

# Office-Based Procedures by Physician Associates and Nurse Practitioners are Outpacing Family Physicians

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# Disclosures

The authors have no relevant relationships with ineligible companies to disclose within the past 24 months.

*(Ineligible companies are defined as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.)*



Objectives:

**To what extent do FPs, PAs, and NPs perform core primary care procedures for older adults?**

**How have the procedural roles of FPs, PAs, and NPs, changed between 2014 and 2021 for older adults?**



# Background

- Procedures: Patient-care manual tasks
- 17% of Americans are  $\geq$  65 years old; 20% will be by 2030
- The number of FPs in clinical practice relative to older adults is declining
- The number of PAs and NPs in clinical practice continues to grow
- Little is known about the primary care procedures performed by FPs, PAs, and NPs for older adults in outpatient settings



# Methodology

- Retrospective cross-sectional observation study
- CMS Medicare Part B database 2014-2021
- Council of Academic Family Medicine (CAFM) recommended procedures
- CAFM Recommended procedures modified to match CPT codes and population
- Marshall B. Ketchum University IRB approved



# Medicare Part B

- Data publicly available through CMS
- Only Traditional Part B (Fee-for-Service ~ 53%)
  - Does not include Medicare Advantage beneficiaries
- Specific procedures per NPI available only if provider submitted > 10 claims per year
  - Uses HCPCS codes (Federal) based on CPT codes (AMA)
- Includes provider types, e.g., physician, PA, NP, etc.
- Does not include specialty or setting for PAs and NPs



# Modified Council of Academic Family Medicine Recommended Procedures (mCAFAM)

## Adapted to Match CPT codes

CAFAM Procedure Cluster	CAFAM Procedures Modified to Match CPT Categories	2019 CPT Codes
Anesthesia	Digital and peripheral nerve block	64450
Cardio-vascular	Arterial Puncture	96373
Eyes, Ears, Nose, & Throat (EENT)	Anterior nasal packing for epistaxis	30901
	Cerumen disimpaction	69209, 69210
	Removal of foreign body from ear or nose	30300, 30310, 30320
	Superficial conjunctival foreign body removal (without slit lamp)	65205, 65210, 65220
Gastro-intestinal and colorectal	Anoscopy	46600
	Placement of nasogastric or enteral feeding tube	43753
	Paracentesis	49082
	Incision and drainage of perianal abscess	46050
	Excision of thrombosed external hemorrhoid	46083
	Remove perianal skin tags	46220, 46230
Genito-urinary	Bladder catheterization	51701, 51702
Musculo-skeletal	Injection/aspiration of a joint, bursa, ganglion cyst, tendon sheath, or trigger point	20600, 20604-20606, 20610-20615
	Simple closed reduction of a subluxated joint without sedation (e.g., nursemaid elbow or lateral patellar dislocation)	23650, 24640, 27560
	Upper and Lower extremity casts	29055, 29065, 29075, 29085, 29125, 29305, 29325, 29345, 29355, 29365, 29405, 29425, 29435, 29440, 29445
	Upper and Lower extremity splints	29105, 29125, 29126, 29130, 29131, 29505, 29515

CAFAM Procedure Cluster	CAFAM Procedures Modified to Match CPT Categories	2019 CPT Codes
Pulmonary	Handheld spirometry	94010
Skin	Destruction of skin lesions (including warts) using cryosurgery, RF/electrocautery, chemical ablation, or intralesional injection	17000, 17003, 17004, 17106-17108, 17110, 17111, 17250, 17260-17264, 17266, 17270-17274, 17276, 17280-17284, 17286
	Biopsies (punch, shave), including vulvar biopsy	11102, 11104, 56605
	Drain subungual hematoma	11740
	Excisional biopsy	11106
	Incision and drainage of abscess, including paronychia	10060, 10061, 1180
	Removal of skin tags	11200
	Remove corn/callus	11055-11057
	Simple, intermediate, and complex laceration repair with sutures, tissue glue, or staples	12001, 12002, 12004-12007, 12011, 12013-12018, 12020, 12031, 12032, 12034-12037, 12041, 12042, 12044-12047, 12051-12057, 13100, 13101, 13120, 13121, 13131, 13132, 13151, 13152
	Bartholin's cyst management	56420, 56440
	Endometrial biopsy	58100, 58558
Women's Health	Remove cervical polyp	57500

