



SIG F05: Assessment & monitoring in undergraduate Endodontology- towards a European standard



An ADEE/ESE Education & Scholarship Committee partnership:

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Agenda of SIG defined by ESE members

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EUROPEAN SOCIETY OF ENDODONTOLOGY

Undergraduate Curriculum Guidelines for Endodontology

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They want: Practical guidelines on HOW to implement the curriculum - achievable throughout a diverse Europe

3 year plan



Phase 1: 2014-15 Preclinical Endodontology
Phase 2: 2015-16 Clinical Endodontology
Phase 3: 2016-17 Final examinations

Phase 1 (2014):

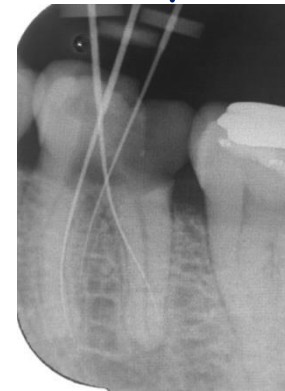
Attendance: 32 from 13 nations

Outcomes:

1. All European Dental Schools should formally assess the Endodontic knowledge & skills of their students before they treat patients.

Considerations included: patient safety; motivating student learning; promoting student self-confidence when judged as 'ready'.

2. Formal assessment allows teachers to identify students as:
 - a. Ready for supervised practice
 - b. In need of further preclinical training though no current method will eliminate all risks.
3. Students should also be assessed on broader issues of relevance to clinical practice, including communication skills, cross-infection control & local anaesthesia, but not necessarily within Endodontology.



4. Preclinical *knowledge-based* assessment should ensure that students understand:

- a. The fundamentals of endodontic disease.
- b. The fundamentals of endodontic diagnosis.
- c. The fundamentals of effective endodontic treatment.
- d. The assessment of endodontic treatment complexity.
- e. The instruments and materials employed in endodontic treatment.
- f. The technical procedures involved in non-surgical root canal treatment.
- g. The clinical signs of iatrogenic error (eg: perforation, ledge, fractured instrument).

5. Preclinical *skills-based* assessment should ensure that students can safely and effectively:
 - a. Isolate single teeth with rubber dam.
 - b. Prepare access cavities into the pulps of uncomplicated anterior and posterior teeth.
 - c. Negotiate the root canals of uncomplicated anterior and posterior teeth.
 - d. Determine working length.
 - e. Shape the root canals of uncomplicated anterior and posterior teeth.
 - f. Irrigate root canals.
 - g. Fill root canals.
 - h. Temporise and restore root canal treated anterior and posterior teeth.
 - i. Engage in reflective self-criticism of their work.
6. Skills-based assessment should be conducted in conditions that are as close to clinical reality as possible.

7. The assessment of clinical skills by direct observation, and with multiple episodes of assessment may be ideal but is resource-intensive, and impractical for many schools.
8. Criterion-based assessment of treatment stages (ie: isolation, access, working length etc) has advantages over the simple evaluation of postoperative radiographs.
9. Students should be encouraged to provide a reflective narrative to be assessed alongside their practical work - what went well, what went not so well, what they have learned.
10. Manufacturers should be encouraged to develop intelligent systems that will facilitate preclinical skills training in endodontics, and provide instantaneous feedback on performance.

Phase 2: Assessment and monitoring in clinical Endodontics (NOT finals)



Questionnaires to all Dental Schools on ESE database (n = 214)

4 reminders

Response 46/214 (21.5%)

Disappointing - so we must not over-analyse!

Some notable points:

3. Staff/student ratios for clinical endodontic treatment

Average 1:7 (range 1:3 - 1:25)

4. Do schools have rules on minimum levels clinical activity in Endo? (n= 46)

Yes	34
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No	12
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- Minimum 2 single root cases, 2 multi-root cases start to finish.
- At least one tooth each year.
- One tooth each year.
- 1 incisor, 1 premolar and 1 molar.
- 20 root canals.
- 20 root canals.
- 3 canals in 4th year and 6 canals in 5th year.
- 10 molar, 15 anterior.
- Requirements based on competencies.
- Single and molar endo to a satisfactory standard.
- 4th year: 20 root canal treatment (2 of which must be multirooted),
3 cases of direct pulp capping,
5th year: treatment of at least 60 roots, including at least 2 teeth with
periradicular pathosis, 5 cases of pulp capping, 1 intra-coronal bleaching and
1 case of post-core application
- 3 roots for the 3rd year, 8 roots for the 4th year, 12 roots for the 5th year.
- 10 canals, with a minimum of 2 multi-rooted cases.
- 20 canals or 10 multi-rooted 20 canals or 10 multi-rooted.
- Absolute minimum 1 tooth with 1-2 root and 1 molar with 3-4 root within
their first year.
- 10 root canals and 1 case of retreatment.

- Definite number of treatment on single canal teeth or premolar in 4th year; definite number of treatment on molar in 5th year and treatment of teeth with apical periodontitis and 2 retreatments (one must be on molar); one molar treated in one visit in the last (6th) year and a follow up of apical periodontitis and one surgical assistance (apicoectomy and root end fill).
- Minimum 8 canals.
- At least 16 root canals (most already accessed and dressed).
- One single or two-rooted tooth, one molar.
- 6 single-rooted, 3 molars.
- 30 premolar or anterior teeth, 10 molars.
- 7 teeth, including 4 molars.
- At least 4 clinical cases of consistent quality.
- 4 single/two rooted, 2 molars.
- 70 completed cases (primary and re-treatments).
- 4 canals per semester (16 total).
- 1 root canal treatment (generally do 1-5)
- 12 canals, including 1 molar.
- Sliding scale based on case difficulty assessment.

5. Great diversity in:

Pulp capping

Pulpotomy

Root canal re-treatment

Apexification

Perforation repair

6. Schools concerned about the limited supply of suitable student cases?

Yes	26	(n = 46)
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No	20
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How do we overcome the experience problem?

- How many cases?
- What if schools cannot supply the cases?
- What if a school exceeds a target?