HEADLINE RESULTS: Feedback can change physicians' clinical performance when provided systematically over multiple years by authoritative, credible source.	* The effects of formal assessment and feedback on physician performance are influenced by the source and duration of feedback. * Other factors, such as physicians' active involvement in the process, the amount of information reported, the timing and amount of feedback, and other concurrent interventions, such as education, guidelines, reminder systems and incentives, also appear to be important. * However, the independent contributions of these interventions have not been well documented in controlled studies → recommended that the designers of future theoretical as well as practical studies of feedback separate the effects of feedback from other concurrent interventions.	II-1

25	Hamdy H, Prasad K, Anderson B, Scherpier A, Williams R, Zwiers R, Cuddihy H: BEME systematic review: Predictive values of measurements obtained in medical schools and future performance in medical practice. Medical Teacher 2006, 28(2):103-116.	To what extent do measurements obtained in medical schools predict outcomes in clinical practice: performance during internship, residency programs, on the job and its impact on healthcare?	Systematic Review	* data sources: Medline, Embase, Cochrane's EPOC, Controlled Trial Databases, ERIC, British Education Index, PsychINFO, Timelit, Web of Science and hand searching in Medical Education Journals. * Published between 1955 and 2004 → 38 studies were included: - 32 < USA, 3 < Canada, 1 < UK, 1 < Australia, 1 < NZ - 29 retrospective cohort studies, 5 survey studies, 4 prospective cohort studies - sample in all cohort studies: entire batch of students	Bahrain	Hospital	15/15	4. Trainees 4.1 Admission policy and selection	Highest correlation between predictor and outcome was National Board Medical Examinations part II (clerkship) and NBME part III (residency-in-training) and the lowest between NBME part I (preclinical) and supervisor during residency	* 38 studies met inclusion criteria * Undergraduate grades and rankings were moderately correlated with internship and residency performance	* Need for a more consistent and systematic approach to studies of the effectiveness of undergraduate assessment systems and tools and their predictive value. (because evidence = rare and weak) * Existing tools do appear to have low to moderate correlation with postgraduate training performance → new measures of performance in practice, such as 'patient outcomes' and 'process of care', might be considered for future studies.	Selection procedures for specialists in training (GSO) in Belgium. Can we face it? How to select the best potentials... ?	II-1
26	Pilotto LS, Duncan GF, Anderson-Wurf J: Issues for clinicians training international medical graduates: A systematic review. Medical Journal of Australia 2007, 187(4):225-228.	To ascertain the specialised communication issues clinicians need to understand when preparing international medical graduates (IMGs) for clinical practice in Australia.	Systematic Review	* data source: Medline * published between 1990 and 2006 * 18 articles met inclusion criteria: → 7 cross-sectional studies, 8 referenced narrative articles, 3 non-systematic reviews	Australia	Not specified	13/15	4. Trainees 4.1 Admission policy and selection	In summary, IMGs need: * the ability to communicate with a range of people * the ability to choose the appropriate terminology, register, and amount of information for different audiences; * an element of empathy * the skills to interact with nursing staff, and a clear understanding of the role of support staff in clinical care * an understanding of practice protocols, with ongoing monitoring of whether information is being interpreted	KEY ISSUES THAT EMERGED WERE: * the need for IMGs to adjust to a change in status * the need for clinicians to understand high level of English language proficiency required by IMGs * the need for clinicians to develop IMGs skills in communicating with patients; * the need for clinicians to understand IMGs expectations about teaching and learning * the need for IMGs to be able to interact effectively with a range of people	Training organisations need to ensure that clinicians are aware of the communication issues facing IMGs and equip them with the skills and tools to deal with the problems that may arise.		II-2

27	Mitchell M, Srinivasan M, West DC, Franks P, Keenan C, Henderson M, Wilkes M: Factors affecting resident performance: development of a theoretical model and a focused literature review. <i>Acad Med</i> 2005, 80(4):376-389.	To illuminate areas of the model and test its construction against literature on resident performance.	Systematic Review	* Pubmed search 1967-2002 * Expert consensus panel (2002-2003): → A hypothesis-generating model of resident performance with 3 input factors (individual resident factors, health care infrastructure, medical education infrastructure), intermediate process measures (knowledge, skills, attitudes, habits), and final health outcomes (affecting patient, community and population)	USA	Mixed (GP + hospital)	12/15	4. Trainees 4.3 Support and counseling of trainees		The authors found 52 original studies that examined factors of an individual resident's performance. They also identified 3 studies where residents during their training had increased empathy. This review did not address possible solutions for these observations.	Few discrete associations between the individual resident's factors and actual job performance. This review paints a distressing picture of physicians in training. Stress, burnout and fatigue levels are high. Levels of depression vary and can be quite high (7-15%).		II-1
28	Yao, D.C. and S.M. The challenge of problem residents. <i>J Gen Intern Med</i> , 2001. 16(7): p. 486-92.	To provide a better understanding of the issues related to problem residents, thereby supporting residency program directors, medical educators, and residents themselves. To provide perspectives and recommendations from other sources to comprehensively examine four vital issues related to the problem: identification, underlying causes, management and prevention	Review with systematic methodology	* data sources Medline (1966-2000), PsychINFO (1977-2000) and HealthSTAR (1975-2000) * Other resources: p487 * 59 articles met inclusion criteria; 33 surveys with questionnaire; 4 described interventions; 14 review papers; 8 could not be specified	USA	Not specified	10/15	4. Trainees 4.3 Support and counseling of trainees		* 59 articles met inclusion criteria * Terminology: Problem residents usually manifest difficulties in one or more of the ABIM's seven areas that relate to clinical competency (1) clinical judgment (2) medical knowledge (3) technical skills (4) humanistic qualities (5) professional attitudes (6) behaviour, medical care (7) moral and ethical behaviour * Prevalence: very little data are available on the prevalence of problem residents within internal medicine residencies	* Problem residents represent a significant challenge * Factors that are thought to be supportive to house officers, and may even prevent various problems are: 1) early detection through timely evaluations; 2) prompt specific feedback and discussion of concerns; 3) orientation and communication of expectations at the beginning of every year; 4) advisor/advisee system; 5) faculty role models; 6) close resident camaraderie; 7) support groups among residents; 8) planned social events, retreats; 9) changing the schedule of highly stressed residents; 10)		II-2

29	Prins JT, Gazendam-Donofrio SM, Tubben BJ, van der Heijden FMMA, van de Wiel HBM, Hoekstra-Weebers JEHM: Burnout in medical residents: a review. Med Educ 2007, 41(8):788-800.	1. What do we know about the prevalence of burnout in medical residents? 2. What are the risk and resistance factors that contribute to or prevent burnout in medical residents?	Systematic Review	* data sources: Medline, Embase and PsychINFO * publications between 1975-2005 (Embase from 1989) → 19 studies were included: * 12 < USA, 4 < Europe (CH, NL, BE, UK), 2 < Afrika (Kenya, SA), 1 < Israel * 12 cross-sectional design, 7 longitudinal design * resident focus: family medicine (5), internal medicine (1), obs & gyn (1), anaesthesia (1), othopedaeics (1), mixed (4), not specified (6) * sample size: N<50 (6), N=50-100(6), N>100(7), only 6	The Netherlands	Mixed (hospital + GP)	15/15	4. Trainees 4.4 Working conditions	The weak quality of the studies, the wide variety and limited predictive power of the predictor variables included and the inconsistent findings illustrate the need for a more systematic design with regard to future research among medical residents	* 19 studies met inclusion criteria * Different studies reported widely varying burnout rates among medical residents, ranging from 18% to 82%. Predictors of burnout can be characterised as either occupational or individual. 4 of the 16 occupational risk factors (eg. quantitative work overload, increased perception of work as stressful, an increase in anticipation of debt at the end of training and increased conflict between work and home) appeared to be strongly related to burnout. 11 individual risk factors examined were only weak	* Research on burnout among medical residents is scarce. A future research model should take account of the individual, occupational and training demands experienced by medical residents. * self-selection of graduates may occur	II-1
30	Thomas, N.K., Resident burnout. JAMA, 2004. 292(23): p. 2880-9.	1) What is the level of significant burnout among residents? 2) What factors are associated with development of burnout? 3) What are the health and performance consequences for residents with burnout and their patients? 4) What coping resources may help residents with burnout?	Systematic review	* Data sources: Medline and Pubmed database * English-language studies reporting primary data on burnout or dimensions of burnout among residents, published between 1983 and 2004.	USA	Mixed (hospital + GP)	10/15	4. Trainees 4.4 Working conditions		* 15 heterogeneous articles on resident burnout were identified. * The studies suggest that burnout levels are high among residents and may be associated with depression and problematic patient care.	* Young physicians who readily embraced hard work in premedical and undergraduate medical education experience high levels of professional burnout in residency training years. Aside from working long hours, something about residency seems to leave many residents feeling emotionally exhausted and cynical and leaves some depressed and critical of their own patient care performance as well. * Further research is needed to determine whether, in accordance with conventional burnout models, the resident who is allowed more work control, meaningful work demands, and better self care can have better personal outcomes and	II-2

31	McCray LW, Cronholm PF, Bogner HR, Gallo JJ, Neill RA: Resident physician burnout: Is there hope? Family Medicine 2008, 40(9):626-632.	Resident Physician Burnout: Is there Hope?	Systematic Review	* All sources N= 190 → Articles reviewed N = 129 → Intervention studies N = 9 (2 RCT's). Interventions: workshops, resident assistance program, self care intervention, support groups, didactic sessions, stress-management/coping training (alone or various combinations) * SORT (Strenght of Recommendation Taxonomy) rating for 2	USA	Mixed (Hospital + GP)	14/15	4. Trainees 4.4 Working conditions		* 9 studies met inclusion criteria * Little research has been dedicated specifically to combat burnout in resident physicians. * Burnout is highly prevalent, especially among resident physicians and medical students.	Despite the potentially serious personal and professional consequences of burnout, few interventions exist to combat this problem. Prospective, controlled studies are needed to examine the effect of interventions to manage burnout among resident physicians.		II-2
32	Finch SJ: Pregnancy during residency: a literature review. Acad Med 2003, 78(4):418-428.	To review the issues surrounding pregnancy during residency by evaluating published commentaries	Systematic Review	* data sources: Medline * published between January 1984 and October 2001 * 27 research reports + 2 additional reports (before 1984) * 24 retrospective self-report questionnaires; 2 interview and observation - based cohort studies; 1 controlled longitudinal study; 2 retrospective chart reviews	Canada	Hospital	10/15	4. Trainees 4.4 Working conditions		* increased risk of complications, especially advers late-pregnancy events, for pregnant physicians * most stressfull = physical demands of residency and lack of support from fellow residents and their departments	* support planning for residents pregnancies * author advocates clear maternity/parental leave policies.		II-2
33	Boex, J.R. and P.J. Leahy, Understanding residents' work: moving beyond counting hours to assessing educational value. Acad Med, 2003. 78(9): p. 939-44.	To analyze resident physicians' activities to assess educational value of residents' work	Systematic review → followed Cochrane collaboration	* data sources: Medline, Healthstar, Cinahl and Institute for Scientific Information's Science Citation Index and Social Sciences Citation Index * published between 1966 and 2001	USA	Hospital	15/15	4. Trainees 4.4 Working conditions		* 16 studies met inclusion criteria: Residents devoted 36% of their effort to direct patient care * 15 % to the residency program's organized teaching activities, * +/- 35 % to delivering patient care of marginal or no educational value * 16 % of residents' waking time on duty was spent	It is possible and potentially valuable to consider not only the number of hours worked by residents, but the educational content of their work when considering residency work and hour reforms.		II-2

39	Post RE, Quattlebaum RG, Benich JJ, 3rd: Residents-as-teachers curricula: a critical review. Acad Med 2009, 84(3):374-380.	To provide an updated systematic review of the literature on residents –as - teachers curricula to determine the most evidence – based curricula and evaluation strategy.	Systematic Review	* data source: PubMed * published between 1975 and 2008	USA	Hospital	13/15	5. Staffing		* 24 studies met inclusion criteria * Mean sample size of all studies = 39,6 Evaluation was performed by * objective structures teaching exams (5:20,8%) * video tape evaluations (6:25%) * learner evaluations (11:45,8%) * self questionnaires (7:29,2%) Mean intervention lenght = 7,6h Most common intervention = based on the One-Minute Preceptor	Resident - as teachers curricula can significantly improve residents' teaching skills.	Introduction of these courses in the long run may improve clinical teaching in both post and undergraduate level	II-1
40	Dewey CM, Coverdale JH, Ismail NJ, Culberson JW, Thompson BM, Patton CS, Friedland JA: Residents-as-teachers programs in psychiatry: a systematic review. Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie 2008, 53(2):77-84.	(1) identify all RCT's for residents' teaching skills (2) identify the efficacy of those interventions of improving skills (3) identify the strenghts and weaknesses of the available studies across medical disciplines 4) identify currently available methods for enhancing residents' teaching skills for residents training in psychiatry.	Systematic Review	* datasources: PubMed, Social Sciences Index and PsycINFO * published: ? * both RCT and controlled, nonrandomized trials of residents' teaching programs directed to enhance residents' teaching skills were selected and critically appraised.	USA	Hospital	15/15	5. Staffing		(1) 13 trials identified and reviewed: most included residents in internal medicine; only 1 included psychiatry residents and assessed their ability to teach interviewing skills to medical students. (2) Along with other studies, this study demonstrated improvement in residents' teaching skills (3) Interventions and outcome measures were heterogeneous while the quality of methodologies varied. (4) 5 studies were of higher quality, representing examples of quality educational research. Several described group differences, blinding, good	*Resident - as - teachers programs can confer benefit on residents teaching skills. *Nevertheless, there is a paucity of evidence especially concerning psychiatry residents-as-teachers programs → important goal of further developing rigorous research on this topic area.		II-1

19	Jha V, Quinton ND, Bekker HL, Roberts TE: Strategies and interventions for the involvement of real patients in medical education: A systematic review. Medical Education 2009, 43(1):10-20.	To provide a summary of evidence for the role and effectiveness of real patient involvement in medical education	Systematic Review	* data sources: Medline, Embase, PsycINFO *47 articles met inclusion criteria (specific focus on the involvement of real patients in medical education) 8 studies used postgraduate or professional samples, 35 studies used undergraduate samples	UK	Not specified	15/15	6. Training settings and educational outcomes 6.1 Clinical settings and patients		*47 articles met inclusion criteria * Majority of studies reported patients in the role of teachers only; others described patient involvement in assessment or curriculum development or in combination roles. * patient involvement was recommended in order to bring the patient voice into education. * There were several examples of how to recruit and train patients to perform an educational role. * The effectiveness of patient involvement was	* Limited evidence of long-term effectiveness of patient involvement and issues of ethics, psychological impact and influence on education policy were poorly explored. * The effectiveness of patient involvement was measured by evaluation studies and reported improvement in skills.		I-1
42	Kilminster, S.M. and B.C. Jolly, Effective supervision in clinical practice settings: a literature review. Med Educ, 2000. 34(10): p. 827-40.	To review the literature on effective supervision in practice settings in order to identify what is known about effective supervision.	Review with systematic methodology	* Datasources Medline, Cinahl, BEI, ERIC, international ERIC, Socfile, PsychLit * published between 1992 and 2000 * 57 studies met inclusion criteria (80% descriptive studies) * Research design errors included a lack of a conceptual base; absent/unclear research questions; inadequate samples; unreliable/inappropriate incidents and other problems meaning that the findings were not generalizable → thirtytwo studies had research design problems that	UK	Not specified	11/15	6. Training settings and educational resources 6.6 Educational expertise		57 studies met inclusion criteria: (1) The evidence only partially answers our original questions and suggests others. (2) The supervision relationship is probably the single most important factor for the effectiveness of supervision, more important than the supervisory methods. (3) Feedback is essential and must be clear.	(4) It is important that the trainee has some control over and input into the supervisory process. Finding sufficient time for supervision can be a problem. (5) Trainee behaviours and attitudes toward supervision; some behaviours are detrimental both the patient care and learning. (6) Current supervisory practice in medicine has very little empirical or theoretical basis.		II-2
43	Bowen, J.L., et al., Changing habits of practice. Transforming internal medicine residency education in ambulatory settings. J Gen Intern Med, 2005. 20(12): p. 1181-7.	To review the literature on ambulatory education and make recommendations for change.	Systematic review	* data sources: Medline, PsycLit and ERIC * published between 2000 and 2004	USA	outpatient setting	10/15	6. Training settings and educational outcomes 6.7 Training in other settings and abroad		* 55 met inclusion criteria * 35 studies focussed on specific curricular areas and 11 on ambulatory teaching care * 5 studies involved evaluating performance * 4 studies focussed on structural issues * 0 studies evaluated the overall effectiveness of ambulatory training or investigated the effects of current resident continuity clinic microsystems	The authors make several recommendations: 1) make training in the ambulatory setting a priority 2) address systems problems in practice environments 3) create learning experiences appropriate to the resident's level of development 4) teach and evaluate in the examination room 5) expand subspecialty-based training in the ambulatory setting 6) make faculty development a priority 7) create and fund multistitutional educational research		II-2

I.3.2 Primary articles (adjuvant search)

NR.	REFERENCE	RESEARCH QUESTION/ AIM OF THE STUDY	STUDY DESIGN	INSTRUMENTS USED	COUNTRY FIRST AUTHOR	SETTING	WMFE AREA	MAIN RESULTS	CONCLUSIONS
16	Cannon, G.W., et al., Factors determining medical students' and residents' satisfaction during VA-based training: findings from the VA Learners' Perceptions Survey. Acad Med, 2008. 83(6): p. 611-20.	To compare medical students' and physician residents' satisfaction with Veterans Affairs (VA) training to determine the factors that were most strongly associated with trainee satisfaction ratings.	Survey study (questionnaire study cross-sectional)	* All medical students and residents in VA teaching were invited to complete the Learners' Perceptions Survey * overall training satisfaction on a 100-point scale * specific satisfaction in four separate educational domains (learning environment, clinical faculty, working environment and physical environment) on a five-point Likert scale ? each domain was composed of unique items	USA	Hospital	2. Training process 2.5 The relationship between training and service	* 6527 medical students and 16583 physicians residents responded to the survey * the overall training satisfaction scores for medical students and physician residents were 84 and 79 respectively (P<.001) * the learning environment domain had the strongest association with the overall training satisfaction score, followed by the clinical perceptor, working environment and physical environment	Factors that influence training satisfaction were similar for residents and medical students. The domain with the highest association was the learning environment. Quality of care was a key item within this domain.
23	Murphy, D.J., et al., The Reliability of Workplace-Based Assessment in Postgraduate Medical Education and Training: A National Evaluation in General Practice in the United Kingdom. Adv Health Sci Educ Theory Pract, 2009. 14(2): p. 219-232.	To investigate the reliability and feasibility of six potential workplace-based assessment methods in general practice training.	Questionnaire study	* performance of GP registrars was evaluated with each tool (i.e. criterion audit, multi-source feedback from clinical and non-clinical colleagues, patient feedback (the CARE Measure), referral letters, significant event analysis, and video analysis of consultations) to assess the reliabilities of the tools and feasibility, given raters and number of assessment needed. * participant experience of process determined by questionnaire	UK	GP	3. Assessment of trainees 3.1 Assessment methods	*171 GP registrars and their trainers participated * in general, ratings were relatively high for multi-source feedback and patient satisfaction questionnaires and relatively for significant event analyses.	Multi-source feedback from colleagues and patient feedback on consultations emerged as the two methods most likely to offer a reliable and feasible opinion of workplace performance

9	Akl, E.A., et al., Brief report: Internal medicine residents', attendings', and nurses' perceptions of the night float system. J Gen Intern Med, 2006. 21(5): p. 494-7.	To assess and compare residents', attendings', and nurses' perceptions of the night float system.	Survey study	* email link to a web-based survey (October 2004) * nonresponders: 3 reminders (2 emails and then a postal mail)	USA	Hospital	<i>4. Trainees</i> 4.4 Working conditions * overall response rate: 75% * only a small portion of residents and attendings thought positively about the night float's impact on training quality (29.9%; 18.2%), daily feedback (23.0% 9.1%), and end of rotation evaluation (21.8%; 6.1%). * less than half of the nurses had positive perceptions of the night residents' performance in terms of promptness (40.9%), physical availability (38.6%), familiarity with the patients' cases, and management plans (15.9%), communication of management plans to nurses (36.4%), professional respect and trust (43.2%), and	Residents had more positive perceptions than attendings and nurses. Nurses, in particular had negative perceptions of resident performance in the setting of the night float system.
35	Brunworth, J.D. and R. Sindwani, Impact of duty hour restrictions on otolaryngology training: divergent resident and faculty perspectives. Laryngoscope, 2006. 116(7): p. 1127-30.	To examine the impact of the ACGME duty hour restrictions on otolaryngology programs and to explore faculty and resident perspectives.	Survey study	Faculty and residents of all 102 ACGME-accredited otolaryngology residency programs were invited to participate in an anonymous online survey.	USA	Hospital	<i>4. Trainees</i> 4.4 Working conditions * study population: 460 respondents (275 residents and 185 faculty representing 57 otolaryngology programs) * 65% of programs implemented at least one change specifically to comply with duty-hour restrictions. * 39 % felt that resident workload was excessive before the restrictions. * Opinions on whether duty-hour limits had fostered improvements in resident education, research, or examination scores varied, but most agreed that resident mental health had improved	Otolaryngology programs have successfully restricted resident duty hours through significant infrastructural changes. Of concern, the majority of residents surveyed appeared to be in favour of the ACGME restrictions, whereas most program directors and faculty were opposed. Further studies are needed to establish whether limited work hours will enhance or hinder the residency training experience.

36	Hutter, M.M., et al., The impact of the 80-hour resident workweek on surgical residents and attending surgeons. Ann Surg, 2006. 243(6): p. 864-71; discussion 871-5.	To assess the impact of the 80-hour resident workweek restrictions on surgical residents and attending surgeons.	Prospective study	Four prospective studies were performed at a single academic surgical program with data collected both before the necessary workforce restructuring and one year after, including 1) time cards to assess changes in components of daily activity 2) Web-based surveys using validated instruments to assess burnout and motivation to work 3) structured, taped, one-on-one interviews with an external PhD investigator; and 4) statistical analyses of objective, quantitative	USA	Hospital	4. Trainees 4.4 Working conditions	* after the work-hour changes, surgical residents have decreased "burnout" scores, with significantly less 'emotional exhaustion' ? better quality of life in and out the hospital * they felt they got more sleep, have a lighter workload, and have increased motivation to work. * no measurable, statistically significant difference in the quality of patient care * resident training and education objectively were no statistically diminished	Although the mandated restriction of resident duty hours has had no measurable impact on the quality of patient care and has led to improvements for the current quality of life of residents, there are many concerns with regards to the training of professional, responsible surgeons for the future.
37	Jagsi, R., et al., The educational impact of ACGME limits on resident and fellow duty hours: a pre-post survey study.[see comment]. Acad Med, 2006. 81(12): p. 1059-68.	To assess the educational impact of Accreditation Council for Graduate Medical Education resident work-hour limits implemented in July 2003.	Survey study	All trainees in all 76 accredited programs at to large teaching hospitals were surveyed between May and June 2003 (before work-hour reductions) and then between May and June 2004 (after work-hour reductions) about hours, education and fatigue.	USA	Hospital	4. Trainees 4.4 Working conditions	* number of respondents: 1770 (60% response rate) * the reduced-hours group reported a significant decrease in time spent directly caring for patients, but the volume of important clinical experiences, including procedures, was preserved, as the sense of clinical preparedness. * the percentage of trainees reporting frequent negative effects of fatigue dropped more in the reduced-hours programs than in the other programs (P <0.05)	This study shows that it may be possible to reduce residents' hours--and the perceived adverse impact of fatigue--while generally preserving the self-assessed quality, quantity, and outcomes of graduate medical education.

38	Wallach, S.L., et al., How do internal medicine residency programs evaluate their resident float experiences?[see comment]. South Med J, 2006. 99(9): p. 919- 23.	To survey the nation's internal medicine residency training program directors to determine the range and frequency of existing methods by which float experiences are evaluated.	Survey study	Questionnaires were sent to the program directors of all 396 internal medicine residency training program sites in the country? information requested included program characteristics, months devotes to float experiences in each year of training, and the location and purpose of the rotation	USA	Hospital	4. Trainees 4.4 Working conditions	* 139 responding programs (39%), 134 with data that could be aggregated * overall, 76% of programs employed a night float for any period of time, and 71% currently had one, on the average for 6.7 years * mean months of float experience during residency was 2.4 months, significantly longer in programs that were not university based * float experiences were evaluated in 89% of those programs who employed them, with 10 different methods reported. University-based programs were significantly less likely to use chart review as a method of evaluation, but no other differences in methodology were significant	Float rotations are common among internal medicine residency programs. Evaluative methods vary, but one or more are applied in the vast majority of programs
----	---	--	--------------	--	-----	----------	--	---	--

I.4 COMPREHENSIVE DESCRIPTION OF THE RESULTS OF THE SYSTEMATIC LITERATURE REVIEW ACCORDING TO THE WFME DOMAINS

Some papers studied a particular area of the WFME grid while other ones covered more than one area and/or sub area. So, each review under study only gives a snapshot of one or a few areas of the WFME grid.

Few reviews focused on areas 5 and 6 that are in fact the scope of this report. The majority of the reviews give detailed information of WMFE area 2 'training process', WMFE area 3 'assessment of trainees' and WMFE area 4 'trainees'. Only one review covered 'governance and administration' (WMFE area 8).

