

DEVELOPMENT OF A CLIENT-ORIENTED WEB SITE
TO EDUCATE CONSUMERS ABOUT THE ROLE OF
GERIATRIC NURSE PRACTITIONERS

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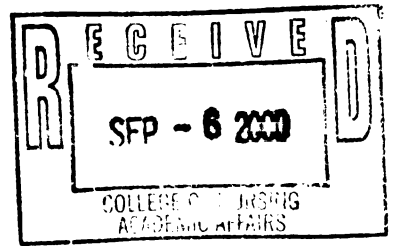
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MICHIGAN STATE UNIVERSITY

BONNIE H. HOLMBERG

1997





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in partial fulfillment of the requirements

for the degree of

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This paper is dedicated to the memory of two special people that had an impact on my career choice: Mrs. Ann (Lawrence) Cary and Mr. Harry Holmberg.

ABSTRACT

Development of a Client-Oriented Web Site to Educate Consumers About the Role of Geriatric Nurse Practitioners

By

Bonnie H. Holmberg

The role of the Geriatric Nurse Practitioner (GNP) is relatively new, evolving from the increased needs of society to meet the growing demands of the aging population. To increase their utilization, GNPs must increase client knowledge about their role in primary care through communication vehicles, such as a World Wide Web (WWW) site. The concept of using a client-oriented web site to educate the consumer is directly related to the number of seniors already on-line, and to research showing dramatic increases in computers purchased among older adults. With the surge of Internet interest, a GNP web site represents a strategy most appropriate for communication of the GNP role in primary care. This web site development is based on a review of research literature and is supported by Rogers' Innovation-Diffusion Theory. The methodology section lists tools and resources utilized to create the GNP web site found at:

<http://pilot.msu.edu/user/holmber6>

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INTRODUCTION

A conclusion reached by the 1995 White House Conference on Aging states: “By the year 2000, there will be almost 76,000 Americans at least 100 years of age. In contrast, more than 1 million baby boomers will live to be 100 years old, with women significantly outnumbering men. Delays in planning for our aging population will result in greater demands upon our nation and its people” (p.17,19). As we move into the 21st century with an anticipated dramatic increase in our aging population, it becomes clear that planning needs to take place to address the primary healthcare needs of this growing population.

The Administration On Aging’s (AOA) World Wide Web (WWW) site contains some interesting projections and statistics concerning this aging population. The AOA reports that: “the older population, persons age 65 years or older, numbered 33.5 million in 1995. They represented 12.8% of the U.S. population, about one in every eight Americans”. The AOA goes on to estimate that by the year 2030, there will be about 70 million older persons, representing 20% of the U.S. population (see Appendix C for AOA URL).

The proportion of health care services required for this rapidly expanding age group is also increasing. Using data from the U. S. Department of Health and Human Services AOA found:

“Older people accounted for 37% of all hospital stays and 47% of all days of care in hospitals in 1994. The average length of hospital stay was 7.4 days for older people, compared to only 4.8 days for people under the age of 65. In 1987 the 65 plus group represented 12% of the U.S. population, but accounted for 36% of total personal health care expenditures. These expenditures totaled \$162 billion and averaged \$5,360 per year for each older person. This is more than 4 times the \$1,290

average spent for younger persons. Older persons also averaged more contacts with doctors in 1994 than did persons under 65 (11 contacts vs. 5 contacts)".

The U.S. health care system is currently in the midst of reform, and the U.S. population continues to age and to use more health care services. One major constraint is that there are a limited number of primary care physicians. Advanced practice nurses have become increasingly attracted to primary care, while physicians in training have become less interested in it, opting instead for specialty or subspecialty medicine. Munding (1994) states that "nearly a third of physicians (perhaps 200,000) are primary care practitioners, but less than 15 percent of medical students (2800 a year) are now planning careers in primary care" (p. 211). This will result in a shortage of primary care physicians that will have a direct impact on the aged persons of America.

The U.S. General Accounting Office (GAO 1995) pointed out another problem facing elders that is just as crucial as the lack of primary care providers. The GAO report questions the adequacy of knowledge in geriatrics and in geriatric pharmacology of currently practicing physicians. A report issued by the GAO states that "17.5 percent of nearly 30 million noninstitutionalized Medicare recipients aged 65 or older used at least one drug identified as generally unsuitable for elderly patients". Their recommendation was for doctors to increase their knowledge of geriatrics and elderly clinical pharmacology (General Accounting Office, 1995). With busy practices, time constraints, and limited access to educational facilities, additional education may not be an option for these physicians.

One proposed solution is a collaborative practice that includes a physician and a geriatric nurse practitioner (GNP). A GNP in the practice may allow increased access to health care for elder patients while providing geriatric focused assessments. As

Mundinger (1994) points out about nurse practitioners “although they are indistinguishable from their physician counterparts in making primary care decisions, nurse practitioners bring additional skills to the practice. Nurses are more likely to talk with patients and adapt medical regimens to a patient’s preferences, family situation, and environment. They also are more likely to provide disease-prevention counseling, health education, and health-promotion activities” (Mundinger, 1994).

The role of the GNP is relatively new, evolving from the increased needs of society to meet the growing demands of the aging population. With the aid of new technology, medications, and procedures, more people will be living into their second century. Increased population longevity presents new challenges in providing healthcare for this age group. The GNP presents one solution to help research, educate, and provide case management of elderly individuals in collaboration with a primary care physician. As the field of geriatrics evolves, its shape will be affected by how we communicate the GNP role to the consumer. As the role of the nurse practitioner expands, it is important to maximize utilization of GNP services. To achieve this, the GNP must increase client knowledge about their role. The role of the nurse practitioner has not been defined for the client in the past. Through communication vehicles, such as a WWW site, the GNP can communicate the scope of their practice and can define their role in primary care to potential clients.

Just as the role of the GNP is new, so is the concept of using a WWW site to educate the consumer about this role. A growing number of seniors are already on-line. Moran (1996) reported that there are roughly 780,000 people, age 55 or older, who use America On-line, a for-profit web browser that has access to the WWW. Dennison (1995), when looking at the number of seniors enrolled in computer courses, reported in the San Francisco Chronicle that over 65,000 older adults had test-driven a computer at

one of the many SeniorNet learning centers across the country. Adler (1996), when reporting on the results of a SeniorNet survey underwritten by Intel Corporation, found computer ownership by persons aged 55 to 75 years of age was 30%, which was a 43% increase from the 1994 survey sponsored by SeniorNet & Intel Corporation. As discussed later in this paper, computer users are the innovators in society that the GNP wants to reach, and a WWW home site represents a strategy most appropriate for communication with today's innovative individuals.

BACKGROUND OF THE PROBLEM

As GNPs struggle to gain role identity in the health care system, it is important that clients be given clear and factual information regarding the GNP role. One potential avenue for increased public awareness is a GNP web site. As of this writing, client-oriented web sites that promote the awareness and understanding of GNPs in a collaborative practice in primary care do not appear to exist.

PURPOSE OF THE PROJECT

The purpose of this project is to develop a client-oriented web site to increase awareness and understanding of the role of the GNP in a primary care collaborative practice. The National Conference of Gerontological Nurse Practitioners has not developed any type of WWW sites to educate the public on the role of GNPs in primary care. The American Academy of Nurse Practitioners has published a generic brochure that answers basic questions about the nurse practitioner role in general, but it does not address specialty roles, such as GNP. Because no informational materials or web sites presently exist pertaining specifically to the GNP, this web site could be a model from which future materials may be developed.

CONCEPTUAL DEFINITIONS

Client-Oriented Web Page

American Nurses Association (1991), defines **client** as a “recipient of nursing actions” (p.7). Webster’s Dictionary (1984) defines **oriented** as “to cause to become familiar with or adjusted to a situation or circumstance”(p. 829). Kidder & Harris (1995) define **web page** as a “coherent document that is readable by a web browser. A web page may vary in complexity all the way from a simple piece of text enclosed by the HTML tags `<PRE>...</PRE>`, meaning “preformatted,” to a densely coded HTML file giving the user access to many types of hypermedia” (p.23).

The definition adopted for this paper: A client-oriented web page is a coherent document that is readable by a web browser to help recipients’ of nursing care become familiar with the GNP role.

Collaborative Practice

Collaborative practice as defined by Baggs & Schmitt (1988), is “nurses and physicians cooperatively working together, sharing responsibility for solving problems and making decisions to formulate and carry out plans for patient care” (p.145).

National Joint Practice Commission (1977) defines collaborative practice as “nurses and physicians collaborating as colleagues to provide patient care”.

Geriatric Nurse Practitioner (GNP)

According to the National Conference of Gerontological Nurse Practitioners, a GNP is a registered nurse with advanced educational and clinical preparation to provide a full range of primary care services to older adults. GNPs practice under the rules and regulations of the Nurse Practice Act of the state which they work. GNPs are certified nationally in the area of geriatrics, with the American Academy of Nurse Practitioners recognizing them as expert nurses (American Academy of Nurse Practitioners, 1988).

Primary Care

Starfield (1992) defines primary care as dealing “with common and less well-defined problems, generally in community settings such as offices, health centers, schools, or homes. Patients have direct access to an appropriate source of care, which continues over time for a variety of problems and includes needs for preventive services” (p.4).

The World Health Organization (WHO) (1978) defined primary care as “essential health care based upon practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination” (p.3).

World Wide Web (WWW)

Internet Literacy Consultants (1994-1997) describes the WWW has having two meanings - “First, loosely used: the whole constellation of resources that can be assessed using Gopher, FTP, HTTP, telnet, USERNET, WAIS and some other tools. Second, the universe of hypertext servers (HTTP servers) which are the servers that allow text, graphics, sound files, etc. to be mixed together” (see Appendix C for URL).

Howe (1997) describes the WWW, (also known as W3, The Web), as “an Internet client-server hypertext distributed information retrieval system which originated from the CERN High-Energy Physics laboratories in Geneva, Switzerland”. He continues “on the WWW everything (documents, menus, indices) is represented to the user as a hypertext object in HTML format. Hypertext links refer to other documents by their URLs. These can refer to local or remote resources accessible via FTP, Gopher, Telnet or news, as well as those available via the http protocol used to transfer hypertext documents” (see Appendix C for URL).

CONCEPTUAL FRAMEWORK

Rogers' Framework

This section deals with the conceptual framework derived from Roger (1982) Innovation-Diffusion Model that gives a theoretical view of the change process. It will be used to guide the development of a client-oriented WWW site to educate consumers about the role of the GNP.

Rogers (1982) developed this theory (Figure 1) in order to explain how new innovations are either adopted or rejected based on the perceived need or recognized problem being addressed. He defined diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. He further fine tuned the definition to say this is a special type of communication, in that the messages are concerned only with new ideas.

He points out that once a need for an innovation is established, there are four elements important in educating consumers to a new role. The **four elements** are: **innovation, time, social system, and communication**. The diffusion process is dependent on individual characteristics that influence the potential adopter at each of these elements.

Innovation. Rogers (1982) defines innovation as “an idea, practice, or object that is perceived as new to an individual or some unit of adoption”. The five characteristics that Rogers suggests the innovation needs to influence for adoptability are:

- ◆ The **relative advantage** to the consumer of using this new innovation. Rogers (1982) states the newness of the innovation and the lack of experience with it is not as important as how the individual perceives the innovation is advantageous to them. The greater the perceived advantage, the more rapid the rate of adoption.

- ◆ **Compatibility** is the degree to which the innovation is compatible with existing values, past experiences, and needs of the potential adopter.
- ◆ **Complexity** is the degree to which the innovation is perceived as difficult to understand.
- ◆ **Trialability** is the degree to which an innovation may be experimented with on a trial basis. Polfus & Bigbee (1989) point out that “the more a potential adopter is able to ‘try out’ an innovation, the more likely the innovation is to be adopted”(p. 40).

