COMPARISON OF PRIMARY CARE OUTCOMES OF NURSE PRACTITIONERS AND PHYSICIANS

by

Kathleen M. Stidham

A manuscript submitted in partial fulfillment of the requirement for the degree of

MASTER OF NURSING

WASHINGTON STATE UNIVERSITY
Intercollegiate College of Nursing

December 2005
To the Faculty of Washington State University:

The members of the Committee appointed to examine the clinical project of KATHLEEN M. STIDHAM find it satisfactory and recommend that it be accepted.

Lorna Scheuerman
Chair

[Signature]

[Signature]
ACKNOWLEDGEMENTS

I sincerely wish to thank my committee members: Lorna Schumann for her undying dedication to her students, for her patience, perseverance and speedy turn-around time, and her ability to be flexible and focused at the same time; Billie Severtsen for her ideas and suggestions that helped to guide me through this difficult process; and Janet Purath for her persistence and frankness.

I would also like to thank my mother-in-law, Virginia Stidham, for her loving support and who always had dinner on the table for me allowing me the time to work on this manuscript; and my friend, Karen Hinman, who was by my side in life and in death; and Sally Ann Peters, my great boss, who allowed me to flex my full time work hours to accommodate my classes and clinical hours. Finally, I want to take this opportunity to thank my husband, Jim Stidham, who without his help, his love, and his great sense of humor this process would have been unbearable, he made the hard and long, easy and bearable.
COMPARISON OF PRIMARY CARE OUTCOMES OF NURSE PRACTITIONERS AND PHYSICIANS

Abstract

By Kathleen M. Stidham, M. NURS
Washington State University
December 2005

Chair: Lorna Schumann

PURPOSE:

To discuss whether studies show if primary care outcomes; cost effectiveness, improved utilization of care, higher client satisfaction levels, improved health status of nurse practitioners (NP) are comparable to those of physicians (MD).

DATA SOURCES:

Review of the literature using PubMed, ProQuest, and CINAHL databases and studies exploring the differences between nurse practitioners and physicians practice and outcomes.

IMPLICATIONS FOR PRACTICE:

The original concept of advance practice nurses was to increase access to health care for uninsured populations and underserved rural areas. The trend is for NPs to fill vacancies of unfilled primary care physician positions. The research suggests that nurse practitioners in the primary care ambulatory setting have equivalent outcomes: utilization of care, cost effectiveness, improved health status, and patient satisfaction, as physicians.

KEY WORDS:

Physician, nurse practitioner, outcomes, primary care outcomes, practice patterns, medical practice, nursing practice.
AUTHOR INFORMATION:

Kathleen M. Stidham, M NURS., RN, CEN, graduated from the Master of Nursing FNP Program from the Intercollegiate Nursing College of Washington State University.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>vi</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>BACKGROUND</td>
<td>1</td>
</tr>
<tr>
<td>RELEVANCE TO NURSING</td>
<td>4</td>
</tr>
<tr>
<td>CONCEPTUAL FRAMEWORK</td>
<td>4</td>
</tr>
<tr>
<td>REVIEW OF LITERATURE</td>
<td>5</td>
</tr>
<tr>
<td>Relevant Research Findings</td>
<td>6</td>
</tr>
<tr>
<td>Utilization of Care</td>
<td>10</td>
</tr>
<tr>
<td>Cost Effectiveness</td>
<td>11</td>
</tr>
<tr>
<td>Improved Health Status</td>
<td>11</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>12</td>
</tr>
<tr>
<td>Areas Other than Primary Care</td>
<td>12</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>14</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>16</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>17</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
</tr>
<tr>
<td>Original Sustained Partnership Model</td>
<td>20</td>
</tr>
<tr>
<td>Adapted Sustained Partnership Model</td>
<td>21</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

1. Original Sustained Partnership Model.................................................................20
2. Adapted Sustained Partnership Model.................................................................21
Comparison of Primary Care Outcomes of Nurse Practitioners and Physicians

Introduction

In the past decade as the need for primary care physicians has increased, the interest of medical students to pursue a primary care specialty has declined. This decline has caused a national crisis in the ability of many to access care. Are nurse practitioners (NPs) going to fill this vacancy of primary care providers? If so, do they provide the same primary care outcomes for patients as physicians (MDs)?

