

COMSEP and APPD PEDIATRIC SUBINTERNSHIP CURRICULUM

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Introduction

The COMSEP/APPD Pediatric Subinternship curriculum has been designed and developed through a collaboration of the Curriculum Task Forces of COMSEP and the APPD. Our goal in designing this curriculum was to bridge the gap between the pediatrics clerkship and the first year of residency training and to provide an educational road map for deliberate learning on the pediatric subinternship. The curriculum currently consists of a set of competency-based learning objectives and issues essential to transition in the fourth-year medical student role which have all defined and validated as relevant by educators from both COMSEP and AAPD. The learning objectives are meant to serve as a guide for learning in the subinternship and also as a launching platform for learning in the remainder of the fourth year. We have also compiled a set of learner assessment tools, as well as an Individualized Learning Plan (1) for subinterns to chart their learning goals and progress.

The Curriculum is designed to be flexible so that it can be used in a variety of in-patient settings and can continue to be tailored. It is developmental in its approach with a focus on Interpreter (problem definition and prioritization and data interpretation and differential diagnosis) and Manager (making diagnostic and therapeutic plans and doing procedures) activities in Pangaro's RIME framework. (2) The competency-based objectives are organized according to the ACGME competency framework and written in the language of the Academic Pediatric Association guidelines (3) to promote continuity between UME and GME curricula, as well as to familiarize learners with this framework. Importantly, the curriculum is learner centered with a focus on self-directed learning, designed to address the learning needs relevant to patient care activities of a fourth-year medical student. Furthermore, the focus on self-directed learning prepares fourth years for taking responsibility for learning in the context of patients care, a practice essential for success throughout their careers. Finally, the curriculum was developed through a consensus building process with educators from UME, GME, and learners, defining and reconciling expectations and needs of all groups involved.

Curriculum implementation

It is suggested that the curriculum be implemented as follows:

1. Learning objectives

Educators tailor the objectives to their particular subinternship and distribute them to learners and teachers, including residents who will be working with the sub-interns.

2. Orientation

The sub-I director presents the learning objectives, expectations for clinical work, ILP, assessment methods and at the beginning of the subinternship.

3. ILP

The learner develops the ILP throughout the subinternship: at the beginning of the rotation, at the end of week 2 and at the conclusion of the rotation. The subinternship director discusses the ILP with the learner at each of these points.

4. Learning activities

Learning activities are currently being developed and will be available soon. Implementation of learning activities is optional. They can be distributed to the student for independent learning or can be used in the classroom. Disruption to clinical work can be minimized by substituting a sub-intern learning activity for a didactic session which does not address fourth-year learning needs specifically (i.e., noon conference).

5. Assessment methods

Assessment of student performance in the subinternship should be based on direct observation of clinical work. Educators should decide which behaviors are most important to observe directly and to give feedback on. Most assessment tools used in GME have not yet been validated for use in medical students in any way besides face validity. A number of tools used in GME could be used to assess sub-intern performance in the clinical setting, including global performance evaluations, structured clinical observations (SCOs), Brief Supervised Observations (BSOs), chart stimulated recall. Examples of these tools will be posted on our web site shortly. Most medical schools use their own clinical evaluation forms for evaluating sub-intern performance. Educators should consider cuing evaluators to write comments in RIME (ie. How the student is functioning as an Interpreter).

1. Challis M. AMEE Medical Education Guide No. 19:Personal learning plans. Medical Teacher. 2000;22(3):225-236.

2. Pangaro LN. A shared professional framework for anatomy and clinical clerkships. Clinical Anatomy. 2006;19(5):419-28.

3. Kittredge Diane, Baldwin C, Bar-on M, Trimm RF, Beach PS. One specialty's collaborative approach to competency-based curriculum development. Academic Medicine. 2009;84(9):1262-8.

COMSEP/APPD PEDIATRIC SUBINTERNSHIP CURRICULUM
Fourth-Year Medical Student Patient Care Principles

Principles essential to providing patient care as a fourth-year medical student:

1. Taking on primary responsibility for the patient.
2. Focusing histories, physicals, and oral and written communication appropriately.
3. Sharing information effectively with a patient and family.
4. Prioritizing and organizing work effectively.
5. Anticipating what a patient will need during the course of hospitalization (i.e. when they need to be re-examined, when a lab needs to be repeated, when additional therapy is necessary, when additional history needs to be obtained, discharge criteria) and communicating this information effectively in hand-overs.
6. Re-evaluating a patient when you take on their care (i.e. the assessment and plan, as well as the clinical status) and looking further when the clinical picture does not fit.
7. Continuing to think about and re-assess the patient during the course of the day.
8. Coping with uncertainty in patient care issues (i.e. knowing what you know and what you don't know, accessing best resources, and knowing when and how to get help).
9. Functioning as a "team player" with residents, attendings, nurses, ancillary staff and all others involved in the care of the patient.
10. Coordinating the care of your patient during hospitalization and in planning for discharge.

