Development of a Nurse Managed Academic Health Clinic

A Model in Merging Education and Practice

Mary Kay Nissen, MSN, ARNP

Mary Tracy, PhD, RN

Abstract

Developing nurse managed academic health clinics can address the call for expanded expert nursing care while providing an excellent clinical opportunity for both student and educator.

An extensive literature review was conducted to determine the impact of such clinics on the provision of expert nursing care. Satisfaction analysis, cost benefit and feasibility studies were examined. An analysis of the literature was performed to review the benefit of bridging practice and education. The literature was found to support the concept that nurse managed clinics can be both beneficial in educating a new health care workforce while blending theory and practice. With these findings, initial steps were taken to develop a nurse managed clinic on a university campus. Initial documents and activities were completed and implemented.

Nurse managed clinics primarily provide expert nursing care to underserved populations. University based nurse managed clinics serve as clinical sites for graduate and undergraduate students. They provide faculty with the opportunity to blend theory and practice while promoting advocacy and networking. The development of academic based nurse managed clinics benefit nursing education and serve to assist in easing the shortage of primary health care providers.

Development of a Nurse Managed Health Clinic

The purpose of the project was to review existing literature regarding nurse managed clinics and complete the initial steps for clinic startup. Project goals included investigation to determine the impact of nurse managed clinics (NMCs). Secondly, a literature review was conducted to analyze satisfaction studies, cost benefit analysis, successful clinic models and health care shortage data. Next, a model for the operation of the nurse managed clinic and a faculty practice was developed. Lastly, phase one of the clinic development process was completed. This phase included conduction and analysis of a community and university needs assessments. These assessments were used to determine health needs that could be met via the services of a NMC. A business and financial plan were completed for initial operation of the clinic. Advisory board members were selected, operational by-laws written and an evaluation plan for clinic services developed.

Background

Health care in America is undergoing rapid change. These changes place significant stress on clinical nursing and nurse educators alike. In several recent landmark documents, there has been a call for the expansion of quality, expert nursing care. From the Institute of Medicine's (IOM) report in 1999, *To Err is Human* to the more recent IOM report on *The Future of Nursing(2010),* delivery of expert nursing care has been a closely examined topic. The *Future of Nursing* report claims that NMC's offer opportunities to expand access; provide quality, evidence-based care; and improve outcomes for individuals who may not otherwise receive needed care. These clinics also provide the necessary support to engage individuals in wellness and prevention activities (IOM 2010). This document places emphasis on the previous report

recommendations and calls for nurses to lead and manage collaborative efforts with others to improve health care. Specifically, it calls for the use of expert nursing knowledge to build a better healthcare system. Nurse managed clinics are one way to answer this call.

Review of Literature

Nurse-managed clinics play an important role in the delivery of health care services to underserved populations. The first centers were established in the early 1970s and paralleled the development of nurse-practitioner education (Barkauskas et al., 2004). The National Nursing Centers Consortium (NNCC) is a member organization of Nurse Managed Clinics (NMCs). According to Torrisi & Hansen-Turton, of the NNCC members; most (74%) are associated with academic nursing programs (2005).

University based NMCs serve as clinical sites for graduate and undergraduate nursing students. They provide faculty with the opportunity to blend theory and practice while promoting advocacy and networking. There are at least 200 NMCs currently operating in 37 states with an estimated two million patient encounters per year. NMC's are often associated with a school, college, university, department of nursing, federally qualified health center, or independent nonprofit healthcare agency. Programs and funding authorized by the Affordable Care Act support a number of emerging models, including NMC's. While managed by Advanced Practice Registered Nurses (APRNs), NMCs are staffed by an interdisciplinary team of healthcare providers, which may include physicians, social workers, public health nurses, and therapists (Torrisi & Hansen-Turton, 2005).

Access to care and lack of insurance are critical factors in delivery of health services and are directly associated with poor functioning, increased morbidity and mortality, lack of

continuity of care, and rising health care costs (Coddington & Sands, 2008)). About 60% of patients seen in these centers are either uninsured or have Medicaid. (Torrisi & Hansen-Turton, 2005). Nurse managed clinics can provide expert care to underserved populations.

The United States likely will need almost 52,000 additional primary care physicians by 2025 to meet the country's health care utilization needs (Petterson, Liaw, Phillips, Rabin, Meyers, Bazemore, 2012). Development of nurse managed academic clinics can assist in solving this health care shortage. These clinics would provide care while placing emphasis on expert nursing education.

A meta-analysis of literature by Coddington & Sands examined data on the cost and quality of care at nurse managed clinics (2008). After excluding centers that were not nurse managed and did not have advanced practice providers, the following information was recorded: type of study and relevance, type of health care facility and providers, services provided client type. Results indicated that when NMCs operated at full capacity, costs per visit were equal or less than primary care visits of the same setting, outcomes were comparable and patient satisfaction was higher with APRN care (Coddington & Sands, 2008).

