

## Slide 5

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**Cnf1**

Poll: What is your stage of career right now in your educational trajectory?

Cnf, 7/19/2016

Lnf2

Poll: What is your current geographic location?

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**Poll Question #3**

**What is your planned/desired trajectory for eventual practice?**

- A. Traditional suburban**
- B. Hospitalist**
- C. Rural**
- D. Urban-underserved**
- E. Academic or**
- F. International**

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Lnf3

Poll: What is your planned/desired trajectory for eventual practice?

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**Poll Question #4**

**Do you think the procedural needs of rural and underserved patients are being met by medicine?**

- A. Yes**
- B. No**

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Lnf4

Poll: Do you think the procedural needs of rural and underserved patients are being met by medicine?

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**Overview**

- **Mindset of a proceduralist**
- ***"Advanced Family Medicine"***
- **Why learn procedures?**
- **Advantages and disadvantages**
- **Possible procedural skills**
- **Which procedures?**
- **Financial issues**
- **Where to begin?**
- **Getting the training**



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## Slide 7

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**Cnf2**      Poll: What is your current geographic location?  
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## Slide 9

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**Cnf3**      Poll: What is your planned/desired trajectory for eventual practice?  
Cnf, 7/19/2016

## Slide 11

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**Cnf4**      Poll: Do you think the procedural needs of rural and underserved patients are being met by medicine?  
Cnf, 7/19/2016

## Mindset of a Proceduralist

- Why choose Family Medicine?
- Primary Care vs. Surgical Care?
- Knowing that you can do this.
- Needing to provide procedural care in less accessible areas (rural, urban, and international).
- License to practice, *"Medicine and Surgery."*



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## Poll Question #5

Have you been discouraged or actively told that FM doctors cannot do procedures and are just outpatient-only doctors?

- A. Yes
- B. No

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inf5

Poll: Have you been discouraged or actively told that FM doctors cannot do procedures and are just outpatient-only doctors?

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## "Broad-Scope Family Medicine"

- It depends upon your reference point.
- Not just about procedures:
  - Its about breadth of practice
  - Its about population served
  - Its about Comfort, competence, and confidence as a clinician.

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## U.S. Family Physician Primary Practice Locations

- Total Office or Clinic – 84%
- Hospital Care – 47%
- Hospitalist – 3%
- Emergency Room Practice – 3%
- Urgent Care – 3%
- Rural Practice – 20% (31% in 1994)
- Procedural care is affected by many factors.

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## AAFP Procedural Statistics for FM

- Skin Procedures (biopsies) – 74.7%
- Musculoskeletal injections – 68.4%
- EGD – 2.5% (was 6.8% in 2011)
- Colonoscopy – 2.5% (was 7.7% in 2011)
- Obstetrical Care – 17.5% (19.2% in 2011 and 25% in 1995)
- C-sections – 9.3% (1.4% denied)
- Full Hospital Privileges – 47%
- Cardiac Stress Testing – 7.6% (was 20.3% in 2011)
- Ultrasound Imaging – 7.4% (OB) & 5.6% (non-OB)
- Cosmetic procedures – 8.9%
- Provision of ER services – 34.5% (was 40.1% in 2011)
- D&C – 10.7%

<http://www.aafp.org/about/the-aafp/family-medicine-facts/table-13.html>

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## Slide 15

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**Cnf5** Poll: Have you been discouraged or actively told that FM doctors cannot do procedures and are just outpatient-only doctors?  
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## “Advanced Family Medicine”

### Issues to consider:

- Distinguishing ourselves from physician extenders
- We are not just short-changed Med-Peds doctors – we can do more
- Some procedural specialists do not think we can do these things (threatened?)
- Many procedural specialists will not go where we will go

### Does it really exist?

- All over the country and all over the world, but not as common as we would like

### How do you find it?

- It's more of a philosophy
- Many seeking it and many more are providing it
- A growing movement in family medicine training
- With “advancing” in procedural skills, one needs to remember that we must advance to more modern application of technology in our procedural skills (e.g. using ultrasound at the bedside to localize area for tubes, etc...).

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## Why Learn Procedures?

