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# NATIONAL INSTITUTE FOR HEALTH SPECIALTIES

## NIHS Entrustable Professional Activities (EPAs) for Specialty Education in Pediatric Dentistry

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## **Pediatric Dentistry**

### ***EPA 1: Patient Assessment***

Key Features: This EPA involves efficiently collecting and documenting relevant patient information through direct interaction with patients or caregivers, reviewing available records, and performing thorough extra- and intra-oral examinations, as well as radiographic assessments, to evaluate oral health status. It requires effective communication, cultural sensitivity, strong observational skills, and knowledge of oral anatomy and pathology.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care; emergency care
- Clinical action observed (select all that apply): documentation of chief complaint, relevant medical, social and dental history; extraoral examination; intraoral examination; radiographic assessment; other ancillary diagnostic tests and laboratory investigations.

#### Basis of formal entrustment decisions:

Collect 5 observations of achievement

- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY1

#### Relevant Milestones:

1. Systematically identify and analyze the patient's chief complaint and present problems through structured interview techniques
2. Demonstrate proficiency in obtaining comprehensive medical, dental, social, and behavioral histories using age-appropriate communication strategies
3. Execute systematic extraoral and intra-oral examinations with attention to anatomical variations and pathological findings
4. Perform and interpret radiographic examinations while adhering to ALARA principles and radiation safety protocols
5. Determine appropriate indications for and request ancillary diagnostic tests, including vitality testing and laboratory investigations

## **Pediatric Dentistry**

### ***EPA 2: Provide preventive care services***

Key Features: This EPA involves implementing preventive strategies to maintain and promote oral health, including oral hygiene instruction, fluoride application, and dental sealant application. It requires strong patient education skills and a commitment to disease prevention.

*This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care; emergency care
- Procedure: oral hygiene instruction and reinforcement; Diet assessment, analysis and advice, dental prophylaxis techniques, fluoride and other remineralizing agents treatment; fissure sealant application; space maintenance; and prevention of traumatic dental injuries.

#### Basis of formal entrustment decisions:

Collect at least 14 observations of achievement

- At least 2 of each procedure
- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 1

#### Relevant Milestones:

1. Execute advanced dental prophylaxis techniques demonstrating mastery of instrumentation, tissue management, and patient comfort optimization
2. Apply evidence-based fluoride treatment protocols with consideration of patient risk factors, age-appropriate delivery methods, and safety guidelines
3. Demonstrate expertise in fissure sealant placement, including proper case selection, isolation techniques, and long-term success evaluation
4. Design and implement space maintenance strategies incorporating biomechanical principles and growth considerations
5. Deliver comprehensive oral hygiene education using age-appropriate motivational interviewing techniques and behavioral modification strategies
6. Provide evidence-based dietary counseling incorporating cariogenic risk assessment and nutritional guidance for optimal oral health
7. Implement comprehensive traumatic dental injury prevention strategies through patient education, protective equipment recommendations, and environmental risk assessment

## **Pediatric Dentistry**

### ***EPA 3: Provide minimally invasive care to restore and improve oral health and function***

Key Features: This EPA involves performing non-invasive procedures such as the application of SDF, Hall crowns, and periodontal scaling to restore and maintain oral health and function. It requires precision, manual dexterity, and knowledge of dental materials.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Procedure: application of SDF; ITR, Hall crown; periodontal scaling; and oral infections management protocols.

#### Basis of formal entrustment decisions:

Collect at least 10 observations of achievement

- At least 2 from each procedure
- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 1

#### Relevant Milestones:

1. Apply silver diamine fluoride using evidence-based protocols with consideration of case selection criteria, application techniques, and patient counseling regarding aesthetic outcomes
2. Execute interim therapeutic restoration (ITR) procedures demonstrating mastery of atraumatic restorative techniques and appropriate material selection
3. Perform Hall crown/Modified Hall Crown Techniques with expertise in case selection, crown fitting, and long-term success monitoring
4. Implement comprehensive oral infections management protocols, including appropriate antibiotic selection, dosing considerations, and resistance pattern awareness
5. Execute comprehensive periodontal management strategies, including non-surgical therapy, patient education, and maintenance protocols

## **Pediatric Dentistry**

### ***EPA 4: Manage a patient encounter***

Key Features: This EPA involves effectively managing all aspects of a patient visit, from initial greeting to post-treatment instructions, ensuring a positive and efficient experience. It requires strong organizational, communication, and interpersonal skills.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Action observed: develop an infection control plan; complete documentation (e.g., treatment record, informed consent); manage a medical emergency.

