

Entrustable Professional Activities in Postgraduate Orofacial Pain Programs

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Entrustable professional activities (EPAs) are a curriculum development and learner assessment tool that ensure a trainee is able to safely translate the skills they have learned during residency into unsupervised clinical practice. Although EPAs are used extensively across various health professions worldwide, dentistry is just beginning to call for their development at both the predoctoral and postgraduate levels. Given the complex, multifactorial nature of orofacial pain disorders and the need for an interdisciplinary approach to management, the specialty of orofacial pain is well suited to embracing EPAs to ensure program graduates are prepared for practice. Therefore, 10 EPAs have been developed in a combined effort from program directors from every CODA-accredited postgraduate orofacial pain residency program. *J Oral Facial Pain Headache* 2020;34:255–264. doi: 10.11607/ofph.2640

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Orofacial pain (OFP) is a frequent form of pain perceived in the face and/or oral cavity that may be caused by diseases or disorders of regional structures, dysfunction of the nervous system, or through referral from distant sources.¹ The OFP diagnostic umbrella is extensive and encompasses neurogenic, musculoskeletal, and psychophysiologic pathologies, including headaches, cancer, infection, autoimmune phenomena, and tissue trauma.² OFP is often chronic, complex, and multifactorial, and patients commonly present with overlapping chronic pain conditions,³ sleep disorders,^{4–6} and/or psychological factors.⁷ The OFP dentist is responsible for evaluating, diagnosing, and managing patients in pain by relying on a comprehensive understanding of the factors that may impact a patient's pain experience and treatment outcome.

Given the broad knowledge base that an OFP dentist must possess, postgraduate OFP residency programs have been established at many US dental schools, with the anticipation of more programs emerging in the future. The Commission on Dental Accreditation (CODA), which recognizes OFP as an area of advanced education, monitors these programs to ensure that educational standards are met while quality and continuous improvement are maintained. As part of this quality assurance process, a core curriculum in OFP was developed in 2010 by the American Academy of Orofacial Pain (AAOP) to ensure minimum competency for program graduates.⁸ This curriculum, which is similar to most health profession curriculums developed since the 1990s, is competency based and primarily constructed to teach the knowledge, skills, and attitudes (KSAs) necessary to act as a health professional in the designated health field.⁹ These KSAs are encompassed within various domains of competence (DoC) that the student must master. Examples of organizations that have developed DoC frameworks include the US-based Accreditation Council for Graduate Medical Education (ACGME), the Canadian Medical Educational Directives for Specialists (CanMEDS), the Association of Canadian Faculties of Dentistry (ACFD), and the Association for Dental Education in Europe (ADEE).^{9,10} The most widely known and internationally implemented competency framework is CanMEDS, which has established seven

Table 1 Entrustable Professional Activities (EPAs) for the Practice of Orofacial Pain (OFP)

1. Performing history-taking and physical examinations in patients with OFP
2. Recommending and interpreting common diagnostic and screening tests and imaging
3. Developing and justifying prioritized differential diagnoses
4. Developing and implementing a management/treatment plan
5. Presenting oral and written reports that document a clinical encounter
6. Performing common OFP procedures
7. Recognizing a patient requiring interdisciplinary care and initiating proper referral
8. Evaluating OFP literature and integrating evidence into clinical practice
9. Delivering scholarly teaching to a variety of audiences, including peers, junior trainees, and/or other health professionals
10. Contributing to the development of knowledge about OFP

EPAs 1–7 represent specific clinical activities, while EPAs 8–10 are activities important for an OFP learner's professional growth.

