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HOME-BASED PRIMARY CARE: A RETURN OF THE HOUSE CALL

by

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Bachelor of Science, University of North Dakota, 2001

Master of Science, University of North Dakota, 2012

An Independent Project

Submitted to the Graduate Faculty

Of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Science in Nursing

Grand Forks, North Dakota

May

2012

This independent study, submitted by Nicole Windjue in partial fulfillment of the requirements for the Degree of Master of Science from the University of North Dakota, has been read by the faculty advisor under whom the work has been done and is hereby approved.

Karen Semmens

Faculty Advisor

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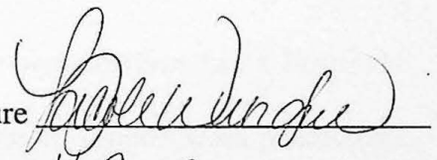
Signature 

Date 4-9-12

Abstract

Retention and recruitment of providers is an ongoing struggle in small and rural communities and poses a significant public health concern in meeting the needs of our aging population. This unfortunate situation will force many of our aging adults and home bound elders out of their homes and into skilled nursing facilities or assisted living environments long before they would have otherwise required skilled care. Providing primary care visits in the home is one way of addressing this issue. The medical and nursing communities have an obligation and a difficult challenge in providing our aging elders with a continuity of care with a more patient centered approach. Expanding the role of the nurse practitioner to practice as a primary provider in the home-care setting would be a cost effective method in decreasing functional decline, managing chronic disease, reduce the frequency of hospitalizations and nursing home stays, all of which reduce the defragmented care among our older adults.

This project will look at the review of literature regarding primary care visits in the home; focusing on cost effectiveness, improved outcomes of chronic disease management, and reducing the number of nursing home admissions. The evidence from these findings will support the need for primary care in the home and a call for program implementation. Local hospitals and clinics that serve the rural area will be the intended audience, as support from practicing physicians and advance nurse practitioners will be essential in the development and implementation of such programs.

Home-Based Primary Care: A Return of the House Call

Introduction

Background

Most of us do not remember the days when doctors made house calls; this is something many have only seen in old movies or re-runs of Leave it to Beaver. The days of house calls were certainly simpler times and with the change in our healthcare over the past 50 years, something many cannot imagine occurring today. However, what the evidence is showing is that many opportunities are missed in the clinic setting, including the visit itself. The objective of this independent study is to review current evidence-based research regarding the quality of healthcare our aging population (65 years and older) receives and evaluate the benefits of, once again, providing house calls to a vulnerable population.

According to the Department of Health and Human Services Centers for Disease Control (2010), the population of people 65 and over has increased from 35 million in 2000 to 40 million in 2010 and is predicted to reach an astonishing 55 million by 2020 and 72.1 million by 2030. Minnesota alone is predicted to double its population of aging adults 65 years and older reaching 1,193,124 by the year 2030. An increase in the older adult population correlates with an increase in the number of elders living with chronic disease and illness, an increase in the frequency of hospital visits, over twice as many visits to primary care providers, placing these individuals at a higher risk for morbidity and an overall decrease in their quality of life, having a tremendous impact on both our healthcare and Medicare systems. The increase in the number of American's living with chronic medical conditions will result in higher health care utilization rates and increasing health care expenditures, posing even a greater demand on our already defragmented healthcare system.

Purpose

The purpose of this review is to look at the current evidence-based literature-surrounding practitioner driven house calls. The research will examine how the patient may benefit from provider visits such as cost effectiveness, convenience, decreasing hospital admissions, better chronic disease management and improving access their access to primary care. Practitioners also may reap the benefits of providing house calls as they strive to meet patient's needs. Such visits would present greater opportunities in providing individualized care, more thorough evaluations, and the ability to evaluate the patient in their own environment, while increasing the amount of time spent with the patient. Once these areas are explored and benefits outlined these findings can be used to influence the delivery of care in the home-based setting.

Significance

As professionals in the healthcare field, "patient-centered care" is a rather hot term. Numerous studies have been conducted on how to best meet the needs of the patient's within the community, while keeping rising healthcare costs down: no "best method" has been founded. With current trends in health care coverage and new Medicare guidelines regarding hospital recidivism, practitioners are under a bit of scrutiny in providing cost-effective quality healthcare.

The high-risk and vulnerable populations are often at the forefront when discussing healthcare expenditures, as these are the populations that utilize the healthcare system more frequently; increased frequency of visits to providers, emergency room visits, hospital admissions, and nursing home placement; all of which are draining both the patient's pockets as well as our federally funded Medicare dollars. Aging adults with multiple co-morbidities are the highest consumer of Medicare dollars, currently accounting for over 75 percent of Medicare

spending (U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, 2006). In 2002, it was noted that those aged 65 years and older made up only 13% of the total population but consumed more than 36 percent of the total personal health care expenditure (U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, 2006).