Figure 1
Innovation -Diffusion Model

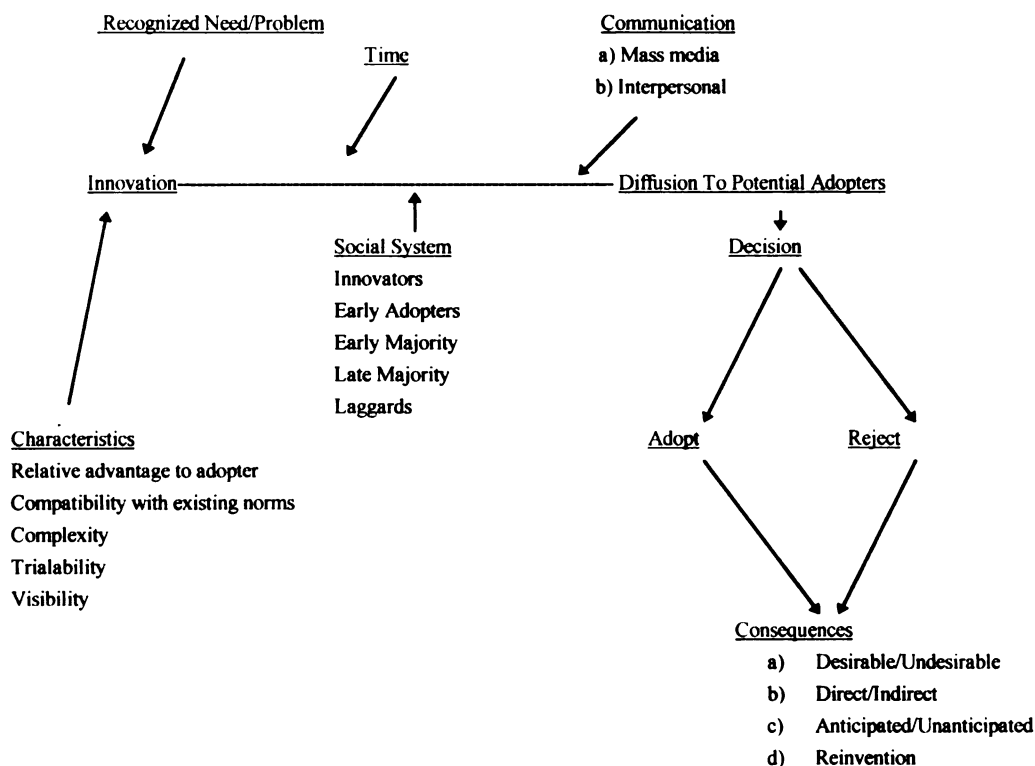


Figure 1. Adopted from “Innovation-Diffusion Theory and the Evolution of the Nurse Practitioner Role: How a Good Thing Has Caught On”. By Patricia Polfus & Jeri Bigbee, 1989, in *Journal Of the American Academy of Nurse Practitioners*, p.39.

- ◆ **Visibility**, according to Rogers, is the degree to which the results of an innovation are visible to others.

Time. (The second element, has a direct influence on adoption of an innovation.)

Rogers (1982) vaguely defined time as not existing independently of events, but as an aspect of every activity. Here we are speaking of the period of time it takes the adopter from first gaining knowledge of the innovation to either adopt or reject it.

Social System. Rogers (1982) defines social system as a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of a social system may be individuals, informal groups, organizations, and/or subsystems. This is the place where the innovation will be introduced. This system includes the community, city, state or country where the provider will choose to practice. It includes all of the health care consumers, health care professionals, and the entire health care delivery system, from governmental, political and legislative systems to the HMOs and private insurance companies. Rogers further breaks the social system down into five groups according to their willingness to adopt new innovations. The innovators in a social system are those that actively seek information about new ideas. They are usually the change agents and are among the first to adopt new ideas such as the use of a new innovation. The second group are the early adopters who will also be some of the first to try using an innovation. The next two groups, the early majority and the late majority, represent the rest of the community who, after acceptance by the first two groups, will try using the innovation. The last group are the laggards. They represent those in society who have a hard time handling change and so resist it (Rogers, 1982).

Communication. (The fourth major element of Rogers (1982) theory, deals with how the innovation is communicated to potential adopters.) Rogers (1982) defines communication as a process in which participants create and share information with one

another in order to reach a mutual understanding. The first type of communication involves the mass media as one way to get the innovation out to potential adopters. This would include articles in newspapers or magazines, or on television or on the radio regarding the innovation or regarding the benefits. Brennen, Moore & Smith (1992) state “existing work demonstrates that patients can use computer technology for health-related services and that computer networks can serve as vehicles for extensive delivery of health-related information“(p.663).

The outcome of the innovation-diffusion model is referred to in terms of **consequences**. Consequences, according to Rogers, are the changes that occur to an individual or to a social system as a result of the adoption or rejection of the innovation.

Relationship of Rogers’ Framework to this project

Geriatrics is a relatively new field, and the role of the GNP is an innovation designed to meet the needs of the aging population. Rogers’ framework is used to incorporate the major concepts of the role of the GNP into the development of a client-oriented WWW site.

Innovation. The newness of the role and the lack of experience with a GNP provides a challenge to the potential consumer to assess the **relative advantage** (the first characteristic of innovation) of using a GNP for their needs. But as Polfus, & Bigbee (1989) point out, “the advantage of the nurse practitioner to the health care system has been readily accepted, as evidenced by the extensive use of practitioners in HMOs, public health settings, health centers, and other primary care settings” (p. 40). As experience with GNPs increases, the public will see the major advantage of their services. That advantage is the GNP’s holistic approach to patient care, which incorporates the roles of

case manager, clinician, educator, consultant, client advocate, and researcher, to name a few.

The second characteristic of innovation according to Rogers (1982) is **compatibility**. Because the health care system is presently in a state of reform and as such is being debated, many consumers are moving from a state of passivity to being active participants. Existing values and past experiences are being shaken up and reformed to meet the continual changes. Potential adopters are learning through experience and through word of mouth about GNPs and are incorporating them into their vocabulary, experiences, and values. It is here the GNP, using the roles of educator and consultant, can bridge the gap from past experience to future trends in health care. Shamansky, Schilling & Holbrook (1985) in determining the market for nurse practitioners in New Haven, Connecticut, found “a slight majority of respondents in this study indicated that NP services were not different from physician services” (p. 246), thus supporting compatibility.

Looking at the third characteristic, **complexity**, the role of the GNP is complex, but that is due only to the newness of the profession and the lack of exposure and education of the public to it. The GNP can make great strides here by educating the public regarding their role with every contact they make. Polfus & Bigbee (1989) point out that “as more nurse practitioners become visible in various practice settings, consumers and other health professionals will increase their understanding” (p. 40) of the role.

The ability of the potential adopter to visit the GNP one time to see if this innovation is something they would like to pursue, without feeling the obligation to continue the relationship if they choose not to, is **trialability**. Polfus & Bigbee point out that “the GNP, in collaboration with a physician, can be tried by the potential adopter at any time” (p.40).

Visibility of the GNP can be accomplished through education of the public with tools such as the world wide web site. Visibility will also be obtained as the GNPs assumes their roles such as clinician, educator, researcher, consultant and advocate. Gallagher (1996) states that it is the NP's responsibility to inform the public and professional communities of their unique qualifications (p. 30).

Time. Time is the period of time it takes the adopter from first hearing about the GNP to either adopt or reject the concept. GNPs through active involvement in the community and health care system, can influence the time it takes for the acceptance of the GNP role. As GNPs make themselves known in the community through active involvement with various community services and agencies, the interpersonal system of communication will increase, thereby diffusing the information regarding their role much faster.

Social System. The social system is where the role of the GNP will be introduced. It is here that the GNP WWW site will have its first introduction to the innovators of the community. These are the active seekers of information about new ideas and technology. They are the change agents that the GNP wants to reach, as they are usually the first to adopt new ideas such as the use of the GNP and the use of WWW sites. The laggards will be the greatest challenge for the GNP to reach.

Communication. Media communication will be the major force in getting out the information regarding the GNP role to potential adopters. Gallagher (1996) suggests "a strong working relationship with a powerful influence, like the media, strengthens the image of the NP" (p. 37). She goes on to state that though the NP role is easily misunderstood, the more the NP reads, writes, and speaks about different topics, the stronger the NP becomes in the public and professional communities. This could include

articles by the GNP in newspapers and in magazines. Or it could mean acting as a consultant for television and or radio. But the use of the WWW site to communicate the role of the GNP would have the potential to reach more adopters, as it would be a constant form of communication available 24 hours a day, seven days a week. Accessing the WWW site could stir the use of interpersonal communication, passing on the information on a one-to-one basis, and thereby potentially increasing the chance of using the GNP services once the role is defined. As Polfus & Bigbee (1989) point out “consumers who appreciate the care and approach of the nurse practitioner influence friends, employers, and legislators to support nurse practitioners as a valuable health care option” (p. 41).

Consequences. According to Rogers (1982) consequences are the changes that occur to an individual or to a social system as a result of the adoption or rejection of an innovation. Snyder & Yen (1995) quote a study by the U. S. Congressional Office of Technology Assessment that concluded that care by nurse practitioners was as good or better than care by medical doctors and was more cost effective (p. 5). Polfus & Bigbee (1989) state that a “direct consequence of the nurse practitioner movement has been improved accessibility and quality of health care services”. They go on to state that an indirect consequence “is the increased availability of third party reimbursement for all nurses, largely as a result of nurse practitioners advocating for direct payment for their services” (p. 41). One anticipated consequence the GNP can expect, is acceptance over time as the role is communicated within the system.

Reinvention, the final stage of consequences, deals with changes that occur over time after adoption. The role of the GNP may first be seen by the public as a clinician. But as the GNP starts to function and the trust factor builds among the adopters, the other role characteristics such as client advocate, researcher, consultant, counselor, and case

manager begin to evolve and gain acceptance in the social system. As the role evolves and gains acceptance, the GNP can be reinvented to meet the individual needs of the community where they practice.

LITERATURE REVIEW

Professional Role Of The GNP Innovation

The role of the nurse practitioner is well documented in literature. But there is very little documentation in literature pertaining to the role of the GNP. The following is a blend of existing articles pertaining specifically to the GNP, and articles about nurse practitioners with a geriatric focus. A search of Medline & CINAHL produced very few articles related to the role of the GNP and computer technology.

According to the National Conference of Gerontological Nurse Practitioners, a GNP is a registered nurse with advanced educational preparation to provide a full range of primary care services to older adults. GNPs, along with all other nurse practitioners, practice under the rules and regulations of the Nurse Practice Act of the state in which they work. GNPs are certified nationally in the area of geriatrics with the American Academy of Nurse Practitioners recognizing them as expert nurses (American Academy of Nurse Practitioners, 1988). The Merck Manual of Geriatrics 2nd edition states that the GNP's "study focuses on normal aging, common problems of old age, management of common problems, and assessment skills in detecting complex problems for referral" (p.283). Ruiz, Tabloski and Frazier (1995) defined the role of the GNP as delivering "primary care directly to older clients within a holistic framework, addressing all aspects of physical and biological, psychosocial, cultural, and family functioning" (p. 1061). The American Nurses Association, when looking at standards of Gerontological nursing practice, stated that "practice involves assessing the health and functional status of aging

adults, planning and providing appropriate nursing and other health care services, and evaluating the effectiveness of such care” (p. 7). They continue on to say that “emphasis is placed on maximizing functional ability in ADLs, promoting, maintaining, and restoring health, including mental health; preventing and minimizing the disabilities of acute and chronic illness; and maintaining life in dignity and comfort until death” (p. 7).

