



What Procedures are Performed by Primary Care Providers?

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Background--Workforce

- Primary care accounts for nearly half of all outpatient encounters.
- Physician assistants (PA), Advanced practice registered nurses (APRN), and physicians all contribute to the primary care workforce.
- The full extent of primary care activities undertaken by primary care providers is largely unknown. (Dehn & Hooker, 1999)

Background--Economic

- Some economists view PA, APRN, and physician roles as interchangeable in primary care.
- Others note differences exist in the types of visits and procedures performed by the three professions. (Everett et al., 2013)

Background--Education

- The scope of training varies between PAs, APRNs, and physicians.
- Procedure training is expensive and time-intensive.
- Medical education programs need to know which procedural skills to include in training to prepare students for the job market they will encounter.
 - “The program curriculum must include instruction in technical skills and procedures based on current professional practice.” (ARC-PA Standards 4th ed)

Background--Community Health Centers

- Community Health Centers employ PAs, APRNs, and physicians.
- CHCs deliver a high percentage of procedural visits.
- Primary care PAs in rural Iowa were found to perform various procedures, and procedural skills were perceived as important. (Asprey, 2006)

Purpose of Study

- To assess the range and relative frequency of procedures undertaken in primary care by PAs, APRNs, and physicians.

Procedures Evaluated

Pulmonary Procedures

- Emergent Airway Management
- Thoracostomy
- Respiratory Procedures (Vital Capacity testing, Respiratory therapy, plethysmography, Gas Dilution, Airway Resistance Testing, Diffusing Capacity Testing)

OB/GYN Procedures

- Fetal Monitoring
- Cervical Cancer Screening
- Physical Contraceptive Device Placement (Cervical Cap and IUD)
- Microscopy (Urinalysis, KOH, Gram Stain, Wet Mount)

Dermatology Procedures

- Dermatologic Procedures (acne surgery, biopsies, electrosurgery, cryosurgery, chemosurgery, surgical curettement)
- Incision and Drainage
- Nail Excision
- Simple Wound Closure
- Complex Wound Closure
- Wound Care

GI Procedures

- Abdominal Paracentesis
- Hemocult
- Naso- or Oro-gastric tube placement

HEENT Procedures

- Cerumen Removal
- Ophthalmological Services
- Epistaxis Treatment
- Laryngoscopy
- Foreign Body Removal

Cardiovascular Procedures

- Central Venous Catheterization
- Arterial Blood Gas
- Cardioversion
- Ultrasound

Musculoskeletal Procedures

- Lumbar Puncture
- Joint Injection
- Splinting and Casting
- Bone Marrow Biopsy

Urologic Procedure

- Pyeloplasty, Cystotomy, Bladder aspiration with suprapubic catheter, Urogram

Low Complexity Procedures

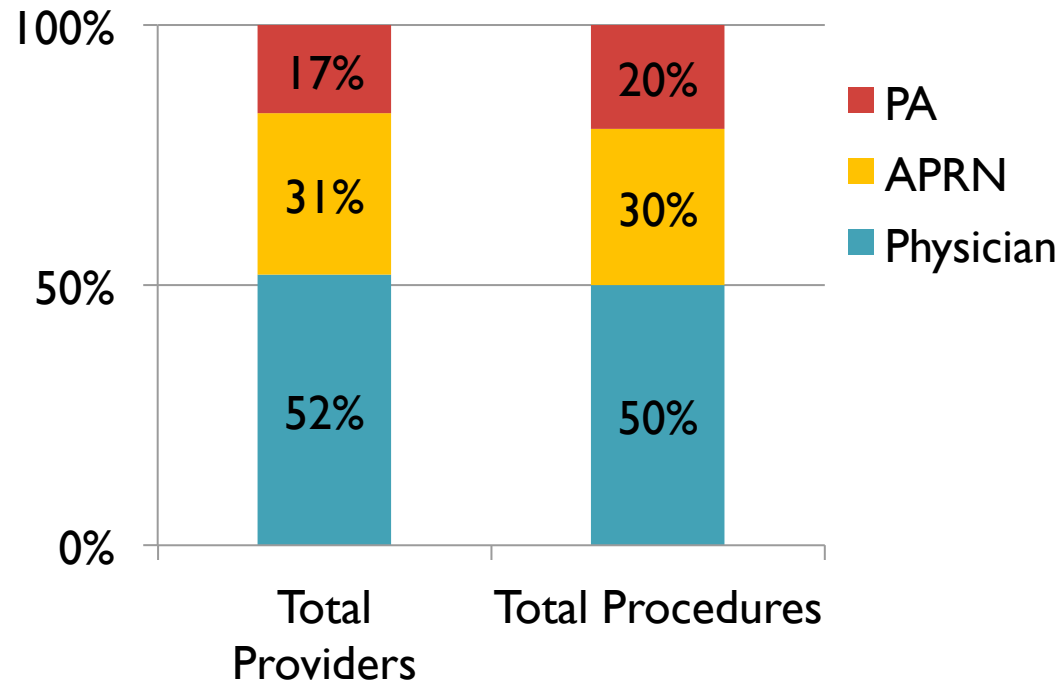
- Venipuncture, Immunization, Injection, Electrocardiogram, Urinalysis, Pregnancy Test

Methods

- Data source: 12 months of CPT codes (2012) from community health clinics in Northern Arizona.
- Sample:

Clinics	52
Unique Patients	59,674
Unique Visits	174,587
Unique Procedures	45,690
Total Providers	93
Physician	48
APRN	29
PA	16