The challenge of meeting the health care needs of our aging population has been an ongoing and increasing concern our healthcare system continues to remedy. It has been estimated that nearly seventy five percent of Americans age 65 years and older are trying to self- manage multiple chronic medical conditions. Twenty three percent have five or more chronic conditions and account for over 67% of all Medicare expenditures. Current trends indicate that these numbers will continue to rise as our aging population continues to grow (Anderson, 2005). Medicare beneficiaries should be considered "high priority" in terms of medical management for the following reasons; on average they see 13 different physician's yearly, accounting for 72% of all physician visits, beneficiaries have up to 50 different medications filled annually, accounting for 88% of all prescriptions filled, they account for 76% of all hospital admissions and 72% of physician visits, and are 100 times more likely to have a preventable hospitalization compared to someone with no chronic conditions (Health Policy and Management, 2007).

One proposed solution to these ever-increasing healthcare demands is to provide quality care at a more convenient, affordable price: home-based primary care. As life expectancies continue to rise, so too does the number of older adults living with chronic medical conditions. Healthcare reform and medical expenditure costs are forcing the aging population to self-manage their acute and chronic conditions on their own, often at a detrimental price. Hospitals are discharging patients earlier, which increase the need for closer, more complex medical

management at a more affordable cost, shifting the focus from a medical care delivery model back to home-based delivery model; house-calls are no longer a thing of the past.

Theoretical Framework

Home-based primary care is based upon the needs of the aging population. With the aging process come unwanted physical changes that often render a person incapable of caring for themselves without the help of caregivers. The theoretical framework that best speaks to the issues concerned in this review is that of the Chronic Care Model (CCM). Edward H. Wagner M.D developed the Chronic Care Model in 1998 and is one of the most widely accepted models guiding care and treatment for those with chronic conditions. The CCM is utilized by the Joint Commission on Accreditation of Healthcare Organization's Disease-Specific Care Certification and has been recognized and awarded by the National Committee for Quality Assurance (Suter, et al., 2008). The model was designed to address the concerns in healthcare, which tends to be focused on managing acute illness episodes and reimbursement rather than the management of chronic disease and prevention of further decline. The CCM is a holistic approach in the management of chronic disease in that it addresses the gaps in primary care for the patient as well as the provider. CCM is comprised of the following components, all of which are essential in optimizing quality care: community; resources, self-management support, healthcare systems, delivery system design, decision support, and clinical information systems. The Chronic Care Model diagram provides a better illustration of the components of the Chronic Care model (Appendix A).

As the models depicts, improved outcomes for both the patient and the provider team are achieved through collaboration of both community and health organization systems. The flow of the CCM can be further dissected with an explanation of each component.

Community

We have often heard the phrase "the whole is greater than the sum of its parts". It can be understood that the whole of any one thing, whether it be a football team, a colony of honeybees, or a business, is much more effective or productive than when we perceive any one part alone. This holds true in healthcare as well. A person cannot reach their full potential when trying to manage their chronic diseases without the collaboration of their physician, pharmacist, and nursing staff, to name a few. It takes a multidisciplinary team approach to best manage the co-morbid conditions many are faced with.

Resources. The performance and effectiveness of a healthcare team can often be improved by gaining awareness of the vulnerable populations within their community and the available resources (Glasgow, Orleans, and Wagner, 2001). Often times underlying risk factors are associated with the economic, environmental, and social health of the community in which the patient resides (Syme and Balfour, 1998). Taking a team approach and working with the various agencies within the community (social services, public health, home health organizations, pharmacists, and volunteer organizations) can prove to ensure that person in need is not falling through the gaps of the system. Community coalitions designed to bring about awareness and support various health-promoting behaviors have proven effective when linked to the primary provider (Special Issue of American Journal of Preventive Medicine, 2001).

Self-management support. Successful outcomes in managing chronic disease are heavily based in the patient and their family's ability to cope with the physical challenges chronic conditions present, as well as the capacity to deflect the emotional burden the illness may leave in its wake. Patient centered interventions that not only engage the patient in taking an active role in their health, but also provide supportive and preventative services, have proven to

be beneficial in improving patient outcomes (Glasgow, Orleans, and Wagner, 2001). Such interventions include; setting realistic and attainable goals in managing chronic conditions, identifying barriers in meeting the goals, and problem solving for these barriers all require the collaborative efforts of the healthcare team. Individualized educational material, treatment plans, and skills training are often the key elements in successful self-management and should be incorporated into the patient's individualized plan of care (Glasgow, Orleans, and Wagner, 2001).

