Using PCAT’s to Evaluate Resident Procedures
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Patrick Barlow, PhD
University of Iowa Family Medicine

Disclosures

• None
Objectives

- Review procedure training requirements for Family Medicine residency
- Become familiar with the Procedural Competency Assessment Tools (PCAT)
- Utilize PCAT to evaluate a procedure
- Discuss and propose best practices for summative evaluations of residents regarding procedural competencies

Family Medicine RRC

- 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 data regarding procedural care in family medicine, and the needs of the community to be served. (Core)
## AAFP Clinical Services Performed by Physicians
(as of December 31, 2015)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Procedures (e.g., biopsies)</td>
<td>74.7</td>
</tr>
<tr>
<td>Musculoskeletal Injections</td>
<td>64.9</td>
</tr>
<tr>
<td>Spirometry</td>
<td>35.6</td>
</tr>
<tr>
<td>Endometrial Sampling</td>
<td>31.2</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>17.6</td>
</tr>
<tr>
<td>Colposcopy</td>
<td>16.6</td>
</tr>
<tr>
<td>Cosmetic Procedures</td>
<td>8.9</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>8.2</td>
</tr>
<tr>
<td>Cardiac Stress Testing</td>
<td>7.5</td>
</tr>
<tr>
<td>Ultrasound (OB)</td>
<td>7.5</td>
</tr>
<tr>
<td>Ultrasound (non-OB)</td>
<td>5.6</td>
</tr>
<tr>
<td>Flex Sigmoidoscopy</td>
<td>4.6</td>
</tr>
<tr>
<td>Echocardiography</td>
<td>4.3</td>
</tr>
<tr>
<td>Allergy Testing</td>
<td>3.7</td>
</tr>
<tr>
<td>Colonscopy</td>
<td>2.5</td>
</tr>
<tr>
<td>EGD</td>
<td>2.5</td>
</tr>
<tr>
<td>Nerve Conduction Study</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Kate DuChene Thoma, MD, MME and John Ely, MD
Department of Family Medicine

INTRODUCTION

- Family Medicine residents need broad training to perform wide variety of clinical procedures required for their future practices in ambulatory and hospital settings.
- Program directors should develop a list of procedural competencies required for completion by all residents of the program.
- Draft ACGME Family Medicine curricular requirements included list of required 18 procedures.
- Little information is known about the number of procedures currently performed by US family medicine residents.

METHODS

- National survey of residency programs using the Association of Family Medicine Residency Directors (AFMRD) list
- Program directors asked to forward link to the 38-item Qualtrics questionnaire to their residents
- Single reminder email sent 4 weeks after initial request

BACKGROUND

- Scope of practice of current family physicians variable

<table>
<thead>
<tr>
<th>AAFP Performance of Procedures by Family Physicians (as of April 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure</td>
</tr>
<tr>
<td>Cardiac Stress Testing</td>
</tr>
<tr>
<td>Colposcopy</td>
</tr>
<tr>
<td>Formal EKG Interpretation</td>
</tr>
<tr>
<td>Holter Monitoring</td>
</tr>
<tr>
<td>Circumcision</td>
</tr>
<tr>
<td>Urine microscopy</td>
</tr>
<tr>
<td>Lumbar puncture</td>
</tr>
</tbody>
</table>

RESULTS

- Low response rate 205/3200 (6%, estimated)
- Resident experience should match educational recommendations

DISCUSSION AND CONCLUSIONS

- Milestones will require competency assessment of residents with emphasis on resident performance and less on the number of procedures performed
- Residents need more real-world clinical exposure and sufficient exposure to procedures
- Developing national data similar to ACGME ADS to monitor scope of clinical training for Family Physicians and incorporate into procedural training for residents

REFERENCES

1. ACGME program requirements in Graduate Medical Education in Family Medicine (Rev. 1, 2010). Retrieved from http://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/120_family_medicine_07012014.pdf

NEXT STEPS

- Milestones will require competency assessment of residents with emphasis on resident performance and less on the number of procedures performed
- Residents need more real-world clinical exposure and sufficient exposure to procedures
- Developing national data similar to ACGME ADS to monitor scope of clinical training for Family Physicians and incorporate into procedural training for residents
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 recommeded 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 23 family medicine educators, used a multi-rounding 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.)