DoCs as being essential to being a health professional: Medical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar, and Professional.¹¹

A common criticism of using a competency-based learner assessment framework is that while competencies describe the qualities and abilities of a clinician, they are difficult to objectively assess and do not demonstrate whether a learner is actually able to perform a certain clinical activity unsupervised.¹² Competencies are also challenging to use for providing specific feedback to the learner, as they are based on more subjective interpretation.¹³ The use of an entrustable professional activity (EPA) offers a more productive framework for learner assessment and feedback, as it allows the instructor to objectively assess multiple competencies via completion of a single professional activity (eg, procedure) and provide objective, clinically based feedback to the learner (Tables 1 and 2). This will serve to document the student's progress at various levels of complexity throughout the program, define shortcomings for remediation more readily, and bolster the confidence of the student with positive feedback.

Entrustable Professional Activities

How can dental and medical educators ensure that their graduates are prepared to transfer the competencies they have achieved in training to unsupervised treatment of the public?

A curriculum development and learner assessment model based on EPAs was created in 2005 by medical educator Dr Olle ten Cate as a way to bridge

the gap between competency-based assessment frameworks and actual clinical practice.^{12,13} EPAs are defined as observable units or tasks of professional practice entrusted to a trainee to execute without supervision once they demonstrate sufficient competence.¹⁴ An EPA integrates several DoC, each with multiple KSAs, into a single assessable clinical activity.¹² For example, in the EPA "performing histories and physical examinations in patients with orofacial pain," a clinician must be both a Medical Expert and Communicator, as well as possess their appropriate KSAs, in order to safely and effectively complete this professional activity.

EPAs have been extensively developed over the past 15 years and are now being utilized by various graduate and postgraduate medical, veterinary, nursing, physician assistant, and pharmacy programs worldwide.¹³ Conceptually, EPAs appear well suited to dental education, which places a large emphasis on procedures. The formation of EPAs is being called for by various academic leaders in the dental community, especially when it comes to specialty training programs, yet little has been published on their development within any predoctoral or postgraduate dental discipline thus far.^{10,15} It is fitting that the dental specialty of OFP, which is interdisciplinary in nature and integrates multiple aspects of dentistry and medicine, is the first dental discipline to comprehensively develop EPAs and adopt their use across its postgraduate residency programs.

Methods

The collection of EPAs presented below represents the combined efforts of the program directors (PDs) from every CODA-accredited postgraduate orofacial pain residency program (12 at the time of EPA creation). The basic frameworks for 8 EPAs were written primarily by the first and last authors (J.H. and J.S.). A draft of the EPAs was emailed to all OFP PDs for review, along with an invitation to participate in a conference call to critique the document. The first conference call was attended by all PDs and was moderated by the first author (J.H.). Suggestions were recorded and integrated as appropriate, and the number of EPAs was expanded to 10. An updated draft was sent to all PDs for further critique and revision. A second conference call took place to review the additional recommendations and finalize the EPA document. After completion of this process, these EPAs were endorsed by the AAOP Resident/Academic Training Committee. Successful completion of a postgraduate program in OFP should guarantee that the graduate can be entrusted to complete each of these professional activities unsupervised.

Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors**1. Performing history-taking and physical examinations in patients with OFP**