With the demand for primary care services and increased costs of treatment, there is an increase demand for primary care providers in the community. This increased demand for services is further compromised by the large number of baby-boomer population accessing care and the transition to decreased lengths-of-stay in the hospital.

With limited medical dollars and resources available, consumers/patients need to make informed decisions on selecting the best primary care provider for them, based on the best practice evidence available. If there is no difference in primary care outcomes between NPs and MDs for the patient, and the patient has a choice, he or she needs to be educated and informed to be able to select the best provider for their needs. To compare the primary care outcomes of physicians and nurse practitioners, a literature search was performed utilizing PubMed, ProQuest, and CINAHL databases.

Background

The NP profession is relatively new in the world of medicine. In the 1960s, a physician-nurse team, at the University of Colorado Health Science Center in Denver, demonstrated that nurses were capable of providing more extensive health care services than had previously been
allowed. This new advance practice graduate was to be called a nurse practitioner (Keane & Becker, 2004).

Midwifery, which is the first form of advanced nursing practice, is approximately one hundred years older than any profession in medicine. Although nursing and medicine are closely related, there are basic differences: 1) with educational process, medicine has a lengthy and standardized process, whereas nursing is variable; and 2) with gender, traditional social roles still are evident, more males are physicians and more females are in nursing (Mundinger, 2002).

Primary care training for either nurse practitioner or physician is based on either a two or three year program followed by a professional licensure. The education of both consists of clinical experience and formal training in diagnosing, treating, managing, and appropriate referral of acute and chronic illnesses. Medical students have a two-year long study of biophysical sciences and month-long rotations in specialty areas. Nursing students have similar primary care training as MDs in the hospital, but also community, and home-health, with in-depth study of health education, communication, risk reduction, and health promotion, which includes a broad introduction to disease and medical management of illnesses. Family Nurse Practitioner programs usually focus their education on preparing the clinician for practice in an ambulatory setting. The training of NPs and MDs may be similar in knowledge and training, but results in difference practice styles and perspectives and serves a different purpose (Mundinger, 2002).

Whitcomb and Cohen (2004) report that the consensus in the United States in the early and mid-1990s was that by the end of the decade, there would barely be an adequate supply of primary care physicians. This information has been supported by the decline in the number of graduating medical students that choose to specialize in primary care. The country is currently
facing an overall shortage of physicians, especially in primary care practices. The 2005 National Resident Matching Program statistics confirms the primary care physician shortage (American Academy of Family Physicians, 2005). Of the 2,767 Family Practice positions offered to graduating medical school seniors only 2,292 positions were filled for an 82.4% fill rate. Of those 2,767 positions available only 1,132 were filled by physicians trained in U.S. medical schools for a rate of 40.7%. Nurse practitioners have a unique opportunity to fill some of these vacancies and improve access to health care.

The American Academy of Nurse Practitioners (AANP) (2000) reported that NPs have proven themselves in regards to wellness and preventative health demands of consumers and reducing the number of repeat episodes of illness. Mundinger (1994) states NPs are particularly cost-effective in preventive care, as a result of their expertise in counseling, patient education and case management. The AANP 2003-2004 NP Practice Site Survey reports that of the approximate 106,000 nurse practitioners practicing in the U.S., 41.2% are in family or primary care settings. This number can help decrease the primary care provider vacancies.

Unfortunately, the medical profession as a whole fosters the view that a nurse practitioner is an “inferior or lesser” profession, than an MD and conveys this to the public. The American Academy of Family Physicians position statement regarding nurse practitioners is, a NP “should not function as an independent health practitioner” and should only function “under the direction and responsible supervision of a practicing, licensed physician” (American Academy of Family Physicians, 2003). The position paper from the American College of Physicians (ACP) states that although they support the expanded roles for NPs, physicians “take responsibility for the quality of care provided.” The ACP does not support independent practice of nurse practitioners (1994). If this “lesser” perception is held by the medical profession as a whole and this is
reflected to the public, patients may continue to seek health care from physicians and not from an “inferior” profession of a NP.

