The Patient Protection and Affordable Care Act (ACA, 2010) will increase the U.S. Government’s role as a health care payer, through enhanced Medicaid and Medicare coverage to primary care providers (Abrams, Nuzum, Mika, & Lawlor, 2011). Developed to improve health care and reduce health disparities, the ACA identified nurse-managed health clinics (NMHC) as one of the initiatives to absorb the additional 32 million Americans covered by the extension of Medicaid and Medicare health insurance. The U.S. Department of Health and Human Services requested the Institute of Medicine (IOM) to review Healthy People 2020 and provide a conceptual framework of the proposed Healthy People agenda (IOM, 2010). The committee’s report, “Leading Health Indicators of Healthy People 2020,” defined a health trajectory representing cumulative effects of risk factors throughout life (U.S. Department of Health and Human Services, 2014). Among the 24 objectives in the report, access to primary care, the reduction of coronary disease, obesity, depression, self-destructive behaviors, and substance abuse are of prime importance. The World Federation of Mental Health (2010) released a 64-page document titled “Mental Health and Chronic Physical Illness: The Need for Continued and Integrated Care.” The report is a collection of empirical evidence and summaries that correlate mental health and the four major chronic illnesses: cardiovascular disease, diabetes, cancer, and respiratory diseases. The conclusion is a need for integrated health care that provides mental health within primary health care clinics.

It is imperative advanced practice registered nurses (APRNs) work to the fullest extent of their education and training (IOM, 2010) to help alleviate the workforce shortage. Further investigation of this model is needed, especially the financial structure that will sustain it. The overall goal of this study is to analyze the barriers that prevent financial sustainability and the variables that provide stable funding sources in NMHCs that offer integrated primary care and mental health.

Literature Review

In the literature review of different models of nurse-managed, nurse-managed, integrated clinics offer access, affordability, and quality to the health care environment.

The integration of mental health and primary care is a holistic, comprehensive model that addresses the complicated needs of those with mental illness.

As nurses increase their education in leadership, financial management, and business, there is a correlating increase in the number of nurse-managed clinics.

More research is needed to determine the financial structures that benefit sustainability of nurse-managed, integrated clinics.

However, in an integrated review of the literature between 2000 and 2012, the data indicate nurse-managed health centers receive less federal financial support than the medically modeled federally qualified health center.
integrated clinics, few studies have analyzed the process toward financial sustainability. The Cochrane Library and the Joanna Briggs Institute revealed no systematic reviews found for NMHCs. It is inferred that NMHCs, defined in the ACA (2010), have developed too recently to be researched systematically.

Only three articles were found using search terms of integrated, nurse-managed center or clinic, searching the databases of EBSCO host, CINAHL, Psychology and Behavioral Sciences, and Health Source Nursing/Academic Edition. When integrated and nurse-managed clinic were searched separately, the same databases yielded 80 articles from peer-reviewed journals. Fifty-eight of these were excluded as there was no focus on financial sustainability; 17 were excluded due to the focus on systems and policies; nine were excluded due to academic funding with an educational focus. In the third search, integrated care, integrated delivery, and integrated clinic yielded 54 articles. Forty-four of these were excluded to maintain the focus of financial sustainability and the remaining were excluded as there was no interprofessional delineation.

In addition to these searches, two websites were used: the Milbank Memorial Fund and the National Nurse Center Consortium. The Milbank Fund financed an extensive review of integrated care evolving across the country (Collins, Hewson, Munger, & Wade, 2010). Integrated care models in the United States were identified and examined, the difference between collaborative care and total integration were examined, and 20 systems demonstrating integration along a continuum were cited. The goal of the Milbank study is to guide policymakers in the development of a health care system that improves quality, accessibility, and manages costs by redesigning primary care to be inclusive of mental health care. Three studies were selected from this source; 17 were excluded for lack of financial focus.