Description	This EPA focuses on the use of an organized approach and appropriate technique for OFP history and physical examination. This EPA includes a review of systems as they relate to OFP disorders, including a patient's relevant medical, dental, behavioral, psychosocial, and sleep histories. This EPA demonstrates appropriate techniques for examination of structures governed by the trigeminal somatosensory and motor complexes, including the masticatory and cervical musculature, TMJs, cervical spine, lymph nodes, temporal arteries, intraoral hard and soft tissues, and other relevant structures. This EPA does not include interpretation of findings.
Required competencies ^a	Medical Expert (ME) Communicator (COM)
Required knowledge	Knowledge of the gross and functional anatomy and physiology of the orofacial, head, and cervical structures (ME 1.3), including growth, development, and aging of the masticatory system
Required skills	Eliciting a comprehensive history relevant to OFP presentation (ME 2.2), including medical, dental, behavioral, psychosocial, and sleep histories Performing a focused OFP physical examination using appropriate techniques (ME 2.2) that includes the following: <ul style="list-style-type: none"> ▪ Observing patient movement and interaction outside of the operatory ▪ Obtaining vital signs ▪ Performing a general assessment/posture evaluation ▪ Conducting a neurologic assessment and cranial nerve–screening examination ▪ Palpating the masticatory and cervical muscles, TMJs, cervical spine, lymph nodes, temporal arteries, and other appropriate structures ▪ Assessing mandibular and cervical ranges of movement ▪ Performing a basic examination of the ear, nose, and throat ▪ Performing a sleep-focused examination ▪ Performing a dental examination that includes the intraoral hard and soft tissues, as well as a facial-skeletal and dental-occlusal structural assessment
Required attitudes	Use patient-centered interviewing skills to effectively gather all relevant information in a timely manner (COM 2.1) Communicate using a patient-centered approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion (COM 1.1) Provide a clear structure for and manage the flow of the patient encounter (COM 2.2)
Recommendations of information sources to assess progress	Direct and indirect clinical observation by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Task: OFP history and examination
Examples of pre-trustable behaviors	Omitting a section of the history and/or examination relevant to the chief complaint Missing information that could be harmful to the patient Not adhering to the clinical evaluation form
Examples of trustable behaviors	Consistently collecting all data appropriate to the chief complaint history Performing a review of systems and collecting past medical history Appropriately performing the OFP clinical examination
Recommended stage of unsupervised practice ^b	Early PGY-1

2. Recommending and interpreting common diagnostic and screening tests and imaging

Description	This EPA focuses on the selection and interpretation of appropriate diagnostic testing, screening, and imaging of an OFP patient.
Required competencies ^a	Medical Expert (ME) Leader (L) Health Advocate (HA) Scholar (S) Collaborator (COL)
Required knowledge	Integration of best evidence, guidelines, and clinical expertise into decision-making (S 3.4)
Required skills	Appropriately recommending and interpreting imaging results in the context of patient presentation (ME 2.2), including: plain film radiographs, CT/CBCT, MRI, and additional advanced imaging techniques Appropriately recommending and interpreting serologic tests in context of patient presentation (ME 2.2), including: complete blood count, complete metabolic panel, rheumatoid panel, thyroid panel, vitamin deficiency screening (eg, vitamin D) Appropriately recommending and interpreting screening tests in context of patient presentation (ME 2.2), including: screening for mental health, neurologic, rheumatologic, sleep, and systemic disorders and substance abuse

OFP = orofacial pain; EPA = Entrustable Professional Activity; KSA = knowledge, skills, attitudes; TMJ = temporomandibular joint; CT = computed tomography; CBCT = cone beam CT; MRI = magnetic resonance imaging; RCT = randomized controlled trial; PICOT = population, intervention, comparison, outcome, time. ^aCompetency numbers are a section of Frank et al.¹¹ ^bAn individual learner may reach this sooner or later than described.

Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors (continued)

