BARRIERS TO INDEPENDENT PRACTICE FOR RURAL ARIZONA

NURSE PRACTITIONERS

by

Michael Adrian Frost

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As members of the Masters Report Committee, we certify that we have read the Report prepared by Michael A. Frost entitled Barriers to Independent Practice for Rural Arizona Nurse Practitioners and recommend that it be accepted as fulfilling the Masters Report requirement for the Degree of Master of Science of Nursing

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Date: May 8, 2009
Masters Report Chair: Karen Greco
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Date: May 8, 2009
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DEDICATION

Dedicated to the Rural Nurse – the Expert Generalist

‘Semper Gumby!’
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ABSTRACT

The purpose of this review of literature is to identify barriers that limit Nurse Practitioners’ ability to provide independent primary care services in rural Arizona. This report is intended to increase the understanding of these barriers by nurse practitioners, policy makers and stakeholders as well as the public. Three types of barriers to Nurse Practitioners’ independent practice in rural Arizona are identified and explored in this report: the formal barriers of policies and practices, the informal barriers perceived by nurse practitioners, and barriers surrounding rurality such as sparseness of population and decreased available services. It is hoped that this report will help inform policy makers, the lay public, and nursing leaders about barriers to independent NP practice and consequently improve public health secondary to improving access to primary care provided by independent nurse practitioners in Yavapai County.
CHAPTER 1: INTRODUCTION
BARRIERS TO INDEPENDENT PRACTICE FOR RURAL ARIZONA
NURSE PRACTITIONERS

Purpose of This Report

The purpose of this descriptive report is to identify and summarize policies and practices that create barriers to Nurse Practitioners’ (NPs) ability to provide independent primary care services in rural Arizona.

Statement of the Problem

Arizona has a more favorable practice environment than most states (Pearson, 2008). However, there are still barriers that NPs must address to independently provide primary care in rural Arizona within the context of the Institute of Medicine’s (IOM, 2005) recommendations to improve the quality of American healthcare, including access to care in rural areas, and the Arizona Rural Health Plan’s recommendations to improve quality of care in Arizona (Eng, Jacobs, & Peashock, 2004). In order to understand barriers to NP rural practice, it is necessary to discuss barriers to practice in the context of federal and state policies that affect NP practice at the local level. Some barriers affect both urban and rural NPs in Arizona, while other barriers are specific to or exacerbated by being in rural areas of Arizona. This literature review will include barriers faced by all Arizona NPs and NPs generally and illustrate how those barriers affect the Prescott area in Yavapai County, Arizona.
Background

Significance to Public Health

There is a shortage of primary care providers in America and this shortage is even more acute in rural areas of the country (IOM, 2005). Nurse Practitioners are in a position to alleviate some of this shortage and have tended toward rural practice environments (Baer & Smith, 1999). Increases in NP training programs coupled with the ability to provide primary care services, independent of physician oversight or mandated ‘collaboration’ or ‘supervision’ has the potential to encourage more NPs to enter practice in areas that need qualified providers. There are more NPs per capita in locations that allow greater autonomy (Pearson, 2008). Per capita, a greater percentage of NPs already work in rural areas than in urban areas (Baer & Smith, 1999; Brown, Hart, & Burman, 2009; Grumbach, Hart, Mertz, Coffman, Palazzo, 2003; Ricketts, 2005), but their work is not well documented and in some cases is ‘invisible’ to health policy makers as discussed in the financial barriers section of this report (O'Grady, 2008). It is hoped that this report will help inform policy makers, the lay public, and nursing leaders about barriers to independent NP practice and consequently improve public health secondary to improving access to primary care provided by independent nurse practitioners in Yavapai County.

Significance to Nursing

Increased independence for the NP will help improve public perception of the NP as a separate and distinct member of a health care team and not an ‘assistant’ (Holt, 1998) or ‘substitute’ (Laurant, Reeves, Hermens, Braspennin, Grol, & Sibbald, 2004) for a physician. A changing public perception will hopefully alter the perception of policy makers in elective office and result in more favorable legislation and fewer formal barriers to independent NP practice in
rural Arizona. For the individual NP, this report will provide an enumeration of barriers they are likely to encounter in attempting to enter independent practice in rural Arizona and will thus prepare them for overcoming such barriers. This report will be significant to the NP community as a map of barriers to be addressed, some of which are not readily identified in the previously published literature related to barriers faced by nurse practitioners. These barriers include both barriers perceived by the NP community and policy barriers that can be mitigated once they are identified. Later, strategies to overcome organized nursing and organized medicine as barriers may then be developed.

Defining Key Terms

Key definitions related to NPs and rural health used in this report will be defined and discussed in this section. Wide variability in how NPs are categorized and studied (Laurant, Reeves, Hermens, Braspennin, Grol, & Sibbald, 2004) and what their scope of practice includes (Pearson, 2008) lead to confusion across state lines and among policy makers (Buppert, 2008a). Similar confusion of how to define rural abounds in the literature and in policy statements (Coburn, MacKinney, McBride, Mueller, Slifkin, & Wakefield, 2007).