No review focused on area 1 'mission and outcomes', area 7 'evaluating of the training process' or area 9 'continuous renewal'.

For a comprehensive review of the literature the findings are presented using the WFME standards and sub areas as a blueprint.

I.4.1 WMFE area 1: Mission and outcomes

No review covered the WMFE area 'mission and outcomes'.

I.4.2 WMFE area 2: Training process

The training process covers the learning approaches, the teaching of scientific methods, the training content (theory and practice), the structure of training, the integration between training and service and the management of training (organisation and coordination).

Eleven reviews covered one of the sub areas of this second WMFE area. No review covered the sub area 'relationship between training and service'.

Sub area: learning approaches

Three reviews cover the sub area 'learning approaches' that refer to the generic and discipline-specific components of the training.

One review demonstrates the paucity of data on the effectiveness of the training of internal medicine curriculum in inpatient settings. The authors concluded to the urgent need to formally define and study what constitutes an effective "core" inpatient curriculum in internal medicine training. They also insist on the need of new inpatient team structures and skills to enhance the link and training in both the inpatient and outpatient settings ².

Byrne et al. analysed the effect of a course with repeated episodes of training spaced out over a period of weeks/months to practice of a particular skill. This approach seems to give positive results. Factors associated with success were periodic feedback, setting the course within the hospital as well as using clinical trainers and providing training for difficult procedures where none was given previously ³. An important limitation of this review is that only one primary study focused on a population of PME students.

The third review concluded that high fidelity simulations are educationally effective and simulation-based education complements medical education in patient care settings ⁴[5]. The top five of right conditions facilitating learning are similar to the ones identified by Byrne e.g:

- feedback;
- repetitive practice;
- simulation-based exercises integrated into the curriculum;
- opportunities to engage in practice of medical skills across a wide range of difficulty levels;
- multiple learning strategies.

Sub area: scientific methods

Training in evidence-based practice in PME gives a small improvement in knowledge ⁵, skills, attitudes and behaviour ⁶. The most frequent intervention was workshop (35.3%), followed by multifaceted intervention (29.6%). Very few studies included in the reviews used validated assessments and therefore the efficiency is hard to estimate.

Sub area: training content

The first review includes 44 RCTs and focuses on medical skills laboratories. The authors conclude that they lead to improvement in procedural skills compared with standard or no training at all when assessed by simulator performance and immediately post training in either undergraduate medical students or postgraduate medical trainees. The most common procedural skills taught in medical laboratories were laparoscopic surgery skills (54%), followed by other surgical skills ⁷. However, the authors concluded that there is a lack of well designed trials addressing the crucial issues of transferability to clinical practice and the retention of skills over time.

A second review focused on curricula to address teamwork principles. The thirteen studies included ⁸ used one or more of the eight following teamwork principles:

- leadership training or elevated leadership skills;
- team members monitor one another's performance and provide feedback (mutual performance monitoring);
- redistributing tasks upon demand by anticipating team member's needs through accurate knowledge of their responsibilities (backup behaviour);
- ability to adapt to changing situations;
- soliciting team member ideas in defining goals and objectives;
- fostering trust between team members;
- including communication training or evaluated communication skills;
- ensuring that team members are "on the same page" (shared mental models).

Sub area: training structure, composition and duration

Bowen ⁹ identified the value of ambulatory environments for both undergraduate and speciality training. The ambulatory environment might act as an adjunct to inpatient training, as demonstrated by the performances on national board examinations, OSCEs, and tests of clinical reasoning. However the predominance of single-institution studies in this review limits the generalization of the findings.

Another review explored the clinical psychology and medical education literature and provided evidence that clinical trainees act more independently as their training progresses. However, no study showed the educational efficacy of providing progressive independence, or the consequences of failing to do so ¹⁰.

Sub area: management of training

One review concluded that there is a pressing need to reconsider the current structure of inpatient education ("resident ward team") in internal medicine. New approaches to supervision, teaching and evaluation are required ².

The questionnaire study of Cannon et al ¹¹ covered sub area 'relationship between training and service'. Using a learners perceptions survey among more than 16,000 residents in America veterans' hospitals, it was shown that the highest correlation with residents satisfaction was the learning environment. Especially quality of care is more likely to result in larger increases in trainee satisfaction than modifications to the physical environment (e.g. parking, food services).

1.4.3 WMFE area 3: Assessment of trainees

Assessment methods are prominently covered in the literature. Nine reviews identified the third WMFE area that involves three sub areas i.e., the assessment methods, the relation between training and assessment and the constructive feedback on performance to the trainee. No studies were identified in sub area 'relation between assessment and training'.

Sub area: assessment methods

Eight reviews and one primary study covered sub area 'assessment methods'. The overall conclusion of these reviews is the paucity of evidence on the validity of the tools currently used and the necessity to combine different approaches.

For clinical procedural skills, it is possible to develop generic criteria for the global assessment in professional groups (doctors, interns or residents)¹². The definition of a clinical procedure is "any discrete task (excluding physical examination) requiring manual skills and health related knowledge which is directly related to the care of a single patient. This includes the humanistic, team and technical aspects of the task when performed in a real-life clinical setting." Main themes for the assessment of clinical procedural skills were identified by the authors of this review.

Carraccio et al. analysed the role of the portfolio in the assessment of the competences¹³. A portfolio is a set of materials collected to represent a person's work and to foster reflective learning, a key to professional development. Carraccio et al (2004) concluded that web-based portfolio assessment provides a venue for the evaluation of competence and has the ability to provide educators with a research infrastructure to practice evidence-based education¹³.

Lurie et al. recommend using the ACGME competencies to guide and coordinate specific evaluation efforts. The peer-reviewed literature provides no evidence that the current measurement tools can assess the competencies independently of one another¹⁴.

The best assessment would be to observe trainees in real – life situations, incorporate the perspectives of peers and patients, or use measures that predict clinical outcomes¹⁵. The literature on such assessments is scarce. In addition to assessments of basic skills, new formats that assess clinical reasoning, expert judgement, management of ambiguity, professionalism, time management, learning strategies, and teamwork require a multidimensional assessment while maintaining adequate reliability and validity.

In the review of Bowen numerous assessment methods were identified e.g., standardized OSCE (Objective Structured Clinical Evaluation) like the Mini Clinical Evaluation Exercise (Mini-CEX = method of evaluating residents by directly observing a history and physical examination followed by feedback). Between 12 and 14 encounters are required to obtain a reproducibility score of .80⁹. Kogan et al. also note the paucity of evidence and mention the mini CEX as most valid tool to assess clinical skills¹⁶.

Lynch et al concludes that useful approaches for assessing resident physician professionalism include a 360-degree assessment and a cognitive assessment¹⁷.

The papers in the review of Hutchinson et al. demonstrate that good practice in test development and implementation is present in medicine but there is insufficient evidence to support the validity and reliability of any single assessment process¹⁸.

Finally, a range of workplace-based performance tools were tested in a study among UK GP registrars. The overall utility was highest for patient feedback and multi-source feedbacks¹⁹.

Sub area: feedback to trainees

One systematic review concluded that feedback can change physicians' clinical performance when provided systematically over multiple years by an authoritative and credible source. Other important factors than the source and duration of feedback are the physicians' involvement in the process, the amount of information reported, the timing and amount of feedback, and other concurrent interventions (e.g. guidelines, reminder systems and incentives). However, the independent contributions of these interventions have not been well documented in controlled studies. Conclusions are very limited, as most studies for this subgroup were conducted for one year or less ²⁰.

I.4.4 WMFE area 4: Trainees

The fourth area of the WFME is the best covered area, with ten reviews and five primary articles concerning this topic. Those reviews covered the sub area “admission policy and selection”, “support and counselling of trainers” and “working conditions”. No review covered the sub area “number of trainees” and “trainee representation”.

Sub area: admission policy and selection

Two reviews covered sub area ‘admission policy and selection’ i.e. the policy set up on criteria and process for the selection of trainees. The first one assessed the predictive value for rankings of undergraduates and future performance. Hamdy concluded that undergraduate grades and rankings were only moderately correlated with internship and residency performance ²¹. The second review from Australia showed a number of traits that could predict successful future training ²²:

- ability to communicate with a range of people;
- ability to choose the appropriate terminology, register, and amount of information for different audiences;
- empathy;
- skills to interact with nursing staff and clear understanding of the role of support staff in clinical care;
- understanding of practice protocols, with ongoing monitoring of whether information is being interpreted accurately.

Sub area: support and counselling of trainees

Two reviews covered the sub area ‘support and counselling of trainees’.

A first review analysed individual residents factors and job performance. It features a distressing picture of physicians in training. Stress, burnout and fatigue levels are high. Levels of depression vary and can be quite high (7-15%). Three studies showed that residents had increased empathy during their training. This review did not address possible solutions for these observations ²³.

The second review rates a prevalence of 4 to 15% of problems among residents ²⁴. Factors that are suggested to prevent various problems are:

- early detection through timely evaluations;
- prompt specific feedback and discussion of concerns;
- orientation and communication of expectations at the beginning of every year;
- advisor/advisee system;
- faculty role models;
- close resident camaraderie;
- support groups among residents;
- planned social events, retreats;
- changing the schedule of highly stressed residents;
- promotion of self-awareness and self-care.

Sub area: working conditions**REVIEWS**

Six reviews covered sub area ‘working conditions’. They mostly covered the problems of burnout and working hours.

Young physicians who readily embraced hard work in premedical and undergraduate medical education experience high levels of professional burnout in residency training years. Aside from working long hours, something about residency seems to leave many residents feeling emotionally exhausted and cynical and leaves some depressed and critical of their own patient care performance as well ²⁵.

Another problem is the increased risk of pregnancy complications, especially adverse late-pregnancy events. Pregnant residents found the physical demands of residency and lack of support from fellow residents and their departments most stressful ²⁶.

A review on burnout in medical residents mentioned burnout rates between 18 and 82%. Four of the 16 occupational risk factors (i.e. quantitative work overload, increased perception of work as stressful, an increase in anticipation of debt at the end of training and increased conflict between work and home) appeared to be strongly related to burnout ²⁷. McCray et al. conclude that prospective, controlled studies are needed to examine the effects of interventions to manage burnout among resident physicians. Only 2 studies were RCT’s and many studies used volunteers. The use of support groups and meditation-type practices was very flexible and hard to replicate, although showing some promising results ²⁸.

Interventions to reduce work hours (night and day float teams, extra cross coverage and physician extenders) resulted in mixed effects on both operative experience and on a perceived educational quality. Interventions intended to decrease work hours might have a varying impact at different levels of training. Potential unintended consequences of reducing resident work hours included inadequate development of professionalism, worse patient – physician communication and a decrease in experience. However, reducing work hours generally improved the residents’ quality of life ²⁹. The interpretations of the outcomes of these studies is hampered by suboptimal study design, the use of non validated instruments and the absence of knowledge on the long-term impact on educational quality and patient outcomes. So, it is unclear if the improved quality of life of residents ultimately results in better patient care ²⁹.

It is potentially valuable to consider not only the number of hours worked by residents, but the educational content needs further consideration. Boex estimated that approximately 15% was directed to programs teaching activities, 36% of time was devoted to patient care with specialty-specific learning objectives and 35% to patient care with marginal or no educational value ³⁰.

PRIMARY STUDIES IN THE SUB AREA ‘WORKING CONDITIONS’.

The first study showed that nurses had a negative perception of the nightshifts of residents: they felt communication aspects and knowledge of patients was unsatisfactory ³¹.

One study showed that otolaryngology programs successfully restricted resident duty hours through significant infrastructural changes. The majority of residents surveyed were in favour of restrictions, whereas most program directors and faculty were opposed ³².

Surgical residents reported decreased burnout scores after work hours changes. Apparently, this did not lead to diminished learn experiences (measured with logbooks and the American Board of Surgery In Training examination (ABSITE)). This study highlights many concerns with regards to the professional development of future surgeons, including a change towards a shift-workers mentality that is not patient-focused, less continuity of care with loss of critical information with each handoff, and a decrease in the patient/doctor relationship ³³. However it seems that time spent to direct patient care diminishes whilst the volume of clinical experiences remains stable ³⁴.

In a nationwide survey of USA nation's internal medicine residency training programmes to determine the intensity of evaluating night float systems, it appeared that evaluation of these residents is most common by morning report and attending evaluation ³⁵.

I.4.5 WMFE area 5: Staffing

Staffing is a major focus of this report. Unfortunately no systematic review covered strictly the two sub areas i.e., 'appointment policy' and 'obligations and development of trainers'.

Two reviews analysed the value of teaching of undergraduates by residents. They concluded that resident-as-teachers curricula might significantly improve the residents' teaching skills ^{36, 37}.

I.4.6 WMFE area 6: Training settings and educational resources

This area is the second focus of this report. However, few data were found for the quality of training practices in PME. In summary, they highlight the role of patient involvement, the importance of the supervision and feedback and the lack of experience in ambulatory practice that might contribute to the residents' lack of confidence for common health problems. No review covered the sub areas 'physical facilities and equipment', 'clinical teams', 'information technology' and 'research'.

Sub area: clinical settings and patients

The effectiveness of patient involvement was measured by evaluation studies and reported improvement in clinical skills and knowledge about the disease or condition or about social aspects of the disease. There is evidence of the short-term positive impact of patient involvement in medical education but the evidence of longer-term impact is still lacking. Issues of ethics, psychological impact and influence on educational policy were poorly explored ³⁸.

Sub area: educational expertise

Kilminster reviewed the literature on effective supervision in practice settings. He concluded that there is no good quality research on this topic. Available data show some evidence of the effectiveness of the quality of the relationship with the supervisor, probably the most important factor, even more important than the supervisory methods. As stated above, feedback is essential. Finding sufficient time for supervision can be a problem ³⁹.

Sub area: training in other settings and abroad

This review did not find any study that assessed the overall effectiveness of ambulatory training in internal medicine. Several studies consistently showed that residents lack confidence and competence for many common health issues ⁴⁰.

I.4.7 WMFE area 7: Evaluation of training process

No review covered WMFE area 'evaluation of the training process'.

I.4.8 WMFE area 8: Governance and administration

One review covered the sub area 'funding and resource allocation' but no study analyzed the other sub areas i.e. 'governance', 'professional leadership', 'administration' or 'requirements and regulations'.

Sub area: funding and resource allocation

One review assessed the quality and costs of education in the ambulatory setting. Overall clinical teaching in ambulatory settings receive high ratings from students and residents. Clinical preceptors who welcome residents in their practices would extent their work schedule by 30-50 minutes per half day clinic. No data were reported for structural facilities (rooms, technical facilities etc.) Bowen concludes that teaching settings in ambulatory care cost about one third more than non teaching settings ⁹.

I.4.9 WFME area 9: Continuous renewal

No review covered WMFE area continuous renewal.

I.5 DISCUSSION OF ALL RESULTS OF THE SYSTEMATIC REVIEW

I.5.1 Limits of the studies: design and population

Many reviews indicated that the quality of the primary articles was questionable. Most primary studies relate to single institutions and the designs are often of poor quality. The current best evidence on quality in PME mainly relies on descriptive studies, on cohorts and before-and-after measurements. Moreover, many reviews included other groups than PME residents and it was sometimes hard to distinguish the results specific for PME trainees.

I.5.2 WFME areas: classification and gaps in the literature

The researchers faced challenges to put the selected papers in the appropriate area and sub areas of the WMFE grid. Some papers would fit in more than one sub area and were classified in the most relevant area.

The most frequent addressed quality areas were the training process, the assessment of trainees and the trainees. The gaps relate to staffing, training settings, renewal, governance and administration. Also the link between staff performance and outcome of the training and the relationship between training and service are hardly addressed in current literature. Moreover, this literature review did not identify any study of good quality on the evaluation of the training process.

I.5.3 Lessons to learn from the available literature

I.5.3.1 *Caveat: limited scope of the studies*

All reviews focused on a specific part of WFME subareas. One illustration is the systematic review in relation with the training content that examined the methods to foster teamwork. Moreover the literature does give clues on specific and potentially useful topics within a WFME area, as for example the best combination of learning methods during PME training.

I.5.3.2 *Admission policy*

A selection of trainees only based on previous academic results seems to be a poor predictor of performance ²¹ and authors from an Australian study proposed a mix of traits that could predict the success of a future PME training ²² (see above).

I.5.3.3 *Training process*

Learning approaches

The first question is the need to describe first an effective “core” inpatient curriculum². As an example, the French government is now developing specific “referentiels” that define the competences expected for each specialty (see the chapter on international comparison).

Effective training would combine several learning approaches. There are some associations between better outcomes and workplace-based training ³. Authors also conclude that high-fidelity simulations are educationally effective and simulation based education complements the medical education in patient care settings ⁴. This review suggests five conditions to facilitate learning (see above).

Training content

One systematic review listed some principles to enhance the quality of teamwork among future specialists ⁸. Moreover, it seems worthwhile to offer to future hospital-based specialists an adequate exposure to outpatient and ambulatory settings as an adjunct to training in inpatient settings ⁹.

1.5.3.4 Assessment of the trainee

Formative assessment: feedback to the trainee

Feedback to trainees is a key for success when provided systematically over multiple years by an authoritative source. Feedback can change clinical performance.

Assessment methods

A global assessment seems the best approach in postgraduate training. Many tools exist ranging from the OSCE to the Mini-CEX. Most authors conclude that a multidimensional assessment is required to complete the assessment of basic skills by an assessment of other competencies e.g. professionalism, time management, learning strategies and teamwork require a multidimensional assessment while maintaining adequate reliability and validity¹⁵.

The use of a portfolio gains importance in PME training¹³. Belgian initiatives in particular give an increasing place to this tool, mainly as a formative tool for the trainee (see chapter 3,4 and 5). Authors also recommend the value of the portfolio as a tool for assessment. This use raises concern among other authors who draw the attention to the conditions that should be fulfilled for using of the portfolio (student characteristics, supervision) and to the risk of biased evaluation with this instrument⁴¹.

More work is needed to review the optimal mix and the psychometric characteristics of assessment formats in terms of validity and reliability^{9, 16}.

1.5.3.5 Working conditions: consequences and promising solutions

Work hours restrictions may improve the resident's quality of life but it will influence the learning outcomes and quality of care^{29, 32}.

Burnout rates during medical residency are high. Some proposed solutions are support groups and meditation-type practices. One study reported that after work-hour changes, surgical residents reported decreased burnout scores without any significant change in learning experiences³³. It must be noted that American (80 hour work week recommendation cfr ACGME⁴²) and European directives (a maximum of 48 hours per week since August 2009⁴³) greatly differ. In Europe the debate has been settled in countries as Germany and the Netherlands while in Belgium this is only true for the specialty of general practice. One result of any reform would be the decrease in human resources with more work for senior doctors or reallocating⁴⁴ tasks to other health personnel.

1.5.4 Strengths and limitations of this systematic review

This literature search has some strengths:

- The topic is original;
- The search strategy has been exhaustive and used strict selection procedures;
- The results are structured according to international concepts in PME;
- The outcome of the literature search highlights gaps in the knowledge on quality issues of PME.

This literature search has also some limitations. The first one is the limitation of search strings by the selection of key words. The topic covers a broad area and the researchers had to make selections of (key)words to keep a feasible search strategy. Secondly, the authors performed strict limitations in the quality appraisal to focus on literature of good quality. In the large number of hits initially selected they observed a large number of papers of low quality, ranging from personal opinions, to very subjective and narrative reviews of the literature, often aiming to demonstrate a particular statement.

1.5.5 What can we learn for Belgium?

There are few data on the assessment and improvement of the quality of teaching by trainers. The art of giving feedback is essential at any stage in medical training. Offering trainers 'how to do it' can give rapid increase of the educational value of post graduate training.

The assessment of trainees is of great importance. At present, many instruments are available ranging from in situ observations (like 360-degree feedback, Mini-CEX), objective clinical examinations and portfolios. More work should be needed to incorporate them, if possible in combination, in the Belgian training programmes.

Much of the current literature reflects research on the results of working hours restrictions. At present, trainees welcome these reforms, but trainers might be more reluctant. Some papers show that reducing work hours does not impair clinical training but may decrease overall continuity of care. The adequate mix of reducing work hours and the need for rearranging tasks especially in hospital environments might be a challenge.

Keypoints – comprehensive results of the systematic literature review

- **The current evidence on quality in PME mostly relies on descriptive studies;**
- **The most frequent WFME quality areas described in the literature are the training process and the assessment of trainees;**
- **Undergraduate grades and rankings of the trainee do not seem to be 'magic' selection criteria;**
- **Some conditions seem effective to facilitate learning e.g. the quality of the relationship with the supervisor, formative feedbacks to the trainee. These last ones are effective when provided systematically over multiple years by an authoritative source;**
- **Working conditions are a prerequisite for the optimal quality of the PME. There is no consensus on the potential impact of reducing working hours i.e. if working less would have negative consequences on the quality of care and on the outcomes of the training;**
- **Many instruments are available for the assessment e.g. in situ observations (like 360-degree feedback, Mini-CEX), objective clinical examinations and portfolios. There is a lack of evidence for choosing any of them but some of them are promising, especially when used in combination;**
- **This systematic review did not identify any criterion to assess the quality of the staffing neither criteria for the training settings;**
- **The results confirm the role of patients' involvement in the training and the importance**

2 APPENDICES CHAPTER 3: INTERNATIONAL COMPARISON: OVERVIEW OF RECOGNITION PROCESS IN FIVE COUNTRIES

2.1 DESCRIPTION OF THE RECOGNITION PROCESS BY COUNTRY

2.1.1 France

2.1.1.1 *background*

France is a centralised country of 60 million inhabitants, where most legislation is defined at a national level. All rules concerning medical education are defined by laws voted on by the National Assembly. The curriculum is designed at a national level as well as the selection of students and teachers.

The third cycle of medical education is implemented at “interregional” level. An “interregion” include at least three academic hospitals. Each interregion is divided in “internship subdivision” (subdivisions d’internat), one for each academic hospital.

The programme comprises a combination of theoretical teaching and clinical training and last 3 years for general practice and 4-5 years for other specialties. Trainings are 6 months in length and residents can choose them according to their seniority and their scores on the national examination.

To complete its third cycle of medical education to get its “diplôme d’état de docteur en médecine”, it is necessary to obtain a DES (“diplômes d’études spécialisées”) and then defend a final thesis. Three other diplomas are available but optional : DESC (“diplômes d’études spécialisées complémentaires”) type 1 or 2 and abilities (“capacités”).

The curriculum is defined at national level. It includes its length (9 years for general practitioners, 10-11 for specialists), its content and the way students are evaluated. The selection of students happens in 2 steps, at entrance to medical studies (undergraduate education) and prior to selection of a specialty training programme (postgraduate education). The entry in postgraduate education depends on the rank obtained on an anonymous written examination organized at national level (from 2004). Those with the highest scores get the first choice of specialty training programme and location of further training (Segouin, 2007). The selection of teachers is based on a recruitment organized by mean of a national competition and a list of all eligible candidates.

2.1.1.2 *Present situation*

WHO ARE THE ACTORS CONCERNED BY THE STANDARDS?

MINISTRY OF HIGHER EDUCATION AND THE MINISTRY OF HEALTH.

Important decisions are made at governmental level by the Ministry of Higher Education and the Ministry of Health. The French state creates and oversees all aspects of training in a general framework (*maquette*) set by decree. This framework gives information on length of curriculum, content of theoretical teaching, length and content of clinical training and validation rules.

EDUCATIONAL COLLEGES (COLLÈGE DES ENSEIGNANTS UNIVERSITAIRES)

Educational Colleges for each specialty contribute to define residency training program in this “maquette”. During the training, theoretical teaching is under their responsibility.

THE FACULTY OF MEDICINE

As mentioned in the national “Code de l’Education” (Art. L 632-4), postgraduate medical training is under university control. So a significant responsibility about the content and quality of training is left to individual faculties of medicine. Teaching and research units in medicine (*Unités de Formation et de Recherche-UFR*) organize medical education at university level. DES or DESC, then thesis, are delivered by the faculty of medicine where the resident is registered (there were 40 medical schools in France at the beginning of 2006).

THE MEDICAL ORDER (ORDRE NATIONAL DES MÉDECINS)

DES and thesis are required to get a license from the Medical Order at the end of the cursus. The summative and certification procedures necessary to get diploma are rather informal depending on specialties and/or medical schools.

THE COORDINATOR-TEACHER

One inter-regional coordinator-teacher is responsible to coordinate theoretical and clinical teaching in each one of the interregion, in relationship with the UFR.

REGIONAL AUTHORITIES

Accredited settings for training are listed by regional authorities i.e. the « préfet de région ».

SUBDIVISION COMMISSION

The regional accreditation commission (*commission de subdivision*) gives an advice to Regional authorities (*le Préfet de région*) who establishes the list of accredited settings (see legal framework below). The subdivision commission is presided by one academic representative (the responsible UFR) and one regional authority (the Directeur régional des affaires sanitaires et sociales). Amongst members of the commission, there are heads of (academic) hospitals, of faculty of medicine, representatives of trainers and trainees, and the coordinator-teacher (who may only give his opinion).

The accreditation of the training setting is reexamined every five years or in case of responsibility changes in the training setting, motivated demand emanating from representatives of trainees, coordinator-teacher or heads of the commission.

Generic standards for training

There is no national system of PME process based on shared and explicit standards. The standardization of the curriculum and the selection of students and teachers, at a national or regional level, is assumed to inherently guarantee the homogeneity and the quality of the training process. (Segouin, 2007).

Minimum requirements concerning residency training program are defined in a national typical logbook (*carton de validation de stage*) which can be improved at university level and has to be validated by the head of the UFR.