2. Recommending and interpreting common diagnostic and screening tests and imaging (continued)	
Required attitudes	Apply evidence and guidelines for achieving cost-appropriate care (L 2.2) Facilitate timely patient access to services and resources (HA 1.1) Consult as needed with other health care professionals (COL 1.2)
Recommendations on information sources to assess progress	Direct and indirect clinical observation by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Imaging ▪ Serologic testing ▪ Screening
Examples of pre-entrustable behaviors	Omitting a necessary serologic test, image, or screening assessment Ordering incorrect or unnecessary testing or imaging Incorrectly interpreting testing or imaging Lack of or inappropriate communication of results to patient
Examples of entrustable behaviors	Ordering appropriate serologic test, image, and/or screening based on patient presentation Correctly interpreting serologic test, image, and/or screening results Communicating results in a clear and timely manner to the patient
Recommended stage of unsupervised practice ^b	End of PGY-1
3. Developing and justifying prioritized differential diagnoses	
Description	This EPA focuses on creating a prioritized list of OFP differential diagnoses.
Required competencies ^a	Medical Expert (ME) Communicator (COM)
Required knowledge	Knowledge of pathologies and pathophysiologies of orofacial, head, and cervical disorders (ME 1.3), including: <ul style="list-style-type: none"> ▪ Head and neck pathology and pathophysiology with an emphasis on pain ▪ Applied rheumatology with emphasis on TMJ ▪ Oromotor disorders, including dystonias, dyskinesia, and bruxism Knowledge of the functional neuroanatomy and neurophysiology of pain (ME 1.3), including: <ul style="list-style-type: none"> ▪ Neurobiology of pain transmission and pain mechanisms in the central and peripheral nervous systems ▪ Mechanisms associated with pain referral to and from the orofacial region ▪ Psychoneuroimmunology and its relation to chronic pain Knowledge of diagnostic categories within the field of OFP, including musculoskeletal, neurovascular, neuropathic, dental, and miscellaneous categories, as well as subcategories encompassed within these diagnoses (ME 2.2). This knowledge includes, but is not limited to: <ul style="list-style-type: none"> ▪ Pain classification systems ▪ Sleep physiology and dysfunction ▪ Systemic disorders ▪ Primary and secondary headache mechanisms ▪ Odontogenic and nonodontogenic pain ▪ Skeletal and occlusal variants' contribution(s) to OFP, headache, and dysfunction ▪ Psychologic disorders as they relate to OFP and sleep medicine ▪ Pain behavior ▪ Secondary gain behavior
Required skills	Eliciting a history, performing a physical examination, and selecting/interpreting appropriate investigations relevant to OFP presentation for purpose of diagnosis (ME 2.2) Applying clinical/diagnostic implication(s) of test results (ME 2.2) Synthesizing patient information to determine diagnosis (ME 2.2) Prioritizing differential diagnoses based on chief complaint and contributing factors (ME 2.1)
Required attitudes	Use patient-centered interviewing skills to effectively gather all relevant information (COM 2.1)
Recommendations on information sources to assess progress	Direct clinical observation and indirect case review by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Case mix: musculoskeletal, neurovascular, neuropathic, dental, miscellaneous
Examples of pre-entrustable behaviors	Synthesizing incorrect differential diagnoses Incorrectly prioritizing differential diagnoses
Examples of entrustable behaviors	Formulating accurate differential diagnoses and organizing in an appropriately prioritized manner

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Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors (continued)**3. Developing and justifying prioritized differential diagnoses (continued)**