The concept of the GNP role is somewhat complex. By breaking the role down into its various components the innovators in society can gain a better understanding of the GNP’s function in primary care. The role components to be examined in no significant order are: **clinician, educator, consultant, researcher, case manager, and client advocate.**

Clinician. The role of the GNP as a clinician is to provide direct patient care to the geriatric population, as well as to develop and implement advanced nursing interventions that improve the overall welfare of their elderly clientele. The Scope and Standards of Gerontological Nursing Practice (1995) states “The nursing process encompasses all significant actions taken by Gerontological nurses in providing care to clients and forms the foundation of clinical decision making” (p.11). Nursing processes being defined as “assessment, diagnosis, outcome identification, planning, implementation, and evaluation” (p.11). Merck Manual of Geriatrics 2nd edition, when looking at the GNP, states “functions include conducting physical assessments; assessing and diagnosing; ordering laboratory and other diagnostic tests; developing and implementing treatment plans for some acute and chronic illnesses; prescribing some medications; monitoring patient status” (p.283).

A 1992 study by Mezey, Lavizzo-Mourey, Brunswick & Taylor examining components of a complete nursing home admission assessment found striking agreement

between those done by nurse practitioners and those handled by physicians, leading them to conclude that the similarity may be related to the interdisciplinary nature of geriatric training and practice. They go on to state that students in each of those programs are exposed to curricula with similar content and value. Kassirer (1994), in his editorial in the Journal of the American Medical Association, when addressing nurse practitioner's roles in primary care wrote:

“This is not to say that nurse practitioners cannot perform many tasks as well as physicians. They are now effectively managing a large number of common problems (such as sore throats and lower urinary tract infections), with and without physician supervision. In outcome measures of such tasks, nurses score consistently better in several areas, such as patient satisfaction, patient compliance, health promotion, and disease prevention. They also seem as capable as physicians of performing many specific procedures” (p.204).

Educator. In the role of educator, the GNP takes into consideration that each person is a unique individual who comes with their own fingerprint on how to learn and make changes in their lives. The GNP assesses each client's readiness and motivation to learn before initiating a plan of care. The GNP may provide incentives, direction and/or educational material to facilitate learning. The GNP will also take into consideration the special learning needs of each client and will institute a self-paced learning module for them. Using visual aids and alternative auditory methods will make each encounter factual and productive. Ory (1984), when looking at health promotion in the elderly, pointed out that “visual, hearing or cognitive impairments in the very old must be considered in obtaining a behavioral diagnosis of factors influencing desired health behaviors or in planning specific health education interventions”(p.32).

The Scope and Standards of Gerontological Nursing practice (1995) points out that the responsibilities of the GNP include “sharing knowledge, research, and clinical information with colleagues and others through formal and informal teaching methods and collaborative educational programs”(p 22). The role of educator for the GNP is not limited to the client, but encompasses the client’s family, community, and colleagues. As Collins, Stommel, King, and Given (1991), pointed out, when looking at attitudes of caregivers of dementia patients to community services, since the “caregiver, not the individual with dementia, is likely to initiate and maintain the use of community services, an understanding of caregiver attitudes towards services is essential” (p.756). The GNP as educator will be able to design programs to meet the needs of both the client and the caregiver, incorporating some preferences of caregivers to improve the overall quality of life for both.

Consultant. A consultant is a person who does consulting, which is a process of interaction between the GNP, the consultee, and perhaps other health care professionals. As a consultant the GNP utilizes communications skills, problem solving skills, and networking which enhances the continuity of care for the elder client. Ruiz, Tabloski and Frazier (1995), point out the importance of this role as “it has been predicted that there will be a shortage of knowledgeable nurses to care for older nursing home residents” by the year 2000 (p.1061). In home-care, Capezuti (1985), states that association with a GNP “could enhance communication between the community health nurse and the physician and thus facilitate the management of the patient’s illness at home” (p. 9). In hospitals, Ruiz, Tabloski, and Frazier (1995) state that GNPs “serve as consultants to other nurses on difficult cases, participate in administrative planning meetings, act as change agents for improving the care of older patients, and assist with patient data bases for quality assurance projects” (p.1062). They go on to point out that GNPs provide

valuable consultation services by participating in educating “geriatric fellows, medical residents, nurses, and students” (p. 1062).

Researcher. Evaluating, interpreting and disseminating research findings to colleagues is part of the GNP role. Through new research, the GNP can identify Gerontological nursing problems in health care settings which can lead to future studies to improve the overall welfare of the clients they serve. Funk, Tornquist, Champagne & Wiese (1993) point out that the “use of research has three main benefits for patients: It may help us understand the patient’s situation more thoroughly, assess more accurately, or intervene more effectively” (p. 92). The Scope and Standards of Gerontological Nursing Practice (1995) points out that research includes participation in data collection, identifying clinical problems suitable for study, sharing research findings, and using such findings to develop policies and procedures. Ory pointed out in 1984 that gerontological research needs to “differentiate what changes are age-related and occur in everyone and what changes are pathological and represent the development of disease”(p.32). This advice still holds true today for the GNP. Ruiz, Tabloski and Frazier (1995), stress “collaborative research between geriatricians and gerontological nurse scientists is a powerful initiative that will lead to greater improvement in the biopsychosocial well being of older people” (p.1063).

Case Manager. A case manager is one who is responsible for coordination of the total care of the aged client, and one who follows them through all health care settings. Staab and Hodges (1996), when defining case management states: “A case manager does not necessarily have to deliver care, but he or she is responsible for recommending, arranging, and planning the financing of the care in the community” (p. 518). They go on to state “the intended purpose of case management is to provide services that allow the patient to be cared for at home as opposed to in a long term care facility” (p.518).

Ruiz, Tabloski, and Frazier (1995), when looking at GNPs, state “as clients move from setting to setting, communication between providers becomes paramount, and GNPs often assume the role of case manager or facilitator of coordinated care” (p.1062).

Client Advocate. The GNP role is that of a strong advocate for the aged client. The ultimate goal is to have the client functioning at the optimum level that they can be for their individualized plan of care. Most older individuals can act as their own advocates, but with the ever changing health care system certain aspects may be overwhelming. Staab and Hodges (1996) point out that effective communication is needed between older clients with health care needs and the various health providers who are attempting to meet those needs (p.532). To accomplish this the GNP needs to be sensitive to the needs and concerns of older adults as both consumers and clients, and the GNP must communicate those needs effectively.

Ruiz et. al., (1995) when looking at GNPs, stated “they serve as important advocates in directing appropriate utilization of resources and making referrals that promote continuity of care geared to the needs of older adults” (p. 1063). Mahoney (1994), when looking at strategies to succeed in marketing healthcare to the older clients stated “those that listen to older consumers and heed the signals from the geriatric marketplace are most likely to succeed” (p.15). Plawechi (1991), when looking at the political side of advocacy, stresses that GNPs “must assume their responsibility in the political arena by advocating an agenda that will improve the lives of all older adults” (p.4).

Relative Advantage To The Adopter

The GNP is an innovator who uses the tools of today’s society to further promote the care needs of the aging population. GNPs provide individualized care, focusing not

just on the disease process, but also on the effects of the health problem on the clients ADL's & IADL's.

Elder & Bullough (1990) stated that nurse practitioners provide "cost savings in ways not so readily documented, such as more rapid patient recovery, better patient outcomes..." (p. 30). Garrard and colleagues (1990), looked at the GNP's impact on nursing home residents and found fewer residents in the GNP staffed homes were hospitalized than those in the non-GNP staffed homes.

Fulmer (1991) looked at Yale-New Haven Hospital's Geriatric Resource Nurse Project. The project was set up to meet the needs of both the staff, and the elderly hospitalized patients. The advanced practice geriatric nurse specialist was used as a consultant and as an educator to the staff to: 1) help staff identify the day to day patterns and problems of the hospitalized elderly, and to 2) facilitate integration of knowledge of geriatrics into practice. What the study found was that the program created a system which increased the "intensity and degree of thinking relative to geriatric nursing issues" and which allowed the integration of geriatric concepts into practice (p.93).

Gallagher (1996), when looking at nurse-managed clinics, reported "clients believe nurse practitioners possess qualities that set them apart from other providers. She goes on to state " One gentlemen expressed that the nurse practitioner so clearly explained instructions for using medications that when he left the clinic, he understood what he was taking, when he was to take it, and what side effects he should report". In addition, the nurse practitioner factually and non-judgmentally discussed the gentlemen's cigarette smoking" (p.36).

Rolfe & Phillips (1995), when looking at the role of the advanced nurse practitioner in dementia care, found benefits to the clients "included earlier detection, diagnosis and

referral, a reduction in crisis situations, a more accessible service, improved quality of care and improved quality of life” (p.293).

Compatibility With Existing Norms and Various Health Care Settings.

GNPs can be found practicing anywhere from rural communities to heavy populated areas such as major cities and retirement communities. Polfus & Bigbee (1989), point out “the movement of nurse practitioners into a variety of practice settings and the existence of increasing numbers of nurse practitioners suggest that the nurse practitioner has since become increasingly compatible with the nursing and the medical professions”(p.40). This compatibility will aid in the adopters understanding of how the GNP fits into their existing values, past experiences and future needs.

Merck Manual of Geriatrics 2nd edition states “upon graduation, about 40% of the geriatric nurse practitioners work in nursing homes or for physicians with practices in nursing homes. About 35% work in urban institutions; about 20% in rural areas” (p. 284). They go on to state “Today, community health services such as home care agencies, hospices, and clinics are managed primarily by nurse practitioners” (p. 284). Burke (1996), when addressing managed care in the National Conference of Gerontological Nurse Practitioners Newsletter, points out that with improved technology and the number of “baby boomers” approaching retirement, “We have an opportunity before us to provide necessary services and to make our niche in providing a multiplicity of services which range from preventive, acute, long term, to mental health services” for the aging population (p. 5).

Garrard et.al. (1990) point out “the geriatric nurse practitioner has been proposed as a way of combating the dual dilemma of escalating costs and the demand for better care in nursing homes” (p. 271). Fulmer (1991) suggests “that there is an urgent demand for upgrading the standards of care for the hospitalized elderly” and recommends a hospital

based geriatric nurse specialist (p.91). Lamper-Linden, Goetz-Kulas & Lake (1983), when addressing the establishment of the Madison Geriatric Clinic, stated “Clearly, Nurse Practitioners made significant contributions in many settings; their skills and ability seemed most fully utilized when defined as primary care providers with physician consultation” (p.12). The American Nurses Association (1995) pointed out that “Gerontological nursing, which focuses on the client and family (both family members and significant others), may be practiced in any setting: the nursing facility, the hospital, the aging person’s own home, the clinic, and the community” (p. 7).

Trialability & Visibility Of The GNP

Because each GNP is unique from their years of work experiences, they bring with them additional skills to their practice setting. Future adopters will have many opportunities to give a GNP a try through various health care settings or through specialized prevention clinics sponsored by the GNP utilizing their unique experiences in that community.

The following is a sample of some of the special clinics the GNP may operate or operate from to met the functional needs of the elderly and increase the GNP’s visibility:

Blood Pressure Screening clinics help many people avoid heart attacks, strokes and other conditions. Beichgott, Pearson and Hill (1983) when looking at hypertension clinics staffed by physicians and nurse practitioners, found patients achieved better blood pressure control than patients managed only by physicians alone.