Relevance to Nursing

Mundinger (2002) stated NPs and MDs have different styles of practice, which are felt to be related to gender. Nursing has a reputation of nurturing, teaching and spending more time with patients; but are the basic primary care outcomes any different between provider types? If the perception of NPs by the public and physicians as a whole is one of a “lesser” profession, then NPs will continue to receive less economic opportunity, professional advancement opportunities, professional and public respect, than MDs until misconceptions are removed. In the past, these long-standing barriers were perpetuated by the reluctance of Medicare, Medicaid and insurance companies to reimburse NPs equally for the same care delivered by physicians. A barrier that may continue is that NPs are thought of as second class citizens in the public and medical community’s eye.

If there is no evidence to support a substandard level of care as evidenced by poor outcomes, when care is delivered by NPs, what have NPs done to extinguish these beliefs? Nurse practitioners, as a whole, need to break the artificial bonds of inferiority and educate the public and the medical profession regarding this misconception. What will the role of the NP be in the future of health care? Will it be one of equality or one of subservience? This manuscript will look at the evidence that is present in the literature regarding primary care outcomes of nurse practitioners and physicians.

Conceptual Framework

The conceptual framework used for this manuscript is a modification of the Michigan State University (MSU) College of Nursing Sustained Partnership Model (see Figures 1 & 2).
The sustained partnership model identifies how NPs interact with their patients and correlates that interaction with patient care outcomes. This framework conceptualizes the role of NPs in the primary care setting by validating the primary care practices of NPs. This model illustrates how the practice of NPs differs from MDs. These differences are in the use of a holistic model of care, “team focus, patient-centered care, comprehensive care, and collaboration” (Dontje, Corser, Kreulen, & Teitelmen, 2004, p. 65).

The sustained partnership model was created to emphasize the partnership of empowerment, mutual decision making, continuity of care, and a holistic approach to primary care delivery by a NP in a primary care environment. The patient and the nurse practitioner are joined into a partnership at the center of the model as shown in figure 1. This model also incorporates Donabedian’s concept of a systems approach to health care delivery systems. Donabedian’s model has three distinct sections: structural influences, processes of care, and potential outcomes (Dontje et al., 2004).

In the case of the MSU model, the final concept is potential outcomes, which are essential to provide the best level of primary care and outcomes possible. The outcomes of the modified MSU model include: cost effectiveness, improved utilization of care, higher client satisfaction levels, improved health status (see figure 1).

Review of Literature

The purpose of this literature review is to utilize the outcomes of the sustained partnership model with a review of the literature. A literature search of PubMed, ProQuest, and CINAHL databases utilizing the following terms in various combinations of: physician, nurse practitioner, outcomes, primary care outcomes, practice patterns, medical practice, nursing practice was performed. Of the 216 articles found, only 7 used for this manuscript were primary
research. The articles selected for this review addressed the following outcomes: patient satisfaction, perceived health status, cost effectiveness, and utilization of care. Different outcomes such as: morbidity, satisfaction, quality of care, compliance and preference; and comparisons/studies have been published regarding differences and similarities between physicians and nurse practitioners, but are not included.

Relevant Research Findings

There are two landmark studies on the quality of the primary care delivered by nurse practitioners in regards to that of physicians. The first was by Mundinger, et al. (2000) and a follow-up study by Lenz, Mundinger, Kane, Hopkins & Lin (2004).

