



Competence and Standards: Are they enough?

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Agenda

1. Standards
2. Education
3. Certification
4. Licensure



Pathway to Professional Licensure...



What is the connection?

STANDARDS



Standards: why do they exist and where do we find them?

- Why are professional standards needed?
 - To establish and maintain competent professionals;
 - To maintain consistency and alignment;
 - To promote and protect the safety and best interest of the public.
- Standards exist in each of the accreditation, education, certification, and licensure.
 - Imposed by accrediting bodies; educational institutions; examining boards; licensing and/or regulatory bodies.



Standards: the questions...

- Are the standards promoted at each level consistent, sufficient and aligned?
- Do the current standards help professionals to establish and maintain competence?
- Are the standards required to maintain licensure sufficient or are more rigorous preconditions necessary?
- Is further development needed to maintain quality professionals and public safety?



Standards: the BIG question...

- Are our Standards enough?



EDUCATION

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Where do we begin?

Some facts about pre-doctoral dental education in North America:

- 81 accredited dental schools across Canada, the United States and Puerto Rico.
- 26,596* students were enrolled in a CODA-accredited dental education program in the United States for the 2022-23 academic year.
- 6,745* students graduated from a CODA-accredited dental program in the United States in 2023.



But how do we know that all pre-doctoral candidates are being trained adequately?

CODA



What is CODA?

- Commission on Dental Accreditation (CODA).
- Develop and implement accreditation standards to promote and monitor the continuous quality and improvement of dental education programs.
- CODA Approval:
 - ***Without reporting requirements:***
 - Programs that achieve or exceed the basic requirements for accreditation.
 - ***With reporting requirements:***
 - Programs that demonstrate deficiencies or weaknesses in one or more areas.



What are CODA's requirements for approval?

- All CODA-approved (accredited) dental programs must demonstrate:
 - Biomedical, behavioral and clinical sciences instruction with emphasis on the oro-facial complex;
 - Use of critical thinking and problem-solving;
 - Professional values and capacities associated with self-directed, life-long learning;
 - Interpersonal and communication skills to manage diverse patient populations;
 - Application of legal and regulatory concepts;



What are CODA's requirements for approval?

- All CODA-approved (accredited) dental programs must demonstrate:
 - Communication and collaboration with other health care professionals;
 - Application of basic principles and philosophies of practice management;
 - Incorporation of principles of ethical decision making and professional responsibility;
 - Provision of evidence-based patient care;
 - Assessment and management of patients with special needs;



What are CODA's requirements for approval?

- All CODA-approved (accredited) dental programs must demonstrate:
 - Delivery of oral health care within the scope of general dentistry:
 - Including (but not limited to)*:
 - Health promotion and disease prevention;
 - Assessment, diagnosis, treatment planning and prognosis;
 - Informed consent and referral and/or delivery of care;
 - Pain control and prescribing practices;
 - Management of dental emergencies;
 - Communication to support patient care.



Why is CODA important?

- CODA approval (without reporting requirements) ensures a degree of consistency between dental education programs.
- Why does this matter?
 - Dental education programs are permitted to develop their own unique curriculum.
 - Evaluation criteria can range within and between dental programs, such as:
 - Pass/Fail or Honors/Pass/Fail
 - Percentage grade scores (e.g. 80%)
 - Point scale (e.g. 1-4)
 - Requirements for specific number of procedures and/or cases



CERTIFICATION

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You've graduated from dental school, now what?

- The second step in the licensure process involves Certification.
- Certification is the responsibility of the dental examining board.
 - **Canada:** National Dental Examining Board (NDEB).
 - **United States:** Integrated National Board Dental Examination (INBDE).
- Dental examining boards hold the responsibility of credentialing professionals to assure quality of practice.



What does Certification mean?

- Certification exams are used to assess the candidate's knowledge of basic and clinical sciences at the level of the beginning practitioner.
 - Content of the exams is based on the competencies for a beginning practitioner.
- Exam focus is on the minimum acceptable level of performance in the competency domains targeted by the exams.