For the purpose of this report, the following terms are defined: Nurse Practitioner, Primary Care and Primary Care Provider, Rural, Scope of Practice, License, Certification, Credentials, and Privileges. Specific state and federal designations and programs will be defined parenthetically as they arise. Other terms will use the common definition found in Merriam-Webster’s Dictionary of Law (1996), American Heritage Dictionary of the English Language (2006), or Stedman’s Medical Dictionary (2002) as accessed through Dictionary.com, or will be defined parenthetically in the text.
Each state and the federal government and nursing organizations have defined the term Nurse Practitioner. Terms include “Advanced Practice Nurse”, “Registered Nurse Practitioner”, “Advanced Practice Registered Nurse”, “Certified Nurse Practitioner”, “Advanced Registered Nurse Practitioner”, and “Certified Registered Nurse Practitioner” (Buppert, 2008a, pp. 33-35). This variation in definition results in the possibility that in some states Advanced Practice Nurses (APNs) who are not NPs, such as Certified Nurse Midwives, Clinical Nurse Specialists, and Certified Registered Nurse Anesthetists, are included in estimated number of NPs. The federal government defers definition of NPs to the states (Buppert, 2008a, p. 1) resulting in national confusion as to just who is an NP. For this report, the following definition will be used, as it is the most current definition, unless otherwise indicated:

“Nurse practitioners (NPs) are registered nurses who are prepared, through advanced education and clinical training, to provide a wide range of preventive and acute health care services to individuals of all ages. NPs complete graduate-level education preparation that leads to a master’s degree. NPs take health histories and provide complete physical examinations; diagnose and treat many common acute and chronic problems; interpret laboratory results and X-rays; prescribe and manage medications and other therapies; provide health teaching and supportive counseling with an emphasis on prevention of illness and health maintenance; and refer patients to other health professionals as needed.”

(American College of Nurse Practitioners, 2009)
Primary Care.

For this report, primary care refers to the definition provided by the IOM (Institute of Medicine, 1996) and referenced by nursing leaders, nursing authors, and NP groups and ‘primary care provider’ refers to clinicians who provide primary care. For NPs, this definition is consistent with the traditions of nursing and with the notion of the NP as partner in health with the patient. The definition is significant as it includes sub defined terms (in italics), makes no distinction between provider types using the term ‘clinician’ instead, identifies a continuum of care across levels, and notes the import of the relationship between provider and patient (Institute of Medicine, 1996, pp. 21-57).

Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.

(Institute of Medicine, 1996, p. 31)

Scope of Practice.

Scope of Practice refers to the legal authority of a professional to practice their craft granted by the state through statute, regulation, or delegation to another entity (Reel, 2007a; Buppert, 2008a). This term is related to but is different from, licensure, privileges, certification, or credentialing. Scope of practice is what a provider is authorized to do in a given circumstance (Reel, 2007a; see also Buppert, 2008a).
Licensure.

In this report, the term will apply to the act of the state granting permission to perform acts of nursing or medicine based on the applicable modifier (Reel, 2007a).

Certification.

This is recognition by a non-state entity that an individual has met some set of qualifications (Reel, 2007b). Certification in healthcare often refers to training requirements and testing but may apply to other circumstances as well. Third party payers, facilities, and employers all may require that a specific body or entity certify a provider during the credentialing process and many states require certification by a national certifying body before they grant a license to an NP (Reel, 2007b).

Privileges & Credentialing.

In short, privileges are a “private law” or “special advantage” granted by one entity to another (American Heritage Dictionary of the English Language, 2006). In the case of healthcare, and this paper, the term refers to the arrangement between a facility and a provider that may include specific performance, practice, and credentialing requirements and/or restrictions, which describes the authority to practice within a facility (Reel, 2007b). Credentialing is the process of verifying a provider’s education, certification, practice background, license, and any other information used to determine the scope and nature of privileges that a provider is granted (Reel, 2007b).

Rural.

Few terms in health policy are as variably defined as “rural”. There are several definitions among federal agencies and stakeholder organizations leading to contradictory
policies (Baer & Smith, 1999; see also Coburn, MacKinney, McBride, Mueller, Slifkin, & Wakefield, 2007; Cromartie & Swanson, 1996; Eng, Jacobs, & Peashock, 2004; IOM, 2005; Rural Health Office, 2006). Rural as a concept includes considerations that are not well identified in policy definitions such as relative isolation, diversity of rural areas, and the difference in perspective on health than non-rural dwellers. These points are addressed later in chapter two “Rural Health”. For this report, “rural” is defined as all areas not included in “urban” census tracts (United States Census Bureau, 2000).
CHAPTER 2: BACKGROUND ON RURAL HEALTH

Rural Health

Rural areas are not homogenous and the diversity of characteristics within varying rural areas has a significant effect on how ‘health’ is viewed. Within the United States 21% of the population lives in areas designated as rural (United States Census Bureau, 2000). This group of roughly 59 million persons live in a variety of locations including farming communities, mining areas, ranching areas, inhospitable landscapes, and any combination thereof (Glasgow, Johnson, & Morton, 2004). This diversity is further complicated by the differing growth status among communities. While communities like Prescott, Arizona are rapidly expanding as a retirement area and likely to lose its status as a rural community, other areas are declining such as the mining town turned art community of Jerome, Arizona (United States Census Bureau, 2000). In spite of the differences in culture, politics, and economic engines there are several commonalities among rural communities in Arizona and throughout the nation. Among these are localized homogeny, low population density compared to total land area of the community, fewer services available, and relative isolation from urban areas (Glasgow, Johnson, & Morton, 2004).

The easiest definition for rural is “not urban”; unfortunately such a definition is meaningless without defining “urban”. Rural (or ‘not urban’) relates primarily to population density and distance to or isolation from urban areas. The problem is that “urban” areas can sprawl in relatively low density since the advent of the car and the post-war explosion of suburbs and because western counties are so large, they can be considered ‘adjacent to metro’ or ‘metropolitan’ areas even though they are very rural or even considered frontier (Center for Rural Health, 2006). This confusion has significant impact for rural policy makers and funding
The use of particular definitions of “rural” for individual programs and policies advocacy positions can have significant impact on a policy or program, so it is important to note the definition in use for a particular policy or program and to choose the definition that best suits the position one is advancing (Coburn, MacKinney, McBride, Mueller, Slifkin, & Wakefield, 2007). A brief comparison of “rural” definitions is included in Table 1.