Inter-regional coordinator-teachers in each specialty are responsible to suggest to regional accreditation commission quality standards for educational settings in three domains: teaching capacities, practice and research opportunities and trainees autonomy. Additional specific standards such as professional aptitudes or educational quality of residency are subjects to evaluation in trainee logbook but not systematically. Inhomogeneity is the rule.

Trainees assess the educational quality of training settings using an evaluation grid sent to the head of the UFR (see logbook).

What evidence is used to determine whether the standards are met?

OUTCOME ASSESSMENT OF TRAINEES

No theoretical assessment occurs during or at the end of the DES. Thesis is considered as the final evaluation of trainee.

LOGBOOK AND/OR PORTFOLIO

The use of a logbook called “carnet de validation de stage” is mandatory. A decree defines a typical logbook which includes the assessment of 10 trainee’s skills by trainers, and the assessment of training settings by trainee (see below). The logbook is not used by all specialties. Some Educational Colleges adapt the typical logbook to their own specialty. As logbook contains general objectives and qualitative standards only, it makes it difficult for the trainee or the trainer to give an assessment on trainee/trainer performance and/or competencies.

2.1.1.3 Meeting of standards by the training settings

Concerning the accreditation procedure, a 2004 decree planned an auto-evaluation based on questionnaires filled by the training settings, site visits and annual meetings for Regional Accreditation Commission to assess training programs.

2.1.1.4 Future development

Implementation of a new commission

A new commission on internship (*Commission nationale de l'internat et du postinternat*) was set up in 2009 to reduce complexity of the third cycle organisation in medical education. This commission is designed to play a role of contact point to deliver information and advice about the distribution of training opportunities, implementation of curriculum, DESC and capacities, creation of new diplomas and problems linked to internship.

Propositions of quality standards

In 2007, the French Medical order was involved in a global reflection on medical education in France and proposed to develop a competency-based assessment. Two years earlier, the French deaneries were suggesting numerous propositions to improve the third cycle in medical education.

Documentation of quality assessment

Some specialties have recently implemented structured clinical examinations, script concordance tests or portfolio-based assessment (Segouin, 2007). Specific educational matters appear in logbook depending on the specialty. For example, the logbook in Physical Medicine and Rehabilitation asks questions to the trainee about the pedagogical follow-up given by trainers and by the medical team, involvement in staff meetings, autonomy opportunities.

Key points:

- **Involvement of the educational colleges for defining the curriculum content;**
- **University control: positive (implementation) and negative (lack of standardization);**
- **Coordinator teacher : standardization at regional level in a large country;**
- **Lack of definition of national quality criteria for training settings/trainers;**
- **No end point to determine whether the standards are met (neither for trainees, nor for trainers).**

2.1.2 Switzerland

2.1.2.1 Background

In the 90s, Switzerland faced problems with the international recognition of its medical education programs. In 2006, after 10 years of discussion between most important actors in the field, a new law regulating medical professions (The Federal Medical Profession Law, LPMéd) has been voted. This law aims to improve the quality of basic medical education and postgraduate medical education.

The LPMéd is anchored in the philosophy of new public management where Federal government defines objectives and gives flexibility to universities and professional organizations to choose the most appropriate way to succeed. This deep reform aims to guarantee the autonomy of local education providers but defines objectives of performance in health care. In addition, the new law specifies that curricula have to be accredited to give access to the federal diploma. The existing Center of Accreditation and Quality Assurance of the Swiss Universities (OAQ) was chosen to accredit the 44 educational programs in medicine in 2011.

WFME standards have been adopted to develop quality assurance in medical education.

The Swiss Medical Association (SMA - FMH-Fédération des Médecins Suisses) collaborates with the OAQ and the Federal Office of Public Health (*Office fédéral de la santé publique*) to prepare this accreditation process.

In april 2009, a new institute inside the SMA was fully dedicated to prepare this federal accreditation process: the Swiss Postgraduate and Continuing Medical Education Institute (*ISFM-L'Institut suisse pour la formation médicale postgraduée et continue*).

2.1.2.2 Present situation

Who are the actors concerned by the standards?

The Federal Medical Profession Law (2006) opened doors to autonomy for educational instances but maintains a regulation by defining objectives of postgraduate medical education and accreditation process.

PROFESSIONAL ASSOCIATIONS AND REGIONAL AUTHORITIES

Professional Associations (“Sociétés de discipline médicale”) award professional titles and Regional authorities (“les cantons”) deliver the license to practice.

THE FEDERAL DEPARTMENT OF HOME AFFAIRS (FDHA)

A state control is a necessary condition to get the international recognition of these titles: the federal responsibility in the official recognition of these educational programs and settings is therefore crucial. Inside the FDHA, the Swiss Federal Office of Public Health (SFOPH) is responsible for the accreditation of PME.

THE CENTER OF ACCREDITATION AND QUALITY ASSURANCE OF THE SWISS UNIVERSITIES

The Federal Department of Home Affairs (FDHA) designates a specific organization – the Center of Accreditation and Quality Assurance of the Swiss Universities (OAQ)- to implement this accreditation process.

THE SWISS MEDICAL ASSOCIATION

Inside the SMA, the Swiss Postgraduate and Continuing Medical Education Institute (ISFM) is designated by the FDHA to prepare the 2011 accreditation procedure. The ISFM applies the LPMéd legislation and the the *Règlementation pour la Formation Postgraduée*. The membership of ISFM guarantees its independency from professional interests. Every important stakeholders are represented in commissions: professional associations, medical faculties, representatives of trainees and trainers, heads of training settings and federal authorities.

What are the generic standards for training?

The Federal Medical Profession Law (2006) defines the trainees’ aptitudes needed at the end of postgraduate medical education (art 17). Psychosocial aspects, ethical aspects and managerial aspects in public health are described as relevant competencies that have to be specified by Medical Professional Associations (see legal framework below). General quality standards of educational settings are also written in the law (art 25). In practice, the standards used by the Centre of Accreditation and Quality Assurance of the Swiss Universities (OAQ) are based on WFME standards and on other general standards no specific for medical education (see legal framework below).

What evidence is used to determine whether the standards are met?

OUTCOME ASSESSMENT OF TRAINEES

Trainees competencies and quality standards are detailed enough to be assessed via Mini-CEX and DOPS.

LOGBOOK AND/OR PORTFOLIO

Introduction of logbook in every professional associations has to be completed in 2009. In these logbooks are included : SMA diploma, assessment protocols and questionnaires, assessment results, number of effective medical interventions and trainer-trainee interview's feedback (see legal framework below).

MEETING OF STANDARDS BY THE TRAINING SETTINGS

Medical training accreditation procedure set up by the Center of Accreditation and Quality Assurance of the Swiss Universities (OAQ) follows a three steps process: self-evaluation by Professional Association; external evaluation with independent experts; consultation of Medical Profession Commission. This process conveys to a global evaluation of setting, training and outcome made by the Federal Department of Home Affairs. The Swiss Postgraduate and Continuing Medical Education Institute (ISFM) aims are :

- to prepare the 2011 accreditation process of 44 programs by the Federal Department of Home Affairs;
- to professionalize site visits in 1200 postgraduate training settings;
- to publish curricula (*concepts de formation postgraduée*) offered by these settings ;
- to introduce logbook in every specialties ;
- to introduce workplace-based evaluation tools (Mini Clinical Evaluation Exercises (MINICEX) et/ou Direct Observation of Procedural Skills (DOPS)) to improve feed-back use and communication skills;
- e-exams ;
- annual trainees'satisfaction inquiry ;
- networking between training settings.

2.1.2.3 *future development*

Implementation of external quality assurance

The Center of Accreditation and Quality Assurance of the Swiss Universities (OAQ) itself is submitted to external evaluation. International experts control the conformity to international guidelines (i.e. Standards and Guidelines for Quality Assurance in the European Higher Education Area (EGS) and the Code of Good Practice of the European Consortium for Accreditation (ECA)) (CUS evaluation report 2006).

Formalization of quality standards

Standards are provided by international (WFME) and national (OAQ) organizations. It is not necessary to fulfil all requirements. Accreditation is based on a global appreciation. Technical competencies, (psycho-)social, ethical and economical aspects of the profession are to be developed.

Documentation of quality assessment

The ISFM website is complete and offers full transparency and information about 3rd cycle organization in medical education.

Keypoints:

- freedom of the teaching units but quality guaranteed by the accreditation of training settings, training, outcomes by a Federal Department of Home affairs;
- accreditation by an external office (OAQ);
- Explicit trainees competencies and WFME quality standards;
- Evaluation of all trainees at national level by the ISFM;
- New system: not yet evaluated.

2.1.3 The Netherlands

2.1.3.1 Background

From 1970 onwards all medical schools started a curriculum reform. The establishment of the eight medical faculties was an opportunity to choose a completely different approach to medical education, modelled after the Canadian McMaster curriculum. Harden's SPICES model (Student-centered, Problem-based, Integrated, Community oriented, with Electives and with Systematic clinical training) was introduced to all Dutch undergraduate medical curricula. And in the late 80's, a national university peer review quality control gave another impetus for the curriculum reform in medicine.

During the 90's, the publication of the Dutch Blueprint offered a more coherent view of what a doctor has to be. The traditional H-shaped medical curriculum was replaced by a Z-shaped curriculum model to prepare undergraduate students for their future residency. But the most salient development of medical training took place in the first decade of the 21st century in the postgraduate phase of the continuum (Ten Cate, 2007). The BIG law (2001) on professions in health care first contributed to regulate postgraduate medical training by focusing on quality and modernising existing bodies. In January 2004, a new law forced all specialty associations to present a new curriculum in 2007.

At present, specialties are in a state of transitions. Many experiments are underway. The main direction of these will be described in the next sections.

Figure 1: From H-shaped medical curriculum to Z-shaped (source: Rosenfield, J., Supplemental report of the international comparisons of the Netherlands. 2008, The association of faculties of medicine of Canada: Ottawa. p. 5)



2.1.3.2 *Present situation*

Who are the actors concerned by the standards?

UNIVERSITIES

There is a divide between training for general practice and all other specialties. For general practice, trainees enrol for a three-year period at one of the eight universities. These universities supervise training. The universities select training practices and trainers are obliged to follow a number of training sessions. In small groups they discuss educational matters, under supervision of faculty of the universities. Concerning trainees, there is a national theoretical examination (multiple choice test). Furthermore, close supervision of faculty allows identifying borderline trainees. Criteria for these are largely subjective. There is no other formal testing for other competencies. Recently, the universities work together in a network (<http://huisartsopleiding.nl/top/home.html>), which aims to establish one national PME training in which the eight universities can profile themselves. The role of the trainers, faculty and trainees are identified and special attention is paid to quality issues.

Postgraduate medical training in all other specialties is not the responsibility of the universities, although they play a prominent role in the delivery of postgraduate training. Students can choose between 34 medical specialties (4 to 6 years; 3 years for general practice), public health and a few other specialties (2 to 4 years part-time). Universities have a close network with the teaching hospitals in the eight health care training regions. Most university medical schools have recently merged with large academic hospitals into University Medical Centres (TenCate, 2007) where interlocked relationship (e.g. Dean is Vice-President of Hospital and Hospital President is Vice-Dean of Faculty) contribute to set up integrated, small and nimble governing board

THE MEDICAL ASSOCIATION, COLLEGES AND REGISTRATION COMMISSIONS

The Royal Dutch Medical Association (Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst-KNMG) is the regulation authority for postgraduate medical training. Two types of bodies are in charge of education and accreditation processes: colleges and registration commissions. This duo is found in each of the three branches of medicine: general practice, occupational medicine and other specialties. Colleges have to define standards -known as requirements ("eisen") or obligations ("verplicht")- for accreditation of trainers, programs and educational settings and for specialists' registration. Commissions have to implement these standards. Professional associations give them advice to set up specific requirements for each specialty.

What are the generic standards for training?

The three Colleges define standards for their specialties by introducing a competency model derived from the Canadian Medical Education Directives for Specialists (CanMEDS) framework which defines, in seven fields, the profile of a competent physician: scientific knowledge, medical ability, team working skills, communication skills, organization, awareness of public health concerns and professionalism. Described as competencies and/or obligations, standards are written for trainees, trainers, training teams and settings. Professional Associations have given an advice to specify and translate these qualitative standards into quantitative standards for each specialty.

What evidence is used to determine whether the standards are met?

OUTCOME ASSESSMENT OF TRAINEES

Competency-based education is an outcome-based curriculum approach with a work-based assessment of actual competence. Regular in-training assessment using the mini-CEX (mini clinical evaluation exercises) approach is now mandatory. Regularly structured progress interviews of programme directors or supervisors with residents are required. (TenCate, 2007).

LOGBOOK AND/OR PORTFOLIO

A portfolio is of application by trainees. As described in the chapter Literature Review, a portfolio is a set of materials collected to represent a person's work. The use of a portfolio allows to incorporate a variety of tools in order to foster reflective learning, which is the key to professional development. In case of visitation, visitation members are authorized to consult these trainees' portfolio (chapter below).

MEETING OF STANDARDS BY THE TRAINING SETTINGS

For training settings, site visits may be organized by the accreditation commission in case of accreditation procedure. A specific commission is delegated to appeal procedures.

2.1.3.3 *Future development*

Implementation of external quality assurance

Colleges and registration commissions recently received the status of Independent Agencies (Zelfstandig BestuursOrgaan). A national project team helps guide the specialty associations in developing curricula to meet the new requirements.

Formalization of quality standards

As PME in the Netherlands has embraced CanMEDS competencies, experts observe the possibility that “medical training could change from fixed-length variable-outcome programmes to fixed-outcome variable length programmes” (TenCate, 2007) and the opportunity to create new and dynamic training programs that are linked to skills and competencies rather than to time alone ⁴⁵. Standards based on competencies are challenging the traditional “tea bag” approach to residency training where good training is supposedly linked to time of immersion. Requests for part-time residency training are heard more and more in a new generation of residents predominantly female (TenCate, 2007).

Documentation of quality assessment

Competency-based curricula offers new possibilities to cover assessment of all relevant competencies. In addition to promising procedures such as the MiniCEX, summative and certification procedures necessary to get diploma are being developed by clinicians: knowledge tests, simulations, Objective Structured Assessment of Technical Skills, video observation, instruments to assess professional behaviour, clinical observations during the job and multisource feedback procedures.

Key points:

- **National legislation (2 laws): to standardize the requirements between specialties, focus on quality of PME;**
- **Mandatory training of trainers;**
- **National PME training across universities for GP;**
- **Outcome assessment of trainee based on different techniques: mini-CEX, logbook, interviews during the training, national examination;**
- **National bodies: professional organisation define standards based on a pre-existing framework (CANMED) – commission implement them;**
- **Future : to switch from a fixed-length programme to programmes linked to skills and competencies.**

2.1.4 United Kingdom

2.1.4.1 *Background*

The General Medical Council (GMC) was established under the Medical Act of 1858 to enable members of the public to distinguish qualified persons practising in the field of medicine from the unqualified, by means of a register. It provided a regulatory framework for undergraduate medical education and training. This framework is the basis for the management of training and accreditation by the Royal Colleges and Faculties pertaining to individual specialties. The GMC established and still maintains a list of all registered UK doctors. In 1975 the Merrison Report identified the need for a regulatory framework for postgraduate medical education and training. As the GMC already provided such a framework for undergraduate medical education and training, the Merrison Report concluded that the GMC should take on this further role, thus creating a unification of medical training regulation throughout the doctor's career. The European Specialist Medical Qualifications Order in 1995 created the Specialist Training Authority (STA) of the Medical Royal Colleges and the Specialist Register was held by the GMC.

Concerns were raised following official inquiries, and in particular, the Bristol Inquiry (1995), which recommended that in addition to regulating undergraduate medical education, postgraduate medical education should also be regulated by the GMC. The Government decided instead to create an independent medical standards board to replace the STA, as consultation indicated that this body would better reflect the views of patients and the NHS rather than giving responsibility to the GMC as then constituted. By the General and Specialist Medical practice (Education, Training and Qualifications) Order 2003, a new statutory body was established: the Postgraduate Medical Education and Training Board (PMETB). This Board is in charge of the framework, content, standards and coordination of PME in the UK as explained in the following chapter.

2.1.4.2 *Present situation*

Who are the actors concerned by the standards?

THE GENERAL MEDICAL COUNCIL

The General Medical Council sets standards and outcomes for basic medical education and the first Foundation Year (F1).

THE POSTGRADUATE MEDICAL EDUCATION AND TRAINING BOARD

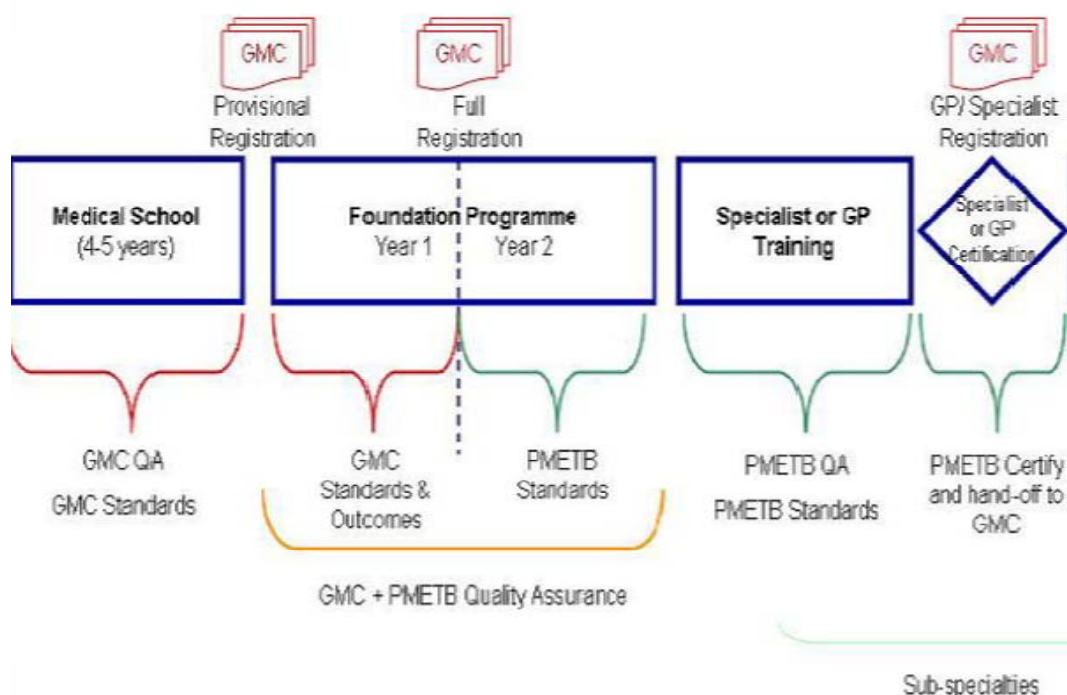
The PMETB is designed to develop a single, unifying framework for postgraduate medical education and training. Its mandate is to raise training standards, to improve the supervision of postgraduate education and training, and to consolidate and strengthen the roles of the colleges and faculties ⁴⁶. The governing board of the PMETB includes representatives of key stakeholder groups, including royal colleges, postgraduate deaneries, trainees, clinical trainers, the GMC, managers from the National Health Service, and patients.

Today, doctors have to complete a full PMETB approved training program in one of the 59 medical specialties to get a Certificate of Completion Training (CCT) at the end of their postgraduate training. The PMETB then notifies the General Medical Council (GMC) to include the awarded trainee on the specialist/GP register. The PMETB is responsible for quality assurance; deaneries, for quality management; local education providers, for quality control.

MEDICAL ROYAL COLLEGES AND FACULTIES

Medical Royal Colleges and Faculties submit their curricula to PMETB to ensure that it meets the PMETB standards before approval is granted.

Figure 2: Structure of medical training in the UK and responsible bodies
(source: Department of Health Professional Standards, The General and Specialist Medical Practice (Education, Training and Qualifications) Order 2010, A Paper for Consultation, 5th June 2009)



Generic standards for training

The Postgraduate Medical Education and Training Board's document called Generic Standards for training (2006, 2008) covers all specialties and all sub-specialties. Under each standard in this document an indication is given of where responsibility lies for meeting the standard. These standards pertain to nine domains: Patient safety; Quality Management, review and evaluation; Equality, diversity and opportunity; Recruitment, selection and appointment; Delivery of approved curriculum including assessment; Support and development of trainees; trainers and local faculty; Management of education and training; Educational resources and capacity and Outcomes. In each domain, a list of mandatory requirements has to be achieved to meet the standards. Since the first edition of Generic standards for training, new standards for trainers have been published.

What evidence is used to determine whether the standards are met?

OUTCOME ASSESSMENT OF TRAINEES

A major facet of PMETB's work is to ensure that doctors are appropriately qualified and certified for application to the Specialist and General Practice (GP) Registers. The Certificate of Completion of Training (CCT) confirms satisfactory completion of an approved programme of training and is one of the certificates which allows entry to the GMC Specialist or GP Registers.

"Standards for curricula and assessment systems" sets out the standards by which all specialty curricula and assessment systems will be evaluated. These are the standards and requirements that PMETB will hold medical Royal Colleges, Faculties and specialty associations accountable for, in accordance with the Order. The Colleges, Faculties and specialty associations have responsibility and ownership of the curriculum and assessment system for each specialty and sub-specialty. Deaneries and local education providers have responsibility for the delivery of the programmes including workplace-based experience based on the approved curriculum and assessment system.

LOGBOOK AND/OR PORTFOLIO

PMETB recommends the use of a trainee's learning portfolio containing annual assessment outcomes, College examination outcomes, log-books, audit reports, research activity and publications. The portfolio will also form the basis of the educational and workplace based appraisal process and the annual planning process (see legal framework below). Increasingly, portfolios are being developed by specialties through the colleges and faculties to be maintained electronically, forming part of an electronic learning platform.

MEETING OF STANDARDS BY THE TRAINING SETTINGS

Quality assurance is about ensuring that standards are a) specified and b) consistently met ⁴⁷. The PMETB is responsible for Quality Assurance (QA), the deaneries are responsible for Quality Management (QM) and local education providers (primary and secondary care trusts and their postgraduate medical education departments) are responsible for Quality Control (QC). The PMETB QA framework has five elements:

1. Standards – Generic standards for training; Standards for curricula and assessment systems; Standards for deaneries.
2. Shared evidence – evidence such as survey data, reports, numbers of trainees by specialty are shared.
3. Surveys – deaneries, trainers and trainees are surveyed.
4. Visit to deaneries – deaneries are visited to scrutinise their QM by sampling specialties.
5. Response to concerns – concerns from PMETB findings, external bodies, for example colleges, trainers or trainees, are studied.
6. Where programmes and/or posts within programmes cannot achieve these requirements currently, postgraduate deans and providers must agree a plan and timetable with PMETB that will ensure the standards are met. The PMETB also operates a system of triggered visits when there may be a serious educational failure. Data and evidence come from several sources: trainees' logbooks; (web)surveys of trainees and trainers; visits.

2.1.4.3 Future developments

Implementation of external quality assurance

The creation of the Postgraduate Medical Education and Training Board (PMETB) was part of a more general move away from a self-regulated medical. After a deep crisis in 2007 due to failure in selection process, governmental inquiries led to a reorganization of responsible instances. The Took Report in 2008 demonstrated dissatisfaction with the current, fragmented system GMC-PMETB.; As a consequence of the Took Report, a new order "The General and Specialist Medical Practice Order 2010" is under consultation in 2009 to propose merging of these stages to provide a seamless, consistent system throughout medical education and training. In view of the recommendation that GMC and PMETB functions should be integrated as quickly as possible, it makes sense at this time to integrate all of the functions within a single body, which will be the GMC (Order2010).

Formalization of quality standards

Between the 2006 and 2008 publication of *Generic standards for training*, there were two new standards about trainers. It is PMETB's intention in future years to describe a framework which may indicate developmental standards where evidence exists that a particular practice or facility improves the quality of postgraduate medical education and training. These standards would then become mandatory standards in due course when training providers have had sufficient time to implement the necessary changes to achieve them.

Documentation of quality assessment

Trainees must have access to the analysis of outcomes of assessments and exams for each programme and each location benchmarked against other programmes. As part of the Quality Framework, the PMETB will establish requirements for a minimum data set. This will be part of regular reports, as specified, from the postgraduate deaneries. PMETB National Reports are based on trainee and trainers surveys and are accessible on the net.

Key points:

- **National body for organising PME;**
- **National generic standards embedded in a quality framework;**
- **Training standards covering 9 domains (Patient safety; Quality Management, review and evaluation; Equality, diversity and opportunity; Recruitment, selection and appointment; Delivery of approved curriculum including assessment; Support and development of trainees, trainers and local faculty; Management of education and training; Educational resources and capacity; Outcomes);**
- **Mechanism that evaluated if standards are met by the training settings;**
- **Transparency in the quality assessment of the training practices.**

2.1.5 Canada

2.1.5.1 Background

Canada is a federation of 31 million inhabitants. Some areas of law fall within federal jurisdiction while others, such as health care and education are under the responsibility of the 10 provinces and 3 territories. The first medical schools did not appear until the middle of the 19th century. Each province and each medical school has a great deal of latitude. However, controls and standards have been implemented at national level, not by the government but by an independent national organisation created by the medical profession itself: the Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada (CFPC).

As (Segouin, 2005) comments, while Canada is a highly decentralized country, its professional bodies have begun to impose national values and practices, including the development of explicit standards for accreditation and of national core competencies (the RCPSC's seven Canadian Medical Education Directions for Specialists (CanMEDS) roles). Nowadays Canada allow medical schools and residency programmes almost complete flexibility in curriculum design and in hiring faculty but submit their graduates to very high stakes final examinations that serve as a quality check on the "output" of the medical school in question (Hodges, 2007).