Recommended stage of unsupervised practice^b Mid PGY-1

4. Developing and implementing a management/treatment plan

Description	This EPA focuses on developing an appropriate management/treatment plan addressing each diagnostic component on the problem list with consideration of cost/risk benefit, as well as incorporating risk assessment of psychosocial and medical factors in the development of an individualized plan of care. This EPA includes both nonpharmacologic and pharmacologic strategies, as well as patient safety strategies (eg, monitoring side effects). This EPA also includes implementing the proposed treatment plan and establishing a written or verbal agreement (as appropriate) with the patient, emphasizing the patient's treatment responsibilities.
Required competencies ^a	Medical Expert (ME) Communicator (COM) Scholar (S) Leader (L) Health Advocate (HA)
Required knowledge	Knowledge of diagnostic categories within the field of OFP to develop an appropriate management plan (ME 2.2) Knowledge of sleep disorders to develop and/or recognize an appropriate management plan (ME 2.2) Incorporation of risk assessment of psychosocial and medical factors into the development of individualized plan of care (ME 2.2) Prioritization of management plan components based on differential diagnoses (ME 2.1) Integration of best evidence, guidelines, and clinical expertise into decision-making and development of management plans (S 3.4) Application of evidence and management processes to achieve appropriate care with consideration of the cost/risk benefit(s) (L 2.2) Application of knowledge of topical and systemic pharmacology and pharmacotherapeutics to select appropriate medication directed at the presumed pain mechanism (ME 3.1) Implementation of a plan for monitoring patient response to treatment and medication side effects (ME 4.1)
Required skills	Provision of nonsurgical management and behavioral therapies for the management of OFP (ME 2.4), including but not limited to: <ul style="list-style-type: none"> ▪ Oral habit reversal therapy ▪ Stress management ▪ Sleep disorder management ▪ Muscle tensing habits ▪ Other behavioral habits Recognizing when surgical interventions are necessary (ME 3.1) Discussing with the patient the degree of uncertainty inherent in chronic pain management (ME 2.4)
Required attitudes	Provide a clear structure for and management of the flow of the patient encounter (COM 2.2) Establish a patient-centered management plan (ME 2.4) Share information and explanations that are clear, accurate, and timely while checking for patient understanding (COM 3.1) Use communication skills and strategies that help patients make informed decisions regarding their health (COM 4.3) Establish goals of care in collaboration with patients, which may include treating symptoms, achieving cure(s), and improving function (ME 2.3) Work with patients and their families to increase opportunities to adopt healthy behaviors (HA 1.2)
Recommendations on information sources to assess progress	Direct clinical observation and indirect case review by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Case mix: musculoskeletal, neurovascular, neuropathic, dental, miscellaneous
Examples of pre-entrustable behaviors	Developing an insufficient treatment plan to address the diagnoses Developing an unsafe treatment plan Inability to communicate the treatment plan to patient and/or family in an understandable way
Examples of entrustable behaviors	Developing a treatment plan that addresses each diagnostic component on the problem list with consideration of cost/risk benefit Implementing the proposed treatment plan and establishing a written or verbal agreement (as appropriate) with the patient, emphasizing the patient's treatment responsibilities
Recommended stage of unsupervised practice ^b	End of PGY-1

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Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors (continued)

5. Presenting oral and written reports that document a clinical encounter	
Description	The focus of this EPA is to provide an oral presentation and appropriate written documentation of a clinical encounter. This EPA includes presenting findings in an organized and well-synthesized presentation, as well as structuring clinical notes for patients with OFP. This EPA does not include interpretation of findings or accuracy of findings.
Required competencies ^a	Medical Expert (ME) Communicator (COM)
Required knowledge	Synthesization of patient information from history, examination, and diagnostic testing for the purpose of written documentation and/or oral summarization (ME 2.2) Documentation of clinical encounters to convey clinical reasoning and the rationale for decisions (COM 5.1)
Required skills	Documenting the essential elements of an OFP history and examination using a structured methodology, such as the subjective, objective, assessment, plan (SOAP) format (COM 5.1) Providing a clear plan for ongoing patient management (ME 4.1)
Required attitudes	Complete oral reports and clinical documentation in a timely manner (COM 5.1)
Recommendations on information sources to assess progress	Indirect clinical observation by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Type of observation: case presentation, clinical notes
Examples of pre-trustable behaviors	Omitting a relevant section(s) of the clinical encounter during oral or written summary Completing documentation in an untimely manner
Examples of entrustable behaviors	Providing a comprehensive oral summary of an OFP clinical encounter Providing thorough written documentation of an OFP clinical encounter
Recommended stage of unsupervised practice ^b	Mid PGY-1
6. Performing common OFP procedures	
Description	This EPA includes performance of common procedures for diagnosing and/or managing OFP and/or sleep disorders. These procedures include intraoral appliance therapy, sleep-related breathing disorder intraoral appliances, and physical medicine modalities. This EPA includes knowledge of the indications and contraindications for each procedure; informed consent; preparation and performance; and postprocedural care, including documentation and management of any complications.
Required competencies ^a	Medical Expert (ME) Communicator (COM)
Required knowledge	Determination of most appropriate procedure (ME 3.1) Description of indications and contraindications for each procedure (ME 3.1)
Required skills	Obtaining and documenting informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure (ME 3.2) Gathering and/or managing the availability of appropriate instruments and materials (ME 3.4) Preparing and positioning the patient (ME 3.4) Performing the procedure in a safe manner by applying knowledge of anatomy, key landmarks, procedure technique, and armamentarium (ME 3.4) Performing procedures including but not limited to: <ul style="list-style-type: none"> ▪ Nerve block <ul style="list-style-type: none"> -Trigeminal nerve (eg, auriculotemporal, supraorbital, infraorbital, maxillary, inferior alveolar, etc) -Greater and lesser occipital nerves ▪ Spray and stretch of the masticatory and cervical muscles ▪ Trigger point injection of the masticatory and cervical muscles ▪ Botulinum toxin injection ▪ Intraoral full-arch stabilization appliance ▪ Mandibular advancement device Preventing and/or managing complications of the procedure (ME 3.4) Providing postprocedural instructions and care (ME 4.1) Documenting the encounter to convey procedure and outcome (COM 5.1)
Required attitudes	Establish a patient-centered management plan (ME 2.4) Optimize patient comfort and safety and modify the procedure as needed (ME 3.4)
Recommendations on information sources to assess progress	Direct clinical observation and indirect case review by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Case mix: intraoral appliance therapy, sleep-related breathing disorder intraoral appliance therapy, and physical medicine modality based therapy