The second website reviewed was the National Nurse Center Consortium (NNCC). The NNCC’s mission is to increase visibility, capacity, and sustainability of NMHCs to provide quality health care to vulnerable populations (Hansen-Turton & Kinsey, 2001). Through the NNCC, 85 peer-reviewed articles were found. Seventy-one were excluded as there was insignificant financial analysis; 11 were excluded as the focus was policy and contracting; leaving three that are used in the review (see Table 1).

The review of articles from the NNCC website suggested four separate funding sources to guide the study: (a) affiliated with a university; (b) federally qualified health centers (FQHC); (c) grant funded as a NMHC, according to the definition in the ACA; and (d) combination of grant funding and fee-for-service (see Table 2).

<table>
<thead>
<tr>
<th>Number Found</th>
<th>Search Terms</th>
<th>Reason of Exclusion</th>
<th>Number Used in Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Nurse managed</td>
<td>No financial analysis (54)</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Integrated and nurse managed</td>
<td>System or policy focus (17)</td>
<td>3</td>
</tr>
<tr>
<td>85</td>
<td>National Nurse Center Consortium</td>
<td>No financial analysis (71)</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>Milbank Fund study of integrated centers</td>
<td>No financial analysis (17)</td>
<td>3</td>
</tr>
</tbody>
</table>

Concept Development: Integrated Care

Historically, integrated care is a term introduced with (a) the influx of health maintenance organizations for cost containment, (b) Kaiser Permanente to improve care quality and collaboration, and (c) the Veterans Administration to increase accessibility of care for veterans. Additional knowledge to the field has been supported by the John A. Hartford Foundation, the John D. and Catherine T. MacArthur Foundation, the Robert Wood Johnson Foundation, and the Hogg Foundation for Mental Health (Collins et al., 2010). In the integrated care model, the patient and provider consider biological, psychological, social, and spiritual aspects of life, rather than just the disease. The conversation consists of both treatment and prevention, including diet, exercise, stress management, emotional well-being, and socio-environmental factors (Mauer & Druss, 2010). Blount (2003) concludes that the major factor impeding integrated care models is the...
current reimbursement system, which undervalues primary care and preventive counseling services and overvalues procedure-intensive specialty care.

The ACA refers to integrated care as a model to reduce cost, improve quality, and increase accessibility. Increased need for comprehensive, integrated care is also needed for the population with persistent mental illness (PMI). The increased mortality rate of those suffering from PMI, an average reduction of 25 years, is not directly accounted for by the mental illness (Colton & Manderscheid, 2006). Instead, it reflects the inability of that population to obtain health care and/or the inability to manage chronic diseases like chronic obstructive pulmonary disease, diabetes, and cardiovascular disease effectively.

**Concept Development: Nurse-Managed Clinic**

The concept of NMHCs originated with public health nursing in England in the 1850s. With the Protestant Reformation, the Catholic Church and many of its charities lost funding and dissolved. With the loss of major Catholic orders that had provided care for the indigent, sick, and injured, NMHCs filled the gap (Donahue, 1985). The concept of the community public health nurse in this country developed from hospitals not being accessible to the poor (Donahue, 1985). Although health systems today are greatly improved from the 1800s, we continue to face inaccessibility to health care in underserved areas. Today, the NMHCs, operating within and funded by the public health system, focus on health education, environment, immunization, prevention, and trends of health within that community. A similar focus can be implemented today in freestanding NMHCs, which will complement the public health system (Ferrari & Rideout, 2005).

The continued history of NMHCs followed the expansion of anesthesia, midwifery, and psychiatric nursing to meet the needs of rapid growth in the health care system and a shortage of these providers, especially in underserved areas. Nursing education responded to the shortage with academic preparation of clinical nurse specialists and nurse practitioners serving specialty populations, often outside of the hospitals (Oros, Johantgen, Antol, Heller, & Ravella, 2001). The development of NMHCs, supported by universities as a service to the community, first appeared in the academic settings. The focus of the academic nursing clinic is twofold: (a) supplying clinical sites for nursing students of that specialty, and (b) providing treatment to underserved populations (Tanner, Pohl, Ward, & Dontje, 2003). These academic affiliates are often grant funded and/or receive supportive assistance from the university.