2.1.5.2 Present situation

Who are the actors concerned by the standards?

MEDICAL SCHOOLS

The existing 17 medical schools are created and run at a provincial level. Each of these are free to appoint as a professor any teacher who meets its own internal criteria. They can choose their own curricular format, including the length of studies (5-6 years for general practitioners, 9-10 years for specialists; university degree not included (in Canada, a medical school is a faculty or school of a university that offers a 3- or 4-year Doctor of Medicine (M.D. or M.D.C.M.) degree. Although presently most students enter medicine having previously earned another degree, the M.D. is technically considered an undergraduate degree)) and have their own criteria for the selection of candidates.

THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA (RCPSC) AND THE COLLEGE OF FAMILY PHYSICIANS OF CANADA (CFPC)

At postgraduate level, the Royal College of Physicians and Surgeons of Canada (RCPSC) and the College of Family Physicians of Canada (CFPC) stipulate the length of training and broad content areas, but leave it entirely to individual programmes to determine methods of teaching and assessment and the sequence of the curriculum. These two organizations control an integrated training system with all elements of postgraduate objectives, in-training assessment, accreditation examination, certification, and maintenance of competence ⁴⁵.

THE ACCREDITATION COMMITTEE

The responsibility for accrediting Canadian residency programs is delegated by the Council of the College to the Accreditation Committee. This Committee is composed of a chair and at least 16 members appointed by the Executive Committee on recommendations from different stakeholders: Faculties of Medicine, Federation of Medical Regulatory Authorities, one representative from each of the resident associations. The Accreditation Committee is assisted in its work by the specialty committee of each of the specialties and subspecialties recognized by the College.

THE MEDICAL COUNCIL OF CANADA

The Medical Council of Canada runs 2 examinations at national level too, the first at the end of undergraduate programme and the second after 18 months of postgraduate training.

THE CANADIAN RESIDENT MATCHING SERVICE

The Canadian Resident Matching Service (The CRAMS) provides an electronic application service and a computer match for entry into postgraduate medical training throughout Canada.

What are the generic standards for training?

The CanMeds framework developed in 1996 by the Royal College of Physicians and Surgeons of Canada defines key competencies for Family Physicians and Specialist Physicians. This framework is organized around seven roles: Medical Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar and Professional. These roles are listed by the two Canadian Colleges in a set of general standards applicable to all residency programs. Other general standards are: Administrative Structure, Goals and Objectives, Structure and Organization of the Program, Resources and Evaluation of Resident Performance.

Accreditation standards are based on this CanMeds Framework and are applicable to the university and affiliated sites in order to ensure the quality of the training settings. These standards are differently weighted by using “must” or “should” to divide them between absolutely necessary or highly desirable standards (see legal framework below).

The RCPSC recognises the strong links between medical schools and their affiliated hospitals and insists that an integrated university-based organisational structure is in place to support all aspects of specialist education and training, including: administrative structures, clinician-teacher number, patient mix, physical and technical infrastructure, etc. ⁴⁶.

What evidence is used to determine whether the standards are met?**OUTCOME ASSESSMENT OF TRAINEES**

Amongst methods to ensure assessment of trainees competencies there are a one-day computer-based test and a three-hour Objective-Structured Clinical Examination (OSCE) with series of five-minute and ten-minute clinical stations (more information on The Medical Council of Canada website: <http://www.mcc.ca/en/exams/>). Residents who wish to take the specialty certification examination of the RCPSC must first have their residency training assessed by the RCPSC to ensure that the specialty specific training requirements have been met in a program that is recognized and approved by the RCPSC. A successful Final In Training Evaluation Report (FITER) is a criterion of eligibility to the RCPSC certification examinations.

LOGBOOK AND/OR PORTFOLIO

Both portfolios and logbooks can be used to collect evidence that learning has taken place. The RCPSC defines logbooks as those tools that are used to track the incidence of educationally relevant activities, such as the number of procedures performed (e.g., a list of appendectomies). Considering the fact that they tend to be highly structured, giving little or no opportunity for learner input or reflection, preference has to be given to portfolio. Portfolio could better reflect increasing interest in competency-based education and in new concepts of competence that go beyond the Medical Expert Role (see legal framework below).

MEETING OF STANDARDS BY THE TRAINING SETTINGS

The accreditation process examines each program using the information obtained by questionnaires and on-site visits made by a team of surveyors experienced in postgraduate medical education and familiar with the standards of the College. Guidelines provided by the specialty committee are particularly important in evaluating educational settings.

2.1.5.3 *Future development****Implementation of external quality assurance***

The accreditation process recognizes the potential for restriction by regulations which are too rigid and promotes the free communication that exists between the College, the medical schools, and the professional associations of specialists and residents as a good safeguard against undue rigidity.

Formalization of quality standards

The latest publication (2009) is a new policy document concerning accreditation and the issue of intimidation and harassment in postgraduate medical education: guidelines for surveyors and programs (RCPSC 2004).

Documentation of quality assessment

The program must provide the College with a Final In-Training Evaluation Report (FITER) for each resident who has successfully completed the residency. This report must represent the views of faculty members directly involved in the residents' education and not be the opinion of a single evaluator. It must reflect the final status of the resident and not be an average of the entire residency. The FITER is dependent on a rigorous and valid in-training evaluation system. It relies on multiple observations and multiple methods of evaluation appropriate to the specialty or subspecialty and the objectives being evaluated. The FITER reports on those non-cognitive and procedural domains that are not all assessed by the RCPSC certification examinations.

Key points:

- **Federal country where standards / outcomes are set at national level whilst the implementation and curriculum is left at local level;**
- **two professional organizations control an integrated PME training system at national level (objectives, in-training assessment, accreditation examination, certification, and maintenance of competence);**
- **Standards based on The CanMEDS Physician Competency Framework;**
- **Accreditation of training settings by an external committee composed of stakeholders from different institutions/organisations, including the residents' ones;**
- **Canadian resident matching service;**
- **Evaluation of training outcome at national level by objective criteria combining theory and practice.**

2.2 WEBLINKS**2.2.1 France**

Legifrance: <http://www.legifrance.gouv.fr/>

Ministry of Higher Education: <http://www.education.gouv.fr/>

Ministry of Health: <http://www.sante-sports.gouv.fr/>

2.2.1.1 Switzerland

The OAQ center of accreditation and quality assurance of the swiss universities : http://www.oaq.ch/pub/en/01_00_00_home.php

The Swiss Postgraduate and Continuing Medical Education Institute : <http://www.fmh.ch/fr/formation-isfm.html>

Federal Office of Public Health: <http://www.bag.admin.ch>

2.2.2 The Netherlands

The Royal Dutch Medical Association: <http://knmg.artsennet.nl/Over-KNMG/about-knmg.htm>

Ministry of Health, welfare and Sport: <http://www.minvws.nl/>

2.2.3 United-Kingdom

The Postgraduate Medical Education and Training Board: <http://www.pmetb.org.uk/>

Medical Specialty Training (Modernizing Medical Career): <http://www.mmc.nhs.uk/>

General Medical Council: <http://www.gmc-uk.org/>

2.2.4 Canada

Royal College of Physicians and Surgeons of Canada: <http://rcpsc.medical.org/>

College of Family Physicians of Canada: <http://www.cfpc.ca>

Le Collège des médecins du Québec : <http://www.cmq.org>

Canadian Information Centre for international Medical Graduates:
<http://www.img-canada.ca>

Canadian Resident Matching Service: <http://www.carms.ca>

Medical Council of Canada: <http://www.mcc.ca/>

2.2.5 European associations

The European Observatory on Health Systems and Policies:

<http://www.euro.who.int/observatory>

The Thematic Network on Medical education in Europe (MEDINE):

<http://www.bris.ac.uk/medine/>

Association for Medical Education in Europe (AMEE): <http://www.amee.org>

European Union of Medical Specialist (UEMS): <http://www.uems.net/> ;

Permanent Working Group of Junior Doctors (PWG – doctors in training):

<http://www.juniordoctors.eu/pwg/site/> ;

European Union of Medical Officers (UEMO – European general practitioners);

<http://www.uemo.org/> ;

Comité Permanent des Médecins Européens (CPME): <http://www.cpme.be/> ;

Federation of European Salaried Doctors (FEMS):

<http://www.fems.net/France/Pages/Accueil.aspx> ;

European Association of Senior Hospital Doctors (AEMH): <http://www.aemh.org/>.

Association of Medical Schools in Europe (AMSE): <http://www.amse-med.eu/>

2.2.6 International organizations

World Federation for Medical Education (WFME): <http://www2.sund.ku.dk/wfme/>

Foundation for Advancement of International Medical Education and Research

(FAIMER): <http://www.faimer.org/>

International Federation of Medical Students' Associations (IFMSA):

<http://www.ifmsa.org/>

Organisation for Economic Co-operation and Development (OECD): www.oecd.org

World Health Organization (WHO): www.who.int

International Association of Medical Regulatory Authorities (IAMRA): www.iamra.com

2.3 LEGAL FRAMEWORK BY COUNTRY

2.3.1 France

Global organization	ART30 La composition des commissions, la procédure de désignation de ses membres et la durée de leurs fonctions sont fixées par arrêté des ministres chargés de l'enseignement supérieur et de la santé. Décret n°2004-67 du 16 janvier 2004 relatif à l'organisation du troisième cycle des études médicales
Global organization	Governmental Regulatory Body
Specific accreditation organization	Préfet de région ; Commission de subdivision ; Commission interrégionale de coordination et d'évaluation instituée pour chaque spécialité; le coordonnateur interrégional
Specific accreditation organization	Accreditation commission assisted by Specialty commission
Role of specific accreditation organization	ART30 La liste des services, organismes ou laboratoires agréés pour les formations pratiques de troisième cycle, à l'exclusion de la biologie médicale, ainsi que la répartition des postes d'internes sont arrêtées dans chaque subdivision par le préfet de région, après avis d'une commission de subdivision. Décret n°2004-67 du 16 janvier 2004 relatif à l'organisation du troisième cycle des études médicales

	ART I La commission de subdivision a pour mission de donner un avis au préfet de région sur : 1. L'agrément des stages pour la formation pratique des étudiants en troisième cycle des études médicales appelés internes ou résidents ; 2. La répartition des stages agréés à proposer au choix des internes ou des résidents tous les semestres. Arrêté du 22 septembre 2004 relatif aux missions, à la composition, à la désignation des membres et au fonctionnement de la commission de subdivision
	ART II La commission interrégionale de coordination et d'évaluation se réunit au moins une fois par an, sur convocation de l'enseignant coordonnateur, pour examiner le contenu et les modalités d'enseignement et de validation des enseignements et des stages. Elle entend, à titre consultatif, un interne inscrit dans le diplôme d'études spécialisées ; il est désigné par l'enseignant coordonnateur sur proposition de l'association des internes de la spécialité considérée et, le cas échéant, du syndicat d'internes en médecine le plus représentatif. La commission est consultée, pour avis, par l'enseignant coordonnateur du diplôme d'études spécialisées concerné dans le cadre du dépôt des dossiers de demande d'agrément des lieux de stage de formation pratique d'internes fournis par chaque chef de service hospitalier ou extrahospitalier. Arrêté du 22 septembre 2004 fixant la liste et la réglementation des diplômes d'études spécialisées complémentaires de médecine
	Les enseignants coordonnateurs interrégionaux d'un même diplôme d'études spécialisées sont chargés, après concertation, de formuler des propositions :a) Aux unités de formation et de recherche de médecine en ce qui concerne le contenu, les modalités et les méthodes d'évaluation des enseignements ;b) Aux différentes commissions de subdivision d'agrément des stages prévues à l'article 30 du décret du 16 janvier 2004 susvisé, en ce qui concerne les critères d'agrément des services, en prenant en compte notamment :1. L'encadrement et les moyens pédagogiques ;2. Le degré de responsabilité des internes ;3. La nature et l'importance des activités de soins et, éventuellement, de recherche clinique. Arrêté du 22 septembre 2004 fixant la liste et la réglementation des diplômes d'études spécialisées complémentaires de médecine
Role of specific accreditation organization	to propose standards ; to assess applications for accreditation
Composition of specific accreditation organization	ART2 Les membres de la commission de subdivision sont nommés par arrêté du préfet de la région de la subdivision concernée. ART17 La durée du mandat des membres de la commission est de quatre années, renouvelable, à l'exception des représentants des internes en activité, qui sont nommés pour une durée de deux années renouvelable, sous réserve de leur maintien sous le statut au titre duquel ils sont désignés. ART3 La commission de subdivision est présidée par le directeur de l'unité de formation et de recherche médicale ou le président du comité de coordination des études médicales de la subdivision ou son représentant lorsqu'elle agrée les stages et par le directeur régional des affaires sanitaires et sociales ou son représentant lorsqu'elle donne un avis sur la répartition des stages agréés. Elle comprend les membres suivants :Avec voix délibérative :1° Le directeur de l'unité de formation et de recherche médicale ou le président du comité de coordination des études médicales de la subdivision ou son représentant ;2° Le directeur régional des affaires sanitaires et sociales

	ou son représentant ;3° Le recteur d'académie ou son représentant ;4° Le directeur général du ou des centres hospitaliers universitaires proposé par l'organisation ou les organisations représentatives de ces établissements dans la région ou son représentant ;5° Le directeur d'un centre hospitalier, proposé par l'organisation ou les organisations représentatives de ces établissements dans la région ou son représentant ;6° Le directeur du ou des centres hospitaliers spécialisés en psychiatrie proposé par l'organisation ou les organisations représentatives de ces établissements dans la région ou son représentant ;7° Un représentant de la commission médicale d'établissement siégeant auprès du centre hospitalier universitaire ;8° Un représentant des commissions médicales d'établissement siégeant auprès des centres hospitaliers ;9° Un représentant de la commission médicale d'établissement siégeant auprès des centres hospitaliers spécialisés en psychiatrie ;10° Un représentant des commissions médicales d'établissement des établissements hospitaliers privés participant au service public proposé par l'organisation ou les organisations représentatives de ces établissements dans la région ;11° Un médecin des armées lorsque des hôpitaux des armées relèvent de la subdivision ;12° Cinq représentants enseignants titulaires ou associés de cinq disciplines différentes proposés par le ou les directeurs des unités de formation et de recherche médicale de la subdivision, dont obligatoirement un enseignant responsable de la médecine générale ;13° Deux représentants des internes en activité affectés dans la subdivision, dont un représentant des internes en médecine générale ou des résidents. Avec voix consultative : 14° Le coordonnateur interrégional de la spécialité concernée ou un autre membre de la commission de coordination et d'évaluation. Qu'il soit présent ou non à la réunion de la commission, il transmet son avis par écrit. Arrêté du 22 septembre 2004 relatif aux missions, à la composition, à la désignation des membres et au fonctionnement de la commission de subdivision ART10 La commission interrégionale de coordination et d'évaluation instituée pour chaque spécialité comprend :- l'enseignant coordonnateur du diplôme ou, le cas échéant, les enseignants coordonnateurs des options du diplôme ; - et au minimum trois autres personnels enseignants et hospitaliers titulaires des centres hospitaliers universitaires, dont deux au moins de la spécialité. Ces enseignants sont responsables de l'enseignement des diplômes d'études spécialisées concernés ; ils doivent appartenir à différentes unités de formation et de recherche de médecine de l'interrégion. S'agissant de la médecine générale, les enseignants associés sont autorisés à siéger au sein de la commission interrégionale. Deux des membres de la commission doivent être extérieurs au centre hospitalier universitaire dont relève l'interne. Les membres de la commission sont nommés pour une durée de trois ans par les directeurs des unités de formation et de recherche de médecine. Arrêté du 22 septembre 2004 fixant la liste et la réglementation des diplômes d'études spécialisées complémentaires de médecine
Specific accreditation organization	n=20 ; Voting representative : university, hospital, trainers, trainees, local authorities ; Advisory members : coordinator-teacher
Accreditation Targets	Services
Accreditation Targets	Training settings
Accreditation Criteria	
Accreditation Criteria	Governmental standards

Accreditation Steps	ART18 La commission de subdivision se réunit au moins deux fois par an, conformément aux dispositions de l'article 30 du décret du 16 janvier 2004. Ces dispositions entrent en vigueur au titre de l'année universitaire 2005-2006. Elle donne un avis sur les demandes d'agrément ou de renouvellement d'agrément des stages hospitaliers ou extrahospitaliers. La commission formule ses propositions pour les stages hospitaliers et extrahospitaliers au vu d'un dossier comprenant : - un questionnaire détaillé rempli par le responsable de la structure demandeur de l'agrément sur la base d'un questionnaire type élaboré par chaque commission. A titre indicatif, un questionnaire type est prévu en annexe ; - un projet pédagogique répondant aux objectifs de la maquette de la spécialité élaboré par le responsable de la structure demandeur de l'agrément ; - un rapport établi, après une visite réalisée par une équipe mixte composée d'un universitaire, d'un non-universitaire et d'un représentant d'interne ou de résident désigné par ladite commission ; - l'avis écrit du coordonnateur interrégional ; - l'accréditation éventuelle de la valeur formatrice par un organisme d'agrément d'un Etat membre de la Communauté européenne. Concernant les stages extrahospitaliers, la liste des praticiens généralistes habilités comme maîtres de stage par le directeur de l'unité de formation et de recherche ou le président du comité de coordination des études médicales est transmise à la commission. ART19 A titre transitoire, un délai de cinq ans est admis pour les stages déjà agréés afin de se mettre en conformité. ART20 La commission de subdivision propose au préfet de région de donner : - soit un agrément sans réserve pour une période de cinq ans ; - soit un agrément conditionnel d'un an maximum assorti de recommandations ; - soit un refus d'agrément motivé. ART21 La liste des services hospitaliers ou extrahospitaliers agréés pour la formation de troisième cycle des études médicales, à l'exclusion de la biologie médicale, est arrêtée par le préfet de région après avis de la commission de subdivision dans chaque subdivision. ART22 L'agrément est systématiquement réexaminé : - au terme d'une période de cinq ans ; - lors d'un changement de structure ou de son responsable ; - sur demande motivée des représentants des internes ou des résidents des organisations représentatives dans la région ; - sur demande des coordonnateurs interrégionaux de chacun des diplômes d'études spécialisées concernés ou du directeur de l'unité de formation et de recherche médicale ou du président du comité de coordination des études médicales ou du médecin inspecteur régional. ART23 La suppression d'un agrément est décidée par arrêté du préfet de région après avis de la commission de subdivision. Le dossier d'un nouvel agrément doit comporter, en plus du dossier prévu à l'article 23, les preuves de la correction des éléments ayant motivé le retrait d'agrément. Arrêté du 22 septembre 2004 relatif aux missions, à la composition, à la désignation des membres et au fonctionnement de la commission de subdivision
Accreditation evidences	internal survey; educational program; (triggered) visitation report; coordinator-teacher advice; independent external accreditation

Accreditation validity	5 years
Visitation	ART18 La visite est réalisée par une équipe mixte composée d'un universitaire, d'un non-universitaire et d'un représentant d'interne ou de résident désigné par la commission de subdivision. Arrêté du 22 septembre 2004 relatif aux missions, à la composition, à la désignation des membres et au fonctionnement de la commission de subdivision
Visitation members	university, lay member, trainee
Trainers accreditation	ART14 L'interne de médecine générale doit : - dans le cadre de ses fonctions hospitalières, effectuer un semestre de formation dans les services agréés pour la médecine générale des centres hospitaliers universitaires ; - dans le cadre de ses fonctions extra-hospitalières, effectuer un stage d'un semestre auprès de praticiens généralistes agréés dits "maîtres de stage". Ce stage peut se dérouler auprès de plusieurs praticiens. Le maître de stage doit exercer son activité professionnelle depuis trois ans au moins et être habilité par le directeur de l'unité de formation et de recherche médicale dont relève l'interne, après avis du conseil de l'unité de formation et de recherche médicale selon des modalités définies par arrêté des ministres chargés, respectivement, de l'enseignement supérieur et de la santé. Décret n°2004-67 du 16 janvier 2004 relatif à l'organisation du troisième cycle des études médicales
Trainers accreditation	minimum length of practice
Logbook	Chapitre III : Validation des stages : Article 11 : Sous réserve de l'application de l'article 20 du décret du 10 novembre 1999 susvisé, un stage est validé par le directeur de l'unité de formation et de recherche ou le président du comité de coordination des études médicales après avis du chef de service hospitalier ou extrahospitalier responsable du stage dans lequel a été affecté l'interne ou le résident. A l'issue de chaque stage, le chef de service remplit le carnet de validation de stage obtenu par l'interne ou le résident lors de son inscription à l'entrée en troisième cycle des études médicales auprès de l'unité de formation et de recherche dont il dépend. Le chef de service renseigne une grille d'évaluation. Il donne son avis, ainsi que le coordonnateur interrégional du diplôme d'études spécialisées, sur le stage effectué par l'interne ou le résident. Il transmet copie de la grille et des avis au directeur de l'unité de formation et de recherche ou au président du comité de coordination des études médicales d'origine. Ce dernier transmet au coordonnateur copie de la grille d'évaluation et de sa décision d'accorder ou non la validation du stage et informe, avant le 15 mars et le 15 septembre de chaque année selon le semestre en cours, le directeur régional des affaires sanitaires et sociales d'origine de sa décision. L'interne ou le résident remplit une grille d'évaluation concernant la qualité pédagogique du stage et en envoie copie au directeur de l'unité de formation et de recherche ou au président du comité de coordination des études médicales et au coordonnateur interrégional d'accueil. A titre transitoire, en attente de l'élaboration définitive d'un carnet de validation, le chef de service, le directeur de l'unité de formation et de recherche ou le président du comité de coordination des études médicales et l'interne ou le résident remplissent les documents types mis en annexe au présent arrêté. ANNEXE I CARNET DE STAGE TYPE: GRILLE D'ÉVALUATION : APTITUDES PROFESSIONNELLES : Connaissances théoriques; Aptitudes diagnostiques; Aptitudes thérapeutiques; Aptitudes à l'urgence; Hygiène/propreté; Relations

	avec les patients; Ponctualité, assiduité; Présentation orale de dossiers; Intégration dans l'équipe de soins; Acquisitions au cours du stage. Échelle d'évaluation : A = Très bien, B = Bien, C = Assez bien, D = Passable, E = Mauvais (tout « E » doit être motivé en observation). ANNEXE 2 FICHE D'ÉVALUATION DE LA QUALITÉ PÉDAGOGIQUE DU STAGE PAR L'INTERNE : GRILLE D'ÉVALUATION : Accueil; Suivi pédagogique par le chef de service; Suivi pédagogique par l'équipe médicale; Suivi pédagogique par l'équipe soignante; Participation aux staffs; Responsabilisation; Encadrement médical si besoin; Bénéfice pédagogique global; Avis général du stage. Échelle d'évaluation : A = Très bien, B = Bien, C = Assez bien, D = Passable, E = Mauvais (tout « E » doit être motivé en observation). Arrêté du 22 septembre 2004 relatif à l'organisation, au déroulement et à la validation des stages des étudiants en troisième cycle des études médicales appelés internes ou résidents
Logbook/portfolio	"Carnet de stage" : planning; trainee performance assessment (clinical and research activities); training setting assessment by trainee;

2.3.2 Canada

Global organization	The Royal College of Physicians and Surgeons of Canada-RCPC (all specialties except family medicine); The College of Family Physicians of Canada-CFPC (family medicine only)
Global organization	Professional Regulatory Body (College)
Specific accreditation organization	the RCPSC Accreditation Committee; assisted in its work by the Specialty Committee of each of the specialties and subspecialties recognized by the College. The CFPC Accreditation committee.
Specific accreditation organization	Accreditation commission assisted by Specialty commission
Role of specific accreditation organization	The role of the Accreditation Committee is: to recommend to the Education Committee, policies, standards, and criteria relating to the accreditation of residency programs; to assess applications for accreditation of new residency programs or for modification of accredited programs; to arrange periodic review and assessment of accredited residency programs through on-site surveys and internal reviews; to determine the category of accreditation granted to each residency program; to develop, maintain and disseminate its policies and procedures.
	The role of a specialty committee in the accreditation process is: to develop and review periodically the specific standards of accreditation for programs in the specialty or subspecialty; to develop and review periodically the specialty-specific portions of the pre-survey questionnaire, which is used to obtain information on programs applying for accreditation and on programs to be surveyed or otherwise reviewed; to review all applications for accreditation of new programs and advise the Accreditation Committee on the category of accreditation to be granted; prior to a survey, to review pre-survey documents and provide comments and suggestions to assist the on-site surveyor(s); to review reports of mandated internal and external reviews and regular surveys and advise

	the Accreditation Committee on the category of accreditation to be granted; and as requested by the Accreditation Committee, to nominate individuals from the specialty or subspecialty to conduct external reviews of specific programs and to participate in regular surveys. The Royal College of Physicians and Surgeons of Canada, General Information Concerning Accreditation of Residency Programs. 2006
Role of specific accreditation organization	to propose standards ; to assess applications for accreditation; to review accredited programs or settings
Composition of specific accreditation organization	The Accreditation Committee is composed of a chair and at least 16 members appointed by the Executive Committee on recommendations from various sources. All members are appointed for a two-year term that is renewable to a maximum of three terms. There are two voting representatives from the Association of Faculties of Medicine of Canada (AFMC), one voting representative from the Federation of Medical Regulatory Authorities of Canada (FMRAC), and one voting representative from each of the resident associations, the Canadian Association of Internes and Residents (CAIR), and the Fédération des médecins résidents du Québec (FMRQ). These representatives are selected by the organizations they represent. In addition, there are several permanent observers, one each from the College of Family Physicians of Canada (CFPC), the Collège des médecins du Québec (CMQ), the Federation of Medical Regulatory Authorities of Canada, the Association of Canadian Academic Healthcare Organizations (ACAHO), the Canadian Resident Matching Service (CaRMS), and one observer from each resident association. There are also two observers from the Accreditation Council for Graduate Medical Education (ACGME), from the USA. The Royal College of Physicians and Surgeons of Canada, General Information Concerning Accreditation of Residency Programs. 2006
Specific accreditation organization	n=min 16 ; Voting representative : university, professional regulatory bodies, trainees ; observers : university, trainees, professional regulatory bodies, international accreditation bodies.
Accreditation Targets	Residency programs
Accreditation Targets	Residency programs
Accreditation Criteria	The RCPSC "General Standards of Accreditation" and the "Specific Standards of Accreditation for Residency Programs". The standards of accreditation of training programs in family medicine are based on the effective teaching of the following four principles of family medicine.
Accreditation Criteria	CANMEDS Standards

Accreditation Steps

The CFPC accreditation is voluntary and is conducted at the request of faculties of medicine at Canadian universities. [...] Accreditation will be withdrawn if, during the term of notice of intent to withdraw accreditation, the program has not been able to remedy the major deficiencies leading to notice of intent to withdraw accreditation and provide evidence of this to the accreditation Committee.