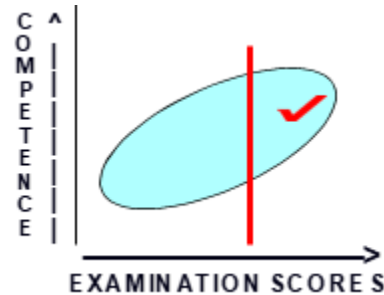
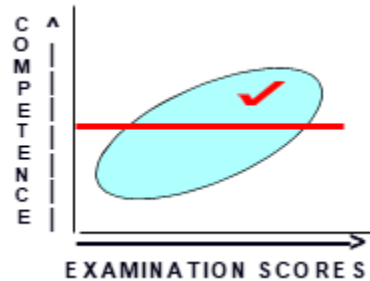
But how do we determine the minimal level of acceptable performance?

Standard Setting



What is Standard Setting?

- The minimal standard (criterion) needed to pass an assessment. For credentialing exams:
 - Not based on an arbitrary policy decision.
 - Not based on a normative method (i.e. bell curve).
- Must create a link between minimal competence and a minimum assessment score.

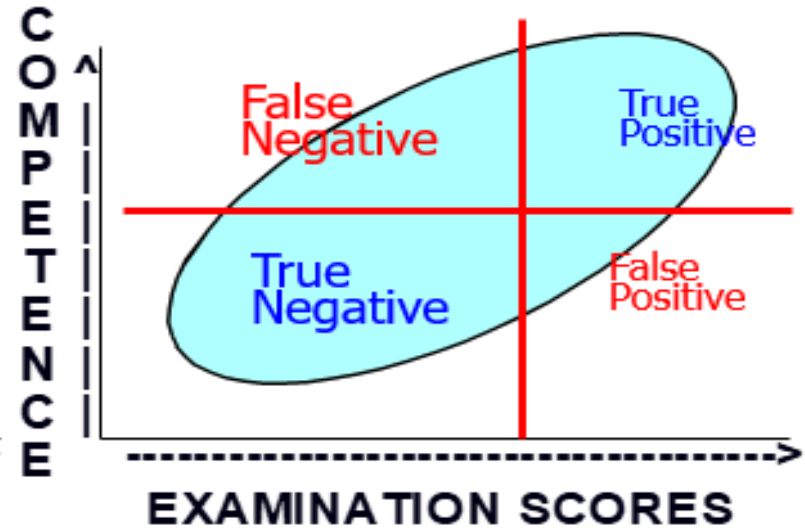
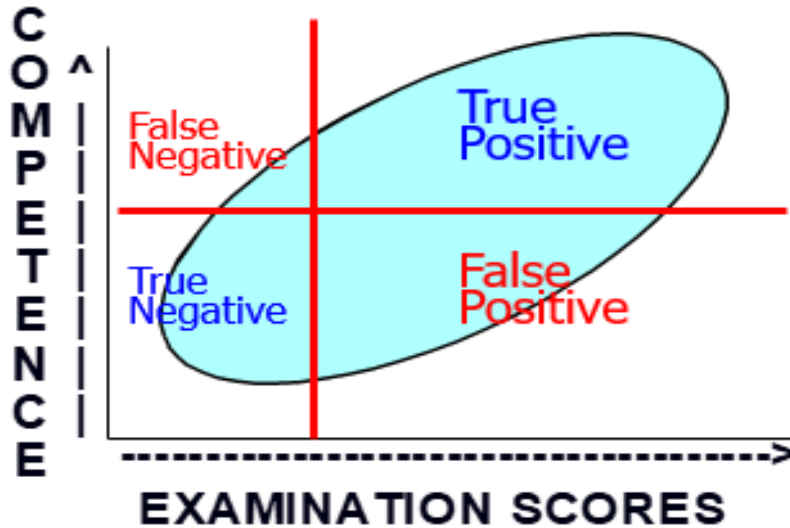


How is Standard Setting accomplished?