<table>
<thead>
<tr>
<th>Source</th>
<th>Brief Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB: (United States Census Bureau, 2000)</td>
<td>All areas (census tracts or blocks) outside those designated as urban – i.e.: population concentrations of 50,000 persons or more.</td>
</tr>
<tr>
<td>OMB: (Office of Management and Budget, 2004)</td>
<td>All counties not designated as Metropolitan – i.e. all counties that have no population center of 50,000 persons or more</td>
</tr>
<tr>
<td>USDA/ERS: (United States Department of Agriculture, n.d.)</td>
<td>Census tract of RUCA score &gt; 4 – i.e. census tracts that are outside urban commuting patterns</td>
</tr>
</tbody>
</table>

For example, using county based definitions employed by the Office of Management and Budget (OMB), in 1990 Yavapai County, Arizona was considered a “non-metro adjacent” county. The more sparsely populated Mohave County, Arizona was considered “metropolitan
outlying” county due to Las Vegas being in the next county (Cromartie & Swanson, 1996) and “fronteir” because it has a density less than six persons per square mile (Center for Rural Health, 2006). Using the Census Bureau definition, Yavapai County is predominately “rural” with an “urbanized area” and several “urbanized clusters” (United States Census Bureau, 2000; see also Rural Health Office, 2006; United Stated Department of Agriculture, n.d.). It becomes “metropolitan” using the OMB definition (Office of Management and Budget, 2004; see also Rural Health Office, 2006; United Stated Department of Agriculture, n.d.). The United States Department of Agriculture – Economic Research Service considers it to be almost entirely “rural” for “Business & Industry” and half-rural based on Rural Urban Commuting Areas (RUCA) scoring system (United Stated Department of Agriculture, n.d.). In addition to the competing federal definitions, there is the state definition that, in Arizona, places Yavapai County squarely in the “rural county” classification as it has less than 400,000 residents (Rural Health Office, 2006). Arizona has further distinctions of “rural-rural” for counties with no census defined urban areas including Yavapai, “rural-urban” for counties with census defined urban area such as Coconino, and “urban-urban” for non-rural counties like Maricopa (Eng, Jacobs, & Peashock, 2004). Table (2) illustrates how Yavapai County falls into each definition:

<table>
<thead>
<tr>
<th>Source</th>
<th>Yavapai County</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB: (United States Census Bureau, 2000)</td>
<td>Predominately Rural with one urbanized area and several urbanized clusters</td>
</tr>
<tr>
<td>OMB: (Office of Management and Budget, 2004)</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>USDA/ERS: (United Stated</td>
<td>Rural with a single urban area and approximately</td>
</tr>
</tbody>
</table>
Table 2

<table>
<thead>
<tr>
<th>Department of Agriculture, n.d.</th>
<th>half the county is rural using RUCA score</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Arizona</td>
<td>Rural-Rural with expected Rural-Urban designation in the 2010 Census</td>
</tr>
</tbody>
</table>

Medically Underserved Areas / Populations

A significant commonality of rural dwellers is the higher morbidity (Wallace, Grindeanu, & Cirillo, 2004). This higher morbidity may be related to, among other reasons, access to services (IOM, 2005), variation in health behaviors (Wallace, Grindeanu, & Cirillo, 2004), or “self-reliance” of rural dwellers (Bales, Winters, & Lee, 2006). Other factors include a higher median age (United States Census Bureau, 2000), occupational & environmental exposures (Wallace, Grindeanu, & Cirillo, 2004), and rural poverty (Jensen, McLaughlin, & Slack, 2007). While many factors play a part in the relatively poorer health of rural dwellers compared to urban dwellers, the focus is on those factors that can be influenced by policy decision related to barriers to independent NP practice such as access to services and rural “self-reliance”.

The issue of access to care is central in much of the research on rural health policy. The economic reality of sparse populations makes access to services that require population concentration to be economically viable unlikely without significant taxpayer support. Such things include several public services like public transit and public utilities or personal service based industries like health care. Federal and state designations of Healthcare Provider Shortage Areas (HPSA), Medically Underserved Areas / Populations (MUA/P) (Health Resources and Service Administration, 2008) can provide a gauge for access to care and efficacy of the care
being provided. But, there are limitations to the designation process as NPs are not named in calculations of provider shortage areas (Health Resources and Service Administration, 2008).

Arizona employs an index scoring system to stratify levels of medical under-service that takes into account provider availability, driving time to access care, income / ability to pay, ambulatory sensitive conditions, nationality, mortality, and supplemental criteria with a higher score indicating greater under-service (Arizona Department of Health Services, 2008). Within Arizona, all counties have designated federal MUA/P or HPSA with noted differences between urban and rural areas, with rural areas having significantly higher federal index scores than urban areas. All of Yavapai County has been designated as a federal MUA/P and approximately half of the county falls into the HPSA designation (Health Resources Service Administration, 2008). Arizona includes all federally designated HPSA as Arizona Medically Underserved Areas/Population (AZMUA) and additionally designates some federal MUA/P as AZMUA (Arizona Department of Health Services, 2008). NPs are prepared to work in primary care areas (Anderson, 2005) however, their status as non-physicians results in exclusion of their services from calculating MUA/P or HPSA designations (Health Resources Service Administration, 2008) demonstrating a significant limitation in conclusions that can drawn from the designation process. It is unclear whether Arizona includes NPs as “providers” for AZMUA designation, while they are not included in the federal process for HPSA or MUA/P (Health Resources Service Administration, 2008).

**Access to Primary Care in Yavapai County**

Access to primary care providers, specialist care providers, emergency services, and inpatient care in rural areas is widely reported to be less robust than in urban areas (IOM, 2005).
Access to specialty and advanced care in rural areas is limited related to the aforementioned economic reality of too few patients to support a specialist practice or to support advanced care services (IOM, 2005; see also Rural Health Office, 2006; Wallace, Grindeanu, & Cirillo, 2004).