The College of Family Physicians of Canada, *Standards for accreditation of residency training programs*. 2006

The RCPSC accreditation process is based on a system of regular surveys of the residency programs of each Canadian medical school on a six-year cycle. [...] This accreditation process examines each program using information obtained through the use of questionnaires and an on-site visit made by a team of surveyors experienced in postgraduate medical education and familiar with the standards of the College. [...] The accreditation process recognizes the potential for restriction by regulations which are too rigid and promotes the free communication that exists between the College, the medical schools, and the professional associations of specialists and residents as a good safeguard against undue rigidity. [...] REGULAR SURVEYS: In brief, the medical school provides the pre-survey information; the specialty committee reviews the documentation and provides comments prior to the survey; the surveyor examines the program in interviews with the program director, teaching staff, residents, and with the residency program committee. In addition, the surveyor tours the facilities and reviews the resources available to the program; the surveyors, as a team, recommend an accreditation status for each program; the surveyor meets with the program director prior to the departure of the survey team to relay the recommended accreditation status for the program; the surveyor submits a written report; the program responds to the report via the postgraduate dean; the specialty committee comments on the survey report and agrees or disagrees with the recommended category of accreditation; the Accreditation Committee reviews the pre-survey documentation, the survey report, the response from the program and the specialty committee recommendation; the dean and postgraduate dean of the medical school meet with the Accreditation Committee before a decision is reached. The Accreditation Committee bases its decision on all available information. EXTERNAL REVIEWS: In addition to the regularly scheduled surveys, the Accreditation Committee may, from time to time, request that an external review of a residency program be conducted when there are serious concerns regarding the ability of the program to meet the standards of accreditation or when circumstances indicate that an on-site program

	review is warranted. UNIVERSITY INTERNAL REVIEWS: Direct responsibility for the quality of university postgraduate residency programs rests with the faculty postgraduate medical education committee and the program directors. The internal review, which is considered to be an integral component of the accreditation process, should be conducted at least two years prior to the regular College visit. It is intended as a mechanism to assist the university in maintaining the quality of its residency programs and to provide the postgraduate medical education committee and program directors with valuable information about the strengths and weaknesses of their programs. INTERNAL REVIEWS MANDATED by the Accreditation Committee: When an internal review of a program is mandated by the Accreditation Committee, the internal review should be conducted in the same manner as a Royal College survey. For mandated internal reviews, the postgraduate dean should provide the review team with a copy of the report from the residents in the program as described below. Internal review reports are to be submitted to the Accreditation Committee by the postgraduate dean. The Royal College of Physicians and Surgeons of Canada, <i>General Information Concerning Accreditation of Residency Programs</i>. 2006
Accreditation evidences	internal survey; educational program; (triggered) visitation report; report from the residents
Accreditation validity	6 years
Visitation	The accreditation process involves many individuals from various medical schools across the country. The College makes every effort to avoid a situation of actual or perceived conflict of interest. Members of the Accreditation Committee, specialty committees and surveyors are requested to declare any potential conflict that may be perceived to positively or negatively influence an opinion expressed. The chair of the survey team has the responsibility of reviewing the operation of the postgraduate division of the faculty and the relationships and communications between the faculty and the teaching institutions involved in postgraduate education. A representative appointed by the Association of Canadian Academic Healthcare Organizations (ACAHO) and a representative from the Federation of Medical Regulatory Authorities of Canada (FMRAC) are assigned to the survey team and assist the chair in this task. A resident surveyor, appointed by the Canadian Association of Internes and Residents or the Fédération des médecins résidents du Québec also accompanies the survey team. Surveys are conducted conjointly with the Collège des médecins du Québec in Québec and, concurrently, although not conjointly, with the College of Family Physicians of Canada. In addition to the regularly scheduled surveys, the Accreditation Committee may, from time to time, request that an external review of a residency

	program be conducted when there are serious concerns regarding the ability of the program to meet the standards of accreditation or when circumstances indicate that an on-site program review is warranted. Two experienced surveyors are appointed by the Accreditation Committee to visit the program and provide a report on how the program has addressed the concerns and to assess if the program is meeting the standards of the discipline. The Royal College of Physicians and Surgeons of Canada, General Information Concerning Accreditation of Residency Programs. 2006
Visitation members	university, professional regulatory bodies, trainee
Trainers accreditation	All resources used for teaching must be organized according to the following general principles: Teaching staff must exercise the double responsibility of providing high quality, ethical patient care and excellent teaching. Staff members who fail to meet these obligations, as judged by the internal evaluation procedures of the faculty, should be relieved of teaching duties. The Royal College of Physicians and Surgeons of Canada and The College of Family Physicians of Canada, <i>General Standards Applicable to All Residency Programs (Doc B)</i>. 2006
Trainers accreditation	educational aptitudes (training for GP trainers)
Logbook	DEFINITION: Clinical faculty may be familiar with portfolios in the context of teaching dossiers that are used in applications for academic promotion. However, portfolios as well as logbooks have many definitions and applications in the medical and educational literature. Growing interest in competency-based education and in new concepts of competence that go beyond the Medical Expert Role is increasing the popularity of these assessment tools. Portfolios are an extremely flexible educational technology that can be adapted to multiple purposes, settings and kinds of learners. Both portfolios and logbooks can be used to collect evidence that learning has taken place. We define logbooks as those tools that are used to track the incidence of educationally relevant activities, such as the number of procedures performed (e.g., a list of appendectomies). They tend to be highly structured, giving little or no opportunity for learner input or reflection. At the other end of the spectrum are unstructured tools that give learners autonomy in deciding what represents their work and provide ample opportunity for reflection. An artist's diary would be an example of this. In the middle lies the kind of portfolio that most contemporary medical programs would find useful: deliberately designed, structured, defining domains of activity and markers of competencies, but capturing supervisor observations on achievement of competence and learner reflections on learning over time. In this way, portfolios are really an "instrument of instruments," or a collection of assessment tools. Their

	components may include logbooks, multi-source feedback instruments, continuous quality improvement projects, learning diaries, encounter cards, essays, rating scales, etc. KEY POINTS: • Portfolios offer the opportunity to assess complex competencies that can be demonstrated in different ways by different persons under different conditions. • They offer a high potential for learning through assessment and an opportunity to develop skills that will be needed for lifelong maintenance of competence. • Portfolios require careful design and development, with particular regard to purpose, criteria for and evidence of achievement. As yet, they are most effective for formative evaluation and documenting progress. • The literature suggests that successful portfolio use is associated with supervisor support and regular, periodic review. • Although portfolios may promote learner reflection, they do not ensure that it will occur. • There must be support for the use of portfolios in the setting in which they will be used, by both learners and teachers. Bandiera, G., Sherbino, J., Frank, J.R., ed. <i>The CanMeds Assessment Tools Handbook: An introductory guide to assessment methods for the CanMeds competencies</i>. 2006, The Royal College of Physicians and Surgeons of Canada
Logbook/portfolio	"CanMEDS portfolio" : logbooks, multi-source feedback instruments, continuous quality improvement projects, learning diaries, encounter cards, essays, rating scales, etc.

2.3.3 United Kingdom

Global organization	PMETB is a non-governmental, independent regulatory body with an important remit to oversee the content and standards of postgraduate medical education across the UK. Postgraduate Medical Education and Training Board, <i>Preparing doctors for the future: about PMETB 2009</i>
Global organization	Independent Regulatory Body
Specific accreditation organization	Central to the foundation of PMETB was the desire to have an independent leader and champion of postgraduate medical education and training. An important aspect of this independence is our financial independence and this means levying fees from those who benefit from our services. To date this has meant a one-off fee charged to doctors when they apply for eligibility to join the Specialist and GP Registers. PMETB remains committed to the principle of independence and has consulted on our fees twice since 2005. To ensure a phased approach to the introduction of fees, PMETB has received grant-in-aid from the UK Departments of Health to act as a subsidy. However, from 2009/10 PMETB aims to be financially independent and fees have, since 1 April 2007, been set at a level where this can be achieved. PMETB is, nevertheless, looking at other ways of generating income

	from beneficiaries and this includes charging the health service for its quality-assurance work. Postgraduate Medical Education and Training Board, web presentation on http://www.pmetb.org.uk/ PMETB works closely and regularly consult with the following key stakeholders: • medical Royal Colleges and Faculties; • the four UK departments of health; • postgraduate deaneries; • strategic health authorities, trusts and hospitals; • trainees; • patient groups; • professional bodies; • other healthcare regulatory bodies; and • the general public. Postgraduate Medical Education and Training Board, <i>Preparing doctors for the future: about PMETB 2009</i>
Specific accreditation organization	Vertical task distribution (Quality Framework)
Role of specific accreditation organization	What is PMETB's Quality assurance (QA) about? It encompasses all the policies, standards, systems and processes directed to ensuring maintenance and enhancement of the quality of postgraduate medical education in the UK. PMETB will undertake planned and systematic activities to provide public and patient confidence that postgraduate medical education satisfies given requirements for quality within the principles of good regulation. PMETB: sets standards and requirements (See for example PMETB Generic standards for training (2006) and approves all postgraduate medical education and training against these standards uses the principle of peer and lay review in all elements of the QF is responsible for post, GP trainer and programme approval is responsible for the approval of specialty and subspecialty curricula is responsible for the approval of assessment systems blueprinted against the approved curricula awards Certificates of completion of training (CCTs) awards Confirmation of Eligibility for Specialist Registration (CESR) and Confirmation of Eligibility for General Practice Registration (CEGPR) PMETB achieves these essential actions through evidence provided in: annual reports from deaneries set in the context of the standards and requirements a PMETB visit to each deanery within the next three years triggered visits or other responses to concerns where necessary annual reports from colleges and faculties verification and confirmation through the PMETB national surveys and other evidence sources re-approval of the curricula and associated assessment systems of all specialties and subspecialties in three years, thereafter five-yearly.
	What are deanery responsibilities for quality management (QM)? Quality management is defined as how the postgraduate deanery discharges its responsibility for the standards and quality of postgraduate medical education. It satisfies itself that local education and training providers are meeting the PMETB standards through robust reporting and monitoring mechanisms. PMETB expects the deaneries to demonstrate adherence to the standards and requirements that it sets down. This is to be accomplished by close working with specialties through the colleges and faculties and with NHS trusts and health boards and other local education providers (LEPs).

	Deaneries must draw on evidence they gain through the quality management and quality control processes. To reduce administrative burdens, PMETB accepts and endorses the principle of risk-based regulation. Risk is seen as those aspects of delivery of postgraduate medical education that do not, or potentially do not, meet PMETB's standards and requirements. Hence the principle of reporting to PMETB will be by exception, with associated action planning. (Section 6.2)
	What are local education providers' responsibilities for quality control (QC)? LEPs are responsible for ensuring that postgraduate medical trainees receive education and training that meet local, national and professional standards. Organisations responsible for QC include Health Boards, all NHS Trusts, the independent sector and any service provider that hosts and supports trainees. Day-to-day delivery is at this level. The director of medical education or an equivalent role provides local leadership by working with and across all specialties. The assignment of responsibilities for meeting standards are given in PMETB's published documents including the Generic standards for training. LEPs are either wholly or partly responsible for Domain 1 Patient safety; Domain 3 Equality, diversity and opportunity; Domain 5 Delivery of curriculum including assessment; Domain 6 Support and development of trainees, trainers and local faculty; Domain 7 Management of education and training; and Domain 8 Educational resources and capacity. In reporting annually to deaneries, LEPs need to follow the same guidelines given above in relation to exception reporting and action planning. Their reports also include the data they contribute to the data set (Section 6.3).
	What is the role of medical Royal Colleges and Faculties (college/faculties)? PMETB has undertaken a review of all medical specialty training curricula, and all sub-specialties, that lead to the award of a CCT so that they adhere to the principles in Standards for curricula and are relevant to, and ready for specialty training. The college/faculties are crucial to the effective delivery and development of the specialties; they will continue to work with other organisations through national, local and regional structures and processes. Each medical specialty has its own specific curriculum developed by the relevant college/faculty. The college/faculties in turn submit their curricula to PMETB. PMETB curricula approvals panels assess each curriculum to ensure that it meets the PMETB standards before approval is granted. Any major change to the curriculum is proposed by the college/faculty to PMETB. Through the annual reporting process, college/faculties will be required to summarise minor changes in the previous year to PMETB-approved curricula and/or assessment systems. The responsibilities of college/faculties cut across a number of domains and are in all cases shared with deaneries and or LEPs. These are given in PMETB's published document Generic standards for training. They are: Domain 2 Quality assurance, review and evaluation; Domain 5 Delivery of curriculum including assessment;

	Domain 7 Management of education and training; Domain 8 Educational resources and capacity; and Domain 9 Outcomes. The annual report contains the specialty examination results, with an analysis by the Specialty Advisory Committee (SAC) or equivalent group. Many college/faculties already provide information relevant to these standards to deaneries on an annual basis. PMETB, the Academy of Medical Royal Colleges (AoMRC) and the Conference of Postgraduate Medical Deans (COPMeD) have agreed a structure so that one report per specialty will be sufficient for both PMETB and all deaneries. Postgraduate Medical Education and Training Board, <i>Operational Guide for the PMETB Quality Framework</i>. 2008
Role of specific accreditation organization	to set standards; to assess applications for accreditation; to review accredited programs or settings; to award certificates of completion of training
Composition of specific accreditation organization	PMETB Board comprises 25 members, made up of 17 medical and eight lay members. There are also four departments of health representatives who attend the meetings as observers. Appointments are made via the independent Appointments Commission, which makes recommendations to the Secretary of State. PMETB has two statutory committees: • Training committee: develops standards for training, curricula and entry to specialty training; promotes improvements to the quality of training; and develops policy for the quality assurance of postgraduate medical education and training. • Assessment committee: responsible for the assessment of those who apply to the Specialist and GP Registers through the equivalence route; assessments carried out during training (including standards for examinations accepted as evidence for entry to, progress through and exit from training); and certification at the completion of training. Postgraduate Medical Education and Training Board, web presentation on http://www.pmetb.org.uk/
Specific accreditation organization	N=25 ; Voting representative: medicals, lay members ; observers: governmental Regulatory Body.
Accreditation Targets	Approval may be granted for: programme/s; post or group of posts, courses; GP trainers. At one or more of the following levels: individual, unit or departmental, trust or equivalent organisation, by specialty or across specialties, deanery level.
Accreditation Targets	Residency programs; trainers;
Accreditation Criteria	Standards for training are an essential element of the QF. They form the backbone of the framework against which the other elements (national surveys of trainees and trainers, a shared evidence base, visits to deaneries and responses to concerns) are developed and measured. As at January 2008 these are: Generic standards for training; Standards for curricula; Principles for an Assessment System for postgraduate training; principles for deaneries. The Generic standards for training (April 2006) cover all postgraduate specialist programmes after the end of the Foundation years (including general practice) and are designed to ensure a robust and uniform framework for postgraduate medical training in the UK. This includes all

	NHS and independent sector environments. The postgraduate deans, with appropriate specialist input from medical Royal Colleges and others, are responsible for ensuring that the standards are met at a local level as part of their remit for quality management of postgraduate medical education and training. The standards are designed to run alongside PMETB's Standards for curricula (March 2005) as well as the Principles for an assessment system for postgraduate medical training (September 2000) and have been reflected in the first PMETB/Conference of Postgraduate Medical Deans (COPMeD) National Trainee Survey. These Generic standards for training are now fully adopted for the Foundation Programme with the addition of two Foundation Programme specific standard statements. The Board has introduced greater clarity and usability of PMETB's existing standards and requirements rather than introduce major changes of substance. The Board has reviewed the use of the terms: standards, requirements, principles and guidance. The Board has agreed the following nomenclature for all PMETB documents: • Principles are overarching statements of intent, values and approaches; • Standards are statements of expectations, PMETB standards are those that must be met by postgraduate medical and training providers at all levels and are enforceable by statute; • Requirements – when a standard is articulated, there will be a set of requirements that underpin the achievement of that standard. These requirements are mandatory and must be reflected by providers at all levels; and • Guidance – all other statements that are not principles, standards or requirements. Guidance will be those activities that should be considered and where appropriate implemented. It is not however a requirement and a deanery, college or local education provider can interpret the guidance within their context. Postgraduate Medical Education and Training Board, <i>Operational Guide for the PMETB Quality Framework</i>. 2008
Accreditation Criteria	PMETB Standards
Accreditation Steps	The Quality Framework embraces five interrelated elements,: 1. Standards: includes approval and action planning; 2. Shared evidence: includes data set; 3. Surveys: trainees and trainers; 4. Visits to Deaneries; 5. Responses to concerns: range to ensure patient and/or trainee safety. Postgraduate Medical Education and Training Board, <i>Operational Guide for the PMETB Quality Framework</i>. 2008
Accreditation evidences	internal survey (trainees and trainers); (triggered) visitation report ; regular review (questionnaires)
Accreditation validity	5 years
Visitation	PMETB VISITS: The PMETB Board has established a five-year VTD cycle. The first round of visits to all 21 deaneries in 2006-07 comprised the first two years of this cycle. The next cycle of visits will therefore take place

	over the three years of 2008-10. Seven deaneries will be visited in each year. The overall purpose of the VTDs will be to investigate and assess against defined standards and requirements the quality management processes, procedures and relationships the deanery has in place to ensure the effective delivery of postgraduate medical education and training. If this is achieved, the deanery will be given PMETB approval. The visit team will consist of PMETB partners who have been specifically recruited and trained for this activity and be contracted for this work. A prospective VTD visitor must be a PMETB partner in order to take part in the visit. PMETB will make the final decision about team membership which will be informed by what emerges from the pre-VTD evidence assessment matrix. There is flexibility in team membership described in the table above. For example, if the lead visitor is a practising doctor, then they may count also as the third medical member of the team, reducing team size. The senior deanery staff member may or may not be a doctor. Postgraduate Medical Education and Training Board, <i>Operational Guide for the PMETB Quality Framework</i>. 2008 TRIGGERED VISITS are in addition to the present deanery visiting programme and are arranged by PMETB in partnership with a medical Royal College, deanery and others with training concerns. They are undertaken where there may be possible serious educational failure which needs a rapid investigation and where concerns cannot be satisfied in any other way. Postgraduate Medical Education and Training Board, <i>Preparing doctors for the future: about PMETB 2009</i> See also the Quality framework operational guide http://www.gmc-uk.org/Quality_Framework_Operational_Guide_web_32561145.pdf
Visitation members	Trained PMETB partners (medical, ... ?)
Trainers accreditation	Domain 6 Support and development of trainees, trainers and local faculty [...] Standards for trainers : All doctors who have completed specialist training can and do act as supervisors, many doctors develop the role to become educational supervisors. These standards apply to all such doctors; however the requirements may specify where they apply only to educational supervisors or others with educational responsibilities. Standard Trainers must provide a level of supervision appropriate to the competence and experience of the trainee Mandatory requirements 6.25 Trainers must enable trainees to learn by taking responsibility for patient management within the context of clinical governance and patient safety. 6.26 Trainers must understand and demonstrate ability in the use of the approved in-work assessment tools and be clear as to what is deemed acceptable progress. 6.27 Trainers must regularly review the trainee's progress through the training programme, adopt a constructive approach to giving feedback on performance, advise on

	career progression and understand the process for dealing with a trainee whose progress gives cause for concern. Standard Trainers must be involved in and contribute to the learning culture in which patient care occurs Mandatory requirements 6.28 Trainers must ensure that clinical care is valued for its learning opportunities; learning and teaching must be integrated into service provision. 6.29 Trainers must liaise as necessary with other trainers both in their clinical departments and within the organisation to ensure a consistent approach to education and training and the sharing of good practice across specialties and professions. Standard Trainers must be supported in their role by a postgraduate medical education team and have a suitable job plan with an appropriate workload and time to develop trainees Mandatory requirements 6.30 Organisations providing postgraduate medical education must ensure that trainers have adequate support and resources to undertake their training role. 6.31 Deaneries must have structures and processes to support and develop trainers. 6.32 Trainers with additional educational roles must be selected and demonstrate ability as an effective trainer. 6.33 GP trainers must be trained and selected in accordance with the General and Specialist Medical Practice (Education, Training and Qualifications) Order 2003. Standard Trainers must understand the structure and purpose of, and their role in, the training programme of their designated trainees Mandatory requirements 6.34 Trainers must have knowledge of, and comply with, the PMETB regulatory framework for medical training. 6.35 Trainers must ensure that all involved in training and assessment of their designated trainee understand the requirements of the programme. Postgraduate Medical Education and Training Board, <i>Generic standards for training 2008</i>
Trainers accreditation	educational aptitudes;
Logbook	4.22 Educational supervisors are responsible for overseeing training to ensure that trainees are making the necessary clinical and educational progress. Where possible, it is desirable for trainees to have the same educational supervisor for the whole of their training programme or for stages of training (e.g. the early years or more advanced years of training). Educational supervisors should: • be responsible for ensuring that trainees whom they supervise maintain and develop their specialty learning portfolio and participate in the specialty assessment process • ensure that the structured report which is a detailed review and synopsis of the trainee's learning portfolio (Appendix 5) is returned within the necessary timescales 5.43 Award of the CCT takes place through the following process: • Doctors who have successfully completed UK training programmes should have the necessary documentation in their portfolios (e.g. annual assessment outcomes, College examination outcomes) to enable them to demonstrate that they have met the required

	standards to apply for a CESR/CEPGR. It is anticipated that application time for a CCT or a CESR/CEGPR in these circumstances will be broadly similar. 7.20 The educational supervisor and trainee should discuss and be clear about the use of a learning portfolio. Regular help and advice should be available to the trainee to ensure that the portfolio is developed to support professional learning. 7.21 Regular feedback should be provided by the educational supervisor on progress. This should be a two way process in the context of an effective professional conversation. Trainees should feel able to discuss the merits or otherwise of their training experience. The detailed content of the discussion which takes place within appraisal sessions should normally be confidential and a summary of the appraisal discussion should be agreed and recorded and any agreed actions documented. Appraisal summaries should be part of the trainee's portfolio. 7.26 The workplace based appraisal documentation should form a permanent part of the trainee's learning portfolio. Where specialties are using electronic portfolios, this documentation should be copied into it as an additional section or be maintained separately as hard copy by the doctor. Educational supervisors should keep copies of the summary document (Form 4) since these will be required by clinical directors or equivalent employer leads to document the performance of postgraduate doctors in their organisations. 7.34 Log-books, audit reports, research activity and publications document other sorts of experience and attainment of skills which trainees may need to demonstrate. They are not, in and of themselves, assessment tools, but are a valid record of progress. Information about these areas should be retained in a specific specialty professional learning portfolio (which is increasingly likely to be an electronic portfolio) which all trainees must keep in order to record their evidence and progress in their training. The portfolio will also form the basis of the educational and workplace based appraisal process (paras 7.16 – 7.27) and the annual planning process (paras 7.28 – 7.27). Increasingly, portfolios are being developed by specialties through the colleges and faculties to be maintained electronically, forming part of an electronic learning platform. 7.44 Deaneries will make local arrangements to receive the necessary documentation from trainees and will give them and their trainers at least six weeks notice of the date by which it is required so that trainees can obtain structured reports from their educational supervisors summarising their portfolio from their educational supervisors. 8.10 Trainees must maintain a learning portfolio which is specialty specific and which covers all aspects of their training. They must share this with their educational supervisors as they move through their rotational programme, as part of the ongoing training process. The transfer of educational information from placement to placement within the training programme is fundamental to the training process and is applicable to every trainee.
--	---

	APPENDIX5 : Workplace based assessments (WPBAs) in current placement/s (only successful WPBAs should be included here) : Mini-CEX, DOPs,CbD,MSF (360 degree),Patient survey,Other (please describe). Experiential outcomes : 1. log-book, 2. audits, 3. research projects, 4. publications, 5. teaching, 6. management development, 7. presentations, 8. courses attended. Other outcomes: 1. reported adverse incidents, 2. complaints, 3. other. UK MMC Policy Group, <i>A Reference Guide for Postgraduate Specialty Training in the UK</i>. 2008
Logbook/portfolio	"Learning portfolio" : planning; trainee performance assessment (Mini-CEX;DOPs;CbD;MSF (360 degree);Patient survey;Other)