- Many valid standard setting methods, but Modified-Angoff method used most widely for multiple-choice question (MCQ) exams.
- Modified-Angoff method:
 - Group of expert judges determines an appropriate **pass mark** for an examination.
 - Requires discussion amongst the experts of the issues involved in credentialing; *and*
 - Evaluation/assessment of the exam through a well-defined and rational procedure.
- Setting the pass mark sets the standard of performance on which decisions will be made about a candidate's competence.



Pass Marks – The Goldilocks Principle:



What is the Modified-Angoff method?

1. Create a panel of representative and qualified subject-matter experts (SMEs);
 - Consideration must be given to panelists' age, gender, ethnicity and educational experience.
2. Discuss role of exam and ***minimal competence***;
3. Training, practice items and feedback;
4. Round 1 - Panelists rate each item – “what percentage of minimally competent candidates WILL get this question right?”;
5. Discussion of discrepancies and presentation of consequence data (e.g., pass rates, item difficulty);
6. Round 2 – Panelists re-rate each item based on consequence feedback;
7. Wrap-up and panelist feedback.



The Modified Angoff Method – Example:

	Question 1		Question 2		Question 3		Question 4		Question 5	
	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
SME 1	55	55	80	80	45	45	65	65	25	55
SME 2	60	60	85	85	40	40	70	70	90	80
SME 3	40	45	90	80	45	45	75	75	80	75
SME 4	80	70	80	80	40	40	70	70	70	75
SME 5	50	50	70	75	50	50	30	50	50	50
SME 6	60	55	90	85	45	45	65	65	65	65
Mean	57.50	55.83	82.50	80.83	44.17	44.17	62.50	65.83	63.33	66.67
SD	13.32	8.61	7.58	3.76	3.76	3.76	16.36	8.61	23.17	12.11

62.67



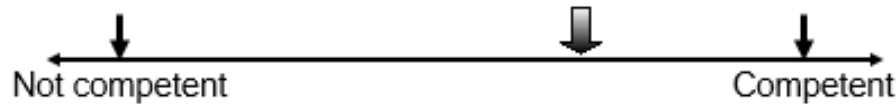
What does Minimal Competence represent?

- Minimal Competence: the ***minimal level of knowledge, skills and abilities (KSA)*** to be considered safe and effective to the public:
 - Acceptable amount of knowledge that candidates must possess;
OR
 - Acceptable level of performance they need to demonstrate despite gaps in their knowledge and clinical decision-making skills.
- Not considered incompetent or unsafe BUT also not advanced competence:
 - “Forgivable errors”.



What does Minimal Competence represent?

- Able to gather information, but not necessarily be able to integrate it.
- Does things in a very rigid and prescribed manner.
- For example, in medicine/dentistry:
 - Can deal effectively with routine situations;
 - Struggles with complicating factors such as competing priorities, lack of resources, co-morbidities, etc.
 - E.g., able to recognize that a patient is sick, but do not necessarily know why.



How is Minimal Competence established?

- Necessitates review of the minimal requirements of the profession (e.g., educational requirements, experience).
- Involves discussion with stakeholders on what is required for safe and effective practice
- Can be helped with Performance Level Descriptors, for example:

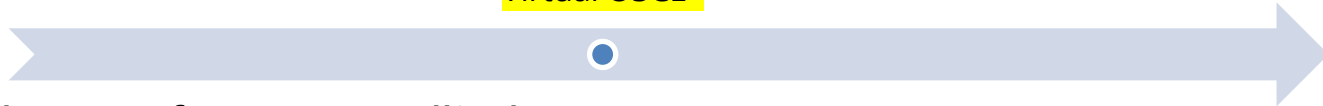
Job Task/Competency/Standard	Incompetence	Minimal Competence	Advanced Competence
<ul style="list-style-type: none">• Maintains patient confidentiality	<ul style="list-style-type: none">• Does not maintain patient confidentiality	<ul style="list-style-type: none">• Understands the importance of patient confidentiality and follows rules rigidly	<ul style="list-style-type: none">• Understands the importance of patient confidentiality but also exceptions and nuances to rules



Why does Standard Setting matter in the Certification process?