**Notes:** Local & topical anesthesia are included with some procedures but do not have a dedicated CPT code. Digital rectal exams, fecal disimpaction without anesthesia, and ocular fluoresceine exams are bundled under evaluation and management codes and not recorded as procedures.



# Results - 2021

- 904,278 mCAFEM procedures filed by 12,367 FPs
- 2.9 Million mCAFEM procedures filed by 8,833 NPs
- 6.7 Million mCAFEM procedures filed by 14,748 PAs
- Three categories accounted for > 98% of all mCAFEM claims filed

– <b>Skin:</b>	<b>83%</b>	}	<b>95%</b>
– <b>Musculoskeletal:</b>	<b>12%</b>		
– <b>EENT:</b>	<b>3%</b>		





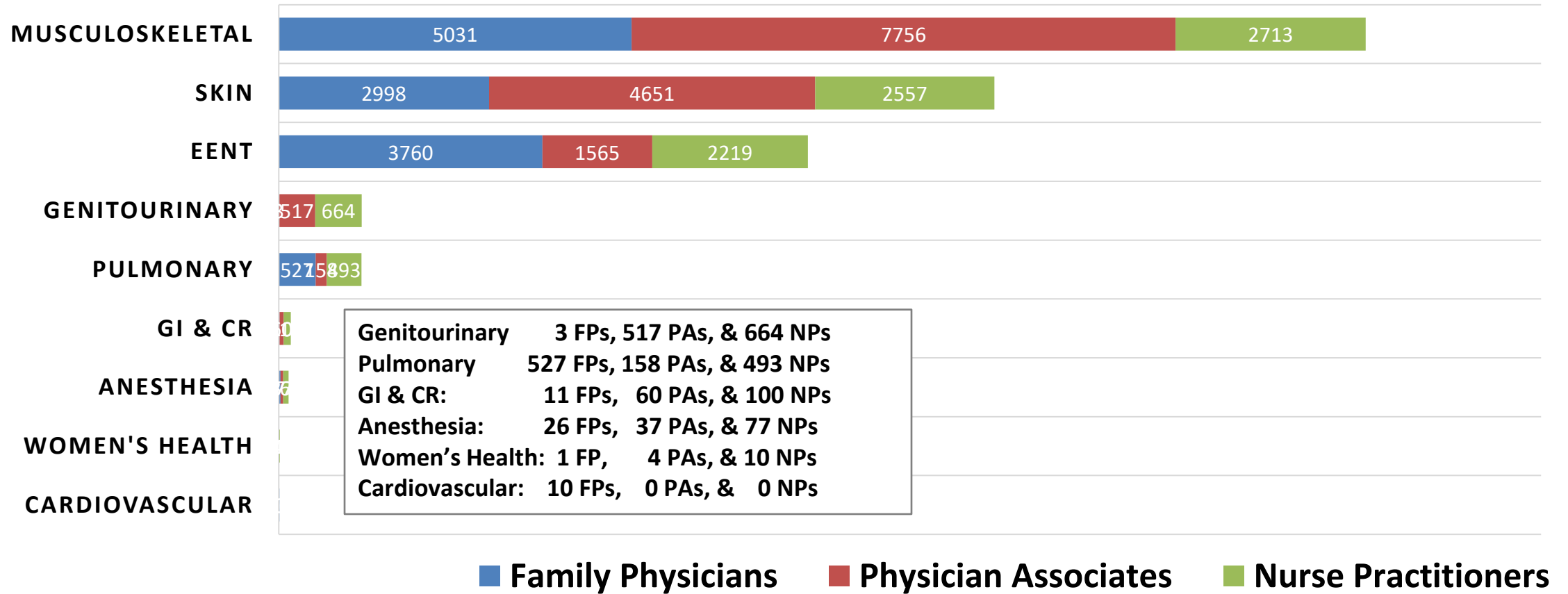
# 2021 Categories of mCAFM Procedures by All Provider Types