Clearly, there is a call for expert nursing knowledge to be used in the provision of care to underserved populations. The nurse-managed clinic model has demonstrated that quality care can be provided at NMC's. The services provided are found to be patient-centered, expertly delivered and affordable. With the number of uninsured and underinsured at an all-time high and health care costs skyrocketing, NMC's provide a sensible and affordable part of the solution to these problems. A provision in the Affordable Care Act has allotted funding to nursing schools

for stipends to increase full-time enrollment, with a goal of training 600 new nurse practitioners and nurse midwives by 2015 (Advance Healthcare Network, 2013).

Model/Method

This project was conducted at a small, private Midwestern university committed to higher education within a liberal arts and Catholic perspective. The university has a tradition of service, caring and openness to all, and emphasizes quality education for its students. In an effort to continue in this tradition, the university department of nursing is dedicated to enhancing the educational experience of students and increasing the provision of health care to underserved populations in the vicinity of the university via the development of an academic NMC. The nurse managed clinic/project model is based on Rothman and Tropmen's (1987) community development approach. This model uses a problem solving approach. This model assumes that desired community change is pursued through broad participation in goal determination and action by a wide spectrum of people at the local level (Krothe, Flynn, Ray & Goodwin 2001).

Community development is expressed through both structure and task accomplishment. Development occurs through associations or networks of actors (means) as well as through actions or changes (ends) (Kaufman, 1985). In relation to the nurse managed clinic, this can be translated into development of groups or networks of local resident and professionals who work together to identify needed change and move towards it (Krothe, et al, 2001). For the initial phase of planning, community partners were engaged and their input was considered in the planning process. These partners included the district health department, community action agencies and private and non-profit organizations.

Historically, health care on campus was extremely limited. Registered Nurse (RN) services were contracted through an agency with the RN present approximately four days per week. APRN services were also contracted but very limited, ranging from 3 to 6 hours per week. Development of the nurse-managed clinic expands opportunities for faculty practice. Under the clinic model, APRN faculties can provide access to care five days per week and expanded evening hours. Doctoral, Masters and undergraduate nursing students are provided opportunities to practice at the clinic under the preceptorship of APRN faculty. Linking the clinic with the nursing program expands health services and enhances nursing education and training for the undergraduate and graduate nursing programs. Various departments will be involved in clinic activities such as physical therapy, psychology, social work, education and others. This is in an effort to provide interdisciplinary care to clients and provide an educational setting for those students.

The concept of faculty practice is built on the premise that nursing practice is a discipline. The literature on faculty practice emphasizes the role as a way to synthesize practice, theory research, and education (Busby et al, 1996). An academic nurse managed clinic is a vehicle for blending education and practice.

Four basic models designed to combine education and practices are described in literature. They are; Rush University's unification model, Case Western Reserve's collaboration model, the University of Maryland's dyad model and the cost sharing model at the University of Texas (Krothe et al, 2001). The cost sharing model will be used for the purposes of this proposal. This is a model in which clinic costs are shared between the University and other agencies with the faculty members responsible only to the university (Walker, Starck & McNiel, 1994).

Project Development-Phase One Planning

Strategic planning for the nurse managed clinic includes planning the development of comprehensive health and wellness services provided to be by graduate and undergraduate students within a university based NMC. In addition, this clinic will provide outreach services to underserved citizens of the community. Plans include 1) developing a cohesive, coordinated model of health care and education via services of a nurse-managed clinic. 2) maximizing the quality, quantity and scope of services provided by the university health clinic 3) integrating theory and practice through clinical experiences at the NMC for undergraduate and graduate nursing students and 4) developing and expanding health and wellness programs to underserved populations in accordance with the mission of the university and college of nursing.

In phase one of the clinic plan, a mission and vision statement for the clinic was developed, advisory board members identified and by-laws for operation developed. The clinic mission statement was written to closely reflect that of the university. The document states the clinic will provide holistic health and wellness services to the campus population and to underserved and vulnerable persons in the community. Health services will provide culturally competent care that promotes wellness and an enhanced quality of life.

Organizational development is a key factor in planning a successful NMC. Using the community development model, networking with the stakeholders and the affected parties in the community is an integral part of building a successful clinic. An advisory board must be established and governing by-laws adopted. "Most NMC's today are operated by university Schools of Nursing and have advisory boards to guide their work" (Torrisi & Hansen-Turton, 2005, p11). The advisory board consists of stakeholders, community groups and lay citizens.

Any school accredited by Commission on Collegiate Nursing Education (CCNE), requires the university to seek input from their communities of interest when developing a nurse managed clinic (Hansen-Turton, Miller & Greiner, 2009).