Yavapai County covers 8,123 square miles and is larger than the land area of Massachusetts (United States Census Bureau, 2000). Within that land area, there are 202,689 persons (United States Census Bureau, 2008). The total number of providers (NPs, physicians, PAs) in Yavapai County is 10-25 per 10,000 persons (Cecil G. Sheps Center, 2008). Figure (1) demonstrates the relative sizes of the states of Massachusetts and Arizona and the size of Yavapai County (United States Census Bureau, 2000). The areas for comparison have been shaded gray and the images are from a single electronic source map and are therefore scaled alike (United States Census Bureau, 2000).
In 2006, Yavapai County had 84 NPs, 286 physicians listed as “primary care”, and 29 PAs (Arizona Department of Health Services, 2008). Prescott had 36 NPs, 136 physicians listed as “primary care”, and 16 PAs (Arizona Department of Health Services, 2008). The local newspaper was only able to identify 49 primary care physicians in 2008, and a report obtained by the newspaper showed only 65 licensed primary care physicians in Prescott with no mention of NPs or PAs (Shultz, 2008). In a 2001 demonstration project report, there were exactly 64 primary care physicians in Yavapai County (with no mention of NPs or PAs) with only one offering sliding fee scale for uninsured patients, twenty not accepting Medicaid patients, and two clinics for uninsured persons serving approximately 600 people per year (Health Resources Services Administration, 2001).
<table>
<thead>
<tr>
<th>Variation in Reporting Number of Selected Health Care Providers by Type</th>
<th>“Primary Care” Physicians</th>
<th>NP</th>
<th>PA</th>
</tr>
</thead>
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<tr>
<td>Arizona Department of Health Services, 2008 – Yavapai County</td>
<td>286</td>
<td>84</td>
<td>29</td>
</tr>
<tr>
<td>Arizona Department of Health Services, 2008 – City of Prescott</td>
<td>136</td>
<td>36</td>
<td>16</td>
</tr>
<tr>
<td>Prescott Daily Courier Shultz, 2008 – “Prescott Area”</td>
<td>49</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Health Resources Services Administration, 2001- Yavapai County</td>
<td>64</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Table 3

Approximately 24% of Yavapai County’s population was uninsured by the report authors and of those only 10% received health care through primary care providers; the balance relied upon the emergency department for primary care services (Health Resources Services Administration, 2001). While, this has improved with continued funding of the original demonstration project and the opening of the Community Health Center of Yavapai in 2001, a Federally Qualified Health Center (FQHC), access is still limited by a lack of providers. The clinics and satellite offices have full time physicians and NPs as well as reproductive health, mental health, and dental providers with a number of payment options including sliding scale fees, but the persistent shortage of providers continues to act as a barrier to access of health care according to a local newspaper report (Shultz, 2008).
The wide variation in defining “primary care physicians” may result in areas with insufficient primary care services in Yavapai County according to a local newspaper report (Shultz, 2008) while the ‘invisibility’ of services provided by NPs (O'Grady, 2008) acts as a barrier to the ability of NPs to demonstrate how they help meet the need for services. This dichotomy can contribute to a situation where available providers face barriers in providing needed services (Lindeke, Jukkala, & Tanner, 2005).

Nurse Practitioners

History of the Nurse Practitioner.

The NP has existed informally since nursing started to re-emerge as a distinct discipline from medicine with Nightingale in the mid-19th century. One of the most profound examples was Mary Grant Seacole who worked in both nursing and medicine during in the Crimea (First nurse-practitioner finally earns a place in history, 2006). At the turn of the century Lillian Wald and other nurses managed caseloads of underserved patients, dispensed medication, and provided primary care at the Henry Street Settlement in New York City’s Lower East Side until they became an economic threat to physicians in Manhattan (Keeling & Bigbee, 2005). It is interesting to note that over a century ago “…nurses were considered “good enough” to care for the poor, whereas physicians would care for the middle class and the rich” (Keeling & Bigbee, 2005, p. 7). Wald continued to advance primary nursing care for the underserved with support for the Red Cross Rural Nursing Service in 1912 and expansion of the Henry Street Settlement services throughout New York through the 1920s (Keeling & Bigbee, 2005).

In 1925, the Frontier Nursing Service (FNS) was founded in Appalachia as part midwifery and part public health service with independent care by nurses in rural areas, with
“oversight” by a physician who would provide written guidelines and orders for the nurse to carry out while they were in the field (Keeling & Bigbee, 2005). The FNS trained nurses in England for service in Kentucky as mid-wives and they had statistically significant better outcomes in birthing than the national average (Keeling & Bigbee, 2005). This would later become the model for NP practice as these nurses provided care with significant independence with the “tacit requirement that patients be poor and have little access to physician-provided care” (Keeling & Bigbee, 2005, p. 14). During the Second World War, the FNS expanded to train midwives locally and later expanded to train Nurse Practitioners in the 1960s (Frontier Nursing Service, n.d.).

The NP role was successfully developed at the University of Colorado in 1965 by the joint efforts of a nurse and pediatrician (Silver & Ford, 1967). From this beginning, the role expanded from the initial certificate programs to a master’s level education (Keeling & Bigbee, 2005). As the 21rst century unfolds, the NP has gained some version of prescriptive privileges in all 50 states, can bill independently in all 50 states, and can practice in 12 states without a formal collaborative agreement (Pearson, 2008).

*Nurse Practitioner Education and Training.*

Currently, most NPs are educated through Master of Science in Nursing (MSN) degree level programs after earning their license as a Registered Nurse (RN) and a Bachelor of Science in Nursing (American College of Nurse Practitioners, 2009; American College of Physicians, 2009). Other entry paths include the post-Master’s certification for nurses with either an MSN in a non-NP area or an NP seeking to change population focus. Increasingly, NPs are being
prepared through the DNP and this level of preparation will be the entry level for new NPs as of 2015 (American Association of Colleges of Nursing, 2004).

The preparation of a NP includes didactic and clinical coursework in patient assessment, pharmacology, pathophysiology, as well as health policy, ethics, and basic research (U.S. Department of Health and Human Services, 2002). After completion of an MSN, until 2015 when a DNP will be required, through a program approved by the Commission on Collegiate Nursing Education or the National League for Nursing Accrediting Commission an NP student is eligible to sit for a national certifying exam through one of four organizations in one of ten specialty areas.