#### Basis of formal entrustment decisions:

Collect 2 observations of achievement

- At least 2 different observers

When unsupervised practice is expected to be achieved: PGY 1

#### Relevant Milestones:

1. Design and implement comprehensive infection control protocols demonstrating mastery of current guidelines and evidence-based practices
2. Demonstrate advanced communication skills in discussing treatment options with patients and caregivers, incorporating shared decision-making principles and obtaining comprehensive informed consent.
3. Execute thorough documentation procedures, including detailed treatment records, comprehensive informed consent processes, and accurate billing documentation
4. Demonstrate expertise in managing medical emergencies through systematic assessment, appropriate intervention, and effective communication with emergency response teams

## **Pediatric Dentistry**

### ***EPA 5: Diagnose and develop an evidence-based treatment plan***

Key Features: This EPA involves synthesizing patient information to formulate accurate diagnoses, create a prioritized problem list, and develop an individualized, evidence-based treatment plan that is tailored to the patient's unique needs and preferences. It requires strong analytical and critical thinking skills, knowledge of various treatment modalities, and the ability to collaborate with patients and their families.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Complexity: high, medium, low

#### Basis of formal entrustment decisions:

Collect at least 6 observations of achievement

- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 2

#### Relevant Milestones:

1. Synthesize and integrate comprehensive patient information to formulate accurate differential diagnoses of hard and soft tissue pathology using systematic diagnostic reasoning.
2. Conduct comprehensive caries risk assessments using evidence-based assessment tools and clinical indicators.
3. Apply clinical decision-making frameworks to prioritize patient problems based on urgency, complexity, and potential impact on overall health.
4. Demonstrate expertise in diagnosing growth and development issues through a comprehensive analysis of craniofacial development patterns and occlusal relationships.
5. Design comprehensive prevention plans incorporating active surveillance protocols, evidence-based recall frequencies, and individualized risk assessment strategies.
6. Formulate advanced restorative treatment plans demonstrating mastery of material selection criteria and technique indications for optimal clinical outcomes.
7. Develop sophisticated growth and development management plans addressing non-nutritive sucking habits, space maintenance requirements, and interceptive orthodontic interventions.

8. Create individualized behaviour guidance plans incorporating pharmacological and non-pharmacological approaches based on patient-specific factors and clinical complexity.
9. Establish evidence-based transition care plans facilitating seamless patient transfer to general dentists through collaborative care coordination.



## **Pediatric Dentistry**

### ***EPA 6: Provide surgical care to restore and improve oral health and function***

Key Features: This EPA involves performing surgical procedures, such as extractions and minor soft-tissue surgeries, and managing oral infections to restore and improve oral health and function. It requires knowledge of surgical principles, aseptic technique, and pain management.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Procedure: intra-coronal restorative treatment; full coverage restorations; primary and permanent extractions; vital pulp therapies; non-vital pulp therapies; management of infection; long-term management of dental trauma; management of oral infection; infiltration/block local anesthesia; other (write in)

#### Basis of formal entrustment decisions:

Collect 12 observations of achievement

- At least 3 different observers
- At least 2 from each procedure

When unsupervised practice is expected to be achieved: PGY 2

#### Relevant Milestones:

1. Execute advanced intra-coronal restorative treatments demonstrating mastery of cavity preparation principles, material selection, and aesthetic considerations
2. Perform complex full coverage restorations with expertise in tooth preparation and provisional restoration management
3. Conduct primary and permanent extractions using appropriate surgical techniques, complication management, and post-operative care protocols
4. Implement vital pulp therapy procedures demonstrating advanced understanding of pulp biology, material science, and long-term prognosis assessment
5. Execute non-vital pulp therapy treatments with mastery of endodontic principles, instrumentation techniques, and obturation methods
6. Demonstrate expertise in infiltration and block local anesthesia techniques with consideration of anatomical variations, patient comfort, and safety protocols