Healthcare organization

Healthcare Organization as it currently stands tends to address those with acute illness and medical needs, often neglecting the need to manage the chronic conditions that are financially burdening. The CCM calls to redesign healthcare organization to create incentives for both the patient as well as the physician in improving the quality of care, better outcomes, and utilizing evidence-based methods in doing so (Glasgow, Orleans, and Wagner, 2001).

Delivery system design. The current way in which our healthcare system is doing business has not proven beneficial for those who have ongoing chronic medical conditions. Acute-care disease management does not provide the support and intervention needed to prevent future exacerbation of chronic conditions. Rather, it leads to an increase in the number of provider and emergency room visits, hospitalizations, and long-term care admissions, all of which are detrimental to the physical and emotional health of older Americans and are extremely costly methods in managing chronic disease. Therefore it can be understood that a call for a change in our current delivery system is desperately needed. The implementation of programs designed to manage chronic conditions and deter exacerbations, while offering incentives to both the provider and the patient, can revolutionize our current healthcare system.

Decision support. Having the ability to treat chronic conditions with optimal patients' outcomes requires an advanced knowledge and skill set of the primary provider. Utilizing evidence-based guidelines is absolutely necessary as is having the ability to recognize when collaboration with other members of the healthcare team as well as specialty providers is warranted. Utilizing decision support tools and guidelines have been recognized as being "essential for prevention because in the absence of symptoms, providers may be less likely to initiate recommended preventative actions or services" (Glasgow, Orleans, and Wagner, 2001, p.588).

Clinical information systems. Clinical information systems involve the timely and accurate delivery of information regarding certain populations living with chronic diseases. The development of effective chronic disease management programs would utilize a registry that allows for easy access of the patient's medical history along with evidence-based guidelines for disease management. These patient's can then be monitored more closely through phone calls, tele-health, or face-to-face visits to ensure adequate care, treatment, and management are being delivered to promote self care behaviors. Such systems are also essential in initiating prompt treatment when needed as well as providing support in preventative services (Glasgow et al, 2001). One previously implemented clinical information system that has proven effective is the immunization registry, for example. This registry tracks a persons' immunization history, when the next immunizations are due, and is based upon recommendations from the Center for Disease Control (CDC) and the Advisory Committee in Immunization Practices (Department of Health and Human Services, Center for Disease Control, 2010).

Definitions

Home Health Care: Health care or medical services provided in one's own home. Home healthcare can provide such services as wound care, physical therapy, medication and disease management, assistance with activities of daily living, patient and caregiver education, to name just a few. Home health care is generally less expensive, much more convenient for the patient, and equally as effective in the management of health and wellness as the care received in a skilled nursing facility or hospital setting (Department of Health & Human Services, 2012).

Iatrogenic illness- any illness or disorder that is a direct result from a therapeutic or diagnostic intervention received while acquired during an inpatient hospital stay (Steel, Gertman, Crescenzi, &Anderson, 1981)

Nosocomial infections or Healthcare-associated infections: Infections acquired during the course of receiving medical care in a hospital or acute care setting (Center for Disease Control, 2011).

Methods

Conducting Literature Search and Review

As our aging population grows, so does the need for home-based primary care programs. There is an emerging collection of research regarding home visits performed by primary providers or advanced practice nurses. A search was conducted utilizing PubMed, Google scholar, as well as the Google search engine, resulting in hundreds of articles on the subject. Results of he publishes articles were then narrowed down by age of the patient, home health services received; focusing on provider or practitioner visits, and the year published, trying to limit the use of articles prior to 2001, however, two studies from 1998 were utilized in this

review. The following key words and/or phrases were used; home-based primary care, primary provider home visits, house calls, advanced nurse practitioners in home care, and practitioners in home healthcare. A total of 18 articles were reviewed and utilized in the literature portion of this review.

Limitations to the search were the lack of current published articles exploring the practice of the utilization of provider and/or practitioners in the home setting. Many of the articles were published in the 1990's circa and did not reflect current trends. However, as the search continued it was evident that there began as shift in the desire for the delivery of primary care in the home setting and additional, more recent articles were found. It also should be noted that references from selected articles were reviewed and as a result additional articles from those lists were selected for inclusion based on the above criteria.

Proposal Based on the Review of Literature

What once was old is new again. The practice of house calls often thought of as a thing of the past, a piece of American history, is no longer considered to be an archaic custom in the delivery of healthcare. With an ever growing aging population and an increase in the number of chronic conditions a person must live with, the development of programs to keep healthcare costs down are in high demand. Home-based primary care is a model of healthcare delivery that can ensure high quality and efficient medical management and intervention in the comfort of a persons home, decreasing hospital admissions, frequency in provider and emergency room, visits, and decreasing the need for long-term care placement. In addition to improving the quality of life for older Americans, these cost saving efforts will have a dramatic effect on our Medicare expenditures.