*Nurse Practitioner Scope of Practice.*

The legal authority for a NP to practice varies widely from state to state as the practice of nursing is state regulated (Pearson, 2008; see also American College of Nurse Practitioners, 2009; American College of Physicians, 2009). Several parts of NP practice are relatively consistent across state lines and are outlined in the definition of the NP (American College of Nurse Practitioners, 2009; American College of Physicians, 2009). In addition to the authority granted by the state, privileges granted by institutions (Reel, 2007b) and third party payers, including Medicare, will determine any special requirements for an NP to meet in order to receive payment for services to plan participants thus limiting reimbursable services (Buppert, 2008a). While not strictly a scope of practice issue, financial considerations limit practice, ipso facto. Within Arizona, the scope of practice for a NP is broad and includes independent practice, prescription privileges, and admission to, treatment in, and discharge from health care facilities (AzSBON, 2003).
Nurse Practitioner Quality of Care.

The care provided by nurse practitioners has been studied by nursing and those interested in quality and accessibility of primary care for more than forty years and researchers have repeatedly found nurse practitioner care to be safe and effective (American College of Nurse Practitioners, 2009). Quality of nurse practitioner care has been demonstrated in several published comparison studies (Christian, Dower, & O'Neil, 2007), health policy studies (U. S. Congress, 1986; see also American Nurses Association, February 27, 2003; Christian, Dower, & O'Neil, 2007) and consumer acceptance of nurse practitioners has also been demonstrated (Brown, 2007).

For at least 44 years, NPs have been providing care to the American public. Before that, some nurses were providing care to the underserved in rural Kentucky, the migrant farmers of the American south and west, and the indigent in New York City’s Lower East Side (Keeling & Bigbee, 2005). From the FNS records of births (Frontier Nursing Service, n.d.) to the latest published study on NPs in primary care in the Netherlands (Dierick-van Daele, Metsemakers, Derckx, Spreeuwenberg, & Vrijhoef, 2009), every study located has shown that NPs provide high quality care in primary care arenas. An evidenced based practice review by the Cochrane Systemic Review noted that NPs provide quality of care comparable to primary care physicians (Laurant, Reeves, Hermens, Brasperning, Grol, & Sibbald, 2004). It does need to be noted that although no study has demonstrated a statistically significant difference in quality of care led by a NP compared to a physician; few studies were designed to measure this (Laurant, Reeves, Hermens, Brasperning, Grol, & Sibbald, 2004). However, two such studies included the seminal Mudinger, et al study (2000) and the Lenz, et al follow-up study (2004) which compared NPs
and physicians ‘head-to-head’ showed no statistical difference in outcomes between care provided by NPs and physicians.

In spite of evidence showing high quality NP care (Laurant, Reeves, Hermens, Braspenninig, Grol, & Sibbald, 2004; see also Lenz, Mudinger, Kane, Hopkins, & Lin, 2004; Mudinger, et al., 2000), groups that have an economic interest in limiting NP care continue to raise the issue of patient safety (Christian, Dower, & O'Neil, 2007). Some physician groups persist in the claim that quality care is only provided with “supervision” while also noting that such “supervision” does not require a physician to be on site (AAFP, 2008) and may be as little as reviewing a chart every two weeks to meet federal billing requirements for a FQHC (CMS, 2008).
CHAPTER 3: BARRIERS

Much has been written concerning the barriers faced by nurse practitioners from different points of view. Several qualitative research studies found barriers NPs experience include: role conflict (Plager & Conger, 2007), lack of recognition from the public and other health professionals (Lindeke, Jukkala, & Tanner, 2005), ‘discounting’ (Martin & Hutchinson, 1999), and lack of support & consumer confusion (Lindeke & Jukkala, 2005). Barriers to NP practice outside of nursing have concentrated on the relationship of the nurse practitioner and the physician, specifically how the NP will affect the physician’s practice (Laurant, Reeves, Hermens, Braspennin, Grol, & Sibbald, 2004).

Within this report, the barriers to NP practice have been separated into formal barriers consisting of policies and practices that limit independent practice and require legal action to overcome, and informal barriers which consist of barriers perceived by NPs but are not formally codified. The experience of rurality as a barrier will address the barriers faced by NPs in rural areas, but which may not be unique to NP practice.

Formal (Policy, Practice, Statutory) Barriers

Limitations on Services Provided

A review of federal and Arizona statutes affecting nurse practitioners revealed that statutes and rules regarding NPs are not always clear, and in places appear contradictory. Arizona has no statutory barriers to independent practice of nurse practitioners in health care facilities as long as they are practicing within their scope of practice and limits of their specialty certification (A.A.C. Title 4, Chapter 19, Article 5: Advanced and Extended Nursing Practice, 2007), but regulatory barriers with regard to certain aspects of primary care do exist. For
example, Department of Health Services Administrative code requires NPs to admit patients to certain facilities, such as hospice and home health, under a physician (A.A.C. Title 9, Chapter 10, Article 8: Hospices; Inpatient Hospice Services; Article 9: Nursing Care Institutions, 2003; Article 11: Home Health Agencies, 1994; Article 14: Recovery Care Centers, 1994). Regulations concerning whether or not NPs can admit, manage, and discharge patients in a hospital are inconsistent and not always clear. Facility policies may interpret the requirements of the law as restricting NPs in independent practice regarding patient admission to, treatment in, and discharge from health care facilities (A.A.C. Title 9, Chapter 10, Article 2: Hospitals, 2002); even though NPs are authorized to perform these functions in a separate portion of the Arizona Administrative Code (A.A.C. Title 4, Chapter 19, Article 5: Advanced and Extended Nursing Practice, 2007).