COMSEP/APPD PEDIATRIC SUBINTERNSHIP CURRICULUM
Learning Objectives

1. Patient Care

Provide patient care that is compassionate, appropriate and effective for the treatment of health problems

(Assessment methods: Global Performance Evaluation (PE), Structured Clinical Observation (SCO), 360 Degree Evaluation(360))

- 1.1 Independently collect both focused and comprehensive, developmentally appropriate patient histories
- 1.2 Independently perform both focused and comprehensive, developmentally appropriate physical examinations
- 1.3 Synthesize information to formulate a differential and primary diagnosis
- 1.4 Develop a prioritized and inclusive problem list
- 1.5 Identify the reason for the patient's admission
- 1.6 Summarize interval patient information and rationale for ongoing clinical management
- 1.7 Recognize patients requiring immediate attention by supervising physician
- 1.8 Suggest appropriate diagnostic tests for the patient's chief complaint and other medical problems
- 1.9 Modify the primary diagnosis based upon interpretation of diagnostic studies
- 1.10 Demonstrate family-centered approach to patient care (e.g., incorporating patient and family perspectives into the management plan)
- 1.11 Develop a prioritized management plan with the health care team and describe a rationale for the clinical plan
- 1.12 Identify patient discharge needs and include in daily plan
- 1.13 Manage time effectively in completing patient care tasks
- 1.14 Identify relevant clinical information necessary for hand-offs

1.15 Reassess patients continuously (e.g., when assuming care, throughout the day and throughout the hospital course)

1.17 Formulate appropriate orders

1.18 Prepare prescriptions

1.19 Practice appropriate infection control measures while caring for patients

1.20 Recognize how clinical uncertainty affects patient care

2. Medical Knowledge

Demonstrate sufficient knowledge to provide patient care with appropriate supervision

(Assessment methods: Chart Stimulated Recall (CSR), PE, Written exam)

2.1 Describe the epidemiology, pathophysiology, and clinical findings of common pediatric conditions that require hospitalization [prerequisite; see COMSEP Clerkship curriculum]

2.2 Describe the diagnostic evaluation and management of hospitalized patients with the following conditions:

- * Abdominal pain or distention
- * Altered mental status (e.g., irritability, lethargy, seizure)
- * Fluid, electrolyte and acid-base disturbances
- * Fever (including in immunocompromised patients)
- * Musculoskeletal pain or swelling
- * Respiratory distress

2.3 Describe how age and development influence clinical findings and epidemiology of common pediatric conditions

2.4 Identify criteria for admission and discharge from the hospital

2.5 Recognize variations in common laboratory findings and vital signs, e.g.,

- * Heart Rate, Respiratory Rate, Blood Pressure
- * BUN and creatinine
- * Cerebrospinal fluid
- * Complete blood count and differential
- * Chest x-ray

2.6 Describe the signs and symptoms that suggest deterioration (including signs of shock and respiratory failure) or improvement of a patient's clinical condition

- 2.7 Describe the impact of chronic illness on a patient's clinical findings and management
- 2.8 Describe principles of pain assessment and management
- 2.9 List drugs of choice and rationale for their use in common pediatric illnesses
- 2.10 Calculate doses of medication based on age, weight, body surface area, and diagnosis
- 2.11 Identify contraindications to therapeutic drug use in children of different ages and/or diagnoses
- 2.12 Calculate fluid and electrolyte requirements for children based on weight, caloric expenditure, diagnosis, and fluid status
- 2.13 Describe the elements of informed consent
- 2.14 Describe the indications, contraindications, risks and benefits of the following procedures:
 - * Arterial puncture
 - * Intravenous catheter insertion
 - * Lumbar puncture
 - * Nasogastric tube insertion
 - * Urethral catheterization
 - * Venipuncture
- 2.15 List the indications for emergency vascular access
- 2.16 Recognize opportunities for preventive services in hospitalized patients

3. Interpersonal and Communication Skills

Demonstrate interpersonal and written communication skills that result in effective information exchange and collaboration with patients, their families, and all members of the health care team
(Assessment methods: CSR, Objective Structured Clinical Examination (OSCE), PE, SCO, 360)