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Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors (continued)

Examples of pre-entrustable behaviors	Selecting an unnecessary or incorrect procedure Performing a procedure incorrectly or unsafely Not obtaining informed consent Not properly documenting the procedure Not properly managing any complications from the procedure
Examples of entrustable behaviors	Knowing indications and contraindications for a therapy/procedure Safely performing the appropriate procedure based on patient presentation Obtaining informed consent Properly documenting the procedure Properly managing any complications from the procedure
Recommended stage of unsupervised practice ^b	End of PGY-1
7. Recognizing a patient requiring interdisciplinary care and initiating proper referral	
Description	This EPA focuses on recognizing when the patient's health concerns are extensive and require an interdisciplinary approach for optimal management. This EPA includes understanding the appropriate referrals to make, as well as functioning effectively within an interdisciplinary health care team.
Required competencies ^a	Medical Expert (ME) Communicator (COM) Collaborator (COL) Professional (P) Scholar (S)
Required knowledge	Synthesization and interpretation of information from clinical assessment (ME 2.2) Revision of differential diagnosis in response to new clinical information or response to treatment (ME 2.2) Integration of best evidence and clinical expertise into decision-making (S 3.4)
Required skills	Sharing information and explanations regarding case complexity and referral that are clear, accurate, and timely, while checking for patient and family understanding (COM 3.1) Determining when care should be shared with or transferred to another health care professional (COL 3.1) Communicating effectively with other health care professionals (COL 1.3)
Required attitudes	Establish a patient-centered management plan (ME 2.4) Identify limits in scope of expertise (P 1.1) Recognize and respond to the complexity, uncertainty, and ambiguity inherent in OFP management (ME 1.6) Establish and maintain positive relationships with colleagues in other health care professions to support relationship-centered collaborative care (COL 1.1)
Recommendations on information sources to assess progress	Indirect case discussion and/or review of clinical documentation by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> Type of observation: consultation note, case discussion
Examples of pre-entrustable behaviors	Not recognizing when a patient's health concerns require or would benefit from a referral for further evaluation Not referring to the appropriate health care provider
Examples of entrustable behaviors	Recognizing when an interdisciplinary approach is appropriate and placing a referral to the appropriate health care provider Communicating professionally with other health care providers
Recommended stage of unsupervised practice ^b	End of PGY-1
8. Evaluating OFP literature and integrating evidence into clinical practice	
Description	This EPA focuses on critical evaluation of OFP-relevant scientific literature and understanding its applicability to current evidence-based care standards. This EPA also includes integrating evidence-supported data into clinical practice.
Required competencies ^a	Professional (P) Scholar (S)
Required knowledge	Critical evaluation of integrity, reliability, and applicability of OFP and health-related research and literature (S 3.3)
Required skills	Integrating evidence into decision-making in clinical practice (S 3.4)
Required attitudes	Demonstrate a commitment to excellence in all aspects of practice (P 1.2) Demonstrate accountability to patients, society, and the profession by responding to societal expectations of the profession (P 2.1)