The primary federal restrictions relate to Medicare Parts A and B (42 CFR § 482.12 and 42 CFR § 410.75-6, 2004) requiring “collaboration” which Medicare defines as “supervision and direction” of a physician. Medicare further restricts NPs through the process of accreditation by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) by placing NPs and PAs in the same category of requiring physician review of care and treatment. Even though PAs are required to practice under physician supervision and NPs in several states, including Arizona, have no such requirement exists (American Nurses Association, 2003). The federal government broadly defines “physician” in the Social Security Act to include podiatrists, chiropractors, dentists, and optometrists (Social Security Act, 1935, as amended 2009 42 U.S.C. 1395 § 1861(r)) specifically excluding NPs by including their services in a separate category. This codifies NPs as a lesser provider than those professions included under the broad definition
of “physician” and the act refers to this definition with respect to requirement for “collaboration” (Social Security Act, 1935, as amended 2009 42 U.S.C. 1395 § 1861(r)).

Within Yavapai County, Arizona, there are four hospitals – one federal, one rehabilitation, and two acute care hospitals. Despite all being in compliance with state law, none privilege NPs as independent providers, effectively limiting the ability of NPs to provide the full spectrum of primary care services to their patients as defined by the Institute of Medicine (1996). Of the four facilities, the federal facility provides the most independent practice environment by far, in that it permits NPs to evaluate and treat patients in the outpatient, inpatient, and emergency room setting based on a locally determined set of privileges consistent with a federal policy on NPs in the Veteran’s Health Administration system (VHA Directive 2008-049). In contrast, Yavapai Regional Medical Center will grant only limited privileges to NPs under the “supervision” of a physician with unrestricted privileges (personal communication T. Kleegan, ANP, October 21, 2008) with no publically available information on the privileging process for NPs. A review of YRMC’s provider directory shows no NPs as part of the publically accessible medical staff roster while psychologists, dentists, and podiatrists are included (Yavapai Regional Medical Center, n.d.). Verde Valley Medical Center does not publically state how they privilege NPs but do promote NPs in their primary care services to their patients noting that NPs “provide high-quality healthcare services” (Verde Valley Medical Center, 2008, p. 8). The final hospital, Mountain Valley Regional Rehabilitation Hospital provides no public acknowledgement of NPs either way, only including “other” on their privileging application form. Each of the four hospitals adopts organizational policies that are consistent with applicable law and billing rules, which may be more stringent than the law requires.
Privileging (within scope of practice, * can’t admit)

<table>
<thead>
<tr>
<th></th>
<th>Physician</th>
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<th>Podiatrist</th>
<th>Psychologist</th>
<th>NP</th>
</tr>
</thead>
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<td>YES</td>
<td>YES*</td>
<td>YES*</td>
<td>YES</td>
</tr>
<tr>
<td>YRMC</td>
<td>YES</td>
<td>YES*</td>
<td>YES*</td>
<td>YES*</td>
<td>YES*</td>
</tr>
<tr>
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<td>unknown</td>
<td>unknown</td>
<td>YES*</td>
</tr>
<tr>
<td>MVRRH</td>
<td>YES</td>
<td>NO</td>
<td>YES*</td>
<td>YES*</td>
<td>NO</td>
</tr>
</tbody>
</table>

Table 4

Financial Barriers

Private insurers may or may not credential or empanel NPs as independent providers irrespective of their scope of practice in a given state creating the situation where treatment is legally provided by a NP, but not reimbursed by a third party payer (Hansen-Turton, Ritter, & Torgan, 2008). This precludes independent NPs from providing services to large groups of individuals who are plan participants (American Nurses Association, February 27, 2003). Nationally, only 53% of managed care organizations credentialed NPs as primary care providers with most of those that did not credential NPs stating NPs bill under a physician’s identifier (Hansen-Turton, Ritter, & Torgan, 2008). This leads to situations where the NP is invisible for auditing, quality of care, or demonstration of efficacy of care and, in some cases, the only physician involvement is signature, while it appears to the insurance company that the physician is seeing a patient (American Association of Colleges of Nursing, 2002). According to a newspaper article interview of a nurse practitioner, those insurers who do credential NPs in Arizona pay as little as 60% of the physician fee schedule according to local newspaper reports (Rough, 2009) while the NP renders comparable services to that of a physician (Laurant, Reeves,
Hermens, Brasperning, Grol, & Sibbald, 2004). The reported Arizona reimbursement rates were not verifiable using publically available sources; this lack of transparency can be a significant financial barrier for independent nurse practitioners. A further discussion of transparency as a barrier requires an exploration of contract and insurance law and regulation which is beyond the scope of this report.

Other problems with reimbursement include the third party payer making the determination if a particular code is within the skill set of a nurse practitioner and denying or down-coding services, which the third party payer does not believe, are within the knowledge, skills, or abilities of a NP (American Nurses Association, 2003). The problem of coding is compounded by the way codes are developed by a single non-governmental entity with a stake in applying codes that reflect a specific model of care (American Nurses Association, February 27, 2003). Thus, the American Medical Association has developed the Current Procedural Terminology that was adopted by Medicare as the primary coding mechanism for payment (CMS, 2009). The effect of this payment model is the non-payment for the added services NPs provide but do not effectively bill for, like health promotion, education, and disease prevention (Plager & Conger, 2007), and at the same time third party payers are paying less for the billed services provided (Hansen-Turton, Ritter, & Torgan, 2008).