To disseminate the evidence generated through the literature review, a poster was developed to be utilized as an educational resource, highlighting the benefits of home-based primary care. This poster may be utilized by as a tool for both providers and the general public alike. The poster created is available in Appendix B.

Review of Literature

Introduction

For many older American's the thought of being hospitalized can cause a great deal of anxiety. Hospitalization alone can have devastating effects on the aging adult, often resulting in irreversible decline in functional status, exposure to iatrogenic illness, and the high probability of placement in a long-term facility or nursing home (Soriano, Fernandez, Cassel, & Leipzig, 2007). Iatrogenic illness refers to any illness or disorder that is a direct result from a therapeutic or diagnostic intervention received while acquired during an inpatient hospital stay (Steel, Gertman, Crescenzi, &Anderson, 1981). Adverse effects from medication, increased risk of pressure ulcers due to decreased mobility, nosocomial infections, and falls related to an increase in weakness and decrease in cognitive and sensory function have all been associated with hospitalization (Soriano, et al., 2007). These adverse events lead to longer hospital stays and increase the likelihood of nursing home admissions. One way to reduce hospitalization and prevent further decline of our older Americans is by providing home-based primary care visits.

A study conducted by North, Kehm, Bent, and Hartman, (2008) sought out to assess the effects of a Nurse Practitioner directed home-based primary care program (HBPC) on reducing hospitalizations, emergency department visits and the overall cost effectiveness of managing the medically complex elderly patient. The study found there to be a significant cost savings, as well as reduced hospitalizations by 84% and emergency visits by 45% when a nurse practitioner was

providing home visits. A similar study evaluating the effectiveness of a HBPC program designed by the Department of Veterans Affairs (VA) in a one-year period showed a nationwide reduction in hospitalization by 27% and a reduction in inpatients days of care after admission by 69%. Patient satisfaction of the program was also evaluated and found to be 98% rating as either very good or excellent regarding the care received (Cooper, Grandadill, & Stacey, 2007).

With the increase in the aging population there is also a significant increase in the number of homebound elders. Chronic disease poses barriers to receiving adequate medical care and intervention; increased frailty, immobility, and mild cognitive impairment greatly hinder the patient's ability to coordinate visits with a primary provider. Many older adults also face many financial barriers to accessing care. Living on a fixed income often makes it difficult to afford transportation to travel to their primary care clinic: this is especially true for those living in rural areas. As a result of the limitations they are faced with, many elderly simply go without seeing their provider. Providing primary care visits in the home is one way of addressing this issue. Restrepo, Davitt, and Thompson (2001) wanted to explore the outcomes of the implementation of a geriatric nurse practitioner (GNP) house call program and determine is such visits would increase the access to care for homebound and frail community dwelling elders. The program provided two venues to receive care; both in the patient's home as well as in satellite clinics. The results of their investigation found that chronic conditions were being managed with better outcomes: 13% reduction in systolic blood pressure for patients with hypertension, 80% of the patients received education on and received immunizations (influenza, pneumococcal, and tentanus-diptheria vaccinations), and 97% of all patients were identified as needing and received nutritional counseling as it concerned to their disease. It was also noted that on average two

additional diagnoses per patient were discovered and treatment was initiated that would have otherwise gone unidentified.

Home health care agencies possess a unique approach in providing care, both in times of sickness and of health, an approach often well accepted by patients. Community-based home care programs that integrate physicians, GNP's, and multidisciplinary health care teams is not only feasible, but a widely acceptable practice that can result in positive outcomes for patients and the healthcare team alike. Patients and caregivers strongly prefer in home care (80.2%) over that of hospital care (5.6%) (Stewart, et al., 2010). It is suggested that this model is ideal for nurse practitioners to coordinate and deliver care in the home, consulting with the family physician and other health care professionals (Stewart, et al., 2010). Providing primary care services to the patient, in the comfort of their own home, GNP's can help maintain the health and safety of the rural elder who may not have the physical, mental, and social capability to see their primary provider in the traditional office setting on a regular basis. Simple procedures such as home safety evaluations, medication and pain management, wound care, diagnostic testing, and/or routine follow-up visits are just a few of the interventions that could be easily performed by a GNP without the patient having to leave his or her home (Milone-Nuzzo & Pike, 2001). Providing home-care in this manner is a patient-centered approach and truly focuses on meeting the needs of our elderly population.