- 3.1 Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
- 3.2 Demonstrate relationship building skills in each clinical encounter and inter-professional exchange

- 3.3 Gather patient information using active verbal and non-verbal listening skills, clarifying and summarizing statements, and open-ended and closed-ended questions within a structured format
- 3.4 Elicit and recognize the perspectives and needs of families and provide care for patients within their social and cultural context
- 3.5 Share information with the patient and family in a way that facilitates their understanding
- 3.6 Include the family in the decision-making process to the extent they desire
- 3.7 Provide education and patient instructions to patients and families, using written or visual methods, taking into account their health literacy level
- 3.8 Recognize the situations in which interpreter services are needed and demonstrate how to use these services effectively
- 3.9 Identify one's own reactions to patients and families, recognize when these reactions interfere with effective communication, and manage these reactions properly
- 3.10 Communicate patient information accurately and efficiently to all health care team members, including the primary care provider
- 3.11 Deliver organized, appropriately focused, and accurate oral patient presentations
- 3.12 Convey concise, pertinent information at the time of hand-offs
- 3.13 Frame a question for a consultant and communicate the patient information and clinical question effectively
- 3.14 Write organized, appropriately focused, and accurate patient notes, including admission, progress, cross-cover, and discharge notes and summaries

4. Professionalism

Demonstrate a commitment to accountability, excellence in practice, adherence to ethical principles, humanism, altruism, and sensitivity to diversity

(Assessment methods: Independent Learning Plan (ILP), PE, SCO, 360)

- 4.1 Demonstrate personal accountability to patients, colleagues and staff, in order to provide the best patient care
- 4.2 Demonstrate integrity, compassion, respect, altruism, and empathy when interacting with all members of the health care team, patients and their families

4.3 Demonstrate a humanistic, family-centered approach to the care of the patient

- a) Identify the perspectives of patients, families, self and other healthcare team members
- b) Analyze how perspectives may conflict and converge
- c) Demonstrate altruism in negotiating a plan of care

4.4 Provide culturally effective care

- a) Identify the important role of culture in the care of each patient
- b) Demonstrate a patient-based approach to cultural competence
- c) Elicit the cultural factors that may influence care of the patient
- d) Recognize how one's own beliefs affect patient care

4.5 Demonstrate punctuality and ability to complete patient care tasks efficiently

4.6 Adhere to institutional guidelines, including those regarding attire, language, documentation, and confidentiality

4.7 Maintain appropriate professional boundaries with patients, families, and staff

4.8. Recognize the impact of stress, fatigue, and illness on learning and performance

4.9 Recognize and appropriately act on unprofessional behavior demonstrated by others

5. Practice-Based Learning and Improvement

Use evidence based medicine and self-directed learning in the care of patients and education of others.

(Assessment methods: CSR, ILP, PE, Portfolio Task, 360)

5.1 Demonstrate self-directed learning in daily practice

- a) Identify strengths, deficiencies, and limits in one's knowledge and clinical skills through self-evaluation
- b) Acknowledge own uncertainty
- c) Develop a plan for improvement

d) Perform appropriate learning activities

5.2 Improve one's own practice by soliciting and incorporating feedback

5.3 Demonstrate evidence-based clinical practice

a) Access appropriate resources to answer clinical questions

b) Critically appraise relevant literature

c) Incorporate evidence from the literature into patient care

5.4 Use information technology to optimize learning

5.5 Participate in the education of patients, families, and the health care team

6. Systems-Based Practice

Strive to provide high-quality health care and advocate for patients within the context of the health care system.

(Assessment methods: PE, Portfolio Task, 360)

6.1 Demonstrate the appropriate utilization of consultants, including social workers, nutritionist, and physical therapists, during hospitalization

6.2 Recognize, address, and work to prevent errors and near-misses

6.3 Recognize the role of systems solutions in improving patient safety

6.4 Coordinate transition from inpatient to home care

a) Identify medical needs (e.g., medications, nutrition, activity, and equipment)

b) Arrange follow-up care (e.g., medical home/primary care, special services, support networks, subspecialty care)

6.4 Recognize the impact of health insurance status on patient care and availability of services

6.5 Recognize the existence of health care disparities and their impact on patient care

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Electronic Resources:

CDIM Internal Medicine Subinternship Curriculum.

<http://www.im.org/Resources/Education/Students/Learning/CDIMsubinternshipCurriculum/Pages/default.aspx>

Family Medicine Curricular Resource Project Post Clerkship Training Resource.

<http://www.fmdrl.org/index.cfm?event=c.getAttachment&riid=197>.