Procedure Category	Number of FPs, PAs & NPs	No. mCAFM Procedures	Percent mCAFM Procedures	Average Procedure per Provider
Skin	10,206	8,543,220	83%	837
Musculoskeletal	15,500	1,191,582	12%	77
EENT	3,784	1,512,652	3%	400
Pulmonary	1,178	39,264	0.38%	33
Genitourinary	1,181	60,228	0.59%	51
Anesthesia	140	35,803	0.35%	256
Gastrointestinal & Colorectal	171	28,265	0.28%	165
Women's Health	15	227	< 0.01%	15
Cardiovascular	10	239	< 0.01%	24
<b>Total</b>	<b>23,909*</b>	<b>11,411,480</b>	<b>100.00%</b>	



\*Many clinicians reported in more than one category.

# Number of Clinicians by Procedure Category, 2021



**Genitourinary**    3 FPs, 517 PAs, & 664 NPs  
**Pulmonary**    527 FPs, 158 PAs, & 493 NPs  
**GI & CR:**    11 FPs, 60 PAs, & 100 NPs  
**Anesthesia:**    26 FPs, 37 PAs, & 77 NPs  
**Women's Health:** 1 FP, 4 PAs, & 10 NPs  
**Cardiovascular:** 10 FPs, 0 PAs, & 0 NPs