Mundinger, et al. (2000) researched the quality of the primary care delivered by nurse practitioners in regards to that of physicians. Since NPs and MDs have the same responsibilities: are the outcomes the same for medication prescribing, direct reimbursement, and hospital admission privileges? The outcomes examined were patient satisfaction, health status, physiologic test results, and utilization of health care services. The study was a randomized double-blind trial to compare outcomes of patients assigned to either NPs or MDs for follow-up care after initial management at either an emergency department or urgent care clinic for asthma, diabetes, and/or hypertension. Of the 3397 initially screened patients, only 1316 patients met the researchers' criteria, had no regular source of care and kept their initial primary care appointment. These 1316 patients were interviewed at six months and one year after their initial appointment between August 1995 and October 1997. The results indicated that there were no significant differences in patient outcomes regarding health status, physiologic test results or health status utilization. Patients seen by NPs did have a statistically significant, but not clinically significant lower diastolic blood pressure (82 vs. 85 mm Hg; \( p = .04 \)).
The strengths of this study are the sample size, the ability to randomize patients, and that providers had the same duties. The limitations of this study are that: 1) no information was given about either type of provider’s level of experience, 2) there were 7 NPs, as compared to 17 MDs in the study, 3) the reporting of perception of health is a self-report from the patient, 4) only community-based clinics were utilized, and 5) the population was primarily female Spanish speaking immigrants from the Dominican Republic. Randomization took place in either an emergency department or urgent care setting, which may have resulted in loss of patients during the study. The major weakness of the studies in measuring “patient satisfaction” is that individuals have different definitions of satisfaction and perception is not a measurable outcome. Nurse practitioners have been educated to promote a holistic and empowering environment of care, which supports the conceptual model of sustained partnership by NPs in the health care arena. Sustained partnership between a patient and NP influences the processes of care, which contribute to improved potential outcomes.

The purpose of the two-year follow-up study by Lenz, et al. (2004) was to compare the outcomes of patients seen by either an NP or MD for their initial visit over the next two years. The investigators selected 406 patients from the original cohort of Mundinger, et al. (2000), who had received care only by the assigned practice and had at least one visit to the same clinic in the two years, since the initial visit in the 2000 study. Patients with hypertension, diabetes, and asthma were studied. The outcomes compared were health status, utilization of health services, and satisfaction with health care. The investigators found no significant differences in outcomes between the two groups, one seen by MDs and the other seen by NPs. The only difference in the results is the average number of primary care visits during year two for each discipline, NPs had 1.76 visits and MDs had 2.5 visits. This could be attributed to the following facts: 90.3% of the
patients were Hispanic and there were more bilingual physicians than nurse practitioners, one of
the nurse practitioners relocated their office, and a high level of Medicaid patients were
randomly assigned to the physician arm of the study.

The primary strength of this study is that it supported the research and outcomes obtained
previously in the Mundinger, et al. (2000) study. The primary limitation was that many patients
were lost to follow-up. Using the prior sustained partnership model is appropriate for this study
in confirming that continuity of care helps to improve a partnership between a patient and NP to
have potentially improved outcomes in the practice setting.

Perceived health and satisfaction with care delivered by NPs was researched by Pinkerton
and Bush (2000). They utilized two questionnaires, the Medical Outcomes Study SF-20 and the
Nurse Practitioner Satisfaction Instrument to determine the clinical significance between both
types of care providers. The SF-20 questionnaire is based on the patients’ perception of health,
not on actual measurable test outcomes. The questionnaire addresses six health concepts:
physical functioning, role functioning, social functioning, mental health, current health
perceptions, and pain (Rand Health, 2005). The Nurse Practitioner Satisfaction Instrument is a
tool that Knudtson (2000) modified from the Home Care Client Satisfaction Instrument-Revised
tool. The results of the study showed no significant difference in perception of health ($p=0.34$)
or patient satisfaction ($p=0.60$) between patients seen by either provider type. The strengths of
this study support the literature in regards to patients’ perception of their health, when seen by
NP. The major limitations to this study are: 1) small sample size of 160 patients, 2) no follow-up
questionnaire was utilized to confirm the original results, and 3) lack of information on the
number and experience of the providers. Nurse practitioners promote an atmosphere of mutual
decision making with their patients. NPs empower their patients to be part of a team and that potential outcomes, which include patient satisfaction, may increase.