Primary care of the elderly is a role nurses are well equipped to manage in all healthcare setting. Nurses tend to be more aware than non-nurse providers of the problems encountered by the elderly, especially those providing care in the home. Nurses are not only experienced in these areas but they also have the expertise in managing patients with such acute and chronic conditions many elderly face affecting functional mobility, alterations in nutrition, bowel and

bladder dysfunction, immobility, maintenance of activities of daily living (ADL's). A study conducted in 2000 by Dalby, Sellors, Fraser, Ineveld, and Howard looked at the impact preventative home visits had on the frail elderly patient living in the community when conducted by a nurse compared with a usual care (non-nurse) visit. This study found that those patients who received nursing visits had new problems identified (95.9%) that had not been previously reported. This resulted in earlier treatment and cure rates as well as a decrease in hospitalization and functional decline. The most commonly identified problem was urinary tract infections (27.4%), which can have debilitating physical and cognitive effects on the elderly when left untreated. This study also found that the influenza vaccine was administered to 90.1% of the subjects who received a nurse visit as compared to 53% of the usual care visits. This suggests that nurse visits may also be crucial in the prevention of potentially devastating illnesses in the elderly.

As the acuity of our older adult population has become more complex, so has the care required to manage these chronic disease and illness. The role of the GNP in the home setting combines conventional nursing duties with a focus on the complex health needs of older adults (Carlson, 1998). The GNP differs from the traditional nursing role in that it provides continuous and comprehensive, rather than episodic and acute care. Primary prevention, health promotion, and early detection, diagnosis, and treatment are key factors in the GNP's delivery of care. Also, GNP's possess the knowledge and autonomy to treat patients in the home setting, eliminating barriers to accessing care (Portillo & Schumacher, 1998). Through direct patient care, the nurse practitioner possesses the ability to diagnose, treat, and manage disease, disabilities, illness, and injuries, as well as implement preventative strategies to improve patient outcomes or resolve illness.

Although primary and secondary prevention are a key concept in health and wellness, it is not always a realistic approach in this population group. Older adults are often faced with disease and illness long before they are aware that they are sick and providers are having to manage these chronic conditions from a tertiary perspective. Tertiary prevention is the management of disease to slow progression and evolution, with a goal to improve survival (Aschengrau & Seage, 2008). Neff, Madigan, and Narsavage (2003) studied the effectiveness of a transitional home care delivery model for patients with chronic obstructive pulmonary disease (COPD) when delivered by an Advanced Practice Nurse (APN). Their studied compared the difference between those participants who received care that was directed and supervised by an APN to those who did not receive routine home care visits. The study specifically examined the following outcomes: respiratory status, functional status, psychological factors associated with COPD, and health service use including acute care, emergency room visits, and hospitalizations. Results concluded that patients had fewer psychological factors (e.g., anxiety, depression) and had better functional abilities when receiving visits directed and supervised by APN compared to the control group. It was also noted that the APN directed model provided care that was more seamless, individualized, and was ongoing from admission to discharge. The study assured daily availability of the APN to address any concerns with patients experiencing COPD exacerbations.

Chen, Farwell, and Jha (2009) specifically looked at the time a provider spends with his or her patients as a factor in actual or perceived quality of care. The study was retrospective, looking back from 1997-2005 and analyzed visits by adults ages 18 years of age and older seen in a clinic setting by a primary care physician. The results were surprising in that the actual time a patient spends with a provider has actually increased by 16% despite the decreasing salaries and the pressure for an increase in efficiency. What was not surprising is that there exists a clear

and consistent correlation between visit duration and the perceived quality of care received. Those that felt that provider spent adequate time with them perceived themselves as healthier compared to those individuals who felt not enough time was spent with them during the visit. This study reinforces the importance of home visiting and the undivided attention and time a provider may spend with the patient in their home. It can also be hypothesized that primary home care visits promote a positive perceived level of health and wellbeing because this type of visit encourages a positive patient and provider relationship.

Another study by Carr-Bains, Nightingale, and Ballard (2010) examined patient satisfaction and experience of receiving home visits by a general practitioner. Participants in the study viewed themselves as either too ill to travel or as having limited mobility preventing them from easily visiting their practitioner when the need arose. The study found that without receiving the care through the home visiting program, the patients would have ultimately been admitted to a hospital or be forced to call for an ambulance or emergency team for assistance. Again, the study underscored the need for primary care providers in the home and their role in reducing the frequency of hospitalizations and/or emergency room visits. This study also emphasized that such in-home care also improved not only the quality of life, but longevity as well.