- To become a licensed dentist in Canada, candidates must successfully complete the following steps for certification:
 - Graduates of accredited programs:

Virtual OSCE®



- Graduates of non-accredited programs:

Assessment of
Fundamental Knowledge
(AFK™)*

National Dental
Examination of Clinical
Competence (NDECC®)



Assessment of
Clinical Judgment
(ACJ™)*



Virtual OSCE®

- Summative examination.
- Assesses problem solving and critical decision-making skills required of beginning dental practitioners.
- 50 single-answer multiple-choice questions.
 - Only one correct response.
 - There are no penalties for selecting an incorrect answer.
- 150 case-based questions.
 - Single/multi-answer multiple-choice questions AND short-answer questions.
- Successful completion leads to NDEB certification required for licensure.



Assessment of Fundamental Knowledge (AFK™)

- Evaluates the candidate's biomedical science and applied clinical science knowledge.
- 200 single-answer multiple-choice questions.
 - Each question has a value of one.
 - Lowest score for any question is zero.
- Candidates must pass the AFK to continue to the other examinations in the certification process.



Assessment of Clinical Judgment (ACJ™)

- Assesses the candidate's ability to formulate diagnoses and make clinical decisions.
- Evaluates the participant's knowledge in oral radiology and their ability to interpret radiographs to form diagnoses.
- 120-150 single- and multi-answer multiple-choice questions.
 - All questions have a maximum score of one and minimum score of zero.
 - For multi-answer questions:
 - All correct answers must be selected to receive the full score.
 - Selecting an incorrect answer results in a score of zero.



National Dental Examination of Clinical Competence (NDECC®)

- Assesses clinical competence of dentists trained in non-accredited programs.
- Two-day examination including two components:
 - Seven *Clinical Skills* requirements performed on manikins in a clinical setting; and
 - Ten *Situational Judgment* stations.
- Grading is performed using Pass/Fail system with critical errors.
 - Candidates receive Pass or Fail result for entire exam, as well as Pass or Fail result for each component.
- Successful completion leads to NDEB certification required for licensure.



NDECC[®] Clinical Skills Requirements

- Representative of basic skills routinely performed and required of dentists entering practice.
- Seven clinical requirements necessary for examination success:
 - Class II amalgam preparation and restoration
 - Class II and Class IV composite resin restorations
 - Endodontic (root canal) access cavity preparation
 - Crown preparation and provisional crown restoration.
- Infection Control and Safety procedures must be followed.
 - Includes working in positions appropriate for the dentist and patient.



How is grading of the Clinical Skills component accomplished?

- All seven clinical requirements must receive a passing grade for successful completion of the Clinical Skills component.
 - Candidates are permitted three Infection Control and Safety errors.
- Grading criteria describes requirements for “Competence” and “Minimal Competence”.
 - Competence represents optimal level of performance.
 - Minimal Competence describes the lowest range of knowledge, skills and abilities that are considered competent.



How is grading of the Clinical Skills component accomplished?

Grade	Category	Narrative
Pass	Competent	<ul style="list-style-type: none">• Best clinical outcome.• Optimal preparation and/or restoration. No errors.
	Minimally Competent	<ul style="list-style-type: none">• Improvements could be made but the clinical outcome is acceptable.• Some overpreparation, underpreparation, damage or tissue trauma as defined in the criteria.
Fail	Not Competent	<ul style="list-style-type: none">• Errors are correctable but indicate significant lack of clinical skills or judgement and compromise clinical outcome.• Errors are not correctable and compromise clinical outcome.• Errors requiring alternative treatment (e.g., more extensive restoration, extraction, root canal treatment).



NDECC® Situational Judgment Stations

- Ten scenarios.
- Assess candidates' knowledge, skills and abilities to manage dental practice-related situations.
- Five requirements:
 - Patient-Centered Care
 - Professionalism
 - Communication and Collaboration
 - Practice and Information Management
 - Health Promotion.



How is grading of the Situational Judgment stations accomplished?

- Minimum six stations must be passed to be successful.
 - Candidates must pass at least one station in each of five requirements.
- Grading criteria describes requirements for “Competence” and “Minimal Competence”.
 - Competence represents optimal level of performance in managing the situation presented.
 - Minimal Competence describes the lowest range of performance considered competent.