Board members (Table 1) were selected to complete the requirements set out by the CCNE. Once the advisory board members were identified, the governing by-laws were written. The by-laws were carefully researched and developed in conjunction with information used by permission from the National Nursing Centers Consortium and input from the Vice President of Finance, university financial department.

In this initial phase, the development of a strategic plan, mission and vision statement for the clinic were developed. These documents tie closely with the mission and vision of the university. The strategic plan, mission and vision were completed for presentation at the first advisory board meeting. The literature states that an initial advisory board meeting should be held prior to commencement of any activities in the academic NMC (Torrisi & Hansen-Turton, 2005).

A community and campus needs assessment was examined. "Since NMCs are community focused, a comprehensive, written community needs assessment should be done to assure that the programs and services that are developed are as responsive as possible to the community" (Torrisi & Hansen-Turton, 2005, p.17). The student and faculty population at the university were given the opportunity to complete a campus needs assessment at employee and student orientation sessions held at the start of the school year. The campus needs assessment was used to determine how the NMC can best serve the needs of the immediate university population. One hundred fifty questionnaires were distributed with 53 returned.

The campus needs survey garnered many favorable comments regarding an NMC on campus. The respondents identified health education and health services needs on campus (Table 2). The survey demonstrated a need for expanded access to APRN services and needs that can be met by interdisciplinary teams from various departments (psychology, social work, physical therapy, etc.)

The community assessment assisted in identifying needs and possible collaborators/partners to help with cost containment and provide more effective care delivery. The community assessment evaluated community strengths and existing resources. For example, one significant finding was that the neighborhood surrounding the university has a population with the highest emergency room visits per year (4+ visits per year). The county in which the university is located was identified as number 74 of 99 counties for health rankings i.e.: health behavior, clinic care, socioeconomic and physical environment (Mercy Medical Center, 2012). The community assessment also closely identified high risk health areas in the region and unmet health care needs in the university area. Services identified through the needs assessments include chronic disease management, acute and urgent care health services, assessment, treatment and education for sexually transmitted infections (STI), nutrition and weight loss education, parenting programs and elderly visit programs.

A primary example of an identified service is merging the district health STI (sexually transmitted infections) program into the nurse managed clinic model providing greatly expanded services to the region. Funding for this activity is through an existing grant held by the district health department. ARNP faculty and students provide examination, counseling and treatment at no cost/low cost to any individuals in need of these services.

Clients with chronic diseases will be identified for eligibility in the chronic disease program run through the NMC. The plan for this program is a cooperative effort between the University and its hospital affiliate. Prospective clients identified in the hospital system will be accepted into the chronic care management program. APRN students, with faculty guidance, develop a plan of care for the client. This plan of care involves interdisciplinary services with nursing, therapy and social work departments all contributing to the management of the client's health care. Home visits for these individuals become part of the undergraduate community health education activities. Care planning and medication management are incorporated into the graduate adult/elderly curriculum and clinical activities. Table 3 reveals a summary of community risk areas identified and services to be provided by NMC.

Business Plan

A business plan is a management tool. It helps an organization identify financial goals and monitor setbacks (Torrisi-Hansen-Turton, 2005). The initial financial plan for the university NMC was completed paying close attention to the data from the needs assessments and the by-laws documents. This document contains the formal business description, organizational structure, market research, financial statement, SWOT (strengths, weaknesses, opportunities, threats) analysis and any necessary supporting documents (Table 4). With input from the Vice President of Finance and student services, a budget was developed (Table 5).

Year one financials for the NMC reflect the monies that are currently budgeted for contracted health services converted to use for the NMC. As faculty will be staffing the clinic as part of their teaching requirements, payroll for the contracted RN and APRN can be incorporated into clinic operations. Moines budgeted for supplies and overhead will remain for those items.

The small student health office was moved during a recent university renovation to a large area in the student center. The new clinic area was a pivotal piece in the planning of the project. This provides the capacity to serve many additional clients and has offices for staff as well as a small lab area (Table 5).

Evaluation Plan

Nurse managed clinics should have Quality Improvement (QI) plans in place. These should be used to assess patient and financial outcomes. QI programs should be developed using national benchmarks and evidence based guidelines. The Associates in Process Improvement (2008) formulated the PDSA (plan, do, study, act) formula for testing change. This plan will be used to evaluate the following questions 1) does the NMC have a positive impact on the health of the community 2) does the clinic model improve education opportunities for students 3) does the clinic model improve faculty practice? Data from QI activities will be collected and analyzed in order to implement the PDSA process.