2.3.4 Switzerland

Global organization	Dans le domaine de la formation professionnelle des médecins, la loi sur les professions médicales (LPMéd) prévoit une répartition claire des tâches entre l'organe de surveillance responsable, le Département fédéral de l'Intérieur (DFI) et les instances responsables de la mise en oeuvre: la formation prégraduée incombe aux universités, la formation postgraduée à la FMH et plus précisément à l'ISFM.
Global organization	New governance : Government and Professional Regulatory Body
Specific accreditation organization	ART I L'ISFM est l'organe de la FMH compétent pour le domaine de la formation postgraduée et continue. Swiss Medical Association, Règlement de l'Institut suisse pour la formation médicale postgraduée et continue. 2009 ART8 La CEFM est compétente pour la reconnaissance, la classification et le changement de catégorie des établissements de formation (art. 43). Swiss Medical Association, Réglementation pour la formation postgraduée. 21 juin 2000 En décembre 2008, la Chambre médicale a décidé de rendre autonome le domaine de la formation professionnelle sous l'égide de la FMH. Elle a créé à cette fin l'Institut suisse pour la formation médicale postgraduée et continue (ISFM) en lui donnant les compétences nécessaires pour s'occuper de tous les domaines de la formation postgraduée et continue des médecins et veiller à son efficacité et à sa qualité. Les influences de politique professionnelle, notamment sur le plan tarifaire, sont exclues en raison des personnes impliquées dans la gestion de l'ISFM qui rassemble tous les acteurs essentiels de la santé: sociétés de discipline médicale, cinq facultés de médecine, médecins en formation postgraduée (ASMAC), formateurs (AMDHS), représentants des établissements de formation postgraduée (H+) et institutions publiques (OFSP, CDS, MEBEKO). Au sein de la FMH, l'ISFM doit rendre des comptes uniquement à la Chambre médicale suisse. Les Sociétés de Discipline Médicale (SDM). L'Institut suisse pour la formation médicale postgraduée et continue, Newsletter July 2009
Specific accreditation organization	Horizontal task distribution
Role of specific accreditation organization	ART I L'ISFM édicte une RFP et une RFC (art. 42, al. 1, let. a des statuts de la

	FMH). ART2 L'ISFM prend toutes les mesures et décisions qui ne relèvent pas de la compétence d'une autre instance. Il lui incombe en particulier: a) d'adopter les révisions de la RFP (sous réserve des compétences de la ChM); b) de créer et de supprimer les titres de spécialiste, les formations approfondies ainsi que les attestations de formation complémentaire (cf. art. 13); l'ISFM soumet ses décisions aux délégués de la ChM moyennant un délai référendaire de deux mois; lorsque 20% au moins des délégués à la ChM le demandent, le projet est soumis à cette dernière; c) d'adopter les programmes de formation postgraduée élaborés ou révisés par les sociétés de discipline médicale (art. 17); d) de décider sur les questions d'interprétation de la RFP et des programmes de formation postgraduée; e) de reconnaître les programmes de formation complémentaire conformément à l'art. 54 RFP et d'en approuver des révisions; f) d'élire les délégués de l'ISFM à la CT et à la CEFP (art. 7 et 8 RFP) et g) de désigner les commissions d'opposition visées aux art. 9 et 10 RFP. <i>Swiss Medical Association, Règlement de l'Institut suisse pour la formation médicale postgraduée et continue. 2009</i> ART11 Il incombe aux SDM: a) d'élaborer les programmes de formation postgraduée et de procéder, le cas échéant, à leur révision (art. 17); b) d'organiser et d'assurer l'exécution des examens de spécialiste (art. 22); c) de prendre position au sujet des oppositions concernant l'octroi d'un titre FMH ou d'une formation approfondie (art. 46); d) d'effectuer les visites en vue des reconnaissances (art. 42 et 43). ART43 1 Toute demande de reconnaissance et de classification ou de changement de catégorie doit être adressée à la CEFP. Elle doit être signée par le médecin responsable (art. 39) et, le cas échéant, un délégué de l'organisme responsable de l'établissement. La CEFP invite la société compétente à effectuer une visite. 2 La CEFP fonde ses décisions sur les éléments suivants: - dispositions déterminantes de la RFP; - critères pour la classification des établissements de formation; - formulaire de demande; - concept de formation postgraduée (art. 41); - rapport de visite (y compris la prise de position du responsable; cf. art. 42). 3 La CEFP peut donner à l'établissement de formation des directives sur le concept de formation postgraduée. La décision de la CEFP est communiquée au responsable de l'établissement et publiée sur le site internet de l'ISFM. Elle doit être communiquée dans les six mois qui suivent la réception de tous les documents accompagnant la demande et au plus tard huit semaines après la réception du rapport de visite. 4 La reconnaissance d'un établissement de formation et sa classification font l'objet d'une réévaluation par la SDM concernée au moins une fois tous les 7 ans, mais en tout cas à chaque changement de responsable. Cette réévaluation suit la même procédure que pour la reconnaissance. Pour se prononcer, la CEFP prend également en considération les résultats de l'enquête sur la qualité de la formation menée auprès des assistants (cf. art. 8, 4e al.). ART8 La CEFP envoie périodiquement, à tous les candidats occupant un poste de formation, un questionnaire standardisé pour l'appréciation de leur établissement de formation. Les résultats des questionnaires sont importants pour les visites et pour l'évaluation des établissements de formation (art. 42 et 43). <i>Swiss Medical Association, Réglementation pour la formation postgraduée.</i>
	1 Toute demande de reconnaissance et de classification ou de changement de catégorie doit être adressée à la CEFP. Elle doit être signée par le médecin responsable (art. 39) et, le cas échéant, un délégué de l'organisme responsable de l'établissement. La CEFP invite la société compétente à effectuer une visite. 2 La CEFP fonde ses décisions sur les éléments suivants: - dispositions déterminantes de la RFP; - critères pour la classification des établissements de formation; - formulaire de demande; - concept de formation postgraduée (art. 41); - rapport de visite (y compris la prise de position du responsable; cf. art. 42). 3 La CEFP peut donner à l'établissement de formation des directives sur le concept de formation postgraduée. La décision de la CEFP est communiquée au responsable de l'établissement et publiée sur le site internet de l'ISFM. Elle doit être communiquée dans les six mois qui suivent la réception de tous les documents accompagnant la demande et au plus tard huit semaines après la réception du rapport de visite. 4 La reconnaissance d'un établissement de formation et sa classification font l'objet d'une réévaluation par la SDM concernée au moins une fois tous les 7 ans, mais en tout cas à chaque changement de responsable. Cette réévaluation suit la même procédure que pour la reconnaissance. Pour se prononcer, la CEFP prend également en considération les résultats de l'enquête sur la qualité de la formation menée auprès des assistants (cf. art. 8, 4e al.). ART8 La CEFP envoie périodiquement, à tous les candidats occupant un poste de formation, un questionnaire standardisé pour l'appréciation de leur établissement de formation. Les résultats des questionnaires sont importants pour les visites et pour l'évaluation des établissements de formation (art. 42 et 43). <i>Swiss Medical Association, Réglementation pour la formation postgraduée.</i>

	21 juin 2000
	Une nouvelle accréditation a été engagée en février 2009, cette fois-ci sur la base de la LPMéd. La coordination en incombe à l'Office fédéral de la santé publique (OFSP). L'Organe d'accréditation et d'assurance qualité des hautes écoles suisses (OAQ) officie une nouvelle fois en tant qu'instance d'accréditation. La Commission fédérale des professions médicales (MEBEKO) se fonde sur son rapport pour conseiller le DFI. Les sociétés de discipline médicale ont été informées des objectifs et du déroulement de la procédure d'accréditation ainsi que de leurs tâches lors d'un atelier le 28 février 2009. Elles ont été invitées à présenter d'ici fin juin 2009 un rapport d'autoévaluation qui procède à un examen critique de la formation postgraduée – classée pour l'occasion en neuf domaines de contrôle – sur la base des standards de la World Federation of Medical Education (WFME). Ces rapports formeront la base de l'évaluation de la formation postgraduée par les experts responsables de l'OAQ. Des visites sont en outre prévues dans certaines spécialités afin d'avoir une vision approfondie de la mise en oeuvre des programmes de formation postgraduée. Une quarantaine d'établissements de formation postgraduée, dont des cabinets médicaux, seront visités entre octobre 2009 et septembre 2010. L'Institut suisse pour la formation médicale postgraduée et continue : <i>principaux projets</i>, available on http://www.fmh.ch
Role of specific accreditation organization	to assess applications for accreditation; to review accredited programs or settings
Composition of specific accreditation organization	ART4 1 Le plénum de l'ISFM se compose de: a) un délégué de chacune des SDM; b) un délégué de chacune des cinq facultés de médecine de Suisse; c) quatre délégués de l'ASMAC; d) deux délégués de l'AMPHS. 2 Les SDM regroupant plus de 200 porteurs de titre de spécialiste ont un droit de vote double et celles qui comptent plus de 1'000 porteurs de titre un droit de vote triple. 5 Les personnes suivantes sont invitées comme hôtes permanents (sans droit de vote) aux séances du plénum: - le président de la FMH - le secrétaire général de la FMH - les membres du Comité central de la FMH - le président de la MEBEKO (section «formation universitaire») - le vice-président de la MEBEKO (section «formation postgrade») - les représentants des médecins à la MEBEKO - un délégué de chacune des trois organisations régionales VEDAG, SMSR, OMCT - les présidents des organisations faîtières des sociétés de discipline médicale (CMPR, FMCH, FMC, FMPP, SFSM) - le président de l'Union des sociétés suisses de médecine complémentaire - le président de la FMP - un délégué de l'Institut pour l'éducation médicale (IML) - un délégué de la CDS - un délégué de l'OFSP - un délégué de H+ (hôpitaux non universitaires) - les collaborateurs du service juridique de la FMH - le responsable de la communication de la FMH ART5 Le plénum élit, parmi les délégués, un comité de 19 membres au plus (art. 43, al. 2 des statuts de la FMH). Swiss Medical Association, <i>Règlement de l'Institut suisse pour la formation médicale postgraduée et continue. 2009</i>

Specific accreditation organization	N=? ; Voting representative: professional Regulatory Bodies, university, trainees, trainers?
Accreditation Targets	Accréditation des filières de formation postgrade selon la loi sur les professions médicales (LPMéd)-Reconnaissance d'un établissement de formation et sa classification (CEFP).
Accreditation Targets	Residency programs; training settings
Accreditation Criteria	Explications concernant le présent modèle de rapport d'autoévaluation: Le présent modèle de rapport d'autoévaluation a été établi par la FMH et l'Institut suisse pour la formation médicale postgraduée et continue (ISFM) en collaboration avec la Société suisse de radiologie (SSR). Il est destiné à servir de modèle à toutes les sociétés de discipline médicale (SDM) pour l'établissement de leur propre rapport d'autoévaluation avec l'aide du guide de l'Office fédéral de la santé publique (OFSP) et de l'Organe d'accréditation et d'assurance qualité des hautes écoles suisses (OAQ). Les réponses apportées aux standards d'évaluation dans ce modèle de rapport d'autoévaluation se rapportent d'une part aux principes de base, qui sont les mêmes pour les 43 programmes de formation postgraduée, et d'autre part aux données spécifiques à chaque discipline. Ainsi, les réponses pour les principes de base sont en caractères gris et celles pour les données spécifiques aux disciplines en bleu. Comme les experts de l'OAQ sont, en règle générale, responsables d'un seul programme de formation postgraduée, tous les rapports d'autoévaluation doivent contenir les deux parties. Vous voudrez bien reprendre toutes les réponses en gris (Principes de base) telles quelles dans votre rapport d'autoévaluation. Cela concerne aussi les Remarques générales. Les réponses-types de la Société suisse de radiologie (en bleu) sont destinées à vous aiguiller et doivent être remplacées par vos propres formulations. 2. WFME standards. Appréciation critique des standards: Les standards de la WFME et leurs adjonctions européennes sont basés sur l'organisation anglo-saxonne de la formation postgraduée dans des Medical Schools et, en grande partie, dans des systèmes de santé étatiques. En conséquence, ces standards visent à ce que le contrôle de la formation postgraduée se déroule en milieu académique et soit encadré par les autorités médicales de l'État. Ces deux réalités n'existent pas en Suisse, de sorte que plusieurs de ces standards posent des questions inapplicables à notre système de formation postgraduée et ne peuvent par conséquent pas être mis en œuvre en Suisse (exemple : les budgets alloués à la formation postgraduée). Une adaptation des standards devra donc être envisagée, pour l'avenir du moins. Swiss Medical Association, <i>Accréditation 2011 : filières de formation postgraduée en médecine humaine. Rapport d'autoévaluation de la Société suisse de radiologie (SSR SGR)</i>, available on : www.fmh.ch/files/doc/1/muster_sbb_fl.doc
Accreditation Criteria	WFME standards
Accreditation Steps	Selon la loi fédérale du 23 juin 2006 sur les professions médicales universitaires (loi sur les professions médicales, LPMéd), l'accréditation se déroule en plusieurs étapes et constitue une procédure transparente permettant de vérifier, à la lumière de standards de qualité clairement définis, si les filières de formations postgrades satisfont à des exigences de qualité spécifiques. Conformément aux prescriptions et pratiques internationales, la procédure se déroule en trois étapes : 1. L'unité responsable (p. ex., une société de discipline médicale) procède, sur la base de standards de qualité, à une autoévaluation de la filière de formation postgrade (art. 26 LPMéd). 2. Sur la base du rapport d'autoévaluation, un groupe d'experts indépendants effectue une évaluation externe (art. 27 LPMéd). 3. La décision d'accréditation pour chaque filière de formation postgrade est rendue par le Département fédéral de l'intérieur (DFI) (art. 28 LPMéd). L'accréditation peut être assortie de charges. Office fédéral de la santé publique OFSP, <i>Accréditation des filières de formation</i>

	postgrade/définition et procédure, available on : http://www.bag.admin.ch/themen/berufe/00415/00578/index.html?lang=fr 1. Autoévaluation sur la base des standards de qualité 2. Envoi de la demande d'accréditation et du rapport d'autoévaluation à l'instance d'accréditation (DFI) 3. Évaluation externe par des experts indépendants (rapport d'expert); Organisation, accompagnement et évaluation par l'organe d'accréditation (OAQ) 4. Consultation de la Commission des professions médicales (MEBEKO) par l'instance d'accréditation (DFI) 5. Décision d'accréditation de l'instance d'accréditation (DFI) Office fédéral de la santé publique OFSP, <i>Schéma de la procédure d'accréditation</i>, available on : http://www.bag.admin.ch/themen/berufe/00415/00578/index.html?lang=fr En 2011, le Département fédéral de l'intérieur (DFI) réitérera l'accréditation de la Réglementation pour la formation postgraduée (RFP) et des programmes de formation postgraduée. Les sociétés de discipline médicale ont été informées de la procédure fixée dans la loi sur les professions médicales (LPMéd) lors de la réunion de démarrage du 27 février 2009. L'ISFM a nommé le Dr Richard O. Binswanger chef de projet. Nous avons invité toutes les sociétés à établir avant la fin juin 2009 un rapport d'auto-évaluation de leur programme de formation postgraduée sur la base d'un modèle établi par la Société suisse de radiologie. L'organe mis en place par l'OFSP pour l'accréditation et l'assurance-qualité des Hautes écoles suisses examinera ces rapports avec des experts indépendants. Des visites supplémentaires seront organisées dans les disciplines présentant le plus d'assistants. Les experts de l'OAQ accompagneront les équipes de visite mises sur pied selon l'art. 42 RFP. Les établissements concernés ont été informés le 11 novembre 2008 de ces visites qui auront lieu entre le début d'octobre 2009 et l'automne 2010. Ces visites achevées, l'OAQ établira les rapports finaux à l'attention du DFI. La Commission des professions médicales (MEBEKO) formulera une recommandation concernant l'accréditation et les conditions éventuelles à l'attention du chef du DFI qui rendra sa décision à fin septembre 2011. L'Institut suisse pour la formation médicale postgraduée et continue, <i>Newsletter July 2009</i> ART8 4 La CEFP envoie périodiquement, à tous les candidats occupant un poste de formation, un questionnaire standardisé pour l'appréciation de leur établissement de formation. Les résultats des questionnaires sont importants pour les visites et pour l'évaluation des établissements de formation. ART43 1 Toute demande de reconnaissance et de classification ou de changement de catégorie doit être adressée à la CEFP. Elle doit être signée par le médecin responsable (art. 39) et, le cas échéant, un délégué de l'organisme responsable de l'établissement. La CEFP invite la société compétente à effectuer une visite. 2 La CEFP fonde ses décisions sur les éléments suivants: - dispositions déterminantes de la RFP; - critères pour la classification des établissements de formation; - formulaire de demande; - concept de formation postgraduée (art. 41); - rapport de visite (y compris la prise de position du responsable; cf. art. 42). Swiss Medical Association, <i>Réglementation pour la formation postgraduée</i>. 21 juin 2000
Accreditation evidences	internal survey; educational program; independent external survey; regular review (questionnaires)

Accreditation validity	7 years (training settings); 5 years (training programs) ?
Visitation	ART42 Les visites servent à garantir et à évaluer la qualité de la formation postgraduée dans les établissements de formation. Chaque SDM effectue des visites selon les conditions générales suivantes: a) La délégation chargée des visites se compose d'un délégué de la SDM, d'un représentant de l'ASMAC et de l'un des experts indépendants désignés par l'ISFM. b) La SDM décide elle-même du lieu et de la fréquence des visites. Pour les établissements de formation postgraduée comptant trois médecins-assistants ou davantage, elle doit organiser une visite dans les cas suivants: - lors d'une demande de reconnaissance et de classification ou de changement de catégorie; - lors d'une réévaluation, notamment en cas de changement de responsable; - à la demande de l'ISFM. Une visite est particulièrement nécessaire lorsque les appréciations des assistants sur la qualité de la formation postgraduée (art. 8, 4e al.) sont insuffisantes ou lorsque le taux d'échecs à l'examen de spécialiste est supérieur à la moyenne. c) La visite se fonde sur une série de critères standardisés et se termine par un rapport. Celui-ci contient en particulier une évaluation portant sur - l'observation des critères de reconnaissance; - la qualité de la formation postgraduée dispensée; - le respect de la sécurité des patients et - l'adéquation, la qualité et la mise en oeuvre du concept de formation postgraduée. d) Le rapport de visite est à remettre au responsable de l'établissement en l'invitant expressément à prendre position par écrit. La procédure relative au rapport de visite doit s'achever dans les quatre semaines suivant cette dernière. Swiss Medical Association, <i>Réglementation pour la formation postgraduée</i>. 21 juin 2000 1. Chaque société de discipline médicale détermine avec l'ISFM les établissements de formation postgraduée à visiter sur la base des critères figurant à l'article 43 de la RFP. 2. Le/la responsable de la formation postgraduée de la société concernée • désigne le délégué de la société qui dirigera l'équipe de visite (responsable de l'équipe de visite); • convient d'une date de visite définitive avec le/la responsable de l'établissement à visiter (REFP); • informe simultanément du montant de la taxe de visite, de Fr. 5'000.-, à verser d'avance (taxe réduite pour des établissements avec 1 à 3 assistants: Fr. 4'000.-); • communique à l'ISFM le lieu et la date de la visite ainsi que le nom du responsable de l'équipe de visite (au moins 3 mois à l'avance). http://www.swiss-paediatrics.org/sites/default/files/mbl_f.pdf La visite des établissements de formation postgraduée permet une évaluation approfondie du concept de formation postgraduée de ces établissements et sa mise en oeuvre dans le quotidien des hôpitaux et des cliniques. La visite permet en outre de contrôler la structure de l'établissement de formation, le concept de gestion des risques et des erreurs ainsi que la mise en oeuvre de la formation postgraduée pratique et théorique. Plus de 130 médecins appartenant aux futures équipes chargées des visites ont participé le 1er mai 2009 à une journée de formation consacrée au nouveau concept de visite, désormais employé. L'Institut suisse pour la formation médicale postgraduée et continue : <i>principaux projets</i>, available on http://www.fmh.ch
Visitation members	Trained ISFM partners (medical), professional regulatory bodies, independent expert (OAQ?), ASMAC ?

Trainees surveys	La douzième enquête réalisée auprès de plus de 9000 médecins-assistants se déroulera cette année à la fin de l'été. Le questionnaire utilisé depuis 2003 a fait ses preuves et permet à la fois une évaluation de la formation postgraduée dans les différents établissements de formation et une évaluation des différentes spécialités. Depuis des années, le taux de réponse est d'environ deux tiers des assistants interrogés. Un module (15 à 20 questions) est utilisé chaque année à propos d'un domaine [WFME] choisi de la formation postgraduée. L'Institut suisse pour la formation médicale postgraduée et continue : <i>principaux projets</i>, available on http://www.fmh.ch
Trainees surveys	
Trainers accreditation	Art. 39 Conditions générales préalables à la reconnaissance : 1 Peuvent être reconnus comme établissements de formation les hôpitaux (resp. leurs divisions et services), les cliniques, les instituts et établissements spécialisés, les services ambulatoires, les cabinets médicaux et d'autres institutions médicales de Suisse, s'ils disposent d'au moins un poste de formation postgraduée adéquatement rémunéré, et si le médecin responsable de la formation postgraduée peut garantir le respect des exigences du programme de formation prescrit. Le responsable de l'établissement de formation est le médecin-chef ou un médecin-cadre désigné pour la formation postgraduée. 2 Le responsable de l'établissement de formation doit être porteur du titre de spécialiste de la discipline pour laquelle la reconnaissance est accordée. Un établissement de formation dont le médecin responsable n'est pas porteur du titre de spécialiste exigé peut être reconnu à titre exceptionnel, à condition que le médecin en question satisfasse à des exigences équivalentes à celles d'un titre de spécialiste. En cas de force majeure, l'établissement de formation postgraduée peut aussi être dirigé par un scientifique non-médecin, titulaire d'un diplôme universitaire. 3 Pour obtenir une reconnaissance, le responsable d'un cabinet médical doit avoir dirigé celui-ci durant au moins 2 ans et avoir suivi un cours de médecin formateur. 4 Le responsable de l'établissement de formation doit pouvoir prouver qu'il remplit son devoir de formation continue selon la RFC. Swiss Medical Association, <i>Réglementation pour la formation postgraduée</i>. 21 juin 2000
Trainers accreditation	minimum length of practice; educational aptitudes (training for trainers); continuing professional development
Logbook	Les logbooks permettent une meilleure structuration de la formation postgraduée et une prise en compte accrue des besoins individuels des assistants. L'Institut suisse pour la formation médicale postgraduée et continue : <i>principaux projets</i>, available on http://www.fmh.ch Introduction du logbook: En novembre 2007, la CFPC a décidé d'introduire un logbook dans tous les programmes de formation postgraduée. Ce logbook a pour but d'enregistrer les progrès d'apprentissage. Il contient les certificats FMH, protocoles d'évaluation et formulaires d'évaluation spécifiques de même que la liste des examens médicaux et des interventions chirurgicales. Sa gestion in-combe aux assistants. En novembre 2008, toutes les sociétés de discipline ont été invitées à introduire les contenus d'apprentissage spécifiques dans le logbook modèle. Le logbook devrait être introduit dans tous les programmes de formation postgraduée d'ici à la fin 2009. L'Institut suisse pour la formation médicale postgraduée et continue, <i>Newsletter July 2009</i> ART20 Entretiens d'évaluation; journal de bord : 1 L'évaluation des prestations du candidat exerçant dans un établissement de formation s'effectue au moyen d'un entretien périodique et structuré entre le candidat et le responsable de la formation. Cet entretien a lieu au moins une fois par année et nécessairement au terme de chaque période de formation postgraduée. De plus, si des problèmes surgissent, un entretien supplémentaire peut être demandé à tout moment par chacune des deux parties. 2 Les résultats de ces entretiens sont consignés dans un journal de

	bord (logbook) signé par les deux intéressés. Celui-ci fait partie intégrante du certificat FMH. 3 En cas de prestations insuffisantes, le candidat doit être prévenu sans tarder et le formateur prévoi-ra au moins un entretien d'évaluation supplémentaire. 4 En cas de problèmes entre le candidat et le formateur, on peut faire appel à une personne média-trice indépendante qui est nommée par l'ISFM. Swiss Medical Association, <i>Réglementation pour la formation postgraduée</i> . 21 juin 200
Logbook/portfolio	"Logbook": planning; trainee performance assessment (Mini-CEX; DOPS); certifications; curricula content

