


Slide 1




What do we do? What should we teach?
Results from a Task Analysis Study
of Oregon NP Practice

NONPF Annual Conference Presentation: April 15, 2011
Gary Laustsen, PhD, APRN-CNP (Family)
Associate Professor, OHSU School of Nursing

Slide 2

Introduction: Research Questions


- What clinical skills and procedures (CSP) do NPs use in practice?
- What clinical skills and procedures do we teach NP students?
- How can we better match these two professional activities?




Slide 3

Introduction: NP Profession Triad

- Exploring the inter-relationships of the Practice-Teaching-Research domains promotes an evidence-based profession.




```
graph TD; Practice[Practice] <--> Teaching[Teaching]; Practice <--> Research[Research]; Teaching <--> Research;
```



Slide 4

Introduction: Study Purpose


- **Purpose:** Complete a task analysis study of Oregon NP *primary care* CSPs to inform NP educational curricula.
 - Examine CSP differences in rural vs. urban NPs
- Oregon NPs are autonomous and provide primary, acute, and specialty care services
- NPs perform multiple CSPs for diagnostic and/or therapeutic purposes



Slide 5

Literature Review & Project Significance

- Literature review: few studies found that examined CSP in NP practice/education
- CSPs in NP practice should inform NP program educational curricula
- NP program goals: offer didactic and skills training that is
 - current
 - based on clinical practice needs



Slide 6


Method: Design & Sample

Design

- Descriptive correlational survey
 - OHSU IRB approval

Sample


- Convenience sample of Oregon FNP, ANP, PNP, GNP (N=1450)
- Other Oregon APNs excluded (PMHNP, WHNP, CNM, CNS, CRNA)



Slide 7

Method: Survey Instrument


- Demographic, Geographic, and CSP items
- Mailed to all Oregon FNP, ANP, PNP, GNP
- Return envelope provided
- Data collection July-December 2010
- CSP survey list developed from:
 - Colyar, M. R. & Ehrhardt, C. R. (2004). *Ambulatory care procedures for the nurse practitioner (2nd ed.)*. Philadelphia: F.A. Davis Co.
 - List reviewed by expert NPs before distribution



Slide 8

Methods: Data Handling


- Returned survey data entered in spreadsheets and verified
- Spreadsheet data transferred to SPSS for statistical analysis
- Preliminary data analysis (March 2011)



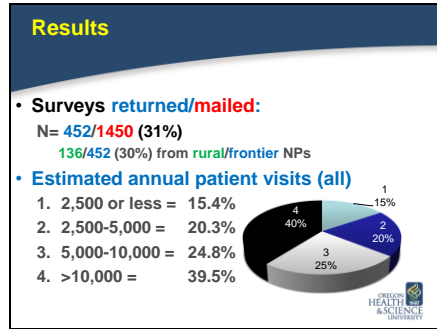
Slide 9

Demographic & Geographic Survey Questions

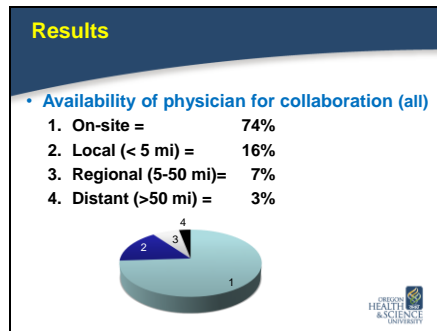
- Practice location (Urban, Suburban, Rural, Frontier)
- Estimated annual patient visits
- Availability of: (On-site, Local, Regional, Distant)
 - physician for collaboration
 - physician specialists (Ortho, Cardio., Gen. Surgery, OB/GYN, Derm., Ophth.)
 - 24-hour MD-staffed ED
- Area of NP Certification (FNP, ANP, PNP, GNP)
- Type of NP educational program attended
 - Certificate, Masters, Post-Masters, Doctorate



