Competency Road Map for Procedural Training in Family Medicine Residencies

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Objectives

- Describe the tiered framework for procedural training, including the rationale and methodology behind its creation.
- Discuss standardized assessment tools for procedural training in your program.
- Articulate ways the Association of Family Medicine Residency Directors (AFMRD) and others can help use these “guidelines” in an iterative improvement cycle.

Background

- Residency programs are expected to have a systematic process to determine that a resident is competent in procedures.
- While the Review Committee for Family Medicine (RC-FM) has granted flexibility to programs in regards to how competency is determined, there is now a need for guidance on how to approach the development of such a process.
- The Council on Academic Family Medicine (CAFM) endorsed a project developing “guidelines,” or a “road map” for programs to assess competency of their residents in procedures.

IV.A.6.r) Residents must receive training to perform clinical procedures required for their future practices in ambulatory and hospital environments. (Core)

IV.A.6.r).(1) The program director and family medicine faculty should develop a list of procedural competencies required for completion by all residents in the program prior to graduation. (Core)

IV.A.6.r).(1).(a) This list must be based on the anticipated practice needs of all family medicine residents. (Core)

IV.A.6.r).(1).(b) In creating this list, the faculty should consider the current practices of program graduates, national

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RC-FM Program Requirements

data regarding procedural care in family medicine, and the needs of the community to be served. (Core)

Question	Answer
What constitutes acceptable on-site supervision for a PGY-1 resident caring for a low-risk pregnant woman in labor? *[Program Requirement: IV.A.6.k)]*	Acceptable supervision for a resident who is providing care for such a patient include: (a) a physician with privileges for providing obstetric labor and delivery services in the hospital associated with the program; (b) a resident who fulfills written program criteria for the supervision of low-risk labor; or (c) a licensed midwife with privileges to provide labor and delivery services in the hospital.
Does the omission of specific procedural competency suggest that the Committee does not consider procedural competence as a critical component to the practice of family medicine? *[Program Requirements: IV.A.6.r).(1).(a)-(b)]*	No. As the list of procedures performed by the practicing family physicians varies based upon the needs of the community, the program directors and members of the faculty should develop a list of required procedures based upon the needs of their FMP and recommendations of organizations, such as the American Academy of Family Physicians (AAFP), the Society of Teachers of Family Medicine (STFM), and the Association of Family Medicine Residency Directors (AFMRD).

CAFM Consensus Statement for Procedural Training in Family Medicine Residency

This consensus report represents the collective wisdom of experienced educators building upon a foundation of established literature and existing standards in determining best practices for informing what defines procedural competency.

CAFM Consensus Statement as a Roadmap to Excellence

Intended for residency program directors to use in curriculum development and resident assessment

What is it NOT?

- ***Not intended to supersede*** residency program directors' own judgment
- ***Not designed to influence*** either hospital privileging of procedures or program requirements outlined by the ACGME RC-FM

Discussion:

Does your program have a required list of procedures?

What is required to achieve “competency”?

Recommendation of a simple framework

Development of Procedure List

- Using Procedure Taxonomy
  - Developed by the STFM Group on Hospital Medicine and Procedural Training
- Data from the AAFP membership survey regarding the scope of procedures performed in practice

Residency Education

Advanced Procedural Training in Family Medicine: A Group Consensus Statement

Barbara F. Kelly, MD; Julia M. Sicilia, MD; Stuart Forman, MD; William Ellert, MD; Melissa Nothnagle, MD

Background and Objectives: *Family medicine does not have a defined scope of procedures or universal standards for procedural training. This contributes to wide variation in family physician training and difficulties obtaining hospital privileges for advanced procedures. The Society of Teachers of Family Medicine (STFM) Group on Hospital Medicine and Procedural Training previously developed a list of core procedures to be taught in all family medicine residencies. The group recommend to develop a consensus list of advanced procedures within the scope of family medicine.* Methods: *Working from a master list of procedures, the group, which consisted of 21 family medicine educators, used a multi-voting process to identify advanced procedures within the scope of family medicine.* Results: *The group generated a list of 36 advanced procedures and added nine procedures to the previously created list of core procedures.* Conclusions: *The STFM Group on Hospital Medicine and Procedural Training proposes a list of advanced procedures within the scope of family medicine and urges family medicine governing bodies to use this list to define and standardize the scope of procedural training and practice in family medicine.*

(Fam Med 2009;41(6):398-404.)