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Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors (continued)

8. Evaluating OFP literature and integrating evidence into clinical practice (continued)	
Recommendations on information sources to assess progress	Directing observation of literature review conducted by a supervisor Use local form to collect information on: <ul style="list-style-type: none"> ▪ Type of literature review (eg, RCT, systematic review) ▪ Quality of evidence critique (eg, PICOT, conclusions)
Examples of pre-entrustable behaviors	Not understanding the type of literature being reviewed and/or the strength of the information based on the level-of-evidence pyramid Not able to critique the article conclusion based on the evidence presented
Examples of entrustable behaviors	Correctly assessing an RCT using the PICOT format Critiquing a systematic review or meta-analysis Integrating knowledge gained into clinical practice
Recommended stage of unsupervised practice ^b	Mid PGY-1
9. Delivering scholarly teaching to a variety of audiences, including peers, junior trainees, and/or other health professionals	
Description	This EPA focuses on teaching didactic and clinical information to audiences who will interact clinically with OFP patients. This EPA includes both small- and large-group formal teaching, as well as informal teaching to junior learners.
Required competencies ^a	Scholar (S) Collaborator (COL) Leader (L)
Required knowledge	Critical evaluation of integrity, reliability, and applicability of OFP-related research and literature (S 3.3) Integration of best evidence and clinical expertise (S 3.4)
Required skills	Defining specific learning objectives for a teaching activity (S 2.4) Presenting information in an organized manner to facilitate understanding (S 2.4) Teaching dentists, physicians, and other health care professionals to effectively integrate evidence into decision-making in their practice (S 3.4) Using audio-visual aids effectively (S 2.4) Providing adequate time for questions and discussion (S 2.4)
Required attitudes	Demonstrate leadership skills to enhance health care (L 3.1) Ensure a positive and safe learning environment for all learners (S 2.2) Establish and maintain positive relationships with dentists, physicians, and other colleagues in the health care professions to support relationship-centered collaborative care (COL 1.1)
Recommendations on information sources to assess progress	Direct observation by supervisor and incorporation of feedback from junior learners Use local form to collect information on: <ul style="list-style-type: none"> ▪ Audience type (peer, trainee, etc), feedback rating received
Examples of pre-entrustable behaviors	Providing inadequate or incorrect information while teaching Ineffectively communicating information to junior learners, leading to poor feedback
Examples of entrustable behaviors	Delivering structured, evidence-based education in an appropriate manner to the target audience Receiving high-quality feedback from audience
Recommended stage of unsupervised practice ^b	Prior to completion of training program
10. Contributing to the development of knowledge about OFP	
Description	This EPA focuses on the resident's involvement in an OFP-related research project. This EPA includes an understanding of the basic principles of biostatistics, research design and methodology, scientific writing, and critique of literature. This EPA does not require a manuscript to be published.
Required competencies ^a	Medical Expert (ME) Collaborator (COL) Scholar (S)
Required knowledge	Knowledge of clinical and biopsychosocial sciences relevant to OFP (ME 1.3) Knowledge of epidemiology of OFP disorders (ME 1.3) Demonstration of understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care (S 4.1)

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Table 2 OFP EPA Descriptions, Competencies, KSAs, and Behaviors (continued)**10. Contributing to the development of knowledge about OFP (continued)**