### (Advantages)

- Enjoyment experienced
- Self-confidence obtained
- Challenge sought and accomplished
- Broad care for the populations that we serve –
  - they need it
  - many of the subspecialty proceduralists will not go where these populations are to serve; but many family physicians will.
- Increased income
- Fits the philosophy of Family Medicine



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## Reasons to Avoid it (Disadvantages)

- Challenging to obtain
- Inadequate training/exposure during residency
- Specialist “obstructionism”
- Hospital or facility conflict or availability
- Increased overhead costs
  - Equipment
  - Facility (professional vs. technical)
  - Liability insurance:
    - Based upon volume of procedures per year (e.g. CS, EGD, Colonoscopy, ...)
    - FM with OB
    - FM with C-sections

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## Possible skills to consider

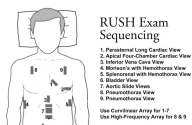
1. Ultrasound (POCUS)
2. Cardiac procedures
3. Surgical OB and Surgical gynecology
4. Urological procedures
5. GI Procedures
6. Hospital-based procedures
7. Dermatological procedures
8. Orthopedic procedures
9. Emergency Room procedures
10. ENT and Dental procedures



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## Ultrasound Skills: Basic and Advanced

- Bedside Ultrasound (POCUS) – the coming trend
- OB Ultrasound:
  - Dating and structural analysis
  - Biophysical Profile/Amniotic Fluid Index
  - Labor-related Ultrasound:
    - Presentation and number
    - Placental evaluation and position
    - Amniotic fluid evaluation (AFI?)
- Abdominal Ultrasound
- Emergency Ultrasound – “RUSH” exam



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## Point of Care Ultrasound (POCUS)

- OB applications (clinic and hospital)
- Cardiac applications (ECHO, LVH, EF, vascular/pulmonary status)
- Emergency applications (vessel access, hydration status by IVC, RUSH exam)
- Urologic applications (urinary volume, urinary retention, scrotal masses, kidneys/hydronephrosis, nephrolithiasis)
- Musculoskeletal applications (soft-tissue and joint injections, osteoporosis screening)
- Mass identification (solid or fluid-filled)
- “Pocket Ultrasound (pUS) for bedside, point-of-care heart assessments” (JAFPM 2015;28:706-712).

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### Cardiac Procedures: Basic and Advanced

- **Stress Testing** (7.6% of FM docs)
  - Regular ECG Stress Testing (minimal equipment)
  - Nuclear Stress Testing (usually hospital or larger clinics)
- **Stress Echo testing**
- **Echocardiography** (4.3% of FM docs)
- **More challenging in big cities**
- **More needed in small towns**

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### Surgical Obstetrics and Gynecology: Basic and Advanced

- Vacuum-assisted deliveries
- Forceps-assisted deliveries
- MEU (Manual exploration of the uterus)
- Endometrial Sampling (pipelle)
- Colposcopy, cryotherapy, and LEEP (cervical dysplasia)
- Cervical Biopsy
- D&C (post-miscarriage)
- C-Sections (9.3% of FM docs)
- Tubal Ligation (open and laparoscopic)
- Diagnostic Laparoscopy
- Working with ultrasonographers (supervising and providing interpretation).
- Hysteroscopy



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### “Minimum Thresholds” for OB/GYN Resident Procedures

Spontaneous Vaginal Deliveries	C-Sections	Operative Vaginal Deliveries	OB Ultrasound (>14 weeks)
200	145	15	50

- *“These minimums reflect the lowest acceptable clinical volume of procedures performed per resident for program accreditation.”*
- These numbers are being debated by many people in OB-focused FM Programs since a decision like this could ultimately determine credentialing numbers for FM doctors seeking privileges in some communities.

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### Maternity Care in Family Medicine: Economics and Malpractice

Maternal Care providing FM (compared with no OB) have...

1. Increased income for the same hours worked (63% more)
  2. Increased satisfaction with medicine and with family medicine as a specialty choice
  3. Increased psychological satisfaction
  4. More frequent performance of a wider array of procedures
  5. Younger practices serving a greater number of complete families & less Medicare
  6. More diverse and comprehensive hospital and office practice
  7. Higher malpractice insurance premiums, but...
  8. Fewer malpractice claims and lawsuits, and...
  9. Fewer non-obstetrical malpractice claims and lawsuits!
- From this study, providing maternal care seems to be the “linchpin” of being a proceduralist.

Journal of Family Practice 1996; 43:101-103

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### Poll Question #6

**Are you surprised by this study and conclusions?**

- A. Yes**  
**B. No**

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Ent6

Poll: Are you surprised by this study and conclusions?

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## Slide 30

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**Cnf6**

Poll: Are you surprised by this study and conclusions?