Mark, Byers, & Mays (2001) used a 37-item patient satisfaction questionnaire developed by Mangelsdorff, Twist, Zucker, Ware, & George (1992) to measure patient satisfaction. Access, quality, and costs of the health care were used to measure patient satisfaction. The questionnaire was administered twice, on the initial visit to the clinic (226 patients) and six months later (167 patients). A score of greater than 140 indicated a high degree of satisfaction, whereas a score less than 80 indicated a high degree of dissatisfaction. Results showed: 1) the mean score for the initial visit mean scores was 134.8 and for 6 months was 129.9, 2) there was no significant difference in patient satisfaction of patients seen by MDs or NPs, and 3) patients with hypertension were most satisfied, then patients with back pain \( f(1,208) = 3.11, p=0.01 \).

Although the strength of this study is that the survey was repeated in 6 months, the study does not follow patients for a longer period to ensure that they remain satisfied with their provider, especially if they only see that provider once or twice. A limitation is that military and civilian providers in military primary care clinics were used for this study. This fact increases the possibility of different scopes of practice and standards of care of the military being used, then in civilian settings. The processes of care of the MSU sustained partnership model illustrates how patients and NP providers in partnership, increased collaboration (shared decision making) and more information giving, can work together to form a partnership to influence utilization and patient satisfaction.

Venning, Durie, Roland, Roberts, & Leese (2000) in a randomized, double-blind study compared the cost effectiveness between MDs and NPs at the first point of contact in primary care. The two-week study compared the following: length of consultation, examinations,
prescriptions, referrals, return visits, and costs. The SF-36 questionnaire (Rand Health) was administered to 1292 adults and children, 651 were seen by MDs and 641 were seen by NPs, on the initial visit and at two weeks. Patient satisfaction was divided into subcategories; medical interview and enablement score. NP consultations were longer than MDs (11.57 vs. 7.28 minutes), patients were asked to return for follow-up more often (37.2% NPs vs. 24.8% MDs), there were no statistically significant differences in the prescribing patterns of both providers, and patients were more satisfied with NPs consultations (mean difference 0.16, 95% confidence interval 0.08 to 0.24). If the NP creates an environment that is conducive to relaxed atmosphere, then the structural influences of the sustained partnership model are supported which leads to higher patient satisfaction levels. The main limitations to this study are how patient satisfaction was determined in the care of the children due to age (parents completed the forms for children between the ages of 5-16), and the NPs in this study were part of a team so the results do not necessarily relate to nurse practitioners, who work independently. Another limitation of this study is that it was only two-weeks long and that the NPs and MDs study practice in the clinic, so probably have the same or similar practice patterns. Creating and maintaining a sustained partnership, while improving potential outcomes, takes time. Longer consultation times with the patient may make the NP less cost effective.

Utilization of Care

Mundinger, et al. (2000) and Lenz, et al. (2004) reported that there were no statistical significant differences between the NP or MD regarding category of service visits: primary care, specialty, emergent or urgent care, or hospitalizations. This held true in the case of patients that were defined in a self-reported health status questionnaire as being “sicker” patients.
Cost Effectiveness

The Mundinger, et al. (2000) research study acknowledged that practice styles of NPs are different in that longer time is spent with the patient on prevention issues. This difference does not alter the equal outcomes of both providers. This outcome was unchanged in the Lenz, et al. (2004) follow-up study.

Venning, et al. (2000) found that nurse practitioners had longer office visits, spent a mean of 11.57 minutes as opposed to 7.28 minutes spent by physicians in consultation with patients. Although NPs issue less prescriptions than MDs, they spent 1.33 minutes more per patient when filling prescriptions out, and ordered more tests (including opportunistic screening) 8.7% vs. 5.6% by MDs. Nurse practitioners in this study requested that patients return to the clinic significantly more often (37.2% vs. 24.8%).

Improved Health Status

Mundinger, et al. (2000) results indicated that there were no significant differences in following patient outcomes: health status, physiologic test results in the setting of diabetes or asthma, or health status utilization. Patients seen by NPs did have a statistically significant, but not clinically significant lower diastolic blood pressure (82 vs. 85 mm Hg; P=.04), then when seen by MDs. This outcome was unchanged in the Lenz, et al. (2004) study, where the investigators found that there were no significant differences in the health status between the two groups, one seen by MDs and the other seen by NPs.