For example, the evaluation plan addresses clinical measures for adolescent immunizations. A planned random chart review with a goal of 95% of adolescent patients having age appropriate immunizations will be conducted. This project would be assigned to RN students under the direction of faculty for credit in undergraduate population health classes.

Geriatric Case Management QI evaluation will also be conducted. Data will include measurement of the number of home visits for all older adults enrolled in clinic project. Safety and health assessments will be performed and medication reviews completed. All older adults should be linked to available community services. Evaluation of performance would be conducted via a formal peer review of records done quarterly under the direction of ARNP

faculty and ARNP students. Items reviewed will include number of assessments completed, number of referrals, hospital and emergency room visits and safety evaluations completed.

Phase Two Planning

With the initial planning phase of the nurse managed clinic completed, the next step in clinic development is a formal meeting of advisory board members. The agenda for the initial meeting includes identification/appointment of clinic personnel, approval of written policies/procedures, job descriptions and review of necessary licensure and regulatory regulations. Key documents to be approved include privacy documents, program evaluation plan and quality improvement procedures.

Conclusion

All goals for the initial phase of the clinic project were accomplished. Phase two planning is underway. Clearly, there is a call for expert nursing knowledge to be used in the provision of care to underserved populations. The NMC clinic model has demonstrated that quality care can be provided at NMC's. The services provided are patient-centered, expertly delivered and affordable. With the number of uninsured and underinsured at an all-time high and health care costs skyrocketing, an NMC provides a sensible and affordable part of the solution to these problems.

The Affordable Care Act has one overarching goal: making and keeping people healthier by providing high quality, cost-effective services that everyone can access. New models to deliver care - including provider teams, nurse-led health clinics, patient-centered medical homes, and Accountable Care Organizations will expand services and meet the health care needs of the nation (Advance Healthcare Network, 2013). Many visionary nurses throughout history have

seen the need for action and developed health care models that are holistic and responsive to the population at large. Nurse managed clinics are health care models that work.

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Table 1. Advisory Board Members

University	*Community*
VP of Finance-University	Head Start Program Director
ARNP Faculty	District Health Department Nurse Manager
Health Sciences Division Chair	ARNP Family Practice Clinic
Department of Social Work Chair	Neighborhood resident

Table 2. Needs Assessment-Campus

Major Risk Areas Identified	*NMC Service Identified-Responsibility*
Acute care/Urgent care	ARNP/RN Students & faculty
Diet/weight management	Educational classes-interdisciplinary team
Screening labs (thyroid, blood sugar)	Wellness Screens – Nursing students/faculty
Stress Reduction	Education/exercise-Interdisciplinary team
Complimentary Therapies (massage, herbal)	Education classes-Interdisciplinary team
Immunizations	ARNP/RN Students & faculty

Table 3. Community Health Needs Assessment

Major Risk Areas Identified	*NMC Service Identified-Responsibility*
Emergency room visits per year (4+/year)	Urgent care services & Chronic disease management program-ARNP/RN Students & faculty
High teen birth rates	Education classes & support groups-Interdisciplinary team
Sexually Transmitted Diseases	Education-Interdisciplinary team Assess & Treat-Cooperative program with ARNP program and District Health
Health & Wellness behaviors	Education classes & physical activities-Interdisciplinary team
Limited access to healthy food/high percent fast food restaurants	Education classes-community garden on campus-Interdisciplinary team

Table 4. SWOT Analysis

Strengths	*Weaknesses*	*Opportunities*	*Threats*
State regulations allow independent APRN practice	Lack of knowledge by community regarding services	Affordable Care Act may provide financial input	One urgent care and one in-store convenient care clinic located within 3 miles of campus
Existing client base	Minimal funding first year	NMC has community partners seeking affiliation	Acceptance from primary care providers
Interdisciplinary Care Team	Limited parking	University in in an underserved area	Regulations restricting APRN services
Excellent education resources	Coverage through summer	Chronic care program services can be co-sponsored by local hospitals	Initial patient volumes may be low
Low cost/free services			
Increased patient satisfaction			

Table 5. Budget Year One

Expenditures		*Revenue*
Supplies	10,000.00	Sports Physicals 7500.00 (300 x $25)
Postage	200.00	School Physicals 8750.00 (350 x $25)
Marketing/Printing	1,500.00	Immunizations-Admin fee 10.00 x 600 = $6,000. Will partner with district health for low cost/free vaccines when possible.
Salaries (From University Payroll) Budget as load hours for clinical education of students.	0	Urgent/episodic care services-free to students. Minimal charge of 10.00 for employees. 75visits x $10 = 750.00
Travel	1,000.00	Lab testing (strep, urine, etc.)-charge for both students and employees. $20.00 per test x 250 tests=$5,000.00
Insurance	3,000.00	
Year One Expenses	$13, 700.00	Year One Revenue $19,250.00