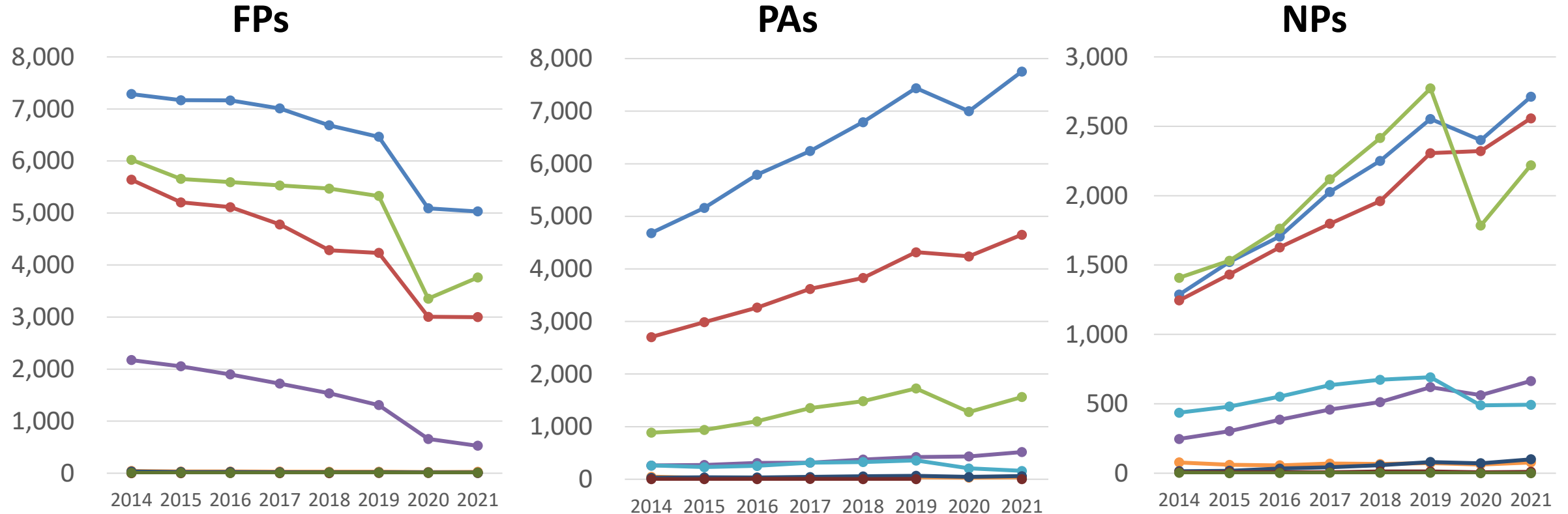


# 2021 Most Frequently Performed Procedure Categories

Category	Family Physicians	Physician Associates	Nurse Practitioners	Total
Skin	462,787	5.6 Million	2.4 Million	8.5 Million