## **Pediatric Dentistry**

### ***EPA 7: Provide care utilizing non-pharmacological behavior guidance***

Key Features: This EPA involves implementing various non-pharmacological techniques to manage patient behavior during dental procedures, thereby promoting a positive, cooperative experience. It requires strong communication skills, patience, and adaptability.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care

#### Basis of formal entrustment decisions:

Collect 4 observations of achievement

- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 2

#### Relevant Milestones:

1. Conduct a comprehensive assessment of patient behavior patterns and anxiety levels using validated assessment tools and clinical observation techniques
2. Implement age-appropriate behavior guidance techniques including tell-show-do, positive reinforcement, and distraction methods, with consideration of developmental stages
3. Establish therapeutic rapport and trust with patients and caregivers through effective communication strategies and cultural sensitivity
4. Demonstrate expertise in managing challenging behaviors through de-escalation techniques, environmental modifications, and adaptive treatment approaches

## **Pediatric Dentistry**

### ***EPA 8: Manage patient care utilizing nitrous oxide inhalation sedation***

Key Features: This EPA involves the safe and effective administration of nitrous oxide for the management of anxiety and pain during dental procedures. It requires knowledge of pharmacology, patient monitoring, and emergency protocols.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care

#### Basis of formal entrustment decisions:

Collect 5 observations of achievement

- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 2

#### Relevant Milestones:

1. Conduct a comprehensive patient assessment for nitrous oxide analgesia, including medical history review, contraindication screening, and risk-benefit analysis
2. Demonstrate expertise in safe and effective nitrous oxide administration, including proper equipment operation, dosage titration, and patient monitoring
3. Execute complete nitrous oxide treatment protocols, including pre-operative preparation, informed consent, intra-operative monitoring, and post-operative recovery assessment
4. Implement appropriate complication management strategies, including recognition of adverse reactions, emergency response protocols, and patient safety measures

## **Pediatric Dentistry**

### ***EPA 9: Collaborate and provide care as a member of an inter-professional team***

Key Features: This EPA involves working effectively with other healthcare professionals (e.g., physicians, nurses, specialists) to provide comprehensive, coordinated care for pediatric patients. It requires strong communication, teamwork, and an understanding of different professional roles.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Action observed: receiving/responding to a referral; making a referral; and participating in a multidisciplinary team

#### Basis of formal entrustment decisions:

Collect 2 observations of achievement

- At least 2 different observers

When unsupervised practice is expected to be achieved: PGY 3

#### Relevant Milestones:

1. Demonstrate expertise in responding promptly to consultation requests and providing comprehensive, evidence-based recommendations for complex referral cases
2. Exhibit advanced professional behavior and communication skills when interacting with patients, families, and interdisciplinary team members in challenging clinical situations
3. Execute appropriate referral processes to medical providers and dental specialists with comprehensive documentation and clear communication of clinical findings and treatment recommendations

## **Pediatric Dentistry**

### ***EPA 10: Manage dental trauma***

Key Features: This EPA involves prompt and effective management of acute and chronic dental injuries to primary and permanent teeth, including diagnosis, pain control, definitive treatment or referral, and managing complications. It requires quick decision-making and proficiency in a range of trauma management techniques.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Action observed (select all that apply): complete extraoral examination, complete intra-oral examination; radiographic examination; diagnosis; pain control; definitive treatment; referral to another specialist; complications management; other (write in)
- Procedure: local anesthesia; restorative treatment (e.g., resin band-aid restoration, fragment re-attachment); extractions; pulp therapy (e.g., Cvek); therapeutics (e.g., antibiotics), other (write in)

#### Basis of formal entrustment decisions:

Collect 5 observations of achievement

- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 3

#### Relevant Milestones:

1. Execute comprehensive trauma assessment protocols, including systematic extraoral, intra-oral, and radiographic examinations, with attention to associated injuries
2. Demonstrate proficiency in emergency local anesthesia administration for trauma patients with consideration of anatomical disruption and patient anxiety
3. Perform splinting of traumatized teeth
4. Perform advanced restorative trauma treatments, including resin band-aid techniques and fragment re-attachment procedures, with optimal aesthetic outcomes
5. Execute emergency extractions for traumatized teeth using appropriate surgical techniques and post-operative management
6. Implement specialized pulp therapy procedures for traumatized teeth, including Cvek pulpotomy techniques and vital pulp preservation strategies
7. Apply evidence-based therapeutic interventions, including appropriate antibiotic selection and pain management protocols for trauma-related complications.