Required skills	Generating focused questions to address practice uncertainty and knowledge gaps (S 3.1) Conducting a basic literature search (S 3.2) Selecting appropriate methods of addressing a given scholarly question (S 4.4) Summarizing and communicating to professional and layman audiences (including patients and their families) the findings of applicable research and scholarly inquiry (S 4.5)
Required attitudes	Actively participate as a research team member, balancing the roles and responsibilities of a researcher with the clinical roles and responsibilities of an oral health professional (S 4.3) Actively listen to and engage in interactions with collaborators (COL 2.1) Identify ethical principles for research and incorporate them into obtaining informed consent, considering harm and benefit and considering vulnerable populations (S 4.2)
Recommendations on information sources to assess progress	Indirect research review by supervisor and/or research team Use local form to collect information on each stage of research completion: <ul style="list-style-type: none"> ▪ Literature review; experimental design; institutional review board submission; data analysis/statistics; thesis preparation; presentation of work
Examples of pre-entrustable behaviors	Not selecting an appropriate research topic Utilizing an inappropriate research design Not completing a thesis
Examples of entrustable behaviors	Selecting an appropriate scientific question that addresses a knowledge gap Completing a comprehensive literature search Selecting an appropriate experimental design Completing institutional review board submission in a time-appropriate manner Completing data analysis using appropriate statistical methods Preparing a completed thesis Presenting research results to applicable audiences
Recommended stage of unsupervised practice ^b	Prior to completion of training program

OFP = orofacial pain; EPA = Entrustable Professional Activity; KSA = knowledge, skills, attitudes; TMJ = temporomandibular joint; CT = computed tomography; CBCT = cone beam CT; MRI = magnetic resonance imaging; RCT = randomized controlled trial; PICOT = population, intervention, comparison, outcome, time. ^aCompetency numbers are a section of Frank et al.¹¹ ^bAn individual learner may reach this sooner or later than described.

Orofacial Pain Entrustable Professional Activities

EPAs are designed to be clinically focused and should be observable, measurable, and suitable for an entrustment decision. Based on these criteria, OFP EPAs⁸⁻¹⁰ are not technically EPAs, as they are not purely clinical activities, and it is difficult to foresee a situation in which it would be unsafe to entrust a learner to perform these activities unsupervised.¹² That said, these activities are important for a learner's professional growth, and it was therefore the consensus among the PDs that these be included in this document.

Implementation and Application of EPAs

Successful implementation of EPAs into a residency curriculum requires that both instructors and learners become very familiar with each EPA, with an understanding that the EPAs will be used throughout the duration of the residency to objectively assess learner development and provide focused feedback to the learner. The learner should be regularly reassessed as being within one of five levels of supervision for each EPA: (1) learner may observe only; (2) learner may execute with direct and proactive supervision;

(3) learner may execute with supervision available upon request; (4) learner may execute with supervision available from a distance or after completion of activity; and (5) learner is able to provide supervision to more inexperienced learners. Learners should be given frequent feedback on performance based on observations by the instructors and will gradually progress through these levels to achieve entrustment.¹⁶ Based on the above entrustment scale and goals for feedback, instructors should be intermittently calibrated to ensure assessment and feedback are based on the level of each learner's clinical abilities and not other traditional factors, such as resident experience.

An EPA, by definition, should have a defined endpoint when the learner is entrusted to practice the specified activity unsupervised. This is called a "summative entrustment decision" and represents a significant step in the learning process.^{12,13} For these OFP EPAs, this formal entrustment decision will be based on collective input from the program staff who observe the learner regularly, as well as ancillary staff who may interact with the learner on an intermittent basis. The final decision of entrustment will be made by the residency PD.

Conclusions

EPAs are a curriculum development and learner assessment tool that help bridge the gap between competency-based education theory and the work a clinician actually provides. They are currently being utilized throughout multiple branches of health profession education systems worldwide. Moving forward, the EPAs presented here will be a valuable resource within the OFP education community and ensure graduating OFP dentists are entrustable to evaluate, diagnose, and manage OFP patients safely.

The highlights of this study include:

- EPAs ensure learners have competency in multiple domains that are critical to patient care and that the learner is able to assimilate those areas of competence into actual clinical practice.
- Graduates of CODA-accredited postgraduate OFP residency programs may be entrusted to practice unsupervised after satisfactorily demonstrating achievement of the OFP EPAs.

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