Musculoskeletal	321,070	877,046	314,536	1.2 Million
EENT	80,886	132,152	123,428	336,466
All Other Categories	39,535	35,838	85,852	161,225



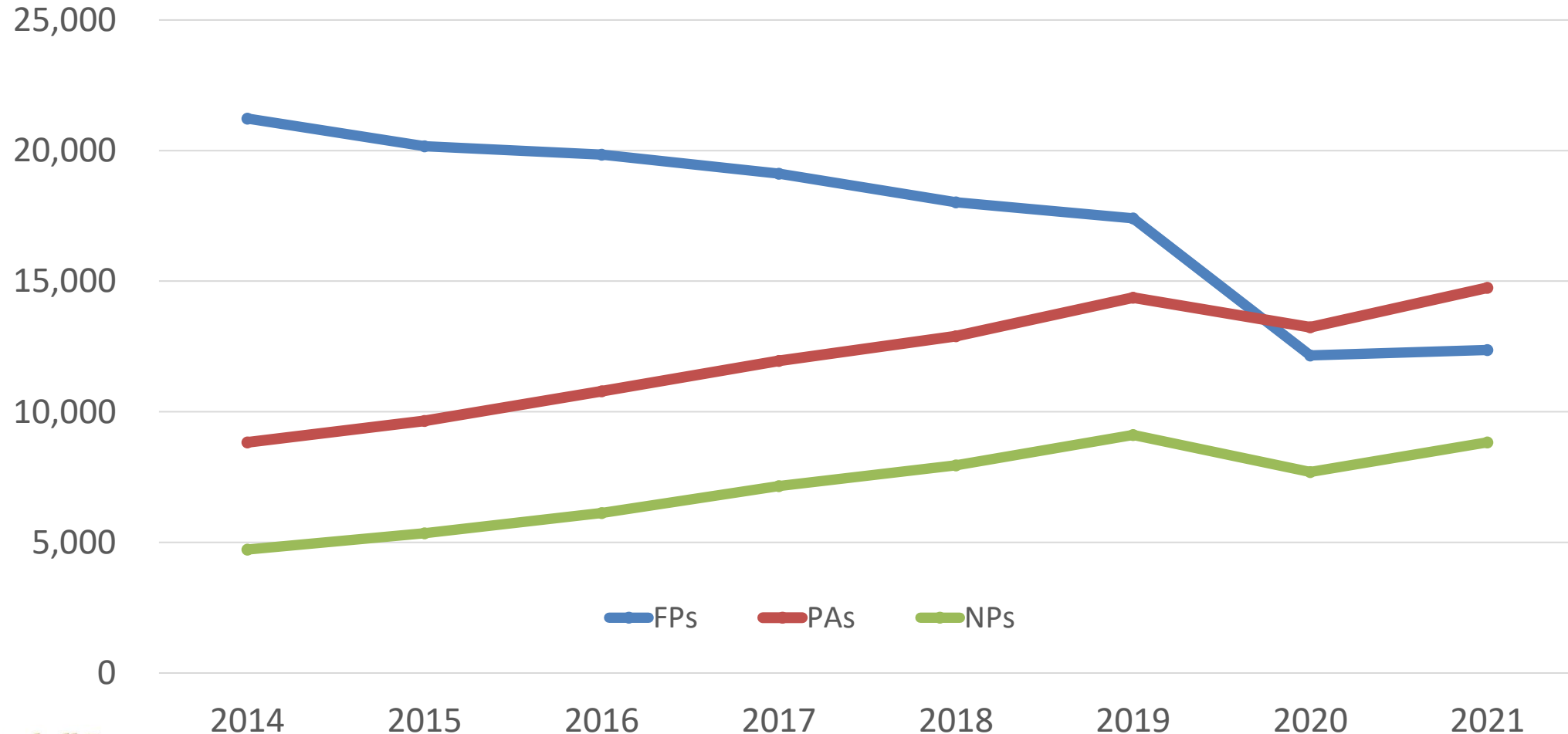
# Number of FPs, PAs & NPs Who Filed mCAFM Claims by Category, 2014 - 2021