Home health care is not a new concept and has actually been an important component of the healthcare arena for over 100 years. Home health care creates an environment that enables adults to better manage disease and illness, reducing the need for long-term care placement. Although the need for GNP's in home healthcare exists, there has been little increase in the number of GNP's who currently practice in the homecare setting. Landers, Gunn, and Strange (2009) sought to identify the organizational, clinical, and patient characteristics of house call-

home medical care practices in the United States. They conducted a cross-sectional study utilizing telephone surveys and questionnaires. The study identified a need for geriatric providers in the home care setting. "While geriatric medicine subspecialists represent 44% of the physician in the practices identified in this survey a recent analysis of house calls to fee-for-services Medicare beneficiaries reported that only 1% of all house calls to fee-for service beneficiaries were done by geriatricians in 2003" (Landers, Gunn, and Strange, 2009, p.113).

Beck, Arizmendi, Purnell, Fults, and Callahan (2009) conducted a retrospective study examining the effectiveness of the House Calls for Seniors Program over a 7-year period. The study specifically looked at the development and growth of a home visiting program to best meet the needs of homebound elders. The program consisted of a healthcare team, which included geriatricians, geriatric nurse practitioners, social workers, a nurse, patient services assistant, and a practice manager. Nurse practitioners often performed almost all urgent visits, and routine visits every 4-6 weeks in between physician visits. The holistic approach to care resulted in improved quality and access to care, improved outcomes in preventive health services, early detection and recognition of disease and illness, as well as over all patient satisfaction with the program.

Whether working independently, collaboratively with physicians, or as members of a geriatric health care team, studies have shows that the care provided by geriatric nurse practitioners and clinical specialists significantly improves the health and wellbeing of older adults in the community, hospitals, and skilled nursing facilities (Mezey & Fulmer, 2002). Understanding the impact GNP's have on the geriatric population forces the nursing profession to focus efforts towards improving and expanding adult and geriatric graduate nursing programs. Theile, Kruschinski, Buck, Mueller, and Hummers-Pradier (2011) explored the attitudes general

practitioners have with regard to the feasibility, burden, and outlook of continued home visits in Hannover, Germany. Their study confirmed that there exists a need for general practitioner home visits. Further, this study suggested that the primary advantage of home visits is one of great financial benefit for the patient by containing costs associated with hospital admissions, emergency room visits, and care and interventions provided care to the homebound elder which would otherwise be provided in a clinic setting.

With the current trends in population and the constant restructuring of our healthcare system, there will undoubtedly be unpredictable change in the way in which health care is delivered. Our aging population will demand innovative solutions to best meet their physical, psychological, and social needs. Cost containment of health care services, an increase in knowledge and skill of our health care providers, and access to care will all be at the forefront of this movement (Caryer, 2007). It has been recognized that cost containment in health care involves decreasing not only the frequency of hospital visits, but also the length of stay. According to the Center for Disease Control and Prevention (2010), the average length of a hospital stay for adults aged 65 years and over is 5.6 days. This means more people are being discharged home with surgical drains, wounds that need dressings, intravenous medications, and/or blood tests that need to be taken at regular intervals or face hospital readmission. Nearly one-fifth or 17.6% of all Medicare patients are readmitted to the hospital within thirty days of discharge. These readmissions are often the result of poor discharge planning which lacks supportive interventions for patient and family. Hospital readmissions have accounted for $26 billion in Medicare expenditures per decade, increasing the financial burden on the Medicare program as well as its beneficiaries (Sullivan, 2011). The Center for Medicare and Medicare (CMS) has proposed that hospitals will suffer penalties for patients that are readmitted within 30

days of discharge; those with the worst hospital recidivism may lose up to 3% of their regular Medicare payments (Sullivan, 2011). These proposed penalties further support the need for home-based primary care to effectively manage and treat patients and prevent unnecessary hospital admissions and readmissions.

Discussion

Implications for Practice

For the aging adult the development of disease an illness not only leads to debilitation and decreased functionality but also can be overwhelming and frightening. Incorporating providers, specifically GNP's, as a component of the home healthcare team, can prove beneficial in better management of chronic conditions. Through collaborative efforts with local public health, social services, and hospital and clinic agencies, the clinician role of the GNP in home-based primacy care can be better developed. This delivery model would bring health care and medical services to the patient, reducing overall costs and eliminating the barrier many elderly.

With hospitals discharging patients earlier, the risk for readmission becomes greater, as does the risk for poorer outcomes. Older adults are among those who are most vulnerable in developing problems post-discharge. With multiple chronic health conditions, decreased functionality, and inability to safely self-manage their health, the elderly are at the highest risk for readmission to the hospital or nursing home. Studies indicate that GNP's working closely with the patient's healthcare team during the transition period back to home and beyond, reduces the likelihood of readmission and prevents post-discharge complications and errors, all while reducing the overall cost of care (Naylor, et al, 1994).