Bereavement Clinics - death and loss are major factors in the aging process. Most survivors do come through the bereavement process in time. But “Fenner & Manchershaw (1993) suggest clinical evidence that some people “become physically and emotionally depressed”(p. 680). Bereavement clinics would allow clients to talk at length about their loss and would allow them to creatively brainstorm ways to handle the

psychological distress. Referrals on to other mental health professionals would be made as needed.

In-home preventive assessment programs for independent older adults. This type of program is setup in an attempt to provide preventive health care and to improve the functional status of the community dwelling elderly population. Fabacher, Josephson, Pietruszka, Linderborn, Morely and Rubenstein (1994), report “a home visit allows a thorough assessment process, with actual observation of patient’s ability to perform activities of daily living and function on a day to day basis as well as inspection for environmental problems and hazards, all of which are not possible in the office” (p. 630).

Toenail cutting and foot clinics. As people age their ability to care for their toenails and feet decline, because they no longer have the hand and eye coordination they did in their youth. Declines in visual acuity and fine motor skills, along with chronic conditions such as arthritis, diabetes, obesity and abnormal toenail growth, impede the process of caring for one’s own toenails. Turner & Quine (1996), point out that “fungal infections are common around the toenails of elderly persons....These conditions need to be identified early so that treatment may commence and later, more complicated and prolonged treatment may be avoided” (p.273). They go on to state that “basic foot care involves toenail cutting, assessment of early identification of abnormalities, client education to prevent foot problems, management of minor conditions, and prompt referral, when necessary”(p.273).

METHODOLOGY

The GNP web site was developed to serve as an educational tool to increase the consumer’s knowledge about the GNP role and how that role benefits the client. The important concepts identifying the GNP role that will be addressed on the GNP web site are being taken from the Literature Review section of this paper. They are as follows:

- (1) Definition of a Geriatric Nurse Practitioner
- (2) Geriatric Nurse Practitioner Role Components
- (3) Advantages of Using a Geriatric Nurse Practitioner
- (4) Where Geriatric Nurse Practitioners Practice
- (5) Trying Out a Geriatric Nurse Practitioner

The resources utilized for the development of the GNP web site and for getting connected to the Internet are as follows:

Hardware:

- **A personal computer.** An IBM-compatible 486 notebook computer was used for this project (a 386 or better notebook or desktop model could be utilized). Sixteen megabytes of Random Access Memory (RAM) were used in order to view graphics on the WWW. The monitor used displayed 256 colors for viewing WWW sites.
- **A modem.** The modem is a piece of hardware that connects the personal computer to the Internet through a telephone line. It transmits the digital information to and from the Internet via a phone line connected to the Internet access provider. An external 28.8 Kbps (kilobits per second) modem was utilized to make the connection to the Internet provider.
- **A telephone line.** The modem was directly connected to the home phone line. (Special adapters are available that allow the use of either the phone or modem at any given time.)
- **Mouse.** The computer's built-in mouse was used as pointing device to input commands.

Software

- ◆ **HyperTerminal.** This is a Microsoft Windows based program that allows connection to a remote computer. It can be used to send and receive files. The HyperTerminal

program was used to connect to the Michigan State University (MSU) computer system via MichNet (the name of the statewide data network in Michigan). This service was used for Internet access from locations within Michigan from which dial-in numbers that are local calls are provided free of charge to MSU students.

- ◆ AT&T WorldNet Service. An Internet Service Provider who charges a monthly fee and provides unlimited access to Internet servers via local access numbers or a 1- 800 number. This service was utilized for Internet access from locations where all MichNet dial-in numbers would have been toll calls.
- ◆ Windows 95 operating system was factory installed on the Notebook computer at time of purchase. Windows 95 is a user interface program that enables the user to start programs, save documents, organize disk reserves, and connect to network servers (Stinson, 1995).
- ◆ Microsoft Word for Windows - Version 7.0 was factory installed as part of Microsoft Office suite. Microsoft Word for Windows is a text-processing application which can export files in text format. The GNP web site documents were created and saved within this program.
- ◆ Ipswitch WS_FTP. A Windows based application for transferring files between the computer (local system) and the MSU computer system. Ipswitch (1996) describes WS_FTP Pro as an “easy-to-use interface, you can ‘upload’ files (meaning copy files from your PC to another system) or ‘download’ files (copy files from another system to your PC)” (p.1).
- ◆ Netscape Navigator 3.01. A WWW Browser from Netscape Communications Corporation. The Free On-line Dictionary of Computing (FOLDOC) states that Netscape “features integrated support for sending electronic mail and reading Usenet news....It provides multiple simultaneous interruptible text and image loading; native

inline JPEG image display and interaction with documents as they load; multiple independent windows” (See Appendix C for FOLDOC URL).

Reference Books

- ◆ Graham, I.S. (1997). HTML Sourcebook - Third Edition: A complete guide to HTML 3.2 and HTML Extensions(3rd Ed.). New York: Wiley Computer Publishing.
- ◆ Stinson, C., (1995). Running Microsoft Windows 95. Redmond, Washington: Microsoft Press.
- ◆ Tatters, W., (1996). Teach Yourself Netscape 2 Web Publishing In A Week. Indianapolis, Indiana: Sams.net Publishing.

Reference Web Sites

HTML Sites

- ◆ Introducing HTML 3.2 - (<http://www.w3.org/pub/WWW/MarkUp/Wilbur>)
- ◆ National Center for Supercomputing Applications Beginner's Guide to HTML - (<http://www.ncsa.uiuc.edu/General/Internet/WWW/HTML/PrimerAll.html>)
- ◆ W3 Recommendations Process - (<http://www.w3.org/pub/www/Consortium>)

Helpful Guides on Getting Started

- ◆ Pilot Accounts Information at Michigan State University - (<http://netinfo.msu.edu>)
- ◆ Creating a World-Web Web Page - (<http://web.msu.edu/pilot>)
- ◆ How To Put Information On The Web - (<http://www.w3.org/pub/WWW/Provider>)
- ◆ Netscape Navigator Handbook - (<http://home.netscape.com/eng/mozilla/1.1/handbook/docs/answers.Html#C37>)
- ◆ Netscape Navigator Handbook (<http://home.netscape.com/eng/mozilla/1.1/handbook/docs/atoz/html#H>)
- ◆ Netscape Navigator Assistance -(http://home.netscape.com/assist/net_sites/index.html)

- ◆ Navigator Gold Tool Box
(http://home.netscape.com/assist/net_sites/starter/samples/index.html)
- ◆ Netscape Navigator Gold 3.01 FTP Download Site
(<ftp.netscape.com>)

Getting Connected

- Modem Configuration. Microsoft Windows 95 provides an applications program called New Modem Wizard which simplifies the process of modem configuration. To configure the modem for connecting to the MSU campus computer for authoring a web site see Appendix D.
- Windows 95 comes with the necessary components to connect to the Internet. One component is TCP/IP, SLIP/PPP. TCP/IP stands for Transmission Control Protocol/Internet Protocol. SLIP/PPP stands for Serial Line Internet Protocol/Point-to-Point Protocol. These are protocols that enable the user to send and receive data over the Internet. (See Appendix D for configuration instructions for TCP/IP).
- Setting up HyperTerminal. HyperTerminal along with a modem can connect to a remote computer even if it isn't running Windows. HyperTerminal can send and receive files, or connect to computer bulletin boards or other information programs. The Windows 95 format has simplified the process of setup and allows you to customize the program icon used with HyperTerminal (See Appendix D for setup procedure).
- Establishing a pilot account - Appendices A (MSU PILOT Electronic Mail) and B (Using Terminal Emulation to Dial in to the Internet), distributed by the Michigan State University Computer Lab, provide information on how to establish a pilot electronic mail account, along with configuration information for use with MichNet dial-in lines.

- Changes to Pilot which allow for Web Site Authoring. After connecting to MSU's Pilot Account's Main Menu, select the "Advanced Features" menu and follow the step by step instructions provided. Upon completion, the user has disk space available to store files and the ability to create a web site on MSU's computer system.
- Setting Up Ipswitch's WS_FTP Professional Program. The license and the software purchased by calling 1-800-793-4825. It also may be purchased via their Web site: <http://ipswitch.com>. Complete the installation using the directions provided with WS_FTP95 Pro. According to Ipswitch (1996), when connected from the local computer to a remote computer, WS_FTP displays the directories and files on the local computer (left side) and the files and directories of the remote computer on the right side. With both systems displayed, the user can easily locate files on one system and copy them to a directory on the other system.
- Setting Up Netscape Navigator 3.01. Netscape allows free download of Netscape Navigator software to all students, staff members, or faculty members of an educational institution. Netscape Communications Corporation operates an anonymous FTP server that can be reached at the URL: <ftp://netscape.com>. (See Appendix D for downloading instructions for Netscape Navigator 3.01).
- Transferring index.html to MSU's Computer System. In Microsoft Word the file index.txt will be developed and saved in the file 'My Documents'. Index.txt will be a blend of text and HTML tags. HTML (Hypertext Markup Language) according to FOLDOC (1997) is "a hypertext document format used on the WWW" (See Appendix C for URL). Internet Literacy Consultants (1997) state that HTML is "the coding language to create Hypertext documents for use on the WWW. HTML looks a lot like old-fashioned typesetting code, where you surround a block of text with codes that indicate how it should appear". They continue "HTML files are meant to be

viewed using a WWW Client Program, such as Netscape or Mosaic". (See Appendix C for URL of Internet Literacy Consultants(tm)).

Utilizing the book and web site references cited above, index.txt was developed and saved. (See Appendix D for procedure for transferring to index.txt to MSU computer).

Development of The GNP Web Site

- Site Diagram - A site diagram (see Appendix G) was developed to guide the development of the GNP web site. This site design was kept simple so it would be easy to navigate throughout the GNP web site. This site design provided a visual path of how the pages within the web site would appear and flow. This ensured that each page would be linked back to the Home Page and not leave the user of the site stranded.
- Establishing the Outline for the GNP Web Site Pages - With the site design diagram identified, topics for each web page was roughed out. The topics chosen are as follows:
 - 1) Home Page - Welcome to the Geriatric Nurse Practitioner Web Site
 - 2) Role of the Geriatric Nurse Practitioner (which follows the format established in the Literature Review and Conceptual Framework sections of this paper).
 - 3) Health Care Agencies Offering Information On Aging.
 - 4) Consumer Topics On Aging.
 - 5) Geriatric Nurse Practitioner Vignettes.
 - 6) Acknowledgments.
 - 7) Links to Other Nurse Practitioner Sites.

These titles were chosen to be descriptive of the contents contained within each page. This allows the user to save the site or individual web page to their bookmark section of their browser and know what it is.

- Netscape Search of Existing WWW Site Formats - With the Home Page Table of Contents established, the next step was individual web page development. A search was conducted to view other web site documents for planning each page set up. Topics related to aging were used as a guide to see what page setup standards were currently being used. (See Appendix E for how to conduct a Netscape Navigator search). Topics entered in for the Netscape search were: Seniors, Geriatric Nurse Practitioners, Nurse Practitioners, Older Adults, Aging, Resources on Aging, and Geriatrics. A sampling of WWW sites visited with features that were identified for use with the GNP web site are: (See Appendix C for URLs of web sites listed below).
 - ◊ AARP (return to home page link)
 - ◊ Geriatric Video Productions (return to home page link)
 - ◊ Aging Network Resource Page (use of colored balls)
 - ◊ NP Web Home Page (use of colored bars and the most helpful feature the ability to click on the page index topic and go directly to that topic. Once at the topic site, the user was able to return to the site index).
- Development GNP Web Site Pages With Guiding Principles Used.
 1. **Welcome to the Geriatric Nurse Practitioner Web Site** - This welcome page, also known as the Home Page, will serve as the front door to the GNP web site. It will function as a guide to the site. (See Appendix H for GNP Web Site Pages).
 - ◆ A mission statement is provided to give a basic introduction to the GNP web site, informing the user of the nature of the contents to be viewed. This helps the viewer decide if this site contains the information they are seeking.