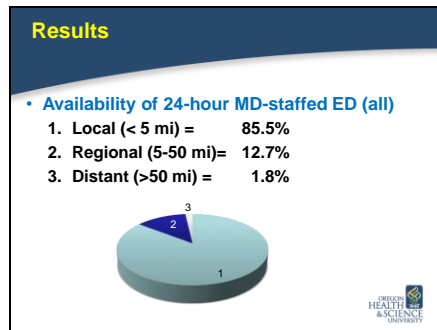
Slide 10



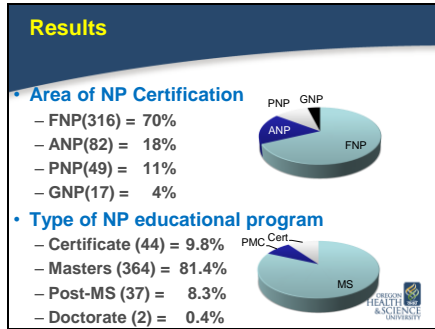
Slide 11



Slide 12



Slide 13



Slide 14

- ### Questions for each CSP item(90 total)
1. Do you perform this skill/ procedure? Yes No
 2. How often do you perform this skill/procedure?
 - Routinely (2 or more/week)
 - Frequently (2 or once/month)
 - Rarely (few times/year)
 3. How important is skill or procedure to clinical practice?
 - Very important
 - Important
 - Moderately important
 - Minimally important
 - Not important
 4. How did you obtain initial training for skill or procedure?
 - NP program
 - CE program
 - Colleague training
 - On-the-job

Slide 15

- | | |
|---|--|
| <p><u>Dermatologic</u></p> <ul style="list-style-type: none"> • Abscess-Incision and Drainage • Bites (Cats, Dogs, Insects, etc) • Burns-Debridement • Digital Nerve Block • Fishhook Removal • Microscopy (e.g. wet mount) • Nail Removal • Punch Biopsy • Ring Removal • Sebaceous Cyst Removal • Skin Biopsy/Lesion Removal • Skin Closure-Dermabond, Staples, Sutures • Skin Tag Removal • Soft Tissue Aspiration • Subungual Hematoma Excision • Tick Removal • Hemostasis/Electrocautery • Wood's Light Examination | <p><u>Musculoskeletal</u></p> <ul style="list-style-type: none"> • Arthrocentesis • Bone Marrow Aspiration/Biopsy • Clavicle Immobilization • Dislocation Reduction • Extremity casting • Ganglion Cyst Aspiration/Injection • Joint Corticosteroid Injection • Lumbar Puncture • Splinting (Fiberglass) • Trigger Point Injection • X-ray Interpretation-Bones <p><u>Respiratory</u></p> <ul style="list-style-type: none"> • Chest Tubes for Transport • Intubation • Nebulizer Administration • Peak Flowmeter • Pulmonary Function Testing • Stab Wound Stabilization • X-Ray Interpretation-Chest |
|---|--|

Slide 16

<u>Genitourinary and Breast</u>	<u>Head: Eyes, Ears, Nose, and Mouth</u>
<ul style="list-style-type: none"> • Bartholin Cyst Abscess: I & D • Breast Biopsy: Needle Aspiration • Cervical Cap • Cervical Lesions: Cryotherapy • Circumcision/Dorsal Penile Nerve Block • Colposcopy/Cervical biopsy • Condyloma Acuminatum Removal • Diaphragm Fitting & Insertion • Endometrial Biopsy • Intrauterine Device (IUD) Insertion • Papanicolaou (Pap) Smear • Paracervical Nerve Block • Pessary Insertion • Subdermal Contraceptive Implant • Ultrasonography • Vasectomy 	<ul style="list-style-type: none"> • Audiometry • Auricular Hematoma Evacuation • Cerumen Impaction Removal • Corneal Abrasion • Epistaxis Control • Eye Irrigation • Eyebrow Laceration Repair • Eyelid Eversion • Foreign Body Removal : Ear/Nose • Foreign Body Removal: Eye • Frenotomy for Ankyloglossia • Lip Laceration Repair • Occipital Nerve Block • Tongue Laceration Repair • Tooth Avulsion and Fracture • Tympanometry

Slide 17

<u>Cardiovascular</u>	<u>Gastrointestinal</u>
<ul style="list-style-type: none"> • Arterial Puncture (ABG) • Blood Culture Collection • Capillary Blood Collection • Doppler Technique • Electrocardiogram (ECG) Interpretation • Holter Monitor Application • IV Access • Intravenous line insertion • PICC line insertion • Unna's Boot Application • Venipuncture 	<ul style="list-style-type: none"> • Abdominal Paracentesis • Anoscopy • Flexible Sigmoidoscopy • Gastric Lavage • Inguinal Hernia Reduction • Nasogastric Tube (NGT) Insertion • PEG Tube Reinsertion • Thrombosed Hemorrhoid Removal • X-Ray Interpretation-Abdominal