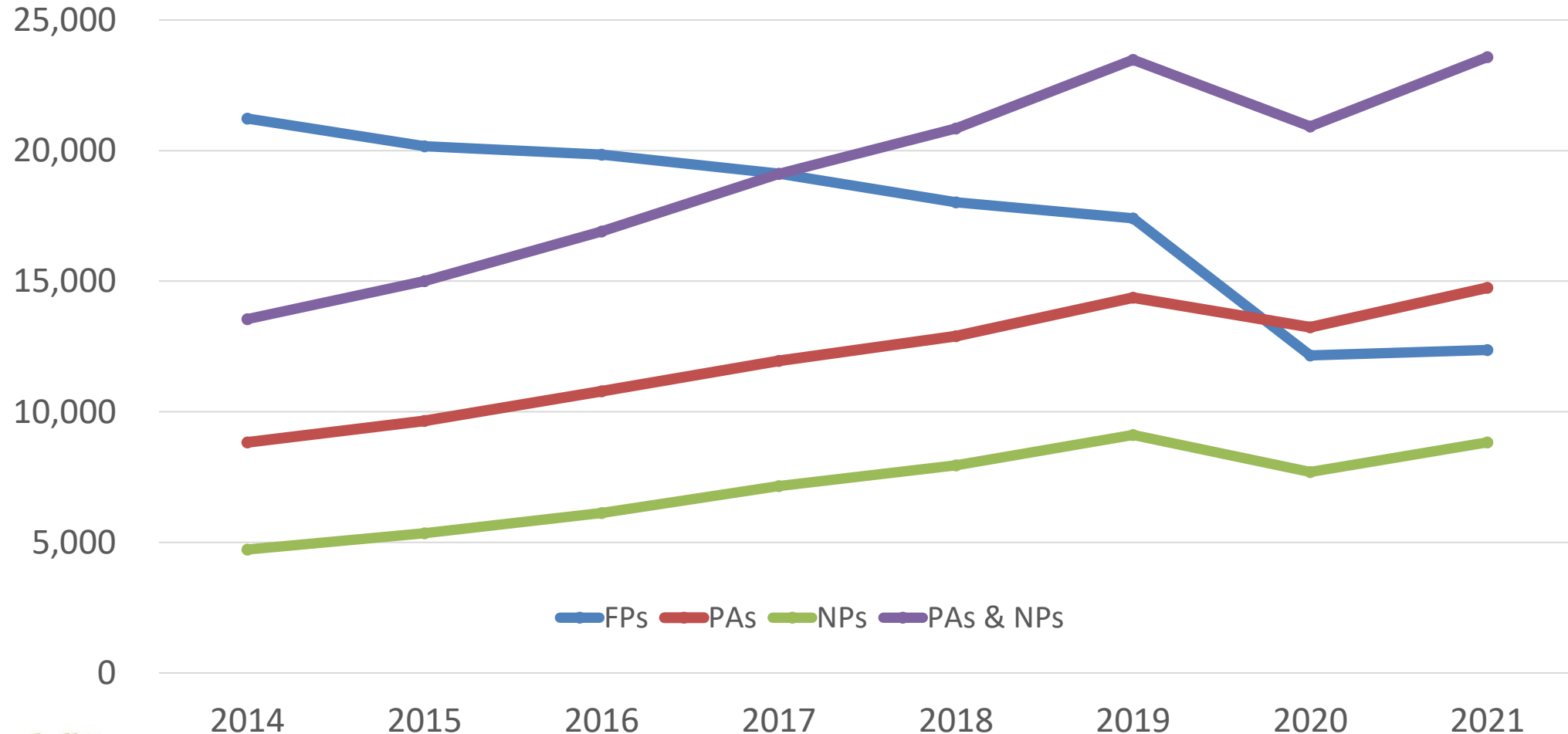
- Musculoskeletal
- Skin
- EENT
- GenitoUrinary
- Pulmonary
- Anesthesia
- GI & CR
- W Health
- Cardiovascular



