Where are we now? Practice-Level Utilization of Nurse Practitioners in Comparison with State-Level Regulations

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Where are we now? Practice-Level Utilization of Nurse Practitioners in Comparison with State-Level Regulations

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Background

The purpose of this integrative review was to synthesize the evidence regarding practice-level utilization of Nurse Practitioners with specific emphasis on potential variations in practice-level utilization in comparison to state-level regulations.

Methods

• Electronic databases: CINAHL, PubMed, and SCOPUS were searched. A manual search of reference lists was also conducted.
• Key words: nurse practitioner, independent practice, full scope of practice, utilization, restriction, role, practice pattern, limitation, credentialing, and privileges

Results

1. State Regulations:
   - Twelve studies either did not address or did not explicitly define the scope of practice in the state or states being included
   - No clear comparison of utilization to state regulation in all but one study.

2. Practice-Level Utilization:
   - On average 34.75% of NPs reported no supervision, 56.6% reported a collaborative agreement was in place. 48.5% reported direct supervision by a physician.
   - Up to 75% of rural NPs reported no supervision required.
   - 87%-98% of acute care or specialty NPs reported prescribing authority, state scope was not defined.

   Prescriptive Authority:
   - Only addressed by three studies.
   - One nationwide study reported 61% of NPs having prescriptive authority, state scope was not defined.

   Privileges:
   - Few studies specifically defining structured activities of daily clinical practice.
   - Five studies reported admitting privileges, 26.8% of NPs had hospital, 6% with long-term care.

   Billing Practices:
   - Only addressed by four studies
   - 30% of NPs bill under own NPI in collaborative practices
   - 56% of NPs bill under own NPI when not in collaborative practices.
   - Rural NPs have higher rate of own NPI billing, specialty NPs have lower rates of own NPI billing.

Study Characteristics:

- Published from 1997 to 2018, only two articles prior to 2010.
- Samples consisted of NPs only, NPs and MDs, NPs and administrators, APNPs, administrators only, and hospital organizations.
- NP sample sizes between 60 to 13,000.
- Seven studies included only PCNPs, two used samples of all NP types, one used ACNPs only, one used NNPs only.
- Nine studies used samples from only one state, six used two states, two used nationwide samples, and one sampled 34 states.
- Of the NPs sampled, 34% were from suburban areas, 46% were from urban areas, and 20% were rural.

Conclusion

There is a small set of studies exploring the relationship between work environment and support for practice, however, there are no studies that examine the relationship between practice level utilization and state regulations. Given the evidence of the positive impact of NPs and the expansion of state regulations on independent practice, it is essential to identify the impact of practice level restrictions that may result in failure to use NPs at the top of their scope.
Articles identified through database search: (n=1419)
CINAHL = 81
PubMed = 148
PsycInfo = 23
Cochrane = 774
Embase = 182
Scopus = 211


Articles after duplicates removed: (n=162)

Articles title & abstract screened: (n=162)

Additional articles identified through other sources (references): (n=10)

Full-text articles assessed for eligibility: (n=41)

Records excluded: (n=131):
- Non-US sample = 18
- Non-NP related = 9
- Education/student only = 1
- Dissertation/thesis/commentary = 57
- Focused on single dx or intervention = 20
- Model = 6
- Did not address regulations = 20

Full-text articles excluded: (n=18):
- Non-US sample = 1
- Focused on single dx or intervention = 2
- Focus on single practice type/system = 2
- Focus on single state = 4
- Did not address regulations = 9

Articles included in review: (n=23)
Summary of Results

If you would like to personalize your poster further, the [UNMC Brandwise website](#) provides a recommended color palette:

Use floods of red to encourage immediate brand recognition

Use black to create contrast and give sections or elements a more serious tone

Use grays in areas where less contrast and emphasis are needed

To use these colors, choose the Eyedropper tool from the font color drop-down menu. Use the eyedropper to select a color from the image above. The color you ‘captured’ with the eyedropper tool will be added to your Recent Colors.
Articles identified through database search: (n=1419)
CINAHL = 81
PubMed = 148
PsycInfo = 23
Cochrane = 774
Embase = 182
Scopus = 211


Additional articles identified through other sources (references) (n=10)

Articles after duplicates removed (n=172)

Articles title & abstract screened (n=172)

Records excluded (n=132):
Non-US sample = 18
Non-NP related = 9
Education/student only = 1
Dissertation/thesis/commentary = 58
Focused on single dx or intervention = 20
Model for study = 6
Did not address regulations = 20

Full-text articles excluded (n=19):
Non-US sample = 1
Focused on single dx or intervention = 2
Focus on single practice type/system = 2
Focus on single state = 4
Did not address regulations = 10

Full-text articles assessed for eligibility (n=40)

Articles included in review (n=21)
Articles identified through database search: (n=5942)
CINAHL = 1786
PubMed = 3912
Scopus = 254

Articles after limits applied: 2013-2018, English, US only, peer-reviewed (n=542)

Additional articles identified through other sources (references) (n=10)

Articles after duplicates removed (n=276)

Articles title & abstract screened (n=276)

Articles excluded (n=193):
Did not include US or was not pertinent to US practice = 63
Non-policy related = 48
Commentary/lit review = 76
Did not connect policy with outcomes = 16

Full-text articles assessed for eligibility (n=70)

Full-text articles excluded (n=50):
Focused only on impact of training = 14
Did not connect policy with outcomes = 21
Did not focus on patient-level outcomes = 15

Articles included in review (n=20)

Methods
Articles identified through database search: (n=1967)
  CINAHL = 270
  PubMed = 485
  Scopus = 1212

Articles after limits applied: 1989-2018, English, US only (n=419)

Additional articles identified through other sources (references) (n=12)

Articles after duplicates removed (n=348)

Articles title & abstract screened (n=348)
  Articles excluded (n=263):
    Did not include US or was not pertinent to US practice = 22
    Non-NP related = 103
    Education/student only = 8
    Commentary/lit review = 76
    Focused on single intervention = 6
    Addressed only state or national regulations/policies = 10
    Not related to NP role/regulation = 38

Full-text articles excluded (n=67)
  Commentary/lit review = 12
  Addressed provider perceptions only = 7
  Only incorporated one facility = 8
  Federal facilities only = 3
  Focused only on training = 3
  Did not address practice-level constructs = 21
  Addressed only state/national/international regulations/policies = 12
  Did not separate out NP data = 1

Full-text articles assessed for eligibility (n=85)

Articles included in review (n=18)