- ◆ This Home Page contains a 'Site Contents' feature with direct links to all pages contained on the site. It is used to direct the innovator to the various features contained on the GNP web site. The titles of each page are presented in list format which organizes the featured links into one location and helps the user to see what information is contained on the site. Each web page accessible from the 'Site Contents' is both a description of the page to be accessed and a direct link to that page by clicking on it.
 - ◆ The use of e-mail allows the user to communicate with the web site author. It allows the user to send questions, feedback and comments directly from the document.
 - ◆ The last update date is provided for users to see how current the information contained on the site is.
2. **The Role of The Geriatric Nurse Practitioner** - Existing literature addresses a wide range of professional nursing functions in a variety of health care settings. It is imperative that this document be included to address the role of the GNP. This page was developed directly from the Literature Review and Conceptual Framework section of this paper. This page contains the following:
- ◆ **Descriptive Title** - The title reflects the nature of the page just accessed. This title matches the title provided on the Home Page. This consistency reassures the user that they arrived at the right destination and allows for indexing of document content.
 - ◆ **Introductory Paragraph** provides information about the material covered on this page. It gives the user the information they need to make an informed decision if this is what they are looking for.

- ◆ **Page Contents** - Provides an organized directory of topics contained on this page. The user then has the ability to click on each title and go directly to that topic.

The topics covered are:

- A. Definition of a Geriatric Nurse Practitioner
- B. Role Components
- C. Advantages of Using a Geriatric Nurse Practitioner
- D. Where Do Geriatric Nurse Practitioners Practice
- E. Give Us A Try

- ◆ **Return to Home Page Link** - A Home Page Link provides the user with a direct link back to the Home Page. A graphic arrow followed by the words 'Return to the GNP Home Page' are used to convey to the user this feature.
- ◆ **Last update date** is provided to keep the user informed of how current the information contained on this page is.

3. Healthcare Agencies Offering Information on Aging - This page contains the following:

- ◆ **Descriptive Title** - The title reflects the nature of the page just accessed. This title matches the title provided on the Home Page. This consistency reassures the user that they arrived at the right destination and allows for indexing of the document content.
- ◆ **Introductory Paragraph** - This introductory paragraph provides information about the material covered on this page. It gives the user the information they need to make an informed decision if this is what they are looking for.
- ◆ **Alphabetical Listing of Agencies** - An alphabetical listing of agencies is provided that offers information on aging. Each title is the name of the agency offering

information. The title serves as a direct link to the agency with a click of the mouse.

- ◆ **Return to Home Page Link** - A return to Home Page Link provides the user with a direct link back to the Home Page. A graphic arrow followed by the words 'Return to the GNP Home Page' are used to convey to the user this feature.
- ◆ **Last update date** is provided to keep the user informed of how current the information contained on this page is.

This page is included on the GNP Web site, as the GNP has the responsibility as educator, to share knowledge and clinical information with clients and potential clients to facilitate learning.

4. **Consumer Topics on Aging** - This page contains a topical format with direct links to each topic. Each linked site was examined by the author before inclusion onto this web document. Though it will not be an exhaustive list, the page will be reviewed and updated monthly to ensure the most current linkage. It is important for clients to have options when seeking answers to their healthcare problems. And in keeping with the role of educator and client advocate, this page is included to facilitate learning.

Added features include:

- ◆ **Descriptive Title** - The title reflects the nature of the page just accessed. This title matches the title provided on the Home Page. This consistency reassures the user that they arrived at the right destination and allows for indexing of document content.
- ◆ **Introductory Paragraph** - introductory paragraph provides information about the material covered on this page. It gives the user the information they need to make an informed decision if this is what they are looking for.

- ◆ **Return to Home Page Link** - A return to Home Page Link provides the user with a direct link back to the Home Page. A graphic arrow followed by the words 'Return to the GNP Home Page' are used to convey to the user this feature.
 - ◆ **Last update date** is provided to keep the user informed of how current the information contained on this page is.
5. **Geriatric Nurse Practitioner Vignettes** - This page will be developed more as a human interest section of the site. Future features to be developed include:
- 1) GNP of the month - Scheduled for Summer 1997.
 - 2) Clinical Pearls dealing with aging - Schedule for Summer 1997
 - 3) Caregiving Pearls - Scheduled for Fall 1997.
 - 4) Patient Testimonials - Scheduled for Fall 1997.

The purpose of this site is to increase the GNP's visibility by using human interest vignettes and providing helpful hints. This page is still under construction and was intentionally included in its incomplete form to bring users back later to watch the site grow. Features include:

- ◆ **Descriptive Title** - The title reflects the nature of the page just accessed.
 - ◆ **Return to Home Page Link** - A return to Home Page Link provides the user with a direct link back to the Home Page. A graphic arrow followed by the words 'Return to the GNP Home Page' are used to convey to the user this feature.
 - ◆ **Last update date** is provided to keep the user informed of how current the information contained on this page is.
6. **Acknowledgments** - This page is designed to thank those involved in helping to create the GNP Web Site. It will provide links to MSU and MSU's College of Nursing for those wanting to pursue more information on a career in geriatrics. It will

be mainly text format with direct linkage by clicking highlighted titles. Features include:

- ◆ Descriptive Title - The title reflects the nature of the page just accessed.
- ◆ Return to Home Page Link - A return to Home Page Link provides the user with a direct link back to the Home Page. A graphic arrow followed by the words 'Return to the GNP Home Page' are used to convey to the user this feature.
- ◆ Last update date is provided to keep the user informed of how current the information contained on this page is.

7. Links to Other Nurse Practitioner Sites - In keeping with the idea to increase GNP visibility, and the visibility of all Nurse Practitioners, this page provides direct links to other Nurse Practitioner sites to promote the profession. Features include:

- ◆ Descriptive Title - The title reflects the nature of the page just accessed.
- ◆ Return to Home Page Link - A return to Home Page Link provides the user with a direct link back to the Home Page. A graphic arrow followed by the words 'Return to the GNP Home Page' are used to convey to the user this feature.
- ◆ Last update date is provided to keep the user informed of how current the information contained on this page is.

Evaluation of the GNP Web Site

Post (1996) suggests that Web sites be evaluated against the following criteria when considering a good site. The same criteria will be used in evaluating the GNP Web site along with some of the guiding principles used in the development.

- ◆ **Content:** The content contained on the GNP Web site is taken from existing literature. It is geared to a specific target audience of innovators seeking information on the role of the GNP. Post (1996) when looking at content questions "Is it unique

as well as accurate? Does it have substance and depth; is it rich? Is it practical and reliable? Is it current? Is it updated regularly?"

As a web document differs from a hard copy document, the user is only able to visualize one screen full of information at a time, the rest of the information has to be scrolled down to, which in some cases is confusing to the user. Keeping this in mind the content contained on the Role of the GNP page was written in short, factual clips so the reader does not become burdened with so much information that they grow tired of the text format, or become confused as to how to access the rest of it.

The GNP web site attempts to broaden the viewer audience base through its use of links to a variety of healthcare topics, agencies and an educational institution without losing sight of its goal to educate the consumer about the role of the GNP.

Each web page will be evaluated on a monthly basis for accuracy with updates as needed.

- ◆ **Organization:** The GNP Web site organization is logical and easy to navigate. Each site document is self contained on one page with links back to the main Table of Contents. Post (1996) when looking at Organization of web sites states "Does it take more than three successive choices at a site to get to something useful or interesting? Is the way a site is organized easily grasped? Is it broken down into logical and digestible parts?"

The design of the GNP web site provides access to the most important information regarding the role of the GNP first. As the longest document contained on the GNP web site is the Role document, a separate Site Contents section was utilized to allow for easy navigation of that site. The user can go directly to the topic they seek and return either to the Site Contents section or return to the Home Page table of contents,

without having to scroll up or down the screen. Returning readers will be able to quickly find what they need.

The navigation arrow button utilized on all pages has a text label to prevent confusion regarding the purpose of the arrow at the bottom of the screen.

The HTML title on each page matches the HTML page tile. This consistency allows for indexing by the user.

- ◆ **Accessibility:** Post (1996) when looking at accessibility questions “is the site available on a consistent basis? Are dead-end links few in number?”

The GNP Web site is available 24 hours day subject to provider policy. Referral links vary in their availability in a 24 hour period.

Problems encountered in making a connection may be related to the referral link server having been turned off at night or the referral link can only accept so many hits to their site at one time.

For validation of site, referral links are checked and updated monthly with removal of dead links and addition of new links.

The GNP web site was viewed on several different size monitors to check for appearance and to obtain feedback regarding the appearance of the site.

The GNP web site has been indexed by four search engines. They are: Yahoo, Lycos, WebCrawler, and InfoSeek. This allows the innovator seeking information on the GNP to enter the term on any of the four search engines cited and be able to locate the GNP web site. (See Appendix C for URLs for Search Engines listed).

- ◆ **Graphics:** Graphics can add a lot to the visual appeal of the GNP web page. Post (1996) when looking at graphics and web design questions “is there a sense of style and color coordination? Is the page layout easy to follow? Is the arrangement of the

links uncluttered? Is the text legible? Is the background unobtrusive?” Some of the principles utilized in designing the GNP web site are as follows:

Background & Color

The choice of a white background color and black font color was made, taking into consideration the normal loss of color discrimination with age. Boyce (1981), when writing guidelines to assist with effective communication with the older adult, suggests that a “good contrast between ink color and paper color will facilitate reading”. She suggests “the best combination for reading is black ink on white paper...Dark colors reflect very little light back to the eye; white reflects nearly all of the light back”. When looking at designs, Boyce goes on to suggest the avoidance of printing over a textured background as it distracts the eye and makes reading more difficult. Tatters (1996) suggests leaving default colors for links, as changing colors can very confusing to users trying to determine which links were followed and which were unfollowed.

Keeping in mind the target audience for this web site is mostly aging adults with decreasing visual acuity, legibility of the GNP web site was a major concern. Highly stylized type and italics was avoided as well as use of all upper case letters. Lower case letters have more variation in shape and are easier to identify. Boyce (1981) points out that “space between paragraphs and space above and below headings also facilitates reading” when writing for the older adult. Boyce continues “for materials intended specifically for older persons, 12 pt. Type is recommended”.

Lines, Balls and Arrows

The decision to go with colorful non-animated graphic bars as separators between topics was made, so as not to distract from the printed material content, but give the reader the sense of the beginning and the end of each section and topic viewed.

Colored balls were used to highlight items in a list, bringing special attention to those

items. The color of each ball was chosen to enhance the colored bars on the page, but if the user is colored blind or have turned off their graphics for downloading replacement icon will be inserted.

The graphics used for the GNP web site were extracted from graphic web sites that gave visitors permission for their use. Graphic sites utilized were:

Ender's Realm (colored bullets, colored lines)

Turbo Net (colored lines, colored bullets)

Net User (colored lines, colored bullets)

(See Appendix C for URLs of above graphic sites and Appendix F for copying graphic).

To WS_FTP (file transfer) graphics to MSU's Computer, the steps are the same as cited above with the exception that files with the extension (gif) can be transferred from your local computer system to MSU without having to rename the file.