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## Basic Urological Procedures

- Circumcisions
- No-scalpel vasectomy
- Vasectomy provided by (8% of FM docs)
- VASCLIP
- Urethral Dilation
- Cystoscopy



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## Gastrointestinal Procedures

- EGD (diagnostic and therapeutic)
  - Surgeons recommend 25 minimum
  - GI recommend 100 minimum (wonder why?)
- Colonoscopy (diagnostic and therapeutic)
  - Surgeons recommend 50 minimum
  - GI recommend 100 minimum
- You should also possess the following:
  1. ACLS certification
  2. IV sedation and anesthesia skills
  3. Minimum of 20 supervised of each



Hedley JABFP Nov-Dec 1998 Vol. 18 No. 6

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## "Sigmoidoscopy may not be enough for older patients"

Colon cancer screening with sigmoidoscopy alone could miss up to 50% of colon polyps in older patients.

- Review of 120,000 colonoscopies his findings showed:
  - Flexible sigmoidoscopy alone could miss 44% of polyps in patients aged 60-69 and 50% in those aged 70-79.
  - Would have missed 22,800 polyps, and 16,800 would have been adenomas.
  - Conclusion: "From this study, it's pretty apparent that sigmoidoscopy should not be used for colon cancer screening in older patients."
  - USPSTF states that, "Sigmoidoscopy every 5 years combined with high-sensitive fecal occult blood testing every 3 years is an adequate screening alternative."
- Bottom Line: Why use an archaic and ineffective device for our patients that we would not want used on ourselves or our loved ones?

Internal Medicine News, 10/23/2013

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## "Colonoscopy: Prime Time for Primary Care?"

- Low U.S. screening rates in those reaching 50 years
- CDC estimates <50% are screened in U.S.
- If screening remains same – need 1,050 colonoscopists by 2020
- Recent study suggests too few specialists to meet demand
- Recommends bridging the gap with properly-trained PCP's
  - Can safely and effectively perform colonoscopy as well as GI
  - Reach cecum 89.2% (ASG/ACG benchmark – 90%)
  - Adenoma detection rate 28.9% (ASG/ACG benchmark – 25%)
  - Complication rates 0.04% (ASG/ACG benchmark – 0.1%)

1 JAMA. 2009;301(9):921-922. / 2 Annals of Family Medicine 2009;7(3):36-43

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## Expanding Access to Colorectal Cancer Screening

- Benchmarking Quality Indicators in a Primary Care Colonoscopy Program - David A. McClellan, MD, Texas A&M Physicians FM Residency
- Background: An inadequate supply of physicians who perform colonoscopies contributes to suboptimal screening rates, especially among the underserved. This shortage could be reduced if primary care physicians perform colonoscopies.
- Results:
  - Total 1155 colonoscopies were performed on 1101 individuals over a 3-years.
  - Cecal intubation rate was 96.25%. (ASG/ACG benchmark – 90%)
  - Adenoma detection rates on patients >50 years old were 38.15% and 25.96%, respectively. (ASG/ACG benchmark – 25%)
  - There was 1 perforation, which was referred to a hospital, and 1 instance of post-procedural bleeding, which spontaneously resolved (0.02%). (ASG/ACG benchmark – 0.1%)
- Conclusions: Primary care physicians performing colonoscopies met the recommended quality indicators set forth by the American Society for Gastrointestinal Endoscopy.
- J Am Board Family Med November-December 2015 vol. 28 no. 6 713-721

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## Hospital-based procedures

("Lines, Needles, and Tubes")

- Ultrasound Guided...
  - Chest Tubes
  - Paracentesis
  - Thoracentesis
  - Lumbar puncture
  - Suprapubic tap
  - Central Lines
- Bone marrow aspiration
- BiPAP management
- Ventilator management (at least initially for stabilization)



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## Dermatological Procedures

- Biopsy (punch, shave, excisional)
- Excision Techniques
- Electrical loop procedures
- Incision and drainage
- Cryotherapy
- Cosmetic dermatological procedures
  - Facial re-surfacing???
  - Botox treatments
  - Liposuction and other body contouring procedures
  - Venotherapy (varicosities)
  - Flap rotations and other plastic surgical techniques

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## Orthopedic Procedures

- Arthrocentesis
  - Diagnostic and therapeutic
- Soft tissue injections
- Casting and splinting
- Fracture management
  - Hematoma blocks
  - Closed reductions



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## Sports Medicine and Procedures

- *"The majority of Sports Medicine CAQ FM docs predominantly practice sports medicine and that practice of musculoskeletal medicine lends itself to greater opportunities to bill for new patients, consultations, and procedures, which may increase compensation."*
- Oftentimes Sports Medicine docs work in the area of ultrasound-directed therapies and injections as well as fracture management and splinting.