How is grading of the Situational Judgment stations accomplished?

Grade	Category	Narrative
Pass	Competent	<ul style="list-style-type: none">• Optimal. No errors.• Management of the situation follows current evidence, standards, guidelines, or best practice.
	Minimally Competent	<ul style="list-style-type: none">• Minor error(s) or omission(s) but management is within the range of acceptable practice.
Fail	Not Competent	<ul style="list-style-type: none">• Major error(s) or omission(s) that indicate a lack of knowledge or judgement.• Management is not within the range of acceptable practice.



LICENSURE

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You've completed the Certification process, now what?

- For candidates who graduated from an **accredited institution**, the minimal requirements for licensure* include successful completion of:
 - Certification exam (i.e. NDEB); *and*
 - College's Ethics & Jurisprudence course.
- If candidates were previously practicing in another jurisdiction, a Certificate of Standing from the appropriate regulatory authority is also required.



You've completed the Certification process, now what?

- For candidates who graduated from a ***non-accredited institution/foreign trained***, the minimal requirements for Licensure* include successful completion of:
 - NDEB equivalency process OR a qualifying program from an accredited university; *and*
 - College's Ethics & Jurisprudence course; *and*
 - Proof of language proficiency**.
- If candidates were previously practicing in another jurisdiction, a Certificate of Standing from the appropriate regulatory authority is also required.



Once Licensure is obtained, how is Competence maintained?

- All dentists licensed in the province with either a general or specialty certificate are required to:
 - Adhere to the ***College's Standards of Practice, Guidelines and Practice Advisories***;
and
 - Participate in the College's Quality Assurance (QA) program.



Why does the College publish guidance?

- Articulate:
 - Legal, professional and ethical obligations of dentists practicing in the province.
 - Minimum expectations of all licensed dentists in the province include:
 - Familiarity with, and an understanding of, all Standards and/or documents applicable to their practice.
 - Maintenance of skills and knowledge through continuing education and review of evidence-based literature.
- Inform dentists and the public of the expectations of the profession.
- Failure to comply with these documents and/or the generally accepted standard of practice may reflect professional misconduct.



Standards of Practice, Guidelines and Practice Advisories

Standards of Practice	Guidelines	Practice Advisories
<ul style="list-style-type: none">○ Must be maintained at all times○ Current Standards include:<ul style="list-style-type: none">• Amalgam Waste Disposal• Dental CT Scanners• Diagnosis & Management of Temporomandibular Disorders• <i>Infection Prevention and Control in the Dental Office</i>• <i>Performance of Intra-Oral Procedures that are Not Controlled Acts by Preventive Dental Assistants, Level II Dental Assistants and Registered Dental Hygienists</i>• Requesting Magnetic Resonance Imaging & Referring to Physician Specialists by Oral and Maxillofacial Surgeons• <i>Use of Sedation and General Anesthesia in Dental Practice</i>	<ul style="list-style-type: none">○ Should be considered in patient care○ Current Guidelines include:<ul style="list-style-type: none">• Conflict of Interest• <i>Dental Recordkeeping</i>• Educational Requirements & Professional Responsibilities for Implant Dentistry• Electronic Records Management• Medical History Recordkeeping Guide• <i>The Role of Opioids in the Management of Acute and Chronic Pain in Dental Practice</i>	<ul style="list-style-type: none">○ Should be considered in patient care○ Current Practice Advisories include:<ul style="list-style-type: none">• Change of Practice Ownership• <i>Informed Consent Issues Including Communication with Minors and with Other Patients Who May Be Incapable of Providing Consent</i>• <i>Maintaining a Professional Patient-Dentist Relationship</i>• Most Responsible Dentist• Postgraduate Education: Responsibilities of the Faculties• Practice Names• <i>Prevention of Sexual Abuse and Boundary Violations</i>• Professional Advertising• <i>Professional Use of Social Media</i>• <i>Release and Transfer of Patient Records</i>• Technical Service Corporations• Use of Complementary and Alternative Therapies in Dental Practice



How was the CURRENT guidance developed?