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Table 13: Clinical Procedures Performed by Physicians at their Practice (as of June 30, 2015)

Clinical Procedures Performed by Physicians at their Practice (as of June 30, 2015)

The *A* lists:
All FM residencies are expected to offer training

- **The *A0* list**
  - Group of simple procedures
  - FM residency graduates **should be able to perform independently** based on skills acquired either in medical school or through the normal residency experience.
  - Task force does not deem it necessary to designate minimum numbers or require specific documentation of training for procedures on the *A0* list
    - Individual programs may choose to verify proficiency for procedures in this group at their discretion.

Table 1: *A0* Procedures

Procedure Cluster	Procedures
Anesthesia	Topical anesthesia
	Local anesthesia or field block
Cardiovascular	ECG performance and interpretation
	Phlebotomy
	Peripheral venous cannulation
	Arterial puncture
ENT	Removal of foreign body from ear or nose
	Cerumen disimpaction
	Anterior nasal packing for epistaxis
	Office tympanometry*
Gastrointestinal and Colorectal	Placement of nasogastric or enteral feeding tube
	Digital rectal exam
	Fecal disimpaction
Genitourinary	Bladder catheterization
Laboratory	Urinalysis (dipstick, microscopy)
	Wet mount and KOH prep
Musculoskeletal	Simple closed reduction of subluxed joint without sedation (e.g. nursemaid elbow or lateral patellar dislocation)
Ocular	Fluorescein examination (without slit-lamp)
	Superficial conjunctival foreign body removal (without slit-lamp)
Pulmonary	Handheld spirometry*
Skin	Remove corn/callus
	Drain subungual hematoma
	Laceration repair with tissue glue or skin staples
Women's Health	Pap smear collection

*May involve equipment not available at all clinical sites

The A lists: continued

- **The *A1* list**
  - All graduates of FM programs **should be adequately trained to perform.**
  - Should guide the efforts of FM faculty in training their residents to have a common skill set that can be reliably provided by family physicians in practice.
  - Except for prenatal ultrasonography, intentionally excludes reference to most obstetrical procedures,
    - which are outlined in the Consensus Guidelines for Maternity Care (currently under development and review).

Table 2: *A1* Procedures

Procedure Cluster	Procedure	Minimum Number	PCAT
Anesthesia	Digital block	3	Nerve block
Gastrointestinal and Colorectal	Anoscopy	2	Anoscopy
Genitourinary	Newborn circumcision	5	Newborn circumcision
Musculoskeletal	Upper and lower extremity splints	2 (including at least 1 upper and 1 lower extremity splint)	Casting and splinting
	Upper and lower extremity casts	2 (including at least 1 upper and 1 lower extremity cast)	Casting and splinting
	Injection/aspiration of joint, bursa, ganglion cyst, tendon sheath, or trigger point	5 (including at least 1 knee and 1 subacromial/ subdeltoid bursa)	Musculoskeletal Injection
Skin	Removal of skin tags	1 (or demonstration of competency with skin biopsy)	Destruction of skin lesion
	Biopsies (punch, shave), including vulvar biopsy	2	Skin biopsy
	Excisional biopsy	3	Skin and subcutaneous excision
	Destruction of skin lesion (including warts) using cryosurgery, RF/electrocautery, chemical ablation, or intralesional injection	3 (for each method)	Destruction of skin lesion
	Remove ingrown nail, or full toenail	3	Nail removal
	Incision and drainage of abscess, including paronychia	3	Incision and drainage
	Simple laceration repair with sutures	3	Skin laceration repair (simple)

The A lists: continued

- **The *A2* list**
  - All family medicine residencies are **expected to offer training**
  - Procedures that may be routinely taught to all residents in more procedurally intensive programs, but other programs may only offer focused training to interested residents as an elective experience
    - which may be arranged either within or outside the family medicine practice.

Table 3: *A2* Procedures

Procedure Cluster	Procedures	Minimum Number	PCAT
Anesthesia	Peripheral nerve block (other than digital nerve)	3	Nerve block
	Hematoma block	3	Nerve block
Cardiovascular	Central venous cannulation	10	Central venous cannulation
	Percutaneous arterial cannulation	5	Arterial cannulation
	Umbilical vein cannulation (neonatal)	3	Umbilical vein cannulation (neonatal)
ENT	Lingual frenotomy	1	Lingual frenotomy
	Endotracheal intubation	10	Endotracheal intubation
Gastrointestinal and Colorectal	Paracentesis	3	Paracentesis
	Incision and drainage of perianal abscess	1	
	Excision of thrombosed external hemorrhoid	2	External hemorrhoidectomy
	Remove perianal skin tags	1 (or demonstration of competency with excision of thrombosed external hemorrhoid)	External hemorrhoidectomy

The B and C lists

- Groups of more complex or advanced procedures
- Training may not be offered in all family medicine residencies.
- Some residencies may offer focused training in one or more of the *B* procedures to interested residents
- The *C* procedures may require additional training outside of a typical family medicine residency curriculum to achieve competency.