JABFM November-December 2015; Vol. 28; No. 6

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## Emergency Room Procedures:

### Basic and Advanced

- Cardiac arrest procedures
- Airway Management
- Interosseous access (EZIO)
- Thoracentesis
- Vascular access
- RUSH Exam (Rapid Ultrasound for Shock and Hypotension)
- Fracture reduction
- Nail procedures
- Procedural sedation (including CT/MRI in children)
- Peritoneal lavage (trauma)
- Pericardiocentesis (emergent)



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## Eye, Ear, Nose, Throat and Dental

- Nasal packing
- Indirect laryngoscopy
- Frenulectomy for ankyloglossia
- Flexible nasolaryngoscopy
- Facial and oral nerve blocks for dental work and laceration repair
- Hordeolum and sty removal
- Tooth extraction (consider licensure – our license is for medicine and surgery and may not apply to dental care in some locations)
- Restorative work (developing world)
- Tympanostomy tube placement

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## General Surgery:

### Basic and Advanced

- Removal of dermatologic masses
- Incision and drainage of abscesses
- Thrombosed hemorrhoid treatment (phlebectomy)
- Wound care
- Breast cyst aspiration and superficial breast biopsy
- Hemorrhoidectomy
- Thyroid fine-needle aspiration (FNA)
- Appendectomy
- Amputations

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## Financial Considerations

- Overhead
- Liability Issues
- Billing and Coding
- Actual revenue in practice



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## Procedural Charges Sampling

Actual Charge (Insurance Reimbursement/Medicaid Reimbursement)

- Arthrocentesis of knee (20610) **\$112** (\$112/\$53)
- 1<sup>st</sup> Trimester OB Ultrasound (76801) **\$216** (\$198/\$116)
- Paracentesis (49080) **\$322** (\$260/\$154)
- Circumcision (54150) **\$378** (\$280/\$181)
- Diagnostic D&C (59160) **\$398** (\$328/\$162)
- Frenulectomy (40819) **\$442** (\$431/\$195)
- Colposcopy; LEEP (57460) **\$540** (\$455/\$288)
- Colles Fracture - closed reduction (25605) **\$874** (\$877/\$405)
- Colonoscopy with biopsy (45380) **\$877** (\$346/\$717)
- Vasectomy (55250) **\$890** (\$710/\$427)
- Complete OB Care (Vaginal - 59400) **\$2816** (\$2732/\$1326)
- Complete OB Care (C-section - 59510) **\$3061** (\$3094/\$1496)

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## Advanced Procedural Training in Residency

Family Med 2009;41(6):398-404

- *"The SFM 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."*
- Requires "focused" training within residency:
  - Skin: Allergy testing, Botulinum toxin injection, non-surgical cosmetic aesthetics, skin flap advanced closures
  - Maternity care: Amniocentesis, Cesarean delivery, external cephalic version, forceps-assisted delivery
  - Urgent care and hospital: Bone marrow biopsy, cardioversion, chest tube insertion, exercise stress test, nasopharyngoscopy, peritonsillar abscess incision and drainage, Swan-Ganz catheter insertion and management, tooth extraction
  - Gastrointestinal: EGD

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## Foundational Skill Set (Standard Family Medicine Practices)

- Basic maternal care and deliveries (including assisted deliveries)
- D&C (post-miscarriage)
- Colposcopy, Cervical Biopsy, and Endometrial Sampling (pipelle)
- Circumcisions
- Vasectomy
- Chest tubes, paracentesis, thoracentesis, lumbar puncture, central lines, suprapubic tap, and bone marrow aspiration.
- Basic Airway Management and BIPAP management
- Skin Biopsy, I&D, and nail procedures
- Arthrocentesis and trigger point injections
- Interosseous access (adult and pediatric)
- Nasal packing and frenulectomy
- Thrombosed hemorrhoid treatment

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## Suburban Practice Procedures

- Foundational Skill Set **PLUS ...**
- In-Hospital Procedural Skills (if desired)
- GI Endoscopy (Advanced Skill)
- Although you could add anything to this list depending upon your interests and desires and the ability to gain privilege in the hospital, clinic, or surgery center settings in your community.

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## Urban/Indigent Practice Procedures

- Foundational Skill Set **PLUS ...**
- In-Hospital procedural skills
- GI Endoscopy (Advanced Skill)
- Obstetrical surgery (Advanced Skill)
- Much of this depends upon the availability of consultants and their willingness to work with your patients and their limited resources (this is challenging in some cities).