## **Pediatric Dentistry**

### ***EPA 11: Provide interceptive orthodontic treatment***

Key Features: This EPA involves the recognition, diagnosis, and evidence-based early intervention of transitional malocclusion conditions that can be corrected or significantly improved through interceptive orthodontic treatments. It encompasses guidance of eruption, space supervision, and focused management of developing orthodontic problems. It requires advanced knowledge of craniofacial growth and development, orthodontic principles, and the ability to determine appropriate timing for intervention versus referral.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation with documentation review by supervisor, evaluation of literature review activities, and assessment of evidence-based clinical decision-making.

The assessment form collects information on:

- Setting: routine care, emergency care
- Complexity: low; medium; high

#### Basis of formal entrustment decisions:

Collect 4 observations of achievement

- At least 2 different observers

When unsupervised practice is expected to be achieved: PGY 3

#### Relevant Milestones:

1. Demonstrate expertise in space maintenance and arch perimeter control: by designing and implementing evidence-based space maintenance protocols for early loss of primary and young permanent teeth, including proper appliance selection, placement techniques, and long-term monitoring strategies
2. Execute comprehensive management of transverse arch dimensional problems: by accurately diagnosing simple posterior crossbites, determining appropriate intervention timing, and implementing corrective treatments, including palatal expansion techniques and appliance therapy
3. Implement advanced management of anterior crossbite discrepancies: by systematically evaluating localized dentoalveolar crossbite displacement and functional anterior shifts (e.g., pseudo-Class III), differentiating between dental and skeletal etiologies, and providing appropriate interceptive treatment or timely referral.
4. Provide evidence-based management of tooth-arch size discrepancies: by conducting a comprehensive analysis of spacing patterns with or without dental protrusion, determining underlying etiological factors, and implementing appropriate treatment strategies, including leeway space preservation techniques

5. Design and execute comprehensive deleterious oral habits management programs: by systematically assessing habit patterns, implementing behavior modification strategies, utilizing appropriate appliance therapy when indicated, and coordinating multidisciplinary care approaches
6. Execute advanced management of ectopic eruption, ankylosis, and tooth impaction problems: by conducting a comprehensive diagnostic evaluation, including advanced imaging interpretation, determining appropriate intervention timing, and implementing surgical and/or orthodontic management strategies or coordinating specialist referral
7. Implement comprehensive management strategies for supernumerary and missing teeth effects: by systematically evaluating the impact of supernumerary teeth (e.g., mesiodens) and congenitally missing teeth on occlusal development, determining optimal treatment timing, and coordinating multidisciplinary treatment approaches, including surgical intervention and space management

## **Pediatric Dentistry**

### ***EPA 12: Manage patient care utilizing moderate sedation***

Key Features: This EPA involves safe and effective administration and monitoring of moderate sedation for dental procedures. It requires advanced knowledge of pharmacology, airway management, and emergency protocols.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Procedures done under sedation: non-surgical management; surgical management.

#### Basis of formal entrustment decisions:

Collect 5 observations of achievement

- At least 3 different observers

When unsupervised practice is expected to be achieved: PGY 3

#### Relevant Milestones:

1. Conduct a comprehensive patient assessment for moderate sedation, including medical history evaluation, physical examination, and risk stratification using established guidelines
2. Demonstrate expertise in sedative agent selection and administration with consideration of pharmacokinetics, drug interactions, and patient-specific factors
3. Execute complete pre-operative preparation, including comprehensive informed consent, fasting guidelines, and emergency preparedness protocols
4. Implement appropriate medication selection and administration techniques with attention to dosing calculations, route of administration, and onset monitoring
5. Provide continuous intra-operative monitoring, including vital signs assessment, sedation level evaluation, and airway management
6. Conduct thorough post-operative monitoring, including recovery assessment, discharge criteria evaluation, and pain management protocols
7. Demonstrate proficiency in recognizing and managing medical emergencies related to sedation, including airway obstruction, respiratory depression, and cardiovascular complications