Advance practice nurses (APN's) build upon their previous skills and knowledge as registered nurses and demonstrate a high level of data synthesis, increased skill complexity and

intervention, and autonomy in their role as practitioners. The expectation of the APN role is to assume both responsibility and accountability for their patients. This is carried out by effectively managing their patient's problems through completing thorough assessments and accurate diagnosis, the implementation of health promotion and prevention measures, and through the use of interventions, both pharmacological and non-pharmacological. APN's are adequately prepared to care for patients with acute and chronic conditions and the care provided has proven to be comparable to that of physicians (Avorn, Everitt, & Baler, 1991).

Research

Economic trends indicate that there will continue be an increased demand for APN's and GNP's to make health care available and affordable for more people (Hooker & Berlin, 2002). Nurse practitioners are currently filling the gaps where physician services are in short supply and where midlevel providers are found to be most cost effective. Rural communities are in great need of providers as these are the areas that are medically underserved and facing a shortage in available health professionals (Kaiser Family Foundation, 2010).

Further research is in needed in the area of home-based primary care, specifically in meeting the needs of rural elders. Chronic medical conditions and increased decline in functional health make medical self-management extremely difficult and GNP's can meet the needs of this ailing population.

Education

Masters prepared nurses are often exposed to the usual settings patients most frequent; clinics, hospital, emergency rooms, and long-term care setting. However, the home setting is often not considered during the educational process. Home-based primary care can offer a more concise view into the lives of the patient population and provide a unique opportunity to

incorporate the home environment into the plan of care.

Most of the work in health maintenance is often unseen, as it takes place behind closed doors, in the patient's home, a place providers are seldom seen. Practitioners have an expectation that their patients will return to their homes and continue to play an active role in their own health, and practice the advice given by their primary providers. Nursing curriculums should provide an added component to their educational outline of providing clinical expertise and medical interventions in the home.

Policy

Having recognized a need for home-based primary care, collaborative efforts should begin at the local and state level to provide medically necessary care to homebound elders. The initialization of programs designed to deliver safe and effective care in the home is the first step in the redesign of the current model of care.

In December of 2011, the Center for Medicare and Medicaid Services released a call for applications for Independence at Home Demonstration, a program designed to encourage the coordination of patient care through home-based primary care. The programs intent is to explore the delivery of comprehensive primary care services in the patient's home and it's effects on the management of those with multiple chronic medication conditions, with a focus in providing quality care and reducing the overall cost of care (Department of Health and Human Services, 2011) This initiative speaks to the need for healthcare reform on a national level. A change in health policy will surely follow, as efforts will demonstrate that home-based primary care is an effective delivery of healthcare.

Conclusion

An increase in population and a decrease in primary care providers will undoubtedly cause a crisis in our rural communities and poses a significant public health concern in meeting the needs of our aging population. This unfortunate situation will force many of our aging adults out of their homes and into skilled nursing facilities or assisted living environments long before they would have otherwise required skilled care.

This increased demand puts a greater strain on the remaining providers, making recruitment and retention much more difficult. An increase in population and a decrease in primary care providers equates to a crisis, especially in our rural communities. It is evident there is a great demand for NPs that have both the education and experience in working with the geriatric population.

Expanding the role of the nurse practitioner to practice as a primary provider in the home-care setting has shown to optimize quality of life, decrease functional decline, and reduce the frequency of hospitalizations and nursing home stays, all of which will undoubtedly reduce the defragmentation of care among this population. Providing medical care in this manner is a patient-centered approach, which focuses on meeting the needs of our aging society