- ◆ **Use of Unique Internet Features:** Post (1996) when looking at use of unique Internet features questions "are there interactive e-mail connections? If there is animated content does it serve a purpose?) Looking at the GNP web site users have the interactive capability of corresponding with the author via e-mail to provide comments, ask questions or voice concerns. E-mail to be checked on daily basis. The site will not contain animated content.

TARGET GROUP

The GNP web site will target the innovators in society who are seeking information regarding the role of the GNP. This includes clients seeking help for acute and chronic diseases, children of elderly adults seeking help with their parent's care, and seniors in need of health promotion and/or disease prevention or management.

IMPLICATIONS FOR GERIATRIC NURSE PRACTITIONERS

Morishita & Hansen (1986), when examining the GNP role in caring for the aged, point out “effective multidisciplinary team function requires negotiation and flexibility. For negotiation to take place, several tasks must be achieved: clear definition of goals, definition of roles, effective communication, mutual respect for one another’s expertise, and shared decision making” (p. 20). The same holds true for client and provider relationships. Since clients are the primary decision makers in regard to their healthcare decisions, by giving them a clear and factual definition of the GNP role, the client is empowered to make informed choices, which is the cornerstone of self-determination.

It is imperative that the GNP Web site be updated on a consistent basis, keeping the content current on the latest research findings. Just as the Internet is constantly changing, so is the GNP role, leading the Web site to be a constantly evolving entity, that will never actually be completely finished.

IMPLICATIONS FOR EDUCATION

GNP educational programs need to stay current with the latest technology and means of communication if the GNP plans on staying at the forefront of healthcare. GNP education programs need to evaluate Everett Rogers’ Innovation-Diffusion Model to determine how and what affect it should have on their programs. Future education programs for GNP’s need to incorporate a computer component that will address the various medical sites on the WWW, because the elderly innovators will already have seen these web sites prior to their clinic visits.

IMPLICATIONS FOR RESEARCH

Future research into the use of computers to reach the innovators of society may need to focus on increasing access, not only to primary care services, but also to specific types

of services that may promote a better health status for the aging adult.

Guidelines for printed materials for Older Adults on the Internet need to be established, taking into consideration the normal loss of near vision and color discrimination with age.

Future research needs to address the effectiveness of the GNP web site on the targeted population. This can be achieved through the use a counter to keep score of “hits” to the site. An analysis of e-mail communications to the author from the GNP web site. Another avenue would be surveys of new patients seen by GNP’s related to the source and type of information regarding GNP providers that the client may have seen.

More research is needed into marketing of the role of GNP to find out how to effectively communicate our roles to the public.

Summary

The GNP web site is in its infancy. It is an innovation utilizing today’s technology to address a perceived need, and that being to educate consumers about the role of the GNP. The GNP web site needs to be looked at as an evolving process, which can never be thought of as complete. With the addition of new pages, updates, changes and links, the GNP web site will truly be spinning its own web on the Internet.

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APPENDIX A

MSU Pilot Electronic Mail

MSU PILOT Electronic Mail

PILOT users can exchange email with other email users on the worldwide Internet. Every MSU student and employee has an account on the PILOT email system. This document describes how to activate and use a PILOT account. Some terms you'll need to know:

CIC: Computing Information Center, 305 Computer Center. Phone 355-4500. The CIC has copies of all the documents and software mentioned here.

MSU identification number: Students use PID. MSU employees use employee ID (ssn). For newly admitted students, your PID was included in your admissions letter. For others, this number is assigned when your application for a PILOT account is processed.

PIN: Students use PAN. Employees use PIN. For newly admitted students, your PAN is on the enclosed page that contains your name and address. Others are assigned a PAN when their application is processed. If you don't know your PIN or PAN, contact the CIC.

MSUnet ID and password: Your network ID and password. These are created when you activate your PILOT account. They are your authorization keys to many network functions, including PILOT email. You can also use PILOT to change your MSUnet password.

What You Need

You need communications software and a computer connected to the Internet. The software must be able to do vt100 terminal emulation. Your Internet connection can be either by modem and phone line or by direct connection.

Connecting

In short, connect your computer to the Internet and then telnet to the address *pilot.msu.edu*

There are two ways to connect to the Internet. Either a dial-in connection or a direct connection.

Dial-in Connection

If you access the Internet through a commercial service provider such as America Online, contact that provider for help on telnetting to the Internet address *pilot.msu.edu*

Within Michigan, the Internet and PILOT can be accessed by a local call to a MichNet phone line. See the document *Using Terminal Emulation to Dial in to the Internet*.

Direct Connection

From an off-campus site connected to the Internet

- Telnet to the Internet address *pilot.msu.edu*

From PC on MSU's Campus Ethernet

- Using DOS and PC/TCP software:
 - At the C:/> prompt, enter: *tn pilot.msu.edu* (MSU students and employees)
 - or
 - At the C:/> prompt, enter: *tn msualum.msu.edu* (Alumni)
- Using Windows 95:
 1. Run the telnet application.
 2. Pull down the *Connect* menu and select *Remote System*.
 3. Enter one of these host names:
 - pilot.msu.edu* (MSU students and employees)
 - msualum.msu.edu* (Alumni)

M • S • U

C O M P U T E R

L A B O R A T O R Y

305 COMPUTER CENTER

EAST LANSING, MICHIGAN

4 8 8 2 4 - 1 0 4 2

PH: 517/355-4500

E-MAIL: COMINFO@MSU.EDU

From Micro Lab PC

1. Use the HD menu to select PILOT (MSU Email System). If necessary, reset the PC to display the HD Menu.
2. Enter one of these host names:

<i>pilot.msu.edu</i>	(MSU students and employees)
<i>msualum.msu.edu</i>	(Alumni)

From Micro Lab Mac or Mac on the Campus Ethernet

1. Open (double click) the Telnet application. In the microlabs, Telnet is on the server in the Communications folder.
2. Pull down the File menu. Select *Open Connection*.
3. Enter one of these Session names:

<i>pilot.msu.edu</i>	(MSU students and employees)
<i>msualum.msu.edu</i>	(Alumni)

Activating your Account

Before using PILOT you must activate your MSUnet ID and choose a password. To do this you need to identify yourself to PILOT by your MSU identification number and your secret PIN (see definitions above).

1. Connect to PILOT. When the *login:* prompt displays, enter *pilot*. When asked for a password, press Return .
2. Read the screens carefully. Enter your MSU identification number and PIN when asked.
3. Enter a secure password when asked. An MSUnet ID will be created. On future logins use this ID and password to enter PILOT.
4. The last activation screen will show your MSUnet ID. Remember it and the password you entered in step 3. Your Internet email address using PILOT is one of the following:

<i>yourMSUnetID@pilot.msu.edu</i>	(student or employee account)
<i>yourMSUnetID@msualum.msu.edu</i>	(alumni account)

Using PILOT

Getting On-screen Help

The bottom of most PILOT screens describes how to get on-line help.

Create and Send Mail

1. From the MAIN MENU press *m*
2. From the MAILBOX screen press *m*
3. Enter the email address of the person you are emailing. To send to another PILOT user simply enter their MSUnet ID. (Do ID searches from the MAIN MENU).
4. Enter the subject of your message.
5. Type the body of your message.
6. When done, press the *esc* key, then *l*, then *s*.

Read Mail

1. From the MAIN MENU press *m*.
2. Use the arrow keys to select a message you want to read then press Enter.

Disconnect

Quit PILOT

Always exit via the MAIN MENU. From the MAIN MENU press *q* .

Help

For assistance call the CIC. Consultants are available Monday through Friday. Consulting is also available by email at: consult@msu.edu or help@pilot.msu.edu. Information regarding acceptable use of all MSU information technology, including PILOT, is available at:
<gopher://burrow.cl.msu.edu:70/00/msu/policy/MSU>

APPENDIX B

Using Terminal Emulation to Dial in to the Internet

Using Terminal Emulation to Dial in to the Internet

This document describes how to use terminal emulation software and a modem to connect to MichNet (within Michigan). Once connected to MichNet, you can access MSUnet and the rest of the Internet. For information about access from outside of Michigan, see the section *Out of State*.

What you need

You need a computer, modem, phone line, and communications software capable of vt100 terminal emulation. A number of capable commercial and shareware programs are available. Kermit communications software works well and is available free from the Computing Information Center (CIC). See *More Help*.

Configuring your modem and communications software

You may need to consult your modem and software documentation for instructions on how to make the following settings. Kermit, as provided by the CIC, is preconfigured and does not require additional set up.

<u>Modem or software setting</u>	<u>Value you should use</u>
Modem (DCE) speed.....	14.4 Kbps or highest speed supported
Computer (DTE) speed.....	57.6 Kbps or highest speed supported
Error correction.....	On
Type of error correction.....	V.42; if V.42 isn't supported, use MNP4
Data compression.....	On
Type of data compression.....	V.42 bis; if V.42 bis isn't supported, use MNP5
Flow control.....	CTS/RTS (also called flow control or handshaking. If not supported, use XON/XOFF, but be aware that enabling XON/XOFF may interfere with binary file transfers).
DTR clearing.....	DOS: Disconnect when DTR is dropped Mac: Ignore DTR
Parity.....	Off or none
Data bits.....	8
Stop bits.....	1
Terminal emulation.....	vt100
Other settings.....	Default settings

East Lansing MichNet dial-in numbers

The East Lansing MichNet dial-in numbers are:

- 517/353-3500 (28.8k speed)
- 517/432-0100 (14.4k speed)

A comprehensive list of dial-in numbers is available from any of the following:

- The document *MichNet Dial-in Numbers*
- Connect to any MichNet number and search the on-line phone list by entering *help* at the *host:* prompt.
- Using the World Wide Web:
<http://www.merit.edu/michnet/how.to.get.connected/michnet.nos>

Connecting

1. Use your modem and communications software to dial the selected phone number.
 2. At the *host:* prompt, enter the domain name address of the computer you want to connect to.
- Examples:

host: <i>pilot.msu.edu</i>	(PILOT email)
host: <i>stuinfo.msu.edu</i>	(Student information system)
host: <i>ibmgate.msu.edu</i>	(Gateway to MSU IBM hosts. Use this address to go to magic, enroll, ibm.cl.msu.edu, and ais3270)

M • S • U
COMPUTER
LABORATORY

305 COMPUTER CENTER
EAST LANSING, MICHIGAN
48824-1042

PH: 517/432-6200

E-MAIL: CONSULT@MSU.EDU

3. When prompted for your network ID and password, enter your MSUnet ID (same as your PILOT ID) followed by @msu.edu

Then enter your PILOT password. Login example:

login: smithjan@msu.edu
Password: (your PILOT password, it won't display)

If you haven't yet activated your PILOT account, enter *guest@msu.edu* and press Return. Then follow the instructions on *Activating Your Account* in the *MSU PILOT Electronic Mail* handout. Login example:

login: guest@msu.edu (for people without an active PILOT ID)
Password: (no password required)

Out of State

Outside of Michigan, a dial-in connection to the Internet can be made through many different Internet service providers (ISPs). An extensive list of ISPs is available at the web site:

[http://www.yahoo.com/Business_and_Economy/Companies/
Internet_Services/Internet_Access_Providers/](http://www.yahoo.com/Business_and_Economy/Companies/Internet_Services/Internet_Access_Providers/)

More help

Consulting is available by email at consult@msu.edu or from the Computing Information Center (CIC), 305 Computer Center, 432-6200. The CIC also distributes preconfigured versions of Mac and MS Kermit free of charge.

APPENDIX C

APPENDIX C

WWW Uniform Resource Locator Addresses

Administration On Aging - (<http://www.aoa.dhhs.gov/aoa/pages/profil96.html#health>).