## **Pediatric Dentistry**

### ***EPA 13: Manage patient care utilizing general anesthesia***

Key Features: This EPA involves safe and effective management of dental procedures under general anesthesia (GA), often in a hospital setting. It requires a comprehensive understanding of anesthesia principles, patient selection, and collaboration with the anesthesia team.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation, with documentation review by the supervisor and input from other health care professionals.

The assessment form collects information on:

- Setting: routine care, emergency care
- Procedures done under GA: surgical management; nonsurgical management.

#### Basis of formal entrustment decisions:

Collect 5 observations of achievement

- At least 2 different observers

When unsupervised practice is expected to be achieved: PGY3

#### Relevant Milestones:

1. Demonstrate expertise in selecting appropriate candidates for general anesthesia through comprehensive risk assessment, medical evaluation, and alternative treatment consideration
2. Execute thorough pre-operative management, including comprehensive informed consent, medical clearance coordination, and surgical planning
3. Implement effective intra-operative management, including airway protection, surgical efficiency, and complication prevention strategies
4. Provide comprehensive post-operative management, including pain control protocols, recovery monitoring, and discharge planning
5. Establish effective collaboration with anesthesia teams through clear communication, shared decision-making, and coordinated patient care

## **Pediatric Dentistry**

### ***EPA 14: Uphold the standards of the profession***

Key Features: This EPA involves maintaining professional standards through quality improvement, ethical conduct, informed consent processes, privacy protection, and commitment to lifelong learning. It encompasses the professional responsibilities that ensure safe, ethical, and competent practice in pediatric dentistry.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation of professional behaviors, documentation review, and feedback from supervisors and team members.

The assessment form collects information on:

- Case mix: routine dental care, complex medical/dental cases, special healthcare needs
- Action observed: informed consent; quality improvement activities; continuing education participation; other (write in).

#### Basis of formal entrustment decisions:

Collect 2 observations of achievement

- At least 2 different observers

When unsupervised practice is expected to be achieved: PGY3

#### Relevant Milestones:

1. Design and implement quality improvement assessments using systematic methodologies, data analysis, and evidence-based improvement strategies
2. Demonstrate unwavering commitment to patient privacy protection through adherence to HIPAA guidelines, confidentiality protocols, and ethical practice standards
3. Engage actively in lifelong learning through participation in continuing education programs, professional development activities, and evidence-based practice integration
4. Advocate effectively for oral health and children's welfare at local, state, and national levels through policy engagement, community outreach, and professional leadership
5. Implement strategies to reduce inequities in pediatric oral health through culturally competent care, community engagement, and social determinants of health awareness

## **Pediatric Dentistry**

### ***EPA 15: Critically evaluate scientific literature and its application to clinical situations***

Key Features: This EPA involves the ability to review journals and scientific literature, critically appraise research findings, and apply evidence-based knowledge to inform clinical decision-making in pediatric dentistry practice.

*Note: This EPA must be observed in a clinical setting.*

#### Assessment Plan:

Direct and indirect observation with documentation review by supervisor, evaluation of literature review activities, and assessment of evidence-based clinical decision-making.

The assessment form collects information on:

- Action observed: evidence-based practice in routine care, complex cases requiring evidence-based decisions

#### Basis of formal entrustment decisions:

Collect 2 observations of achievement

- At least 2 different observers

When unsupervised practice is expected to be achieved: PGY3

#### Relevant Milestones:

1. Conduct a systematic review of journals and scientific literature using advanced search strategies, database navigation, and evidence hierarchy understanding
2. Demonstrate expertise in critically appraising research validity and applicability through systematic evaluation of study design, methodology, and statistical analysis
3. Apply evidence-based knowledge to clinical decision-making through integration of research findings, clinical expertise, and patient preferences
4. Synthesize research findings with clinical expertise and patient values to develop comprehensive, evidence-informed treatment recommendations