Table 1.
Procedure Categories, Revised23

A: All family medicine residency programs must provide training in each of these procedures.
A0: Residents will have the ability to perform these basic procedures either upon graduation from medical school or through normal residency experience. These procedures do not require specific documentation of training or numbers performed.
A1: All residents must be able to perform these procedures independently by graduation.
A2: All residents must have exposure to these procedures and be given the opportunity to be trained to perform them independently by graduation.
B: These procedures are within the scope of family medicine and require focused training for residents to be able to perform independently by graduation.
C: These procedures are within the scope of family medicine and may require additional training beyond the usual 1 year training for family physicians to perform independently.
Following is a list of procedures that will be encountered in residency. It is not an exhaustive list but does include most procedures our residents experience:

A0: Procedures all residents must be able to perform but documentation not required
A1: Procedures all residents must be able to perform (documentation required)
A2: Procedures residents will be exposed to and will have the opportunity to gain proficiency

<table>
<thead>
<tr>
<th>Category</th>
<th>A0 Procedures</th>
<th>A1 Procedures</th>
<th>A2 Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>• Cryotherapy of skin lesion</td>
<td>• Punch biopsy of skin</td>
<td>• Cesarean section</td>
</tr>
<tr>
<td></td>
<td>• Skin tag removal</td>
<td>• Excisional biopsy</td>
<td>• Forceps delivery</td>
</tr>
<tr>
<td></td>
<td>• Shave corn/callus</td>
<td>• Nail excision with and without matrix destruction</td>
<td>• Vacuum delivery</td>
</tr>
<tr>
<td></td>
<td>• Laceration repair</td>
<td>• Nail treatment</td>
<td>• Third-degree perineal laceration repair</td>
</tr>
<tr>
<td></td>
<td>• Wart treatment (other than cryotherapy)</td>
<td>• Nail treatment</td>
<td>• External cephalic version</td>
</tr>
<tr>
<td>Maternity Care</td>
<td>• Fetal monitor interpretation</td>
<td>• Artificial rupture of membranes (amniotomy)†</td>
<td>• Paracervical block</td>
</tr>
<tr>
<td></td>
<td>• Manual removal of placenta (simulation)</td>
<td>• IUFD placement†</td>
<td>• Amnioinfusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fetal scalp electrode placement†</td>
<td>• Fourth degree perineal laceration repair</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• First-degree laceration repair†</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shoulder dystocia management (ALSO)†</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Second-degree perineal laceration repair†</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Injection of cervical ripening agent (Cervidil, Prepidil®, Cytotec)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Foley bulb insertion for induction of labor</td>
<td></td>
</tr>
</tbody>
</table>
LP Video

- How would you provide feedback?
- What process do you use to evaluate?
Procedure Competency Assessment Tool (PCAT)

1. Minimum volume of experience

2. Formal, standardized assessment tool
PCAT Competency: Minimum Volume

- Number of times resident should perform a procedure under supervision before faculty consider the resident to perform it independently
- Not synonymous with establishing a minimum threshold case log for residency experience
- Based on expert opinion and should be adjusted as data becomes available
- May include simulation and models

Competency: Formal, Standardized Assessment

- Procedure Competency Assessment Tool (PCAT)
- Adapted from validated Operative Performance Rating System (OPRS) used in surgical specialties
- 5 point Likert scale with behavior anchors ranging from “novice” to “expert”
- May be used as formative teaching tool, but primary goal is to evaluate operators performing procedures independently
NEWLY REVISED