Aging Network Resource - (<http://www.aoa.dhhs.gov/network.html/>).

American Association of Retired Persons -

(<http://www.aarp.org/programs/health/home.html#intro/>)

Ender's Realm - (<http://www.ender-design.com/home/index.html/>)

Free On-line Dictionary of Computing - (<http://wombat.doc.ic.ac.uk/>).

Geriatric Video productions - (<http://www.geriatricvideo.com/resource.htm/>).

InforSeek - (<http://www.infoseek.com/>)

Internet Literacy Consultants - (<http://www.matisse.net/files/glossary.html>).

Lycos - (<http://www.lycos.com/>)

Netscape Communications Corporation FTP Site - (<ftp://netscape.com/>)

Net-User - (<http://www.netuser.pair.com/graphics/>)

NP Web Home Page - (<http://www.unh.edu/npract/index.html/>).

Turbo Net - (<http://www.turbo-net.com/>)

WebCrawler - (<http://webcrawler.com/GNN/WebQuery.html/>)

Yahoo - (<http://yahoo.com/>)

APPENDIX D

APPENDIX D**Procedures For Connecting To The Internet**

●**Modem Configuration.** In Microsoft Windows 95, the following procedure may be followed to configure the computer for connection to the MSU campus computer for authoring a web site. In Microsoft Windows 95 use the New Modem Wizard to configure the modem as follows:

1. Click on Start Button.
2. Click on Settings icon.
3. Click on Control Panel.
4. Double click on Modems item.
5. Click on Add button to start the Install New Modem wizard, which then provides step by step instructions throughout the configuration process.

●**Windows 95 Configuration of TCP/IP** - Windows 95 comes with the necessary components to connect to the Internet, but it is still necessary to configure TCP/IP. The steps are:

1. Click on Start button.
2. Click on Settings.
3. Click on Control Panel.
4. Click on Network.
5. Click on Configuration.
6. Click on TCP/IP.
7. Click on Properties.
8. Click on "Obtain an IP Address Automatically".
9. Click on OK.

•Setting up HyperTerminal.

1. Click on Start button.
2. Click on Programs Icon.
3. Click on Accessories.
4. Click on HyperTerminal.
5. Type in your MSU e-mail ID in the connection Name text box.
6. Click OK.
7. Fill in the phone number and area code (Call MSU Campus Computing at 517-353-1800 to obtain a local MichNet access number).
8. Click OK button.
9. Click Dial to connect or Cancel.
10. After logging off or if you chose the option to cancel, Click on File.
11. Click on Save.

• Setting Up Netscape Navigator 3.01. Netscape Communications Corporation

operates an anonymous FTP server that can be reached at [ftp.netscape.com](ftp://ftp.netscape.com). Down load the Netscape Navigator software using WS_FTP as follows:

- 1) Click on Start Button
- 2) Click on Accessories.
- 3) Click on WS_FTP.
- 4) Click on WS_FTP95 Pro.
- 5) Under Profile Name enter in WS_FTP32.
- 6) Enter in [ftp.netscape.com](ftp://ftp.netscape.com) under Host Name.
- 7) Under Host Type, click on standard.
- 8) Fill in MSU user ID number (holmber6).
- 9) Fill in anonymous.

- 10) Click Apply.
- 11) Click OK.
- 12) Under the remote system window (right side of screen) double click on pub.
- 13) Double click on Navigator.
- 14) Double click on Gold.
- 15) Double click on 3.01.
- 16) Double Click on Windows.
- 17) Double Click on g32e301p.exe
- 18) The Transfer window appears and remains up while file transfer is under way.
- 19) Under the local system window (left side of screen), click on g32e301p.exe
- 20) Click on EXE. Button located on right side of left screen.
- 21) A dialog box will appear. Follow step by step instructions for instillation of Netscape Navigator. Netscape icon now appears on main Windows 95 screen and can be activated by double clicking on icon.
- 22) Dialer screen appears with current phone number.
- 23) Click OK. (WWW connection has been established)

● **Transferring index.html to MSU's Computer System.** The files used for web site development must be written in Hypertext Markup Language (HTML) and saved in text format. The procedure is as follows:

1. Click on Start Button.
2. Click on Programs icon.
3. Click on Office 4.0.
4. Click on Microsoft Word.
5. Using Microsoft Word write and edit word document, using HTML tags obtained from cited resource HTML references.

6. Click on File at top of screen.
7. Click on Save As....
8. Click on Save as type.
9. Choose Text Only (*.txt).
10. Under File Name type index.txt.
11. Click Save.
12. Click on File button at top screen.
13. Click on File button at top of screen.
14. Click on close.
15. Click yes to save file.
16. Click save as text only.
17. Click Start button.
18. Click on Programs.
19. Click on WS_FTP 95 PRO. The Session Properties Window appears.
20. Under Profile Name fill in select WS_FTP from options.
21. Under Host Name/Address fill in pilot.msu.edu.
22. Click on standard under Host type.
23. Under user ID, fill in your MSU pilot ID account name (holmber6).
24. Under password, fill in your MSU pilot password.
25. Click apply.
26. Click OK.
27. The WS_FTP95 main screen appears. The left side of screen contains all the C drive files under the local system. The right side of screen contains your MSU Pilot account files, under the remote system.
28. On the left side of screen under local system, double click on green arrow.

29. Double click green arrow again to display contents on C drive.
30. Double click on My Documents.
31. Click on index.txt file.
32. Double click on remote system (right side of screen) file called pub.
33. Click on arrow pointing right in middle of main screen.
34. Moving over to the right side of the remote system directory screen, scroll down and locate index.txt file and click on it.
35. Click on Rename Button, located on right side of remote system screen.
36. Type in box that appears on screen index.html.
37. Click OK. The file index.html is now set up on MSU's computer system.
38. Exit out of WS_FTP 95 Pro.

APPENDIX E

APPENDIX E

Steps to Conduct a Search with Netscape Navigator

1. Double Click on Netscape Navigator.
2. Click 'Net Search' button located on title bar on the browser page.
3. Enter in search topic being sought. (seniors, Geriatric Nurse Practitioners, Nurse Practitioners, Older Adults, Aging, Resources on Aging, Geriatrics to name a few).
4. Click on any one of the many search result screen options provided to locate information being sought.

APPENDIX F

APPENDIX F

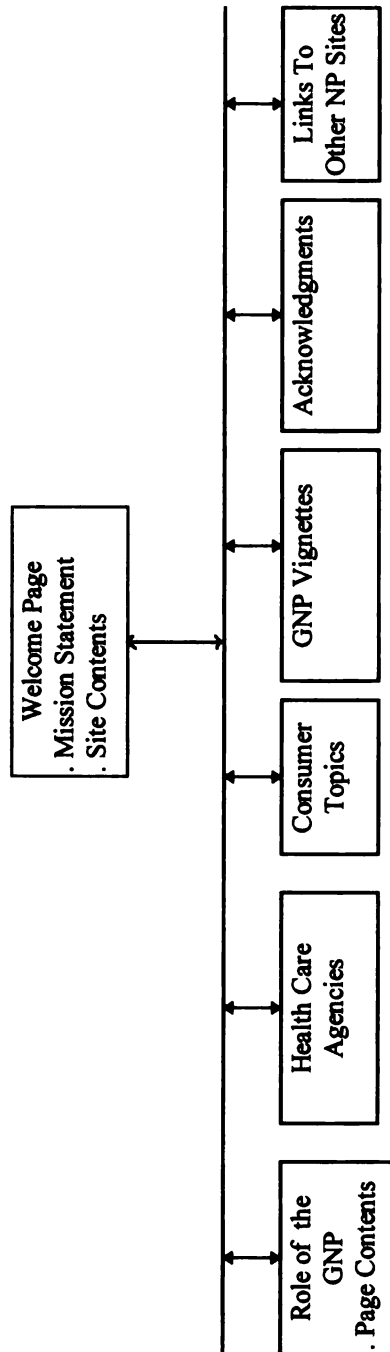
Steps to Copy Graphics Off of the Internet

- 1) Click on Netscape Navigator icon on Windows 95 main screen.
- 2) Click Connect button on Connect To pop up screen.
- 3) Click on File when connected to Netscape Navigator Home page.
- 4) Click on Open Location.
- 5) Enter in <http://www.ender-design.com/home/index.html>.
- 6) Click on Graphics from Enders Realm Home Page.
- 7) Click on Lines.
- 8) Click on Miscellaneous.
- 9) Right-click on hline.gif.
- 10) Select "Save As..." from pop up menu.
- 11) Click on C Drive from Save in option feature.
- 12) Click on My Documents.
- 13) Click Save.

APPENDIX G

APPENDIX G

GNP Web Site Diagram



APPENDIX H

Welcome to the Geriatric Nurse Practitioner Web Site

Mission Statement

This site examines the role of the Geriatric Nurse Practitioner in primary care of the aging population. It also provides links to other healthcare resources on aging.

Site Contents

- ☐ [The Role of The Geriatric Nurse Practitioner](#)
 - ☐ [Health Care Agencies Offering Information On Aging](#)
 - ☐ [Consumer Topics On Aging](#)
 - ☐ [Geriatric Nurse Practitioner Vignettes](#)
 - ☐ [Acknowledgments](#)
 - ☐ [Links to Other Nurse Practitioner Sites](#)
-



Thank you for visiting the GNP Web Site. If you should have any comments or questions, send them to [Bonnie Holmberg](#)

Last Update: 4 May 1997

Welcome to the Geriatric Nurse Practitioner Web Site

```

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<STRONG>This site examines the role of the Geriatric Nurse Practitioner in primary
care of the aging population. It also provides links to other healthcare resources on
aging.</STRONG>
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<LI><A HREF="HAOIA.html">Health Care Agencies Offering Information On
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<LI><A HREF="CTA.html">Consumer Topics On Aging</A>
<LI><A HREF="VIN.html">Geriatric Nurse Practitioner Vignettes</A>
<LI><A HREF="ACK.html">Acknowledgments</A>
<LI><A HREF="Links.html">Links to Other Nurse Practitioner Sites</A>
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Last Update: 4 May 1997</STRONG>
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The Role of the Geriatric Nurse Practitioner

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from the increased needs of society to meet the growing demands of the aging
population. With the aid of new technology, medications, and procedures, more
people are living into their second century. Increased population longevity presents
new challenges in providing healthcare for this age group. Geriatric Nurse
Practitioners represent one solution to this growing need, promoting optimal wellness,
health promotion and disease prevention.</STRONG>
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Contents</FONT SIZE></STRONG></A></p>
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<LI><A HREF="#Role Components">Geriatric Nurse Practitioner Role
Components</A>
<LI><A HREF="#Advantages">Advantages of using A Geriatric Nurse
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<LI><A HREF="#GNP Practice">Where Do Geriatric Nurse Practitioners
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<LI><A HREF="#Give Us A Try">Give Us A Try</A>
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SIZE></STRONG></CENTER>
<p><STRONG>
According to the National Conference of Gerontological Nurse Practitioners, a
Gerontological Nurse Practitioner is a registered nurse with advanced educational
preparation to provide a full range of primary care services to older adults. Geriatric
nurse practitioners practice under the rules and regulations of the Nurse Practice Act
of the state in which they practice. Because they are certified nationally in the area of
geriatrics, the American Academy of Nurse Practitioners recognizes them as expert
nurses.</p>

```

Role Components

The concept of the Geriatric Nurse Practitioner is somewhat complex. By breaking the role down into it's various components one can gain a better understanding of the Geriatric Nurse Practitioner's function in primary care. The role components to be examined in no particular significant order are as follows:

●Clinician

As a clinician the Geriatric Nurse Practitioner provides direct patient care to the older adult. The Geriatric Nurse Practitioner also develops and implements individualized nursing interventions that improve the over all welfare of their clients. Functions may include, but are not limited to:

- ☐ **Obtaining Medical Histories**
- ☐ **Conducting Physical Examinations**
- ☐ **Assessing, Diagnosing and Treating most common health problems**
- ☐ **Working with the client to develop and implement and individualist treatment plans**
- ☐ **Working with clients to keep updated on yearly immunizations as well as keeping updated on diagnostic screening tests for cancer.**
- ☐ **Assessing, Diagnosing and Monitoring chronic health problems such as Dementia, Alzheimer's, High Blood Pressure, Diabetes, Arthritis.**
- ☐ **Ordering and Interpreting Diagnostic Tests such as Blood, Urine and X-rays.**
- ☐ **Prescibing medications or recommending over-the-counter medications to alternative therapies.**
- ☐ **Promote positive health seeking behaviors and self care skills through continual education and advocacy.**
- ☐ **Collaborate with physicians and all other health care professionals to provide continuity of care.**
- ☐ **Making referrals when clients condition beyond the Scope of Practice.**

●Educator

In the role of educator, the Geriatric Nurse Practitioner takes into consideration that each person is a unique individual who

comes with their own fingerprint on how to learn and make changes in their lives. The Geriatric Nurse Practitioner assesses each client's readiness and motivation to learn before initiating a plan of care. They provide incentives, direction and/or educational material to facilitate learning. The Geriatric Nurse Practitioner takes into consideration the special learning needs of each client and will institute a self-paced learning module, using visual aids and alternative auditory methods that will make each encounter factual and productive. The Geriatric Nurse Practitioner's role as educator is not limited to just the responsibility for educating their clients, but encompasses the client's family, community and colleagues. In Dementia and Alzheimer cases the Geriatric Nurse Practitioner implements nursing interventions that meet both the needs of the client and of the caregiver, to improve the overall quality of life for both.

● Consultant

As a consultant the Geriatric Nurse Practitioner utilizes communication skills, problem solving skills, and networking skills with the client and other health care providers to enhance the continuity of care for their clients.

● Researcher

Evaluating, interpreting and disseminating research findings to colleagues is also a part of the Geriatric Nurse Practitioner's role. Through new research, the Geriatric Nurse Practitioner can identify nursing problems that affect the older adult, thus leading to future studies geared to improve the overall welfare of the clients they serve.

● Case Manager

As case manager the Geriatric Nurse Practitioner is responsible for coordination of the total care of the aged client, and is the one who follows them through all health care settings. The Geriatric Nurse Practitioner may not necessarily deliver the care, but is responsible for recommending, arranging, and planning the care. The intent is to provide services that allow the client to remain in their home as long as possible, as opposed to being cared for in a long term care facility.

<CENTER
ALIGN>Advantages of Using a Geriatric Nurse Practitioner</FONT
SIZE></CENTER>

<p>

The Geriatric Nurse Practitioner is an innovator who uses the tools of today's society to further promote the health care needs of the aging population. Geriatric Nurse Practitioners provide individualized holistic care, focusing not just on the disease process, but also on the effects of health problems on the client's daily activities, job and family.

Research studies have shown in Dementia care Geriatric Nurse Practitioners provide cost savings in health care by providing more rapid patient recovery, earlier diagnosis and referral, and a reduction in crisis situations. Research has also shown that clients found Nurse Practitioners provide a more accessible service, improved quality of care, and improved quality of life.

<p>

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<CENTER
ALIGN>Where Do Geriatric Nurse
Practitioners Practice</CENTER>

<p>

Geriatric Nurse Practitioners can be found practicing in any of the 50 United States, from rural communities to heavy populated areas such as major cities and retirement communities. The following is a sampling of practices that employ Geriatric Nurse Practitioners.

Geriatric Clinics

Family Practice Clinics

Nurse Managed Clinics

Hospitals

Nursing Homes

Home Health Care Agencies

Assisted Living Facilities

Hospice

Health Maintenance Organizations

Community Health Centers

Speciality Clinics (Diabetes, Hypertension, Alzheimer's etc.)

Area Agencies on Aging

Public Health Departments

- ☐ Geriatric Clinics
- ☐ Family Practice Clinics
- ☐ Nurse Managed Clinics
- ☐ Hospitals
- ☐ Nursing Homes
- ☐ Home Health Care Agencies
- ☐ Assisted Living Facilities
- ☐ Hospice
- ☐ Health Maintenance Organizations
- ☐ Community Health Centers
- ☐ Speciality Clinics (Diabetes, Hypertension, Alzheimer's etc.)
- ☐ Area Agencies on Aging
- ☐ Public Health Departments
- ☐ Schools of Nursing

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Give Us A Try

The goal of the Geriatric Nurse Practitioner is to have their clients functioning at the optimum level that they can achieve at each stage of their life. Prevention and Wellness Clinics are one way of achieving this goal. The following is a small sample of some of the clinics the Geriatric Nurse Practitioner may operate, or operate from, to meet the functional needs of the aging population. They are also a good way to experience the care from a GNP.

☐ **Bereavement Clinics**

Death and loss are major factors in the aging process. Most survivors do come through the bereavement process in time. But research has shown that some become physically and emotionally depressed. Bereavement clinics allow clients to talk at length about their loss and encourage creative brainstorming on ways to handle the psychological distress. Referrals to other mental health professionals are made as needed.

☐ **Blood Pressure Screening Clinics**

Research has shown that Blood Pressure Screening Clinics help many people avoid heart attacks, strokes and other related conditions.

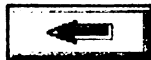
1) In-home Prevention Assessment Programs for Independent Older Adults

This type of program is set up in an attempt to provide prevention health care and to improve the functional status of the community dwelling elderly population.

2) Toe Nail Cutting and Foot Clinics

As people age, their ability to care for their toenails and feet decline because they no longer have the hand and eye coordination they did in their youth. Declines in eye sight and fine motor skills, along with chronic conditions such as arthritis, diabetes, obesity and abnormal toenail growth, impede the process of caring for one's own toenails.

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Schools of Nursing

<p>

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<CENTER

ALIGN>Give Us A Try</CENTER>

<p>

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Health Care Agencies Offering Information On Aging

The following Agencies offer a wealth of information and resources on aging. Some sites provide toll free numbers if personal assistance is needed.

[Administration On Aging](#)

[Agency for Health Care Policy and Research](#)

[Alzheimer's Association](#)

[American Association for Geriatric Psychiatry](#)

[American Association of Retired Persons](#)

[American Geriatrics Society](#)

[Michigan Aging Service System](#)

[Mid-Florida Area Agency on Aging](#)

[National Institute on Aging](#)

[Nebraska AgeLink](#)

[Social Security Administration Home Page](#)

[World Health Organization Public Information Page - Consumer Information](#)



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Health Care Agencies Offering Information On Aging

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<A HREF="http://www.aoa.dhhs.gov/"> Administration On Aging</A>
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<A HREF="http://www.ahcpr.gov/">Agency for Health Care Policy and
Research</A>
<p>
<A HREF="http://www.alz.org/">Alzheimer's Association</A>
<p>
<A HREF="http://www.aagpgpa.org/">American Association for Geriatric
Psychiatry</A>
<p>
<A HREF="http://www.aarp.org/">American Association of Retired Persons</A>
<p>
<A HREF="http://www.americangeriatrics.org/">American Geriatrics Society</A>
<p>
<A HREF="http://www.state.me.us/beas/dhs_beas.htm">Maine Bureau Of Elder and
Adult Services</A>
<p>
<A HREF="http://mass.iog.wayne.edu">Michigan Aging Service System</A>
<p>
<A HREF="http://www.mfaaa.org">Mid-Florida Area Agency on Aging</A>
<p>
<A HREF="http://www.ageinfo.org/">National Aging Information Center</A>
<p>
<A HREF="http://www.nih.gov/nia/">National Institute on Aging</A>
<p>
<A HREF="http://agel.ndoa.state.ne.us">Nebraska AgeLink</A>
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<A HREF="http://www.ssa.gov/">Social Security Administration Home Page</A>
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 World Health
Organization Public Information Page - Consumer Information

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Consumer Topics on Aging

The following topics offer a wealth of information on health problems and concerns. This information is presented to encourage discussions between consumers and their healthcare providers. It is not meant to take the place of sound medical advice.

● Alzheimer's & Dementia Sites

- ▢ [Alzheimers Disease](#)

● Sites On Caregiving

- ▢ [Administration on Aging Site](#)
- ▢ [Answers Magazine for Children of Aging Parents](#)

● Death, Dying And Grief Resources

- ▢ [Death, Dying & Grief Resources](#)

● Depression

- ▢ [Depression](#)

● HEALTHY PEOPLE 2000

- ▢ [Healthy People 2000](#)

● Immunizations

- ▢ [Immunization Action Coalition](#)

● Internet & E-mail Sites

- ▢ [Doctor's Guide To The Internet](#)
- ▢ [Internet and E-mail Resources On Aging](#)

☐ [Additional Internet Resources](#)

➤ **Long Term Care Resources**

☐ [Golden Age.Net](#)

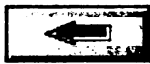
☐ [Senior Sites](#)

● **Specific Disease Sites**

☐ [American Diabetes Association](#)

☐ [OncoLink - Cancer Information](#)

☐ [National Institute of Diabetes and Digestive and Kidney Disease](#)



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<LI><A HREF="http://www.aoa.dhhs.gov/aoa/pages/jpostlst.html">Internet and E-
mail Resources On Aging</A><p>
<LI><A HREF="http://astro.ocis.temple.edu/%7Epgmed/post.html">Additional
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<LI><A HREF="http://www.niddk.nih.gov/">National Institute of Diabetes and
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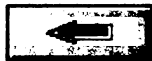
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Geriatric Nurse Practitioner Vignettes!



PAGE CONTENTS

- Geriatric Nurse Practitioner of the Month - (Coming Summer 1997)
- Clinical Pearls - (Coming Summer 1997)
- Caregiving Pearls (Coming Fall 1997)
- Patient Testimonials - (Coming Fall 1997)
- [GNP Home Page](#)



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Acknowledgments

A special thank you is extended to the faculty and staff at Michigan State University's College of Nursing who encourage creativity in their students to address the variety of health needs of older adults. The Geriatric Nurse Practitioner Web Site is a direct result of this encouragement. The Michigan State University Gerontology track is based on advanced nursing theory from geriatric nursing and behavioral and natural sciences. For more information regarding the Gerontology Program at Michigan State University the following is provided.

Michigan State University

College of Nursing

A230 Life Science Building

East Lansing, Michigan 48824-1317



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provided.<p>
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University</CENTER></A><p>
<CENTER><A HREF="http://pilot.msu.edu/unit/nurse">College of
Nursing</CENTER></A><p>
<CENTER>A230 Life Science Building</CENTER><p>
<CENTER>East Lansing, Michigan 48824-1317</CENTER><p>
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Last Update: 4 May 1997</STRONG>
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Links to Other Nurse Practitioner Sites

Links to Other Nurse Practitioner Sites

- | [A Primary Care Home Page For Nurse Practitioners](#)
 - | [The Advance Practice Nurse](#)
-



[Return to the GNP Home Page](#)

Last Update: 4 May 1997

Links to Other Nurse Practitioner Sites

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For Nurse Practitioners</A><BR>
<LI><A HREF="http://www.cyberportal.net/npweb/index.html">The Advance Practice
Nurse</A><BR>
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Home Page</A>
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Last Update: 4 May 1997</STRONG>
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