The results of the Pinkerton & Bush (2000) study indicated that patients completing the questionnaires did not perceive any difference in care between providers, in regards to perceived health. This being stated, satisfaction of one’s care provider does not equate with evidence-based appropriate care delivery.
Patient Satisfaction

Mundinger, et al. (2000) measured patient satisfaction by using a provider specific English and Spanish modified version of the Medical Outcomes Study questionnaire (Rand Health Website). Patients completed the questionnaire after their initial visit and in 6 months. There were no significant differences in patient satisfaction between NPs and MDs at the first visit. At the 6 month period, the MD group rating was higher than the NP group (4.22 vs. 4.12 out of a possible 5; P=.05). Lenz, et al., (2004) found no statistically significant difference between MDs and NPs in patient satisfaction. But there were differences in “visit-based continuity” and “communication,” with \( p \) values approaching significance in favor of greater satisfaction with physicians.

The research results of the Pinkerton & Bush (2000), Venning, et al. (2000) and Mark, et al. (2000) support that patients are satisfied equally with nurse practitioners and physicians. The Mark, et al. (2001) study also shows that patients as a whole had a difference in satisfaction level depending on their age (older patients were more satisfied than younger patients) and patients with hypertension were more satisfied than patients with back pain. The results were not significantly different 6 months later. The researchers also studied provider practice styles that ranged from the traditional disease model to a holistic model based on biopsychosocial principles, and found patient satisfaction is not changed by provider practice style.

Areas Other than Primary Care

Hoffman, Tasota, Zullo, Scharfenberg, and Donahue (2005) investigated whether NP and MD teams had better or the same outcomes as MD and Fellows (pulmonary or critical care) teams in managing chronically, critically-ill patients. The study was done in a subacute medical intensive care unit. The results indicated no difference in either team in regards to patient
outcomes, such as length of stay, days on mechanical ventilation, and disposition. The NP/MD team had less reintubations ($p=.02$) which enhances outcomes of health care. Although both NPs and fellows spent the same amount of time managing the patients, the NP spent more time coordinating care, and interacting with patients, patients’ significant others, and other providers (45% NP vs. 18% fellows; $p < .001$). The researchers state that with appropriate education and collaboration, an acute care NP would be competent in managing critically-ill patients. The strength of this study was the time period of 31 months and reinforces the equivalent care provided by NPs. Limitations were that no randomization occurred, the setting was a university-affiliated tertiary care center, and only one acute practice nurse practitioner was in the study as compared to six fellows who were certified in internal medicine. This supports the sustained partnership framework in that NPs spend time developing a relationship with the patient and/or significant others, which can be cost-effective, promote better utilization of care, improve health status, and increase patient satisfaction levels.

Nurse practitioners’ clinical outcomes, as compared to interns and resident physicians in an inpatient geriatric setting was researched by Lambing, Adams, Fox, & Divine (2004). NPs spend more time on documentation and planning care (28% vs. 15%, $p=.011$), advance directive discussion with patients ($p=.036$), and referral to physical and occupational therapy ($p=.001$). Nurse practitioners care more for patients with musculoskeletal and psychiatric disorders. Their patients are older and more ill at admission and discharge, than their physician counterparts. Physicians spend more time performing literature reviews, functional status, managing cardiac patients, and have lower lengths-of-stay. The major limitations of this study are: 1) a relatively small sample size ($n=100$), 2) the wide range of experience (1-15 years) for the NPs, 3) a small provider group (8 NP and 18 interns), 4) the providers completed “self-report” time logs, and 5)
a new questionnaire was used that had not been tested for it’s validity. The theory of sustained partnership supports the increased length-of-time taken by NPs for patient consultations, as having the potential for patient outcomes that are equal to or better than that of MDs.

In the nursing home setting, Aigner, Drew, and Phipps (2004) found that using a team which consists of nurse practitioners and physicians compared with physicians alone, had no increase in: Emergency Room visits, number of hospitalizations, lengths-of-stay and costs. The only difference identified was that patients are seen more frequently, in the team approach, which increases both overall care and access to care for the underserved. The strengths of this study are the length of time (12 months) and that 8 nursing homes were used. The limitations are that NPs worked with physicians in a team, and the study does not indicate if nurse practitioners would have the same outcomes, if they worked independently. Developing a sustained partnership with patients takes time and may lead to increased visits and longer consultation times with patients, but has the potential of improved outcomes.