2.3.5 The Netherlands

Global organization	KNMG
Global organization	Professional Regulatory Body (Order)
Specific accreditation organization	ART2 De organen voor de opleiding en registratie die door het Federatiebestuur van de KNMG zijn ingesteld, zijn: a. Het College voor Huisartsgeneeskunde, Verpleeghuisgeneeskunde en medische zorg voor verstandelijk gehandicapten (CHVG) en de Huisarts, Verpleeghuisarts en arts voor verstandelijk gehandicapten Registratie Commissie (HVRC); b. Het Centraal College Medische Specialismen (CCMS) en de Medisch Specialisten Registratie Commissie (MSRC); c. Het College voor Sociale Geneeskunde (CSG) en de Sociaal-Geneskundigen Registratie Commissie (SGRC). Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Regeling specialismen en profielen geneeskunst</i> . 2008
Specific accreditation organization	Accreditation commission
Role of specific accreditation organization	ART2I I. Een registratiecommissie heeft tot taak: a. Het uitvoeren van het collegebesluit tot het instellen of opheffen van één of meerdere specialistenregisters, opleidingsregisters, profielregisters. b. Het inschrijven van personen in een specialistenregister en het doorhalen van deze inschrijving. c. Het herregistreren van personen in een specialistenregister en het opnieuw inschrijven van herintreders in een specialistenregister, en het doorhalen van deze inschrijving. d. Het inschrijven van personen in een profielregister en het doorhalen van deze inschrijving. e. Het herregistreren van personen in een profielregister en het opnieuw inschrijven van herintreders in een profielregister, en het doorhalen van deze inschrijving. f. Het inschrijven van personen in een opleidingsregister en het doorhalen van de Regeling specialismen en profielen geneeskunst inschrijving. g. Het nemen van besluiten ten aanzien van de opleiding tot specialist of profielarts. h. Het erkennen van opleiders, opleidingsinrichtingen en opleidingsinstituten, en het schorsen of intrekken van de erkenning. i. Het houden van toezicht op de naleving van besluiten van een college door erkende opleiders, opleidingsinrichtingen en opleidingsinstituten. j. Het vaststellen van het bedrag dat ter dekking van de

	kosten voor de taken van een registratiecommissie is verschuldigd. 2. In het kader van de in het eerste lid, onder c., d., g., h., en i. bedoelde taken kan een registratiecommissie opleiders, opleidingsinrichtingen of opleidingsinstituten (doen) visiteren en daartoe visitatievoorschriften vaststellen. 3. Een besluit van een college wordt uitgevoerd door de registratiecommissie die op grond van artikel 2 aan dat college is gekoppeld. Besluitvorming registratiecommissie Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Regeling specialismen en profielen geneeskunst</i>. 2008
Role of specific accreditation organization	to assess applications for accreditation; to review accredited programs or settings
Composition of specific accreditation organization	ART5 1. De colleges en registratiecommissies bestaan uit stemgerechtigde leden en adviseurs. 2. Een lid wordt door het Federatiebestuur voor vier jaar benoemd en is aansluitend eenmaal herbenoembaar.
	ART10b [By voorbeeld] het CCMS is samengesteld als volgt: 1. Leden: a. Specialisten, ingeschreven in één van de door het CCMS ingestelde registers, die niet aan een universiteit zijn verbonden, in een aantal gelijk aan het aantal hoogleraren, genoemd onder b. Het lid wordt voorgedragen door de betreffende beroepsvereniging. Het Federatiebestuur ziet bij de benoeming toe op een voldoende spreiding over de door het CCMS aangewezen specialismen; b. Hoogleraren in de geneeskunde, ingeschreven in één van de door het CCMS ingestelde registers, die aan de medische faculteit van een universiteit zijn verbonden. Elke medische faculteit draagt een lid voor; c. Een lid voorgedragen door een representatieve organisatie die de algemene ziekenhuizen vertegenwoordigt; d. Een lid voorgedragen door een representatieve organisatie die de universitair medische centra vertegenwoordigt. Adviseurs: a. Een of meer artsen die in het opleidingsregister van de MSRC staan ingeschreven, aangewezen door een representatieve organisatie die de betreffende artsen vertegenwoordigt; b. Een of meer secretarissen van de MSRC. 3. Met uitzondering van de leden, bedoeld in het eerste lid, onder c. of d., zijn de leden van het CCMS opleider of plaatsvervangend opleider, of zijn dat in de periode van vijf jaar voorafgaand aan hun benoeming, geweest. ART12b
	De MSRC is als volgt samengesteld: 1. Leden: a. Een specialist uit elk door het CCMS aangewezen specialisme, voorgedragen door de desbetreffende representatieve wetenschappelijke vereniging; b. Drie leden voorgedragen door een representatieve organisatie die de algemene ziekenhuizen vertegenwoordigt; c. Drie leden voorgedragen door een representatieve organisatie die de universitair medische centra vertegenwoordigt; d. Per profielregister één profielarts, niet behorend tot de onder a tot en met c genoemde categorieën van personen, voorgedragen door een representatieve organisatie. 2. Adviseurs: a. Een of meer artsen die in het opleidingsregister van de MSRC staan ingeschreven, aangewezen door een representatieve

	organisatie die de betreffende artsen vertegenwoordigt; b. Eén of meer secretarissen van het CCMS. Samenstelling SGRC Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Regeling specialismen en profielen geneeskunst</i>. 2008
Specific accreditation organization	N=min 10 ; Voting representative : professional Regulatory Bodies, hospital, university, medical ; advisory members : medical, professional Regulatory Bodies
Accreditation Targets	ART33 1. Een opleider, een opleidingsinrichting of een opleidingsinstituut, kan worden erkend indien voldaan wordt aan de door het desbetreffende college vastgestelde eisen. 2. Bij de beoordeling van een verzoek om (hernieuwde) erkenning kan een Regeling specialismen en profielen geneeskunst registratiecommissie een (beoogd) opleider, opleidingsinrichting en opleidingsinstituut (doen) visiteren. Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Regeling specialismen en profielen geneeskunst</i>. 2008
Accreditation Targets	Trainers; residency programs; training settings
Accreditation Criteria	
Accreditation Criteria	CANMEDS Standards
Accreditation Steps	C.18. Aanvraag erkenning 1. De aanvraag tot erkenning tot opleider, plaatsvervangend opleider, stageopleider of opleidingsinrichting wordt door de betreffende medisch specialist respectievelijk inrichting, bij de MSRC ingediend op een door de MSRC verstrekt aanvraagformulier onder overlegging van documenten waaruit blijkt dat aan de eisen en verplichtingen van dit besluit en de specifieke besluiten wordt voldaan. 2. De aanvraag voor erkenning tot opleider, plaatsvervangend opleider of stageopleider en de aanvraag voor erkenning van de inrichting tot opleidingsinrichting worden gelijktijdig bij de MSRC ingediend, tenzij de inrichting al is erkend. 3. Tenminste drie maanden voor het verstrijken van de termijn waarvoor de erkenning is verleend wordt door de betreffende opleider, plaatsvervangend opleider, stageopleider of opleidingsinrichting een schriftelijke aanvraag voor het opnieuw verlenen van de erkenning bij de MSRC ingediend. C.19. Visitatie [...] C.20. Beslissing tot erkenning 1. Indien niet aan de betreffende eisen voor erkenning is voldaan, kan geen erkenning worden verleend. 2. Indien niet aan de betreffende eisen en verplichtingen voor erkenning wordt voldaan wordt de erkenning niet opnieuw verleend.

	3. In afwijking van het eerste en tweede lid, kan de erkenning onder door de MSRC bepaalde voorwaarden opnieuw worden verleend, indien niet aan de betreffende eisen of verplichtingen voor erkenning wordt voldaan en blijkt dat de tekortkomingen incidenteel van aard of van korte duur zullen zijn. 4. De voorwaarden, bedoeld in het derde lid, zijn gericht op het herstellen van de tekortkomingen die zijn geconstateerd ten aanzien van de betreffende eisen of verplichtingen en op de wijze waarop het herstellen gedocumenteerd wordt. 5. De erkenning van de opleider, de plaatsvervangend opleider en de opleidingsinrichting geschiedt onder eensluitende voorwaarden. 6. De MSRC deelt haar beslissing, bedoeld in het eerste, tweede of het derde lid, schriftelijk mede aan de opleider, de opleidingsinrichting en de betrokken aios onder toezending van het visitatierapport. C.21. Duur erkenning 1. Een erkenning wordt voor vijf jaar verleend. 2. De MSRC kan, gehoord de plenaire visitatiecommissie van de betrokken wetenschappelijke medisch specialisten vereniging, een medisch specialist die niet of niet volledig voldoet aan de eisen voor erkenning, als opleider, plaatsvervangend opleider of stageopleider erkennen op grond van diens bijzondere kwaliteiten. 3. In afwijking van het eerste lid kan de MSRC bij een eerste erkenning besluiten tot een erkenning voor een kortere periode dan vijf jaar. 4. In afwijking van het eerste lid kan de MSRC een erkenning opnieuw verlenen voor een kortere periode, indien niet aan de verplichtingen voor erkenning wordt voldaan en uit de bevindingen van de visitatiecommissie blijkt dat de tekortkomingen incidenteel van aard of van korte duur zullen zijn. 5. De duur van een erkenning van een opleider, plaatsvervangend opleider of stageopleider kan niet de resterende duur van een bestaande erkenning van een opleidingsinrichting, waaraan de opleider is verbonden, overstijgen. C.22. Ingangsdatum erkenning 1. Indien een erkenning voor de eerste maal wordt verleend bepaalt de MSRC de ingangsdatum van de erkenning. 2. Indien een erkenning opnieuw wordt verleend geldt deze vanaf de einddatum van de vorige erkenning. C.23. Eén opleidingsinrichting 1. De erkenning als opleider wordt in verband met één opleidingsinrichting gegeven. Deze opleidingsinrichting kan op verschillende locaties gehuisvest zijn. 2. (vervallen) C.24. Alle onderdelen opleiding 1. De erkenning van een inrichting als opleidingsinrichting wordt verleend voor het volgen van alle onderdelen van de opleiding in een medisch specialisme. 2. In afwijking van het eerste lid kan een inrichting als opleidingsinrichting worden erkend voor het volgen van een gedeelte van de opleiding of een stage in een medisch specialisme C.25. Koppeling erkenning opleider en opleidingsinrichting
--	---

	1. Indien de erkenning van de opleidingsinrichting vervalt, vervalt de erkenning van de opleider, de plaatsvervangend opleider of de stageopleider voor dat medisch specialisme met ingang van dezelfde datum. 2. Zodra de opleidingsinrichting niet voldoet aan de erkenningeis, bedoeld in artikel C.10., eerste lid onder f, en niet is voorzien in waarneming als bedoeld in artikel C.6., vervalt de erkenning van de opleidingsinrichting voor dat medisch specialisme met ingang van dezelfde datum. C.26. Tussentijdse wijziging erkenning 1. Indien de opleider, plaatsvervangend opleider, stageopleider of de opleidingsinrichting de in dit besluit en de specifieke besluiten omschreven eisen en verplichtingen niet nakomt, kan de MSRC besluiten de erkenning: a. voor een nader te bepalen periode te schorsen; b. tussentijds in te trekken; c. om te zetten in een erkenning voor een kortere periode of onder door haar bepaalde voorwaarden. 2. In de gevallen, bedoeld in het eerste lid, onder b en c, wordt eerst een visitatierapport opgemaakt alvorens de MSRC ter zake een beslissing neemt. 3. De MSRC deelt haar terzake genomen beslissing, bedoeld in het eerste lid, schriftelijk mede aan de opleider, de opleidingsinrichting en de betrokken aios onder toezending van het visitatierapport. 4. Indien de erkenning van de opleidingsinrichting wordt geschorst of tussentijds wordt ingetrokken, kunnen vanaf dat moment geen nieuwe aios in opleiding worden genomen. C.27. Einde van rechtswege De erkenning van de opleider eindigt van rechtswege: a. bij overlijden van de opleider; b. indien de opleider ingevolge een in kracht van gewijsde gegane rechterlijke uitspraak onder curatele is gesteld wegens geestelijke stoornis; c. indien de opleider ingevolge een in kracht van gewijsde gegane rechterlijke uitspraak al dan niet tijdelijk de bevoegdheid om zijn medisch specialisme uit te oefenen is ontnomen; d. indien een opleider zijn taak neerlegt of zijn arbeidsovereenkomst wordt beëindigd; e. indien de opleider of de opleidingsinrichting gedurende twee achtereenvolgende jaren geen aios meer heeft opgeleid; f. indien geen aanvraag voor vernieuwing van een erkenning wordt aangevraagd. C.28. Voortzetting opleiding bij einde erkenning :1. In geval de erkenning niet opnieuw is verleend, is geschorst, is geëindigd van rechtswege of is ingetrokken zal de MSRC, voor zover nodig in overleg met de betrokken aios, nader bepalen op welke wijze zij hun opleiding kunnen voortzetten. 2. De MSRC kan indien zich een situatie voordoet, bedoeld in het eerste lid, en de aios onevenredig wordt benadeeld van de voor de opleiding gestelde bepalingen ontheffing verlenen. Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Besluit van 9 februari 2004 houdende de algemene eisen voor de opleiding, registratie en herregistratie van medisch specialisten en voor de erkenning van opleiders, plaatsvervangend opleiders, stageopleiders en opleidingsinrichtingen</i>
Accreditation evidences	internal survey; (triggered) visitation report

Accreditation validity	5 years
Visitation	Ten behoeve van de opleidingsvisitatie geeft de aios de leden van de opleidingsvisitatiecommissie inzage in zijn portfolio. De leden van de visitatiecommissie gaan daarbij vertrouwelijk om met het portfolio. Het gaat om een controle 'op hoofdlijnen'; de inzage betreft de systematiek van het portfolio. De 'omvang' van deze inzage is dan ook niet anders dan het geval is bij de beoordeling van de ziektegeschiedenissen van artikel B.5. lid 1 aanhef en onder o. Kaderbesluit CCMS. Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Besluit van 6 oktober 2006 tot vaststelling van beleidsregels met betrekking tot de (wijziging van de) inschrijving in het opleidingsregister en de opleiding tot medisch specialist</i> C.19. Visitatie 1. Alvorens een erkenning wordt verleend of opnieuw wordt verleend doet de MSRC nader onderzoek. 2. Alvorens een erkenning als opleidingsinrichting voor de eerste maal wordt verleend wordt de inrichting gevisiteerd. 3. Indien een erkenning al eerder is verleend kan de opleider, plaatsvervangend opleider of de opleidingsinrichting worden gevisiteerd. 4. Gedurende de periode van de erkenning kan de MSRC tussentijds visitaties laten uitvoeren. 5. De MSRC kan het onderzoek en de visitatie, bedoeld in het eerste, tweede en derde lid, zelf uitvoeren of de visitatie door een of meer visitatoren laten uitvoeren. 6. Tijdens het onderzoek of de visitatie verkrijgen de MSRC of de visitatoren inzage in alle noodzakelijke stukken voor de erkenning en hebben toegang tot de gehele inrichting. Tevens zijn de aanvragers beschikbaar voor de MSRC of de visitatiecommissie. 7. Ter uitvoering van de visitaties stelt de MSRC nadere voorschriften vast. Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Besluit van 9 februari 2004 houdende de algemene eisen voor de opleiding, registratie en herregistratie van medisch specialisten en voor de erkenning van opleiders, plaatsvervangend opleiders, stageopleiders en opleidingsinrichtingen</i> Visitatie 'nieuwe stijl' Zoals het er nu naar uitziet gaan de visitatoren van de MSRC vanaf 1 januari 2011 over op een systematiek die meer aansluit bij de moderne, competentiegerichte vervolgopleiding, waarin een centrale rol is weggelegd voor het geven en ontvangen van feedback. Kern van deze andere manier van visiteren is zelfreflectie: de opleiders/opleidingsgroep en aios beoordelen zelf de opzet, inhoud en uitvoering van hun opleiding. De externe visitatoren van de MSRC toetsen vervolgens hoe deze beoordeling is verlopen en wat de opleiders/opleidingsgroep en aios met de resultaten van hun beoordeling hebben gedaan. http://knmg.artsennet.nl/Opleiding-en-Registratie/modernisering/Visitatie-nieuwe-stijl.htm
Visitation members	

Trainers accreditation	C.1. De eisen voor erkenning De MSRC erkent een medisch specialist als opleider indien hij aan de volgende algemene eisen voldoet: a. hij is ten minste vijf jaar voor het medische specialisme waarvoor hij als opleider erkend wil worden, en niet tevens voor een ander medisch specialisme, in het desbetreffende register van medisch specialisten ingeschreven en actief als medisch specialist werkzaam; b. hij beschikt over didactische kwaliteiten; c. hij beschikt over organisatorische kwaliteiten; d. hij is wetenschappelijk actief en heeft wetenschappelijke interesse; e. hij is bereid co-assistenten en aios op te leiden; f. hij is in een voor het betreffende medisch specialisme erkende opleidingsinrichting werkzaam op een zodanige wijze dat hij de eindverantwoordelijkheid als opleider daadwerkelijk en naar behoren kan dragen; g. hij is lid van de betreffende wetenschappelijke specialistenvereniging; h. hij voert gestructureerd overleg met andere relevante hulpverleners; i. hij maakt deel uit van en geeft leiding aan een opleidingsgroep als bedoeld in artikel C.2. en legt de specifieke taken en verplichtingen van leden van de opleidingsgroep schriftelijk vast; j. hij is op aanwijzing van de MSRC bereid aios op te leiden, die een nieuwe opleidingsplaats zoeken in het geval een aios door de CvG in het gelijk is gesteld of in de gevallen als bedoeld in artikel C.28. Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Besluit van 9 februari 2004 houdende de algemene eisen voor de opleiding, registratie en herregistratie van medisch specialisten en voor de erkenning van opleiders, plaatsvervangend opleiders, stageopleiders en opleidingsinrichtingen</i>
Trainers accreditation	minimum length of practice; educational aptitudes; involved in research activities
Logbook	ARTIKEL 2 Plichten van de aios: portfolio Beleidsregel bij artikel B.5. lid 1 aanhef en onder g. Kaderbesluit CCMS. 1. Het portfolio is eigendom van de aios. 2. De (plaatsvervangend) opleider is uit hoofde van zijn functie gerechtigd tot inzage in het portfolio. De overige leden van de opleidingsgroep zijn tot inzage in het portfolio gerechtigd indien en voor zover dat= nodig is om hun plichten uit het Kaderbesluit CCMS na te kunnen komen. 3. Ten behoeve van de opleidingsvisitatie geeft de aios de leden van de opleidingsvisitatiecommissie inzage in zijn portfolio. De leden van de visitatiecommissie gaan daarbij vertrouwelijk om met het portfolio. Het gaat om een controle 'op hoofdlijnen'; de inzage betreft de systematiek van het portfolio. De 'omvang' van deze inzage is dan ook niet anders dan het geval is bij de beoordeling van de ziektegeschiedenissen van artikel B.5. lid 1 aanhef en onder o. Kaderbesluit CCMS. 4. Elke bij de opleiding van de aios betrokken opleider dient zich ervan te vergewissen dat voor dat gedeelte van de opleiding waarvoor hij verantwoordelijk is het portfolio van de aios volledig en juist is. Dit blijkt bij voorkeur uit een paraaf van de betreffende opleider in het portfolio. 5. Met het bepaalde in het vierde lid kan door de oordelend opleider worden voldaan aan het bepaalde in artikel B.9. lid 3 Kaderbesluit CCMS. ARTIKEL 4 Jaarlijkse beoordeling

	Beleidsregel bij artikel B.7. Kaderbesluit CCMS. De opleider dient jaarlijks, aan het eind van elk volgend opleidingsjaar, de aios te beoordelen. Deze beoordeling wordt vastgelegd op een formulier en wordt toegevoegd aan het portfolio. ARTIKEL 5 Eindoordeel e. de aios tenminste sedert 1 januari 2005 een volledig en correct portfolio heeft bijgehouden; Koninklijke Nederlandsche Maatschappij tot bevordering der Geneeskunst, <i>Besluit van 6 oktober 2006 tot vaststelling van beleidsregels met betrekking tot de (wijziging van de) inschrijving in het opleidingsregister en de opleiding tot medisch specialist</i>
Logbook/portfolio	"Portfolio": planning; trainee performance assessment; may be used during visitations

3 APPENDIX CHAPTER 4 LEGISLATION: OVERVIEW OF THE SPECIFIC REGULATIONS OF MEDICAL SPECIALTIES OTHER THAN GENERAL PRACTICE

3.1 DURATION OF TRAINING FOR BASIC SPECIALIZATIONS AND PROFESSIONAL TITLES

3.1.1 Basic specializations

Basic Specialization	Duration
Forensic medicine	5 y.
Physical medicine and revalidation	5 y.
Clinical biology	5 y.
Nuclear medicine	5 y.
Gynaecology-obstetrics	5 y.
Pathological anatomy	5 y.
Pediatrics	5 y.
Child – and youth psychiatry	5 y.
Adult psychiatry	5 y.
Stomatology (diploma medicine + dentistry is required)	5 y.
X ray diagnosis	5 y.
Dermato-venereology	4 y.
Urgency medicine / Acute medicine	3 y./6 y.
Anaesthesia-resuscitation	5 y.
Surgery	6 y.
Neurology	5 y.
Radiotherapy	5 y.
Neurosurgery	6 y.
Ophthalmology	4 y.
Orthopaedic Surgery	6 y.
Otorhinolaryngology	5 y.
Reconstructive and aesthetic surgery	6 y.
Urology	6 y.
Internal medicine	5 y.
Cardiology	6 y.
Gastro-enterology	6 y.
Geriatrics	6 y.
Medical oncology	6 y.
Pneumology	6 y.
Rheumatology	6 y.
Management of health data	2 y. practical training (1 y) can be followed during training for basic specialization
Insurance medicine and medical expertise	3 y. practical training (1 y) can be followed during training for basic specialization
Neuropsychiatrics	
Labor medicine	4 y.

3.1.2 Particular professional titles

Basic specialization	Particular professional title	Duration
Internal medicine	Endocrinology-diabetology	2 y. at least one year has to be completed after the homologation as medical specialist in internal medicine
Stomatology	Maxilla-facial surgery	2,5 y.
Internal medicine	Nefrology	2 y, at least one year has to be completed after the homologation as medical specialist in internal medicine
Neurology or paediatrics	Pediatric neurology	2 y
Anaesthesia-resuscitation Internal medicine Cardiology Gastro-enterology Neurology Pneumology Rheumatology Surgery Neurosurgery Urology Orthopaedic surgery Reconstructive and aesthetic surgery Paediatrics	Urgency medicine	2y; at least one year has to be completed after the homologation as medical specialist in the basic specialization
Anaesthesia-resuscitation Internal medicine Cardiology Gastro-enterology Neurology Pneumology Rheumatology Surgery Neurosurgery Urology Orthopaedic surgery Reconstructive and aesthetic surgery Paediatrics	Intensive care	- 2 y, at least one year has to be completed after the homologation as medical specialist in the basic specialization - 1 year for specialists in urgency medicine
Internal medicine	Clinical hematology	2 y., at least one year has to be completed after the homologation as medical specialist in internal medicine
Surgery Neurosurgery Reconstructive and aesthetic surgery Dermato-vererology Gyneacology-obstetrics Orthopaedic surgery Otorhinolaryngology Stomatology Urology Ophtalmology Pneumology Gastro-enterology Neurology	Oncology	2 y, at least one year has to be completed after the homologation as medical specialist in the basic specialization
Paediatrics	Neonatology	2 y, at least one year has to be completed after the homologation as medical

		specialist in paediatrics
Paediatrics	Paediatric hematology and oncology	2 y, at least one year has to be completed after the homologation as medical specialist in paediatrics
Clinical biology	Nuclear in vitro medicine	- Medical specialists in clinical biology: 1y training in application of radioisotopes Theoretical and practical training in radiation protection and radiation physics - Trainees in clinical biology Training during the training for clinical biology specialization Theoretical and practical training in radiation protection and radiation physics

3.2 TRAINERS: APPOINTMENT POLICY AND OBLIGATIONS

3.2.1 Appointment

For most of the specialties the trainer has to work at the service where training is given on a full time basis and spend most (for some specialisms this is specified – e.g. labour medicine: 80%) of his time at clinical activities related to his specialty and for some specialties to (e.g. Gastro-enterology, Paediatric haematology and oncology) the outpatient and the technical activities related to his specialism. For dermato-veneorology, the Superior Court can homologate trainers that are head of an outpatient department on a full time or part time basis. For some disciplines, trainers have to be head of service (e.g. pediatric neurology, emergency and acute medicine, neonatology). Trainers in emergency and acute medicine have to participate to the set up of an emergency plan for the hospital services of the hospital where the emergency department is linked to. Trainers in oncology have to prove scientific activities in oncology. Moreover additional specific criteria can be set by the Minister of Health Affairs after an advice of the Superior Council. These criteria are different according to the basic specializations, required for the training for oncologist. Trainers in clinical biology have to prove special education in the section or sections of clinical biology that he teaches upon to the trainees, as far as the laboratory performs sufficiently diversified analyses. Trainers for adult psychiatry or child psychiatry have to be commonly known as primarily active in adult or respectively child psychiatry.

3.2.2 Obligations and development of trainers

For some disciplines (e.g. Urology, dermato-venereology) it is specified that trainers have to make sure that trainees keep familiar with other related medical and surgical disciplines and that they participate to the interventions related to the respective discipline at the emergency service. Regulation with regard to X-ray diagnosis specifies that trainers have to organize seminars and arrange that trainees can participate to interdisciplinary radio-clinical meetings.

Moreover some trainers have to guarantee that all areas of the respective discipline are covered (e.g. psychiatry, neurology). Trainers for some disciplines (e.g. anesthesiology, cardiology) have to participate to the activities for emergency care and intensive care, to which the trainees assist. Trainers for oncology have to participate to an oncological care programme.