Medicare and Medicaid (the Arizona Health Care Cost Containment System – AHCCCS) both will contract directly with NPs under two different sets of criteria. Medicare will pay NPs directly at the lesser of 85% of the physician fee schedule or 80% of charges billed provided the NP has a ‘collaborating physician’ (Buppert, 2008a, p. 151). AHCCCS includes NPs as approved providers consistent with the federal Medicaid rules which require “medical direction” of a
physician bi-weekly (Rural Health Clinics, 42 CFR § 491.8, 1978 as revised in 2007) for Rural or Federally Qualified Health Clinics and require no relationship to a physician (Grants to States for Medical Assistance Programs, 42 CFR § 1396d(a)(21), 2009) outside of the FQHC. Payment modeling is left to the states and Arizona pays NPs who participate in the AHCCCS plans up to 90% of the physician fee schedule or capitation rate (HRSA, 2003). The reality of less pay (Hansen-Turton, Ritter, & Torgan, 2008) with equal standard of care as found in 1985’s *Fein v. Permanente* (Buppert, 2008a, p. 254) is a real and persistent barrier to independent practice (Plager & Conger, 2007).

Informal (Nurse Practitioner Perceived Barriers) Barriers

*Educational Barriers*

The educational preparation of a NP is different from that of a physician (American Association of Colleges of Nursing, 2006; see also American Association of Colleges of Nursing, 2002; American College of Nurse Practitioners, 2009; American College of Physicians, 2009; IOM, 2005; Laurant, Reeves, Hermens, Braspennings, Grol, & Sibbald, 2004). This difference in education creates a situation where various members of the health care team may not be well informed as to the abilities of other members of that team (IOM, 2001). Another issue is the perceived level of education that NPs currently have and the content of that education. A survey of NPs conducted in 2004 found about half of nurse practitioners felt only somewhat prepared after graduating from an NP program (Hart & Macnee, 2007). One way to address this issue is a formal residency program for NPs (Flinter, 2005).

This issue is compounded by those in academia who are actively supporting more theoretical preparation at the doctoral level (Burman, Hart, Conley, Brown, Sherard, & Clarke,
2009) while forgoing needed clinical preparation (Hart & Macnee, 2007; Flinter, 2005). At least one web-based source also questioned if NP preparation at the doctoral level is less rigorous than other practice doctorates (Miller, 2008) through examining the need for the DNP in contrast to the blurring of roles between doctors and nurses (Miller, 2008). As the Doctor of Nursing Practice (DNP) becomes the standard for NP practice, a firm understanding of the profession’s history and challenges that have been faced in the past will be invaluable as political advocacy of NPs shape the future of rural independent practice in Arizona and the profession as a whole.

*Defining the NP Role*

Several authors have noted that role definition has been a fundamental barrier to independent practice of NPs, which has been compounded by wide variations in title (Billingsly & Harper, 1982; see also Christman, 1998; Fairman, 2002; Groups & Roberts, 2001, pp. 329-355; Lindeke, Jukkala, & Tanner, 2005; Martin & Hutchinson, 1999; Pearson, 2008). Role confusion is also an issue when two NPs have been educated by the same program to provide independent primary care, see patients in a variety of settings, and write for a host of medications, and they practice in two different states with differing scope of practice laws. In one state, the NP must work for a physician, can only write prescriptions from a physician-determined formulary, and may not see patients anywhere besides the physician’s office; in contrast the other NP moves to a state that permits them to work independently in all areas (aside from the Medicare restriction on hospitals). Here are two NPs with equal preparation who sat for the same exam, but face two very different practice environments (Pearson, 2008).

This confusion over role has also contributed to an environment where NPs are discounted and their role minimized by physicians, other nurses, and health care facility
administrators (Martin & Hutchinson, 1999). This role confusion has been described in Arizona NPs as well with an emphasis on the “nursing model versus the medical model” and “conflict between actual and desired role” as sources of internal conflict for the NP (Plager & Conger, 2007, p. 6). The difference between the medical model and nursing model undermined the NPs’ ability to provide nursing driven care instead of being a substitute for a physician (Plager & Conger, 2007). This barrier was described as being of particular concern in rural NP practice (Lindeke, Jukkala, & Tanner, 2005). This confusion exists as a barrier in that it limits the ability of the NP to act independently as a secondary effect on the understanding of the role by others in healthcare (IOM, 2005).

Public Awareness

Public awareness of the role of the NP has been less than optimal even after forty years of NP practice (Lindeke, Jukkala, & Tanner, 2005). While the role has been mentioned in popular literature since its inception (Holt, 1998), it has not entered popular cultural lexicon and remains a significant barrier to practice (Lindeke & Jukkala, 2005). This relatively low expectation of independent NPs’ ability to provide care to the public is associated with the persistent popular culture depiction of physician and nurse roles (Newland, 2007). There is also the effort undertaken by the AMA on national television (Hill, 2005) and AAFP in several print outlets, including the Arizona Republic (Rough, 2009), to allege lower quality of care and need for “supervision” of NPs by physicians.

Lack of Support & Working Environment

Several barriers to practice that NPs perceived relate directly to their working conditions and support from others in healthcare as well as other NPs (Lindeke & Jukkala, 2005). These
barriers are related to physical space such as office space, support staff including receptionists that include the NP as a provider and medical assistant support, and inclusion in health care groups, (Martin & Hutchinson, 1999; see also Lindeke, Jukkala, & Tanner, 2005; Plager & Conger, 2007). A recurrent theme in the literature is the “less than” descriptions of what NPs do. In 1999 a qualitative study found that NP descriptions range from being referred to as a “mid-level” to being “ignored”, “blamed”, and a “scapegoat” for physicians within the practice (Martin & Hutchinson, 1999), a more recent replication study was not located. The least satisfying part of an Arizona NPs’ job is lack of collegiality (Schiestel, 2007). This lack of collegiality has been reported consistently in the literature with several authors noting it as more detrimental to rural NPs who have limited contact with others within the profession (Lindeke, Jukkala, & Tanner, 2005).

Rurality as a Barrier

The unique characteristics of rural areas pose barriers that are specific to those characteristics while not necessarily specific to NPs. Areas that create barriers to for rural providers may provide opportunities in some ways for independent practice of NPs in rural areas. This is not always the case however, and NPs are affected by rural practice issues like distance from support networks, professional isolation, lack of anonymity, spousal employment, long hours, and the requirement to be an ‘expert generalist’.