ACS/APDS
SURGERY RESIDENT SKILLS CURRICULUM
PHASE 1 - CORE SKILLS

AMERICAN ACADEMY OF FAMILY PHYSICIANS

CAFМ-Approved Procedure Competency Assessment Tools

- Incision and Drainage
- Intrauterine Device
- Joint, Bursa, Soft Tissue Aspiration or Injection
- Lingual Frenotomy (for Ankyloglossia)
- Lumbar Puncture
- Nail Removal
- Nerve Block
- Newborn Circumcision
- OB Ultrasound Basic/Limited
- Oral Endotracheal Intubation
- Paracentesis
- Reduction of Dislocated or Subluxed Joint
- Skin and Subcutaneous Excision
- Skin Biopsy (Non-Excisional)
- Skin Laceration Repair (Simple)
- Slit Lamp Examination
- Thoracentesis
- Umbilical Vein Cannulation (Neonatal)
- Vasectomy
- Wet and KOH Prep

(Individual files in .docx format.)

Anoscopy
Arterial Cannulation
Bartholin's Cyst Management (Manipulation)
Bartholin's Cyst Management (Word Catheter)
Casting and Splinting
Central Venous Cannulation
Cervical Cytology (Pap Smear)
Cervical Polypectomy
Colposcopy
 Destruction of Skin Lesion
Endometrial Biopsy
Extracorporeal Hemorrhoidectomy
Fine Needle Aspiration Biopsy
Fine Needle Aspiration of Cyst
General
Implantable Contraception
LP Video take 2

- PCAT Assessment

Our Experience with PCAT’s

- Iowa Data
SUMMATIVE EVALUATION OF PROCEDURE COMPETENCY

Family Medicine RRC

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Summative Evaluation

- V.A.3.a) The specialty-specific Milestones must be used as one of the tools to ensure residents are able to practice core professional activities without supervision upon completion of the program.

- V.A.3.b) The program director must provide a summative evaluation for each resident upon completion of the program.

This evaluation must:
- V.A.3.b).(1) become part of the resident’s permanent record maintained by the institution, and must be accessible for review by the resident in accordance with institutional policy;
- V.A.3.b).(2) document the resident's performance during the final period of education; and,
- V.A.3.b).(3) verify that the resident has demonstrated sufficient competence.

Clinical Privileges/Procedures Requested.

At the conclusion of Dr. __________’s Family Medicine residency training, he/she was judged capable of performing the following procedures independently. Current clinical competence should be assured before granting these privileges.

**CORE PROCEDURES**

**General**
- Skin punch biopsy
- Cryotherapy (skin lesion)
- Excision of skin lesion (including excisional biopsy)
- Incision and drainage of abscess
- Suturing/laceration repair—simple/complex
- Termal Removal
- Anoscopy
- Circumcision—neonatal
- Endometrial biopsy
- Lumbar puncture
- Management of simple nondisplaced fractures/splinting/casting
- Epistaxis management
- Joint aspiration and injection

**Obstetrical**
- Resident completed only the minimal requirements for obstetrical training for a family medicine residency.
- Resident completed our full obstetric training program and was judged capable of the following core obstetric privileges:
  - Spontaneous vaginal delivery
  - Repair of obstetrical lacerations and episiotomies
  - Labor augmentation and induction
  - Manual extraction of retained placenta
  - Basic obstetrical ultrasound (position of the head, heartbeat)
  - Amniotomy
  - Fetal scalp electrode placement
  - Intrauterine pressure catheter (IUPC) insertion
  - Interpretation of fetal heart rate tracing
Procedure Competency & Summative Evaluation

• Discussion
  – Specific list
  – “scope of FM procedures”
  – No comment

PCAT: Future Research Needed

• Collaborate
• Validate
• Disseminate

• “This task force recommends that AFMRD & STFM establish and support a learning collaborative for the continuing development, field testing, refinement, and dissemination of this method of procedure competency assessment.”
Please contact me if interested in collaboration on PCAT validation

kate-thoma@uiowa.edu

Please…

Complete the session evaluation.

Thank you.