Pre-2023 Standards Review and Development Process

Overview of the Process:

- QA staff led all Standards work
- Represented professional judgment of clinical staff and College-selected “experts”
- Expert-driven
- Internally-focused
- Minimal consultation with external audience of stakeholders

Concerns with the Process:

- Inconsistent review and/or revision
- Lacked commitment to updating guidance on a regular basis
- Not reflective of best practices with respect to policy development



Modernization of Standards

- Transitioning to two document types: Standards and Resources.

Standards	Resources
To articulate mandatory expectations for practice	Include recommendations, clarification and/or companion documents (i.e. FAQs)

- To be presented in a simplified, direct and plain language format.
- Must** and **Required** will articulate mandatory expectations.
- Advised** and **Recommended** will indicate items that permit the use of reasonable discretion.



How will the FUTURE guidance be developed?

2023 Standards Review and Development Process

Overview of the Process:

- Policy staff will lead all Standards work
- Standards work will be supported by a staff clinical lead
- Working Groups to be implemented as-needed after foundation setting
 - Lead policy analyst to set foundation (i.e. empirical research, jurisdictional analysis, etc.)
- QA Committee to review and approve all Standards prior to consideration by Council
- Final approval will be sought by Council at two points:
 - i. Approval to consult externally
 - ii. Final approval
- Incorporation of Standards prioritization
 - Consideration of all resources and key emerging issues
 - Application of prioritization framework



Current RCDSO Guidance	Pre-Doctoral Curriculum	Certification
Amalgam Use and Disposal	Included	Tested
CT Scanners	Limited	Tested
Temporomandibular Joint Disorders	Limited	Tested
IPAC	Included	Tested
Delegation	Included	Not tested
MRI	Limited	Tested
Sedation and General Anesthesia	Limited	Tested
Conflict of Interest	Included	Tested
Recordkeeping/Release of Patient Records	Included	Tested
Implant Dentistry	Limited	Tested
Prescription and Use of Opioids	Included	Tested
Practice Ownership	Included	Tested
Social Media/Advertising	Included	Tested
Informed Consent	Included	Tested
Boundaries (Sexual and Non-Sexual)	Included	Tested
Most Responsible Dentist/Referrals	Included	Tested
Complementary and Alternative Therapies	Limited	Tested



Once Licensure is obtained, how is Competence maintained?

- All dentists licensed in the province with either a general or specialty certificate are required to:
 - Adhere to the College's Standards of Practice, Guidelines and Practice Advisories;
 - and*
 - Participate in the ***College's Quality Assurance (QA) program.***



What does the QA program include?

- Annual Declaration.
- Jurisprudence and Ethics course.
- Practice Enhancement Tool (PET).
- Continuing Education (CE).



Annual Declaration

- Licensees must self-declare whether they are in compliance with the QA program requirements.
 - Accomplished through completion of the online renewal questionnaire.
- Compliance involves:
 - Completion of the Practice Enhancement Tool (if selected);
and
 - Awareness of ongoing CE responsibilities.



Jurisprudence and Ethics Course

- Informs membership of:
 - Process, purpose and importance of professional regulation;
 - Ethical and legislative environment surrounding health professions;
 - Risk management strategies for safe practice;
 - Current practice norms, standards and rules of practice.
- Comprised of four sections each with its own learning objectives.
- Final scored assessment available after all sections are complete.



Practice Enhancement Tool (PET)

- Online assessment evaluating practice, knowledge, skills and judgment.
- Required by licensees once every five years (random selection).
- Based on peer-derived standards.
- 200 multiple-choice and case-study questions across 15 competency areas.
- Results can be reviewed with Practice Enhancement Consultants for interpretation and development of CE plans to address weaknesses.



Continuing Education (CE)

- 90 points required over three-year cycle in three categories:
 - Category 1: “Core” Courses
 - Minimum of 15/90 points
 - Category 2: Approved Sponsor Courses
 - Minimum of 45/90 points
 - Category 3: Other
- Maintained through online e-portfolio.