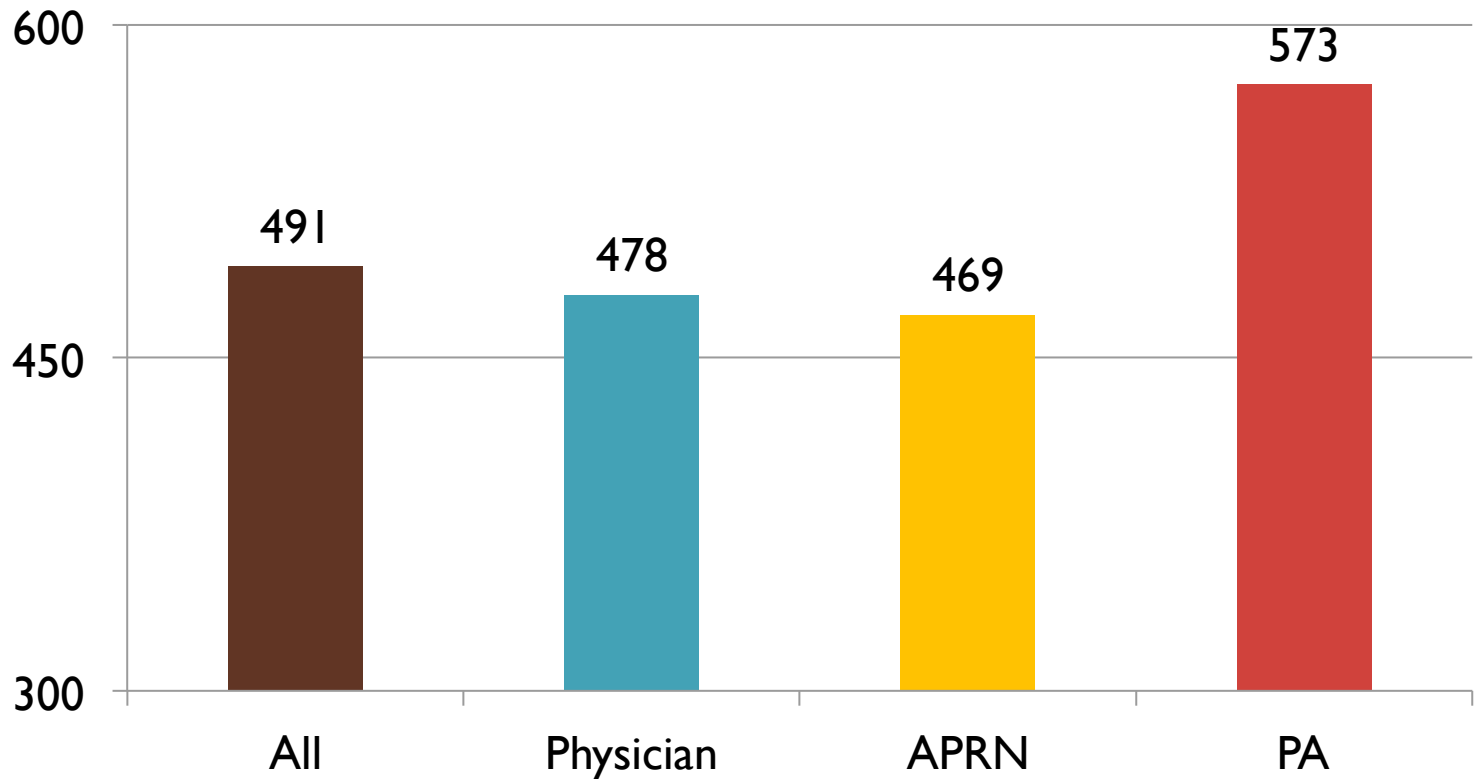
Results



Key Findings:

- Half of all providers are PAs & APRNs.
- Half of all procedures are performed by PAs & APRNs.

Number of procedures per provider



Key Findings:

- All provider types perform procedures.
- PAs perform more procedures per provider than physicians or APRNs.

Most Common Procedures by Provider Type

Rank	Physician	APRN	PA
1	Fetal Monitoring*	Respiratory Procedure*	Respiratory Procedure*
2	Respiratory Procedure*	Microscopy	Fetal Monitoring*
3	Joint Injection	Fetal Monitoring*	Dermatologic Procedure
4	Microscopy	Physical Contraception	Cerumen Removal
5	Dermatologic Procedure	Cerumen Removal	Simple Wound Closure

Key Findings:

- Respiratory procedures and fetal monitoring are in the top 5 for all clinicians. (*)
- **OB/GYN** procedures are more common for APRNs than PAs and physicians.
- **Dermatology** procedures are more common for PAs and physicians than APRNs.

Conclusions

- PAs & APRNs are a substantial workforce for Northern Arizona CHCs, comprising half of the workforce and performing half of all procedures.
- PAs perform more procedures per provider than physicians or APRNs.
- Consistent with training, APRNs perform more women's health procedures and physicians and PAs perform more dermatology procedures.

Conclusions for PA Educators

- Results add to the growing body of evidence that PAs, APRNs, and physicians may be fulfilling distinct roles in the primary care setting.
- These findings inform educators about which procedural skills to include in training to prepare students for the job market they will encounter.

Future Directions

- Explore difference in procedures by rural and urban location.
- Include more clinics across Arizona.
- Develop reproducible methods for evaluation of procedures performed in other states.

References

- Dehn RW, Hooker, RS. Clinical Activity of Iowa Family Practice PAs. JAAPA Apr 1999, 12(4):63-77.
- Everett CE, Thorpe CT, Palta M, Carayon P, Gilchrist VJ, Smith MA. Division of Primary Care Services Between Physicians, Physician Assistants, and Nurse Practitioners for Older Patients With Diabetes, Medical Care Research and Review, Oct 2013, 70:531-541.
- Asprey DP. Clinical skills utilized by physician assistants in rural primary care settings. JPAE. 2006; 17(2): 45-47.



Discussion

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