Lack of Anonymity

One widely reported effects of practicing in a rural setting is lack of anonymity (Ralph & Buehler, 2006). The lack of anonymity refers to the lack of separation between personal and professional lives that occurs in rural communities (Ralph & Buehler, 2006). This lack of
anonymity contributes to the trusted and knowledgeable status conferred upon the ‘old-timer’, or the individual who is known to the community, lived in the community for an extended period, and owns land (Boland & Lee, 2006). Lack of anonymity has been cited as an advantage for the rural nurse practitioner who may interact with patients outside the practice setting raising the question of whether it is a barrier or advantage for NPs seeking primary care practice (Hansen, 1999).

Isolation

A significant barrier faced by the rural NP is professional isolation, an issue that has been raised in several contexts in this report. Isolation has been defined in the literature as “an actual separation from or a deficiency in a resource needed to fulfill professional responsibilities or needs” (Shreffler quoted in Jukkala, Henly, & Lindeke, 2008). Rural professional isolation of the NP is a barrier frequently raised in studies on rural NP practice (Lindeke, Jukkala, & Tanner, 2005). Isolation from continuing education has been an issue for both nursing and medicine and the decrease comfort level of providers in performing complex or infrequently practiced skills may be a quality concern (Jukkala, Henly, & Lindeke, 2008). Lack of peer support also affects other health professionals and has become one of the issues being addressed on the federal level (IOM, 2005) and by the State of Arizona (Rural Health Office, 2006).

For the rural NP, issues of role confusion and workplace barriers compound professional isolation, may make it more difficult to collaborate in interdisciplinary settings (Phillips, Harper, Wakefield, Green, & Fryer, 2002).
Distance to Support Networks

One of the defining characteristics or rurality is sparseness of population compared to urban areas and an associated decrease in available services (Bales, Winters, & Lee, 2006). This distance has the effect of significantly limiting services that require significant infrastructure, specialization, or large population concentrations to be economically viable (IOM, 2005). Such lack of infrastructure and support is particularly acute for the primary care rural NP as they may be placed in the position of managing complex conditions that are typically managed in a hospital or long-term care facility because no facility is available or has space (Plager & Conger, 2007). While rural populations tend to be older, poorer, and sicker than urban populations, they have fewer resources available to provide treatment comparable to urban practices (Daniels, VanLeit, Skipper, Sanders, & Rhyne, 2007).
CHAPTER 4: CONCLUSION AND SUMMARY

This report has explored the barriers to independent practice faced by NPs practicing in rural Arizona. Among the barriers are the informal barriers like political conflicts created by the inter-professional rivalry between medicine and nursing (Phillips, Harper, Wakefield, Green, & Fryer, 2002; see also Fairman, 2004) and the barriers perceived by NPs themselves including the issues surrounding rurality (Lindeke, Jukkala, & Tanner, 2005; Plager & Conger, 2007). Other formal barriers include legal barriers related to scope of practice and internally confusing & contradictory statutes (Christian, Dower, & O'Neil, 2007; Pearson, 2008) and payment policies as a barrier (Hansen-Turton, Ritter, & Torgar, 2006 & 2008).

Limitations & Future Work

This report is limited in scope and depth by only including publically available source data and commentary. More information may be available through interviews or correspondence with leaders in medicine, nursing, health policy, and third party payers. This report is also limited to a single state with relatively liberal practice rules for NPs, barriers in other states may be significantly more stringent.

Future work in Arizona should include a survey of third party payers in Arizona to identify specific payment policies regarding NPs and the development of strategies to change the internal statutory conflicts with regard to NPs. Future research at the national level needs to include survey of NP programs to determine how, or if, they are addressing the educational barriers identified, feasibility of implementing NP residency programs, and methods to reduce the inter-professional conflict between nursing and medicine and the internal conflict within nursing. Future research on the efficacy of nursing “theory” in advanced nursing practice and
“dose efficacy” of clinical training regimens needs to be completed to address NP perceived educational barriers and / or shortcomings of NP preparation.

Enumeration of Barriers

The identified barriers fall into three broad categories, formal, informal, and rurality. In the chart below the identified barriers are organized into the three aforementioned categories.

<table>
<thead>
<tr>
<th>Formal</th>
<th>Informal</th>
<th>Rurality</th>
</tr>
</thead>
<tbody>
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<td>Medicare payment</td>
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<td>Isolation</td>
</tr>
<tr>
<td>Medicaid payment</td>
<td>Lack of Peer Network</td>
<td>Lack of Services</td>
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<td>Third Party Payers</td>
<td>Lack of Work Support</td>
<td>Spousal Employment</td>
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<td>Contradictory Federal &amp; State Rules</td>
<td>Colleague Recognition / Physician Resistance</td>
<td>Lack of Anonymity</td>
</tr>
<tr>
<td>State Practice Act Variability</td>
<td>Different Expectations from Actual Practice</td>
<td>Lack of Continuing Education Opportunity</td>
</tr>
<tr>
<td>Lack of Financial Transparency</td>
<td>Educational Shortcomings of Initial NP Preparation</td>
<td></td>
</tr>
</tbody>
</table>

Table 5

Conclusion

Overcoming the formal, informal, and rurality barriers in rural Arizona will require a coordinated effort by NPs at the local, state, and federal levels. Internal lobbying with the practice and academic nursing communities and public education can be explored to address the informal barriers while lobbying external to nursing will be needed to overcome the formal barriers enumerated. Barriers involving rurality will require inter-professional cooperation and
involvement in infrastructure planning and implementation. Future work can explore specific strategies to address the barriers noted here, but any such strategy will require cooperative action and resolution of the political barriers associated with the history of the NP movement.
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Medicare, 42 CFR § 482.12 and 42 CFR § 410.75-6, 2004


Rural Health Clinics, 42 CFR § 491.8, 1978 as revised 2007