Continuing Education (CE)

Category 1	Category 2	Category 3
<ul style="list-style-type: none">• “Core Courses”• Require QA Committee approval• Offered by approved sponsors:<ul style="list-style-type: none">• Faculty or school of dentistry or medicine• International, national, provincial/state dental associations• Canadian dental or medical regulator• Canadian government agency or Canadian Forces• Qualified provider of CPR/BLS/ACLS/PALS*• Study club*• Hospital*	<ul style="list-style-type: none">• Courses and/or teaching at a university faculty of dentistry or approved institution• Offered by approved sponsors:<ul style="list-style-type: none">• Faculty or school of dentistry or medicine• International, national, provincial/state dental associations• Canadian dental or medical regulator• Canadian government agency or Canadian Forces• Qualified provider of CPR/BLS/ACLS/PALS*• Study club*• Hospital*	<ul style="list-style-type: none">• Considered as “other” courses and CE activities such as:<ul style="list-style-type: none">• General attendance at dental convention• Attendance at courses on non-clinical topics (i.e. practice management)• Courses on clinical topics offered by non-approved sponsors• Self-study on clinical topics not requiring independent assessment• Lecturing on clinical topics for non-approved sponsors• Reading approved dental journals and/or textbooks



Process of CE Course Development

1. Identification of Need (“Gap Analysis”)

- May include review of the following:
 - Needs of current professionals (i.e. emerging techniques/technologies, etc.);
 - Opportunities to improve/benefit patient care;
 - Requirements of regulatory bodies; and/or
 - Course offerings of other CE organizations.

2. ***Course Design and Development***

3. Course Delivery

4. Evaluation.



Course Design and Development

- The “meat and potatoes” of course creation.
- Review of several factors is necessary to develop a quality program:
 - Drafting course descriptions;
 - Formulating learning objectives and program goals;
 - Determining learning methods ;
 - Selecting learning technology (if applicable);
 - Preparing of course summaries*;
 - Developing tests, assessments and/or other methods of evaluation;
 - Regulatory approval and/or accreditation (if required) (i.e., Category 1 courses);
 - Other considerations (i.e. course provider, sponsorship, etc.).



Approval Criteria for Category 1 ('Core') Courses

- Broad relevance and applicability to professional practice;
- Presented in association with an approved sponsor and by providers recognized as 'experts' on the subject;
- Developed using adult learning theory and instructional design principles;
- Supported through references and/or links to educational materials;
- Bias-free and diverse*;
- Independent assessment component; and
- All-access delivery.



Approval Process of Category 1 ('Core') Courses

1. Completion of the Category 1 Course Application;
2. Submission of the completed application and supporting documents* to the College.
3. Review of all material by the QA Committee.
4. QA Committee provides formal decision.
5. Course is added to the College's list of Category 1 Courses.



Delivery requirements for Category 1 ('Core') Courses:

- Presented with an approved sponsor;
- Delivered without modifications (including the assessment);
- No conflict of interest of approved sponsor(s) and speaker(s);
- No identification of companies providing funding for the presentation^A;
- Available to all members of the College^B;
- Reflective of the diversity within the profession^C;
- Reasonable efforts to have all participants complete the assessment;
- Course certificates or proof of attendance provided; and
- Maintenance of attendee records for at least eight years following delivery.



To summarize...

- Standards are present throughout the course of professional development;
- Educational institutions implement individual program requisites, however, basic requirements must be achieved to receive accreditation approval;
- Graduates are required to demonstrate minimal competency to obtain certification;
- Candidates are eligible for licensure once certification is achieved;
- Licensed professionals are expected to maintain competence through fulfillment of continuing education requirements;
- Possible gaps exist between Standards expected of professionals and what is learned and tested during the Certification process.



Before we wrap things up...

- In 2022, in the province of Ontario:
 - **10,729 active* dentists** as of December 31, 2022;
 - **1814 investigations** were reviewed/disposed of by the Inquiries, Complaints and Reports Committee (ICRC); and
 - **16 disciplinary hearings** were conducted.



Returning to the BIG question...

Are our Standards enough?



Questions?





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Thank You

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