Discussion

The original concept of advance practice nurses was to increase access to health care, especially for the uninsured populations and underserved rural areas, primarily in community and outpatient areas. Over time, primary care has evolved from a disease-oriented focus of physicians, to one of health promotion, health maintenance, and treatment by the nurse practitioner. The trend is for NPs to fill the vacancies of unfilled primary care physician positions in urban and suburban areas, and perhaps someday to be the gatekeepers of care. The research suggests that nurse practitioners in the primary care setting have equivalent outcomes, when treating patients in ambulatory settings. Research shows that when a sustained partnership is developed with a patient that includes: empowerment, continuity of care, shared decision
making, and holistic care; the primary care outcomes: patient satisfaction, health status, physiologic measures, utilization, and cost effectiveness; are the same for NPs and MDs.

Based on the review of the literature, some areas of concern remain regarding NPs providing equivalent care as MDs. First, self-rating of patient satisfaction does not equal good management of health care issues. Does the fact that NPs take longer with patients mean they prefer NP to MD management of health care issues? In fact, one study suggests that patients are “okay” with NPs for minor concerns, but not major ones. Second, do NPs and MDs have similar outcomes if the patient illness is more complex, then the NP would routinely see in an ambulatory setting? More research needs to be done to answer this question. Thirdly, will consultation times shorten depending on the length-of-time a nurse practitioner is in practice? Mark (2001) was the only study to reference average years of provider experience, NPs mean experience was 6 and MDs mean experience was 6.2. If NPs in spite of their billing practices (85% of what MDs bill at), are less productive then MDs, will this decrease patient access to health care and drive up costs?

Do NPs need to move away from the sustained partnership practice model (more time intensive) to the medical model of the physician to remain competitive? Forming a sustained partnership with a patient; that is fostered by empowerment, shared decision making, holistic and continuity of care; takes time. If NPs move away from the sustained partnership model, will they be “lost” in the medical model? Will potential or actual outcomes continue to indicate increased health-promoting behaviors, improved utilization of care, increased satisfaction, or improved health status for the patient? Perhaps NPs and MDs should train and work as a team to fill in the gaps of each other’s practice, both studying the practice model of each and taking the best of each.
Again, is the perception of satisfaction due to the fact that nurse practitioners spend more time with the patient, educating and nurturing; or because they are “good” providers? Although the limited research shows that there is not an appreciable difference in outcomes, more research is needed to determine, if this holds true in the long run (more than two years) and in severely compromised patients with complicated diagnoses.

Finally, just because patient outcomes are not significantly different between NPs and MDs, more research needs to be performed about outcomes and whether evidence-based practice guidelines are being used. Depending on the results of the research, the significance for nursing may improve nurse practitioner integrity in the medical arena and public eye. Is the increase in consultation time a result of NPs following evidence-based practice guidelines at a higher rate than MDs? This would lend more credibility to NPs as a profession.

Summary

The literature referenced in this manuscript supports evidence that nurse practitioners and physicians have equivalent primary care outcomes in a variety of settings. Patient satisfaction and self-rating health status are subjective patient assessments and not measurable, therefore may not be valid. Future studies need to determine, if cost effectiveness will improve as NPs have more experience or education is altered to meet the needs of today’s health care environment. More research is required to determine, if family practice nurse practitioners will have the same measurable outcomes as primary care physicians with patients’ with severe illness and comorbidity over the long term.


Outcomes of care managed by an acute care nurse practitioner/attending physician team


Figure 1. Original Sustained Partnership Model

The M.S.U. "Sustained Partnership" Model of N.P. Primary Care
(Dontje, Corser, & Kreulen, 2002)

Printed with permission.
Figure 2. Adapted Sustained Partnership Model

Adapted from the M.S.U. "Sustained Partnership" Model of N.P. Primary Care

(Don'tje, Corser, & Kreulen, 2002)

Printed with permission.