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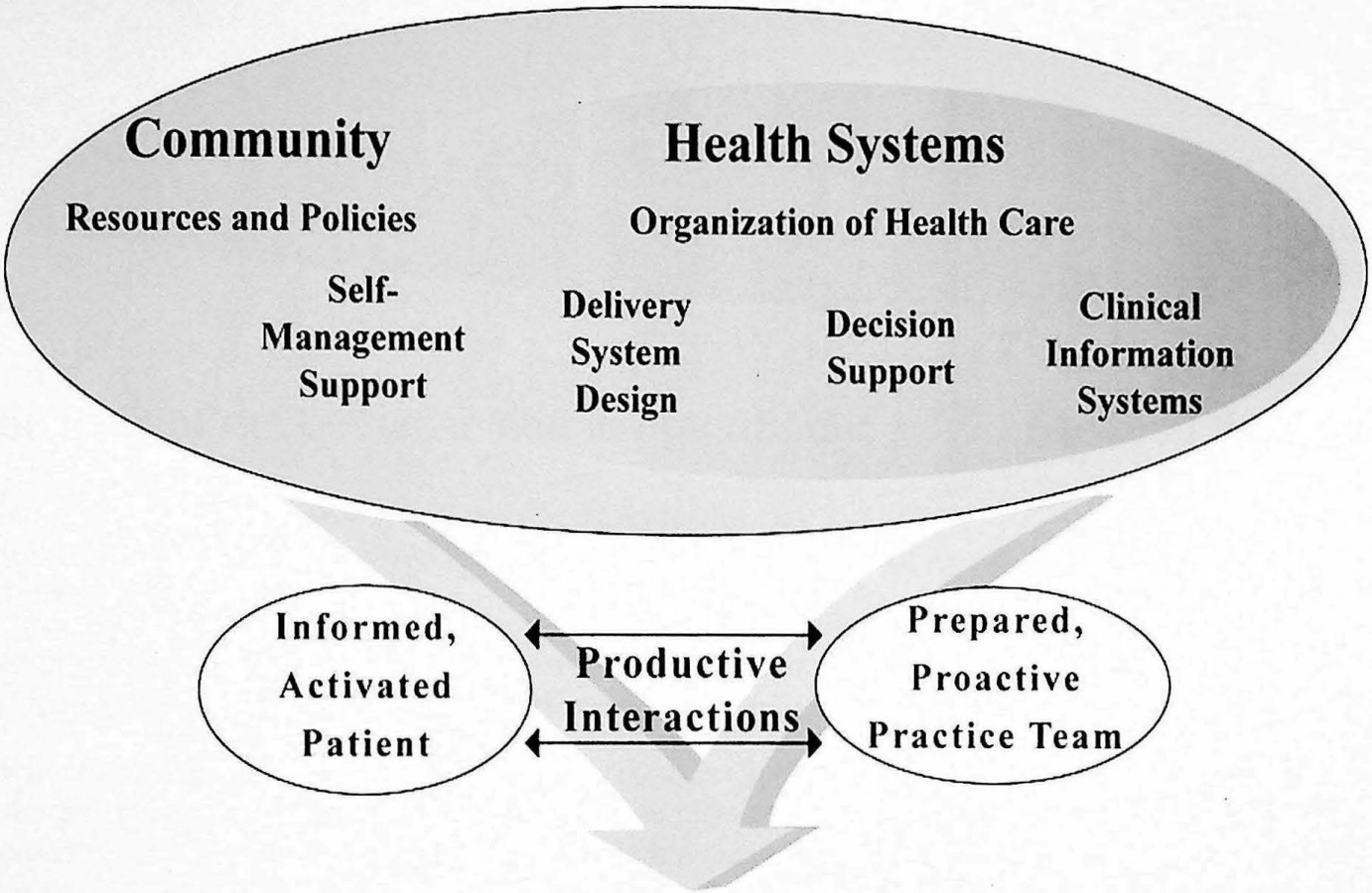
APPENDIX A

The Chronic Care Model



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APPENDIX B

Home-based Primary Care

The Role of the Geriatric Nurse Practitioner

Geriatric Nurse Practitioners (GNPs) provide direct health care services to adult elderly who are living with acute and chronic medical conditions.

GNPs practice independently and collaboratively in multiple rural and urban settings, with home-based primary care coming to the forefront.

GNP home-based primary care is a cost effective solution in ensuring our seniors remain in their homes as long as they are physically able, having all of their personal and medical needs met, enhancing their access to quality care.

The medical and nursing communities have an obligation and a steep challenge in providing our aging elders with a continuity of care with a more holistic approach. Expanding the role of the GNP to practice as a primary provider in the home-care setting has shown to optimize quality of life, decrease functional decline, and reduce the frequency of hospitalizations and nursing home stays, all of which reduce the defragmentation of care among this population (Carlson, 2007).

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Home Based Medical Services

People who may benefit from home-based primary care

Seniors who are:

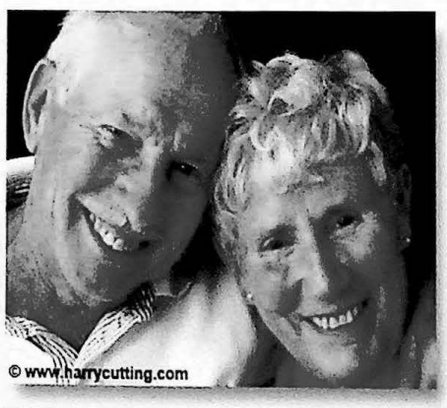
-Medically isolated

-Have difficulty managing their current health and are struggling with one than one chronic medical problems

-Have difficulty managing their medications

-Have difficulty getting to their doctor's office

-Do not have a primary physician



"I alone cannot change the world, but I can cast a stone across the waters to create many ripples."

~Mother Teresa