# Number of FPs, PAs & NPs Who Filed Any mCAFM Claims, 2014 - 2021



# Number of FPs, PAs & NPs Who Filed Any mCAFEM Claims, 2014 - 2021



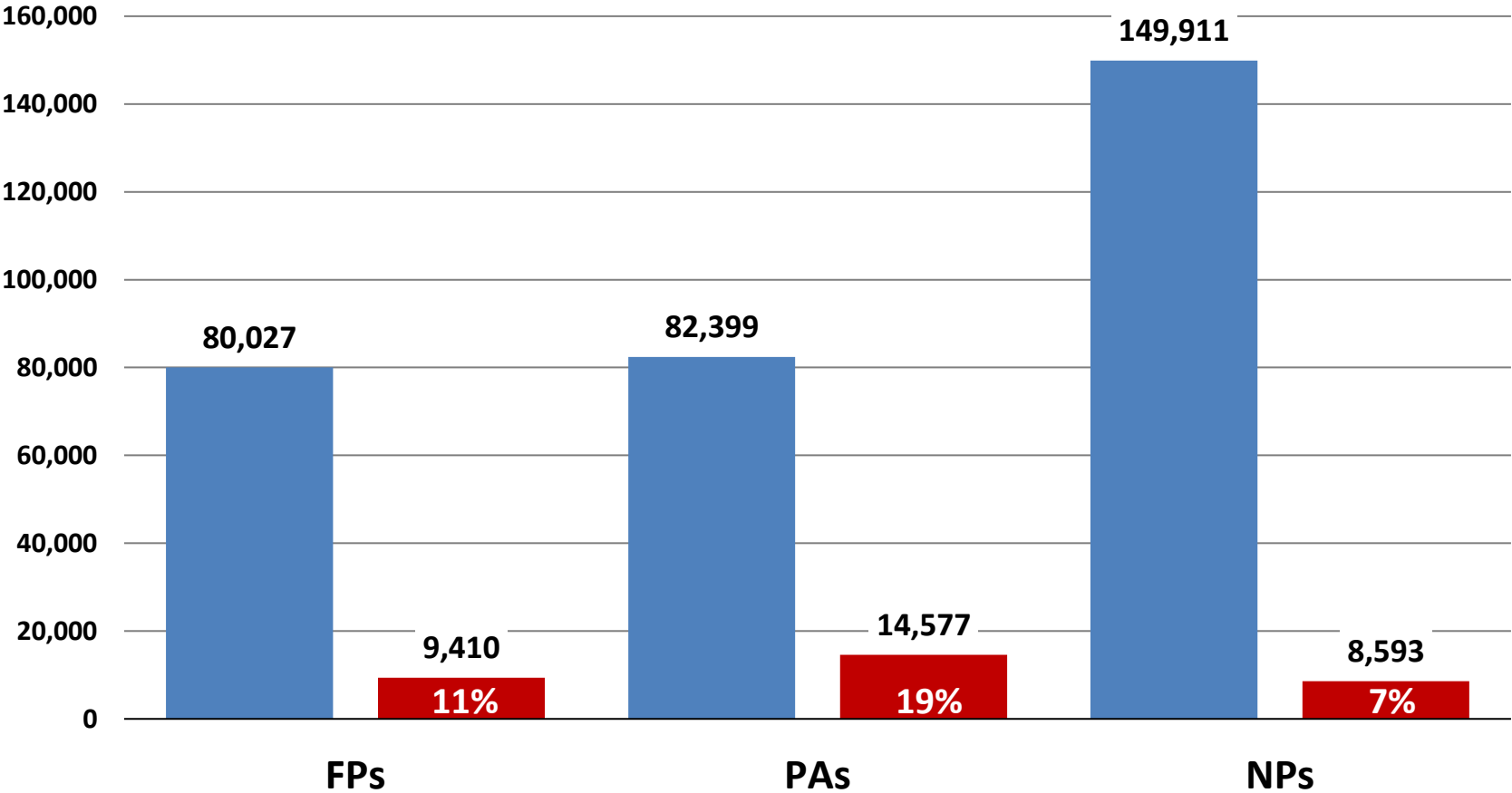
# Discussion: 2021

- Approximately 62.6 million Medicare beneficiaries
- 53% Enrolled in Traditional FFS Medicare Part B
- 95% of clinical procedures in Skin and Musculoskeletal categories

	FPs	PAs	NPs
No. in Clinical Practice	102,930	132,940	234,690
No. Who filed ANY Medicare Claim	80,027	82,399	149,911
<b>Percent who filed any Medicare Claim</b>	<b>77%</b>	<b>61%</b>	<b>63%</b>



# Comparison of the Number of FPs, PAs & NPs Filing Any CPT Claim to the Number Filing mCAFM Claims in 2021





# Increase in Procedures Partly Explained by Growth of PAs and NPs, 2014 through 2021

	FPs	PAs	NPs	PA+NP Combined
Pct Growth of Professions	-17%	45%	92%	72%
Pct Growth of clinicians who filed mCAFM Claims	-42%	67%	87%	74%

- Growth in PAs filing mCAFM claims 1.5x growth in profession
- Growth in NPs filing mCAFM claims similar to growth in profession

Why?

- Increased billing under personal NPI?
- Increased procedures?
- Both? Something else?



# Limitations

- Medicare Cohort
- Medicare Advantage beneficiaries not included (~47% in 2021)
- “Incident to” billing may mask role of PAs and NPs in dataset
- Practice/provider specialty for PAs & NPs not available



# Implications

- Guide which technical skills and procedures to teach in PA and NP schools
- PAs and NPs are increasingly performing procedures formerly performed by FPs
- PAs and NPs poised to manage growth in U.S. Medicare population's medical needs



# Take-Home Points

- In 2021 there were 1.8 times as many clinically active NPs as PAs
- For Skin and Musculoskeletal categories (95%), 2.35 times as many PAs filed claims as NPs
- For all other categories 1.52 times as many NPs filed claims as PAs
- Since 2014 FPs in clinical practice declined by 17% and submitted 42% fewer mCAFM claims
- The number of PAs & NPs in clinical practice have increased by 72% and submitted 87% more mCAFM claims



# New Questions to Explore

- Are patient needs being met?
- Are PAs more procedurally oriented than NPs?
- Are PAs more likely to work in specialties where skin and musculoskeletal procedures are performed?
- Are PAs more likely to bill Medicare under their own NPI?
- Are there geographic differences, i.e., rural v. urban?
- Is this impacted by State-level scope-of-practice regulations?



# Conclusions

- The number of FPs in clinical practice and the number of mCAFM claims they submit are declining
- PA & NPs' increasing clinical activity may be compensating for this decline
  - *Although not necessarily within family practices*
- PAs perform more of the most common procedures than NPs
- The stage is set to further explore the ambulatory procedures in more detail



# QUESTIONS?



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