4 APPENDIX CHAPTER 5: BELGIAN SITUATION

Websites of the universities - PME training

University	Information GP training	Information other specialties
Universiteit Antwerpen (UA)	http://www.ua.ac.be/main.aspx?c=.STUDKIEZ&n=66244&ct=63422	http://www.ua.ac.be/main.aspx?c=.OOD2009&n=76597
Universiteit Gent (UG)	http://www.opleidingen.ugent.be/studiekiezer/nl/opl/dnhuis.htm	http://www.opleidingen.ugent.be/studiekiezer/nl/grade/mama.htm
Katholieke Universiteit Leuven (KUL)	http://www.kuleuven.be/onderwijs/aanbod/opleidingen/N/CQ_50268790.htm	http://www.kuleuven.be/onderwijs/aanbod/opleidingen/N/CQ_50812436.htm
Vrije Universiteit Brussel (VUB)	http://www.vub.ac.be/infoover/onderwijs/bama/of-mnm-huisartsgeneeskunde.html	http://www.vub.ac.be/infoover/onderwijs/bama/of-mnm-specialisticheneeskunde.html
Université Libre de Bruxelles (ULB)	http://www.ulb.ac.be/facs/medecine/publics/vous-etes-candidat-specialiste.html	http://www.ulb.be/facs/medecine/publics/vous-etes-candidat-specialiste.html
Université Catholique de Louvain-la-Neuve (UCL)	http://www.uclouvain.be/prog-2009-mege2mc.html	http://www.uclouvain.be/243236.html
Université de Liège (Ulg)	http://www2.ulg.ac.be/aacad/prog-cours/medecine/conditions_acces.pdf	http://www2.ulg.ac.be/aacad/prog-cours/medecine/MedHome.html
Interuniversity organisation (GP) ISHO/ICHOvzw	http://www.icho-info.be/	
Trainers (GP)	http://www.overstag.be/	
Trainees (GP)	http://www.hiboforum.ixinu.be/forum/login.php?redirect=viewforum.php&f=6&start=0	

5 APPENDIX CHAPTER 6: RESULTS OF THE SURVEY AMONG RECOGNITION COMMISSIONS

5.1 SPECIALTIES

	Frequency
Anatomie pathologique (FR)	1
Anesthésie-Réanimation (FR)	1
Arbeidsgeneeskunde (NL)	1
Bijzondere beroepstitel Intensieve Zorg (NL)	1
Cardiologie (FR)	1
Cardiologie (NL)	1
Chirurgie (FR)	1
Dermato-Venereologie (NL)	1
Fysische geneeskunde en revalidatie (NL)	1
Gastro-Entérologie (FR)	1
Gastro-enterologie (NL)	1
Gériatrie (FR)	1
Gynaecologie-Verloskunde (NL)	1
Heelkunde 140 (NL)	1
Huisartsen (NL)	1
Huisartsgeneeskunde (NL)	1
Imagerie Médicale (FR)	1
Kindergeneeskunde (NL)	1
Klinische Biologie (NL)	1
Médecine du travail (FR)	1
Médecine Générale (FR)	1
Médecine légale (FR)	1
Médecine Nucléaire (FR)	1
Médecine physique et réadaptation fonctionnelle (FR)	1
Médecins ayant une qualification particulière en gestion de données de santé (FR)	1
Medische Oncologie (NL)	1
Neurochirurgie (NL)	1
Neurologie (NL)	1
Oftalmologie (NL)	1
Oncologie Médicale (FR)	1
Oto-rhino-laryngologie (FR)	1
Otorhinolaryngologie (NL)	1
Pathologische anatomie (NL)	1
Pédiatrie (FR)	1
Plastische, reconstructieve en Esthetische heelkunde (NL)	1
Pneumologie (FR)	1
Pneumologie (NL)	1
Psychiatrie (FR)	1
Psychiatrie volwassene en kinder- en jeugd (NL)	1
Radiodiagnose (NL)	1
Radiothérapie-Oncologie (FR)	1
Reumatologie (NL)	1
Soins intensifs (FR)	1
Specialist in de Urgentiegeneeskunde - Specialist in de Acute Geneeskunde - Bijz	1
Stomatologie et chirurgie orale et maxillo-faciale (FR)	1
Urologie (FR)	1
Urologie (NL)	1
Total	47

5.2 FORMATION PEDAGOGIQUE DES MAITRES DE STAGE?

	Frequency	Pct
Non réponse	1	2,1%
ik weet het niet	3	6,4%
ja	6	12,8%
Neen	15	31,9%
Non	19	40,4%
oui	3	6,4%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
Non réponse	1	2,1%
ik weet het niet	3	6,4%
ja /oui	9	19,1%
neen /non	34	72,3%
Total	47	100,0%

A quelle fréquence ?

	Frequency	Pct
Non réponse	37	
< 1x	1	2,1%
= 1x /une fois par an	3	6,4%
> 1x /plus d'une fois par an	6	12,8%
Total/ interrogés	47	

Interrogés : 47 / Répondants : 10 / Réponses : 10
 Pourcentages calculés sur la base des interrogés

5.3 TEMPS MINIMUM PAR SEMAINE SPECIFIE PAR LA COMMISSION

	Frequency	Pct
Non réponse	2	4,3%
ja	4	8,5%
je ne sais pas	1	2,1%
neen	21	44,7%
non	17	36,2%
oui	2	4,3%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
Non réponse	2	4,3%
ja /oui	6	12,8%
je ne sais pas	1	2,1%
neen /non	38	80,9%
Total	47	100,0%

5.4 EVALUATION DE LA QUALITE DES MAITRES DE STAGES PAR LA COMMISSION

	Frequency	Pct
ik weet het niet	 1	2,1%
ja	 9	19,1%
neen	 15	31,9%
non	 12	25,5%
oui	 10	21,3%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
ik weet het niet	 1	2,1%
ja /oui	 19	40,4%
neen /non	 27	57,4%
Total	47	100,0%

5.5 EVALUATION DE LA QUALITE DES LIEUX DE STAGE PAR UN ORGANISME EXTERNE

	Frequency	Pct
ik weet het niet	 4	8,5%
Ja	 5	10,6%
Neen	 16	34,0%
Non	 17	36,2%
Oui	 5	10,6%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
ik weet het niet	 4	8,5%
ja /oui	 10	21,3%
neen /non	 33	70,2%
Total	47	100,0%

5.6 EVALUATION DE LA QUALITE DES LIEUX DE STAGE PAR LA COMMISSION

	Frequency	Pct
Ja	 12	25,5%
Neen	 13	27,7%
Non	 11	23,4%
Oui	 11	23,4%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
ja /oui	 23	48,9%
neen /non	 24	51,1%
Total	47	100,0%

5.7 ORGANISME EXTERNE POUR L'EVALUATION DE LA QUALITE DES LIEUX DE STAGES

	Frequency	Pct
Non réponse	 2	4,3%
ik weet het niet	 4	8,5%
ja	 5	10,6%
je ne sais pas	 1	2,1%
Neen	 16	34,0%
Non	 12	25,5%
oui	 7	14,9%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
Non réponse	 2	4,3%
ik weet het niet /je ne sais pas	 5	10,6%
ja /oui	 12	25,5%
neen /non	 28	59,6%
Total	47	100,0%

5.8 EVALUATION DES MEDECINS ASSISTANTS AU SUJET DE LA QUALITE DU LIEU DE STAGE

	Frequency	Pct
ik weet het niet	 1	2,1%
Ja	 14	29,8%
je ne sais pas	 2	4,3%
Neen	 10	21,3%
non	 1	2,1%
Oui	 19	40,4%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
ik weet het niet /je ne sais pas	 3	6,4%
ja /oui	 33	70,2%
neen /non	 11	23,4%
Total	47	100,0%

5.9 EVALUATION A LA FIN DU PARCOURS

	Frequency	Pct
ik weet het niet	 1	2,1%
Ja	 23	48,9%
Neen	 1	2,1%
Non	 3	6,4%
Oui	 19	40,4%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
ik weet het niet	 1	2,1%
ja /oui	 42	89,4%
neen /non	 4	8,5%
Total	47	100,0%

5.10 SUPPORT AUX ASSISTANTS EN CAS DE PROBLEME

	Frequency	Pct
Non réponse	1	2,1%
ik weet het niet	1	2,1%
Ja	22	46,8%
je ne sais pas	2	4,3%
Neen	1	2,1%
Non	2	4,3%
Oui	18	38,3%
Total	47	100,0%

Idem (Recodage)

	Frequency	Pct
Non réponse	1	2,1%
ik weet het niet /je ne sais pas	3	6,4%
ja /oui	40	85,1%
neen /non	3	6,4%
Total	47	100,0%

6 APPENDIX CHAPTER 7. KEY INFORMANTS

6.1 KEY INFORMANT LIST

Name	Function	Contacted as
Dr. Guy De Roy	Ondervoorzitter Nederl. Kamer - Hoge Raad	High Council representative
Dr. Yves Bottu	Vice-président Chambre Francophone - Conseil Supérieur	High Council representative
Xavier Van Cauter	Coordinateur Legal Management, DG II Soins de Santé primaires et Gestion de Crise, SPF Santé publique, Sécurité de la Chaîne alimentaire et Environnement	Federal Public Service - Public Health
Dr. Jan Heyrman	Em. Professor (KUL)	GP Trainer
Dr. Michel Roland	Médecin généraliste	GP Trainer
Dr. Michelle Nisolle	Professeur Gynécologie Obstétrique (ULG)	Academic Teacher
Dr. Paul Broos	Coördinerend stagemeester heekunde U.Z.Leuven (KUL)	Trainer
Dr. Stéphanie Jacquinet	Assistante première année en médecine générale (UCL)	GP trainees representative (in CCFFMG)
Dr. Elodie Brunel	Assistante premier master complémentaire en médecine générale (ULG)	GP trainees representative (in CCFFMG)
Dr. Roel Van Giel	Huisart in opleiding. Voorzitter van het HIBOFORUM.	GP trainees representative (HIBOFORUM)
Dr. Emmanuel André	Président du Groupement des assistants du réseau hospitalier de St-Luc (UCL)	Trainee representative (GALUC)
Dr. Hylke de Jonge	Bestuurslid Leuvense Vereniging van Geneesheer Assistenten (KUL)	Trainee representative (LVGA)
Dr. Daniel Désir	Directeur général médical de l'hôpital Brugmann	Director of hospital
Dr. Jo Leysen	Medisch directeur van ZHN Turnhout	Director of hospital
Dr. Gustave Moonen	Doyen de la Faculté de Médecine (ULG)	Dean
Dr. Eric Mortier	Dekaan van Faculteit Geneeskunde en Gezondheidswetenschappen (UGENT)	Dean
Dr. Anne Gillet-Verhaegen	Vice-présidente du Groupement belge des Omnipraticiens (GBO); maître de stage en médecine générale	GP Union representative
Dr. Marc Moens	Ondervoorzitter Belgische Vereniging van Artsensyndicaten	Union representative
Bruno Fonteyn	Avocat - CMS DeBacker	Lawyer
Pierre Slegers	Avocat - CMS DeBacker	Lawyer
Dr. Patrick De Coster	Directeur médical hôpital Mont-Godinne (UCL); président du Réseau Santé Louvain (UCL)	Academic initiative
Philippe Rouard	Coordinateur général du Réseau Santé Louvain (UCL)	Academic initiative

6.2 WHO-WFME GUIDELINES FOR ACCREDITATION

The WHO/WFME Guidelines for Accreditation of Basic Medical Education are available on : <http://www.wfme.org/>

As specified in page 4, “the guidelines for basic medical education could also be used in accrediting postgraduate medical education and continuing professional development (CPD) of physicians”.

1. Lorant V GC, D'Hoore W, Sauwens D, Remmen R, Peremans L, et al. Huisartsgeneeskunde: aantrekkingskracht en beroepstrouw bevorderen Health Services Research (HSR). Brussel: Federaal Kenniscentrum voor de Gezondheidszorg (KCE); 2008. KCE reports 90A (D/2008/10.273/63).
2. Di Francesco L, Pistoria MJ, Auerbach AD, Nardino RJ, Holmboe ES. Internal medicine training in the inpatient setting. A review of published educational interventions. *J Gen Intern Med.* 2005;20(12):1173-80.
3. Byrne AJ, Pugsley L, Hashem MA. Review of comparative studies of clinical skills training. *Medical Teacher.* 2008;30(8):764-7.
4. Issenberg SB, McGaghie WC, Petrusa ER, Gordon DL, Scalese RJ. Features and uses of high-fidelity medical simulations that lead to effective learning: A BEME systematic review. *Medical Teacher.* 2005;27(1):10-28.
5. Coomarasamy A, Khan KS. What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. *BMJ.* 2004;329(7473):1017.
6. Flores-Mateo G, Argimon JM. Evidence based practice in postgraduate healthcare education: a systematic review. *BMC Health Services Research.* 2007;7:119.
7. Lynagh M, Burton R, Sanson-Fisher R. A systematic review of medical skills laboratory training: Where to from here? *Medical Education.* 2007;41(9):879-87.
8. Chakraborti C, Boonyasai RT, Wright SM, Kern DE. A systematic review of teamwork training interventions in medical student and resident education. *J Gen Intern Med.* 2008;23(6):846-53.
9. Bowen JL, Irby DM. Assessing quality and costs of education in the ambulatory setting: a review of the literature. *Acad Med.* 2002;77(7):621-80.
10. Kennedy TJT, Regehr G, Baker GR, Lingard LA. Progressive independence in clinical training: a tradition worth defending? *Acad Med.* 2005;80(10 Suppl):S106-11.
11. Cannon GW, Keitz SA, Holland GJ, Chang BK, Byrne JM, Tomolo A, et al. Factors determining medical students' and residents' satisfaction during VA-based training: findings from the VA Learners' Perceptions Survey. *Acad Med.* 2008;83(6):611-20.
12. McKinley RK, Strand J, Ward L, Gray T, Alun-Jones T, Miller H. Checklists for assessment and certification of clinical procedural skills omit essential competencies: A systematic review. *Medical Education.* 2008;42(4):338-49.
13. Carraccio C, Englander R. Evaluating competence using a portfolio: A literature review and web-based application to the ACGME competencies. *Teaching & Learning in Medicine.* 2004;16(4):381-7.
14. Lurie SJ, Mooney CJ, Lyness JM. Measurement of the general competencies of the accreditation council for graduate medical education: a systematic review. *Acad Med.* 2009;84(3):301-9.
15. Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA.* 2002;287(2):226-35.
16. Kogan JR, Holmboe ES, Hauer KE. Tools for Direct Observation and Assessment of Clinical Skills of Medical Trainees: A Systematic Review. *JAMA.* 2009;302(12):1316-26.
17. Lynch DC, Surdyk PM, Eiser AR. Assessing professionalism: A review of the literature. *Med Teach.* 2004;26(4):366-73.
18. Hutchinson L, Aitken P, Hayes T. Are medical postgraduate certification processes valid? A systematic review of the published evidence. *Med Educ.* 2002;36(1):73-91.
19. Murphy DJ, Bruce DA, Mercer SW, Eva KW. The Reliability of Workplace-Based Assessment in Postgraduate Medical Education and Training: A National Evaluation in General Practice in the United Kingdom. *Adv Health Sci Educ Theory Pract.* 2009;14(2):219-32.

20. Veloski J, Boex JR, Grasberger MJ, Evans A, Wolfson DW. Systematic review of the literature on assessment, feedback and physicians' clinical performance*: BEME Guide No. 7. *Medical Teacher*. 2006;28(2):117-28.
21. Hamdy H, Prasad K, Anderson B, Scherpbier A, Williams R, Zwierstra R, et al. BEME systematic review: Predictive values of measurements obtained in medical schools and future performance in medical practice. *Medical Teacher*. 2006;28(2):103-16.
22. Pilotto LS, Duncan GF, Anderson-Wurf J. Issues for clinicians training international medical graduates: A sytematic review. *Medical Journal of Australia*. 2007;187(4):225-8.
23. Mitchell M, Srinivasan M, West DC, Franks P, Keenan C, Henderson M, et al. Factors affecting resident performance: development of a theoretical model and a focused literature review. *Acad Med*. 2005;80(4):376-89.
24. Yao DC, Wright SM. The challenge of problem residents. *J Gen Intern Med*. 2001;16(7):486-92.
25. Thomas NK. Resident burnout. *JAMA*. 2004;292(23):2880-9.
26. Finch SJ. Pregnancy during residency: a literature review. *Acad Med*. 2003;78(4):418-28.
27. Prins JT, Gazendam-Donofrio SM, Tubben BJ, van der Heijden FMMA, van de Wiel HBM, Hoekstra-Weebers JEHM. Burnout in medical residents: a review. *Med Educ*. 2007;41(8):788-800.
28. McCray LW, Cronholm PF, Bogner HR, Gallo JJ, Neill RA. Resident physician burnout: is there hope? *Fam Med*. 2008;40(9):626-32.
29. Fletcher KE, Underwood W, 3rd, Davis SQ, Mangrulkar RS, McMahon LF, Jr., Saint S. Effects of work hour reduction on residents' lives: a systematic review. *JAMA*. 2005;294(9):1088-100.
30. Boex JR, Leahy PJ. Understanding residents' work: moving beyond counting hours to assessing educational value. *Acad Med*. 2003;78(9):939-44.
31. Akl EA, Bais A, Rich E, Izzo J, Grant BJB, Schunemann HJ. Brief report: Internal medicine residents', attendings', and nurses' perceptions of the night float system. *J Gen Intern Med*. 2006;21(5):494-7.
32. Brunworth JD, Sindwani R. Impact of duty hour restrictions on otolaryngology training: divergent resident and faculty perspectives. *Laryngoscope*. 2006;116(7):1127-30.
33. Hutter MM, Kellogg KC, Ferguson CM, Abbott WM, Warshaw AL. The impact of the 80-hour resident workweek on surgical residents and attending surgeons. *Ann Surg*. 2006;243(6):864-71; discussion 71-5.
34. Jaggi R, Shapiro J, Weissman JS, Dorer DJ, Weinstein DF. The educational impact of ACGME limits on resident and fellow duty hours: a pre-post survey study. *Acad Med*. 2006;81(12):1059-68.
35. Wallach SL, Alam K, Diaz N, Shine D. How do internal medicine residency programs evaluate their resident float experiences? *South Med J*. 2006;99(9):919-23.
36. Post RE, Quattlebaum RG, Benich JJ, 3rd. Residents-as-teachers curricula: a critical review. *Acad Med*. 2009;84(3):374-80.
37. Dewey CM, Coverdale JH, Ismail NJ, Culberson JW, Thompson BM, Patton CS, et al. Residents-as-teachers programs in psychiatry: a systematic review. *Can J Psychiatry*. 2008;53(2):77-84.
38. Jha V, Quinton ND, Bekker HL, Roberts TE. Strategies and interventions for the involvement of real patients in medical education: A systematic review. *Medical Education*. 2009;43(1):10-20.
39. Kilminster SM, Jolly BC. Effective supervision in clinical practice settings: a literature review. *Med Educ*. 2000;34(10):827-40.
40. Bowen JL, Salerno SM, Chamberlain JK, Eckstrom E, Chen HL, Brandenburg S. Changing habits of practice. Transforming internal medicine residency education in ambulatory settings. *J Gen Intern Med*. 2005;20(12):1181-7.
41. Naccache N, Samson L, Jouquan J. Le portfolio en éducation des sciences de la santé : un outil d'apprentissage, de développement professionnel et d'évaluation. *Pédagogie médicale*. 2006;7(2):110-27.
42. Accreditation Council for Graduate Medical Education [cited 2009/11/18]. Available from: www.acgme.org/

43. European Working Time Directive [cited 2009/11/02]. Available from: <http://www.dh.gov.uk/en/Managingyourorganisation/Humanresourcesandtraining/Modernisingworkforceplanninghome/Europeanworkingtimedirective/index.htm>
44. Laurant M RD, Hermens R, Braspenning J, Grol R, Sibbald B. Substitution of doctors by nurses in primary care. *Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD001271. DOI: 10.1002/14651858.CD001271.pub2.
45. Woodrow SIMDM, Segouin CMDP, Armbruster JP, Hamstra SJP, Hodges BMDM. Duty Hours Reforms in the United States, France, and Canada: Is It Time to Refocus Our Attention on Education? [Miscellaneous]. *Academic Medicine*. 2006;81(12):1045-51.
46. Downton SB, Stokes M-L, Rawstron EJ, Pogson PR, Brown MA. Postgraduate medical education: rethinking and integrating a complex landscape.[see comment]. *Medical Journal of Australia*. 2005;182(4):177-80.
47. Beard J, Cooper N. Quality assurance. In: Cooper N, Forrest K, editors. *Essential guide to Educational Supervision in Postgraduate Medical Education*. Oxford: Blackwell Publishing; 2009. p. 135-43.

This page is left intentionally blank.

KCE reports

- 33 Effects and costs of pneumococcal conjugate vaccination of Belgian children. D/2006/10.273/54.
- 34 Trastuzumab in Early Stage Breast Cancer. D/2006/10.273/25.
- 36 Pharmacological and surgical treatment of obesity. Residential care for severely obese children in Belgium. D/2006/10.273/30.
- 37 Magnetic Resonance Imaging. D/2006/10.273/34.
- 38 Cervical Cancer Screening and Human Papillomavirus (HPV) Testing D/2006/10.273/37.
- 40 Functional status of the patient: a potential tool for the reimbursement of physiotherapy in Belgium? D/2006/10.273/53.
- 47 Medication use in rest and nursing homes in Belgium. D/2006/10.273/70.
- 48 Chronic low back pain. D/2006/10.273/71.
- 49 Antiviral agents in seasonal and pandemic influenza. Literature study and development of practice guidelines. D/2006/10.273/67.
- 54 Cost-effectiveness analysis of rotavirus vaccination of Belgian infants D/2007/10.273/11.
- 59 Laboratory tests in general practice D/2007/10.273/26.
- 60 Pulmonary Function Tests in Adults D/2007/10.273/29.
- 64 HPV Vaccination for the Prevention of Cervical Cancer in Belgium: Health Technology Assessment. D/2007/10.273/43.
- 65 Organisation and financing of genetic testing in Belgium. D/2007/10.273/46.
- 66 Health Technology Assessment: Drug-Eluting Stents in Belgium. D/2007/10.273/49.
- 70. Comparative study of hospital accreditation programs in Europe. D/2008/10.273/03
- 71. Guidance for the use of ophthalmic tests in clinical practice. D/2008/10.273/06.
- 72. Physician workforce supply in Belgium. Current situation and challenges. D/2008/10.273/09.
- 74 Hyperbaric Oxygen Therapy: a Rapid Assessment. D/2008/10.273/15.
- 76. Quality improvement in general practice in Belgium: status quo or quo vadis? D/2008/10.273/20
- 82. 64-Slice computed tomography imaging of coronary arteries in patients suspected for coronary artery disease. D/2008/10.273/42
- 83. International comparison of reimbursement principles and legal aspects of plastic surgery. D/2008/10.273/45
- 87. Consumption of physiotherapy and physical and rehabilitation medicine in Belgium. D/2008/10.273/56
- 90. Making general practice attractive: encouraging GP attraction and retention D/2008/10.273/66.
- 91 Hearing aids in Belgium: health technology assessment. D/2008/10.273/69.
- 92. Nosocomial Infections in Belgium, part I: national prevalence study. D/2008/10.273/72.
- 93. Detection of adverse events in administrative databases. D/2008/10.273/75.
- 95. Percutaneous heart valve implantation in congenital and degenerative valve disease. A rapid Health Technology Assessment. D/2008/10.273/81
- 100. Threshold values for cost-effectiveness in health care. D/2008/10.273/96
- 102. Nosocomial Infections in Belgium: Part II, Impact on Mortality and Costs. D/2009/10.273/03
- 103 Mental health care reforms: evaluation research of 'therapeutic projects' - first intermediate report. D/2009/10.273/06.
- 104. Robot-assisted surgery: health technology assessment. D/2009/10.273/09
- 108. Tiotropium in the Treatment of Chronic Obstructive Pulmonary Disease: Health Technology Assessment. D/2009/10.273/20
- 109. The value of EEG and evoked potentials in clinical practice. D/2009/10.273/23
- 111. Pharmaceutical and non-pharmaceutical interventions for Alzheimer's Disease, a rapid assessment. D/2009/10.273/29
- 112. Policies for Orphan Diseases and Orphan Drugs. D/2009/10.273/32.
- 113. The volume of surgical interventions and its impact on the outcome: feasibility study based on Belgian data
- 114. Endobronchial valves in the treatment of severe pulmonary emphysema. A rapid Health Technology Assessment. D/2009/10.273/39
- 115. Organisation of palliative care in Belgium. D/2009/10.273/42
- 116. Interspinous implants and pedicle screws for dynamic stabilization of lumbar spine: Rapid assessment. D/2009/10.273/46

117. Use of point-of care devices in patients with oral anticoagulation: a Health Technology Assessment. D/2009/10.273/49.
118. Advantages, disadvantages and feasibility of the introduction of 'Pay for Quality' programmes in Belgium. D/2009/10.273/52.
119. Non-specific neck pain: diagnosis and treatment. D/2009/10.273/56.
121. Feasibility study of the introduction of an all-inclusive case-based hospital financing system in Belgium. D/2010/10.273/03
122. Financing of home nursing in Belgium. D/2010/10.273/07
123. Mental health care reforms: evaluation research of 'therapeutic projects' - second intermediate report. D/2010/10.273/10
124. Organisation and financing of chronic dialysis in Belgium. D/2010/10.273/13
125. Impact of academic detailing on primary care physicians. D/2010/10.273/16
126. The reference price system and socioeconomic differences in the use of low cost drugs. D/2010/10.273/20.
127. Cost-effectiveness of antiviral treatment of chronic hepatitis B in Belgium. Part I: Literature review and results of a national study. D/2010/10.273/24.
128. A first step towards measuring the performance of the Belgian healthcare system. D/2010/10.273/27.
129. Breast cancer screening with mammography for women in the agegroup of 40-49 years. D/2010/10.273/30.
130. Quality criteria for training settings in postgraduate medical education. D/2010/10.273/35.

This list only includes those KCE reports for which a full English version is available. However, all KCE reports are available with a French or Dutch executive summary and often contain a scientific summary in English.