Competency Assessment: **2 parameters**

1. Minimum volume of experience

2. Formal, standardized assessment tool

Minimum Volume

- # times a trainee should perform a procedure under supervision before considering independent performance.
- *Not* synonymous with establishing a minimum threshold case log for residency experience
  - as ACGME review committees in other specialties have done.
- Derived by the expertise of task force members
- Should be adjusted based on data from ongoing research surveys of programs' and graduates' actual exposure volumes and comfort levels.
- Procedural experience may come from the use of simulation and models

Formalized Standardized Assessment

- Procedure Competency Assessment Tool (PCAT)
- PCAT should reflect the continuum of technical and cognitive skills required to demonstrate both a minimum level of proficiency and an aspirational level of expertise for the given procedure.
- After having logged the minimum number for a given procedure, the resident requests a formal competency assessment
  - while performing the procedure under supervision but without guidance of the preceptor.
- The preceptor is not expected to endorse the resident's competence upon the first request unless the resident clearly demonstrates the skills outlined in the PCAT.

Achieving Competency

- Anticipated that a significant proportion of residents would need to log far more than the minimum number before they are able to pass the competency assessment.
- Once the resident demonstrates competence, the supervising faculty may sign them off as competent to perform independently.
- The supervision policy for residents “signed off” on a particular procedure would remain at the discretion of the individual program.

Development of PCATs

- Adapted from the Operative Performance Rating System currently used in surgical specialties
- Use a 5-point Likert scale, with behavior tiers ranging from “novice” to “expert”
- Target for determining competency => “competent” level for every domain listed in the tool.
- Although they may be used as a formative teaching tool, the PCATs are designed primarily to evaluate operators performing procedures without preceptor guidance.

Procedure Competency Assessment Tool – Wet and KOH Prep

Provider: _____ **Date:** _____

Procedure: [ ] 87210 Wet/Saline Mount [ ] 87210 KOH Prep

Specimen: [ ] Vaginal [ ] Skin [ ] Other: _____

How many of this procedure have you completed thus far? _____

Please circle the descriptor corresponding to the candidate's performance in each category, **irrespective of the training level.**

Context of Examination:

Novice		Competent		Expert
Not sure of the patient's history or indications for the test		Understands the general indications and clinical value of test; able to explain to patient		Clearly articulates the indications, clinical value, limitations, and implications of the test to patient

Knowledge of Specific Procedure:

Novice		Competent		Expert
Deficient knowledge; unable to articulate procedure steps		Able to articulate all important steps of procedure		Demonstrates familiarity with all aspects of procedure

Procedure Setup:

Novice		Competent		Expert
Does not gather all required supplies or improper patient positioning		Gathers key instruments and supplies; properly positions patient		Ergonomic setup of all instruments and supplies

Collection of Specimen:

Novice		Competent		Expert
Unsure of how or from where to collect, or where to place specimen		Properly collected specimen		Smooth collection of specimen without incident

Slide Preparation:

Novice		Competent		Expert
Awkward handling of specimen; needs direction on slide preparation		Independently prepares slides with proper technique using correct solutions		Precise, directed and smooth preparation of slides

Microscopy:

Novice		Competent		Expert
Needs direction on parts of the microscope and assistance to get specimen into view		Competent use of microscope but occasionally appeared awkward or uncertain		Precise, directed and smooth handling of microscope; gets specimen into good view efficiently

Recognition of Key Findings:

Novice		Competent		Expert
Has difficulty identifying or recognizing key cell types or structures		Recognizes presence of key cell types and structures, including: epithelial cells, "clue" cells, fungal elements, trichomonads, WBCs, RBCs, bacteria		Rapidly and accurately identifies key findings; easily differentiates true findings from artifact

Overall on this task did the provider demonstrate competency to perform this procedure independently?

Yes _____ **No** _____

Comments:

Attending Name (Print): _____ **Signature/Date:** _____

Discussion:

How do you see your program using this roadmap to procedural competency?

During the break…

- Discuss / think about how you might implement the information you just heard.
- Fill out a session evaluation.

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