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### Advanced Family Medicine Skill Set

- Foundational Skill Set (assumed), PLUS...
- Hospital-based procedures (including ventilator care)
- Advanced GI Endoscopy (EGD and Colonoscopy)
- Operative Obstetrics (C-section)
- Ultrasound skills (OB and non-OB)
- Stress-testing
- LEEP and Tubal ligation (open and/or laparoscopic)
- Closed reduction of fractures
- Emergency Room Procedures (basic and advanced)
- Facial and dental nerve blocks
- Spinal and Epidural anesthesia

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### Rural Practice Procedures

- Foundational Skill Set PLUS...
- Advanced Family Medicine Skill Set, PLUS...
- Surgical Obstetrics (including C-sections)
- Basic General Surgery
- Basic Gynecology
- Stress-testing
- Colposcopy and LEEP
- Basic and Advanced ER Procedural skill set
- Basic (non-operative) Orthopedics
- GI Endoscopy
- Abdominal and OB Ultrasonography

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### Rural Kansas Procedural Example:

Truly an "Advanced Family Medicine" Practice

- Cayle Goertzen, MD – Belleville, Kansas
- His procedural skills:
  - Operative OB
  - Tubal ligations (open and laparoscopic)
  - Spinal and epidural anesthesia
  - Fracture management
  - Hysterectomies (open)
  - Laparoscopic surgery (including lap-cholecystectomies)
  - Amputations
  - Appendectomies (open and laparoscopic)

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### International Practice Skill Set (unlimited)

- "The sky is the limit"
- Foundational Skill Set (assumed), PLUS...
- Advanced Family Medicine Skill Set, PLUS...
- Full spectrum general surgery (often needed regularly)
- Obstetrical and Gynecological surgery (beyond C-sections)
- General urology
- Orthopedics (including operative orthopedics)
- Diagnostic procedures:
  - Ultrasonography (all types – the primary diagnostic modality beyond plain film radiography)
  - Echocardiography
- The array of skills is determined by the needs of the population

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### Getting the Training you are seeking

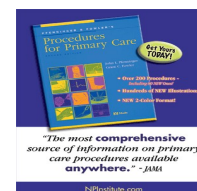
- Residency Training Programs
- Fellowships  
<https://nf.aafp.org/FellowshipDirectory/search>
- CME opportunities for the practicing physician
- Training with other proceduralists in practice



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### National Procedures Institute (NPI)

- Founded in 1989 by John L. Pfenninger, MD to provide medical education on procedural skills for primary care clinicians.
- In 2008, NPI was sold to a joint venture of the American Academy of Family Physicians, the Society of Teachers of Family Medicine and the Texas Academy of Family Physicians.
- Developed by Family doctors and taught by Family doctors.



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## Poll Question #7

**Why do you think specialists do not embrace the idea of well-trained Family doctors providing advanced procedural care?**

- A. Misunderstanding**
- B. Bias**
- C. Protection of revenue potential**
- D. Patient harm**
- E. Never seen it**

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Enf7

Poll: Why do you think specialists do not embrace the idea of well-trained Family doctors providing advanced procedural care?

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## Key Issues for the Residents

- Even if you are not sure where you are headed, you should participate liberally in procedural opportunities and determine your passion, aptitude, and comfort at being a proceduralist.
- **Document everything:**
  - Scopes
  - C-sections (primary and otherwise)
  - SVD, forceps, vacuum deliveries
  - ICU cases (especially DKA and ventilator cases)
  - Actually everything!
- \*Train broadly and then narrow your practice based upon your needs and your population served.
- Cafeteria analogy



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## Conclusion

- **Procedural training should be a part of every family medicine residency training program.**
- **Are you cut out for *Advanced Family Medicine*?**
  - It's a mindset
  - It's a philosophy
  - It requires aggressiveness, courage, and hard work
- **\*Being a proceduralist has a lot of upside and very little downside (other than the initial time and challenges of getting the appropriate training).**
- ***"Begin with the end in mind"* – Where are you headed?**

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## Poll Question #8

**As a result of this presentation, did you change your trajectory or plans for Family Medicine Training?**

- A. Yes**
- B. No**

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Enf8

Poll: As a result of this presentation, did you change your trajectory or plans for Family Medicine Training?

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## Slide 56

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**Cnf7** Poll: Why do you think specialists do not embrace the idea of well-trained Family doctors providing advanced procedural care?  
Cnf, 7/19/2016

## Slide 60

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**Cnf8** Poll: As a result of this presentation, did you change your trajectory or plans for Family Medicine Training?  
Cnf, 7/19/2016