Slide 18

Results: Urban vs. Rural Top 10 Frequency of Use					
	CSP	Urban NPs		CSP	Rural NPs
1. Cerumen Removal		68%	1. Cerumen Removal		93%
2. Pap Smear		65%	2. Bites (Cats, Dogs)		93%
3. Abscess-I & D		65%	3. Pap Smear		89%
4. Bites (Cats, Dogs)		63%	4. Tick Removal		87%
5. ECG Interpretation		61%	5. Abscess-I & D		85%
6. Peak Flowmeter		55%	6. Skin Tag Removal		82%
7. Nebulizer Admin.		54%	7. Nebulizer Admin.		79%
8. Skin Tag Removal		54%	8. Peak Flowmeter		78%
9. Microscopy		53%	9. Skin Closure-Sutures		77%
10. CXR Interpretation		52%	10. ECG Interpretation		76%

Slide 19

Results: Urban-Top 10 Criticality of CSP
(How important is skill or procedure to clinical practice?)

CSP	Very Important	Important	Moderately Important	Minimally Important	Not Important
1. Cerumen Removal	39%	18%	21%	8%	15%
2. Pap Smear	67%	9%	6%	2%	16%
3. Abscess-I & D	40%	24%	14%	11%	12%
4. Bites (Cats, Dogs)	31%	28%	17%	10%	14%
5. ECG Interpretation	56%	19%	12%	6%	7%
6. Peak Flowmeter	44%	18%	16%	7%	15%
7. Nebulizer Admin.	44%	19%	17%	8%	12%
8. Skin Tag Removal	19%	23%	27%	12%	18%
9. Microscopy	53%	17%	9%	5%	17%
10. CXR Interpretation	58%	18%	10%	3%	10%

Slide 20


Results: Rural- Top 10 Criticality of CSP
(How important is skill or procedure to clinical practice?)

CSP	Very Important	Important	Moderately Important	Minimally Important	Not Important
1. Cerumen Removal	43%	30%	18%	7%	3%
2. Bites (Cats, Dogs)	38%	29%	20%	11%	3%
3. Pap Smear	76%	13%	4%	4%	4%
4. Tick Removal	17%	28%	27%	22%	4%
5. Abscess-I & D	47%	28%	15%	7%	3%
6. Skin Tag Removal	31%	24%	27%	16%	3%
7. Nebulizer Admin.	53%	23%	19%	3%	2%
8. Peak Flowmeter	43%	33%	16%	5%	2%
9. Skin Closure-Sutures	55%	24%	13%	7%	1%
10. ECG Interpretation	55%	24%	13%	6%	2%

Slide 21

Results: Top 10 CSPs Learned in NP Program
(How did you obtain initial training for skill or procedure?)


CSP	% NPs Learned CSP in School
1. Pap Smear	89
2. Microscopy (wet mount)	67
3. Diaphragm Fitting/Insertion	49
4. Eyelid eversion	47
5. Suturing	47
6. CXR interpretation	46
7. ECG Interpretation	44
8. Tympanometry	41
9. X-ray bone interpretation	39
10. Extremity casting/splinting	38



Slide 22

Summary


- Primary care CSPs are used more frequently by rural NPs than urban NPs
 - Urban NPs used a CSP more frequently than rural for only 11 of the 90 CSPs.
- Total average use of all CSPs (90)
 - Total(28) = 31%
 - Rural(36) = 40%
 - Urban(25) = 28%



Slide 23

Summary


- Majority of CSPs surveyed were not learned in NP program
 - Max = 89.3% (Pap)
 - Min = 6.5% (Lumbar Puncture)
 - Avg = 24.3%



Slide 24

Summary

- **Criticality: 43/90 (48%) of CSPs were rated as very important or important to respondents' clinical practice**
- Criticality of CSPs higher for rural NPs
 - Rural: 55/90 = 61%
 - Urban: 38/90 = 42%



Slide 25

Limitations & Acknowledgements

- Study generalizability is limited by:
 - Survey methodology
 - Geography (Oregon)
 - Respondents' surveyed (FNP, ANP, PNP & GNP only)
- Appreciation is expressed to the Oregon NPs for their contributions to this project.
- Financial support was partially provided by the:
 - OHSU Foundation Betty Gray Rural Health Development Fund