The educational levels, health regulatory policies, and funding streams have changed dramatically in 150 years, as notably seen in the present health care environment. Today, many APRNs, graduate and doctorate prepared, continue to provide care within the community settings, either academically affiliated or freestanding. In the present academic environments, APRNs are exposed to more business management skills and financial awareness. Although non-uniformity of state licensing standards encumbers practice, nurses are serving, managing, and owning clinics, especially in underserved areas (Hansen-Turton & Kinsey, 2001). The focus of care in NMHCs is wellness promotion, disease prevention, and management of chronic conditions within that community. Many clinics manage those with chronic mental illness and offer health education to reduce chronic cardiovascular, respiratory, and metabolic diseases of obesity and diabetes (Hansen-Turton, Baily, Torres, & Ritter, 2010).

The development of NMHCs reflects the continual adaptation to meet the needs of populations and to operate in rapidly changing health care economies. Today’s NMHCs are fueled and funded by the ACA (2010), encouraged by the IOM (2010), and are advanced by lobbying activity of advanced practice nursing organizations. The conceptual framework of this study combines two concepts: nurse managed and integrated health care, focusing on the funding streams, in an effort to understand the process of obtaining financial sustainability for freestanding, nurse-managed, integrated health care.

**Conceptual Framework**

The conceptual framework of this study was developed by reviewing the literature on nurse-managed clinics and integrated care, determining the need for both, and imagining an area where the two concepts are congruent (see Figure 1).

The data found from the literature representing the congruence of nurse-managed and integrated care is then divided, as suggested by the NNCC, into four major groups: (a) academic affiliated, (b) federally qualified health centers, (c) blended income from grants and service-based reimbursement, and (d) nurse-managed health centers funded through the ACA. The defined groups in Table 2 are not finite. Many clinics researched are in transition, moving toward a reimbursement and financial structure that is sustainable. The choice of articles used for this study, extracted from the complete literature search, is based on those studies that presented the most data of financial structure and evidence of financial sustainability.

Nine articles are reviewed and analyzed (see Table 3). They vary in types of designs including descriptive, case studies, expert opinion, qualitative, and quantitative research. Lacking the strength of empirical studies, it is difficult...
Nurse-Managed Clinics: Barriers and Benefits Toward Financial Sustainability when Integrating Primary Care and Mental Health

Figure 1. Conceptual Diagram: Options for Financial Sustainability

- Academic Affiliation
- FQHC Grant Funded
- Blended: Fee for Service and Grants
- NMHC Grant Funded

Main Categories of Collected Data:
- Design, Level of Evidence, Sample
- Main Characteristics of Center
- Reimbursement Sources, Ratios
- Indications of Financial Stability

Identify Themes or Repetitive Patterns

Resynthesize the Data into Logical Conclusions
Sustainability when Integrating Primary Care and Mental Health

Nardi (2011)
Collins (2009)
Walker &
Evans  (2011)
Thorson, &
Haack,
Valleley,
Meadows,

Study, Date
Meadows, Valleley, Haack, Thorson, & Evans (2011)
Walker & Collins (2009)
Nardi (2011)

Primary Study, Date
Cross-sectional study; quantitative; Level IV; N=228
Noncomparative descriptive study. A pilot study was completed to test the effects of integrating mental health with primary care.
Noncomparative descriptive study, level IV. The integrated clinic described served 7,200 clients over 5 years. Although the study is well referenced by experts in the field, there is a political statement being made, which is often interpreted as a bias in the

Design, Level of Evidence, and Sample
Examine time spent and resulting reimbursement for behavioral health services as opposed to medical services in a pediatric clinic. Clinic staffed by three pediatrics and a behavioral health outreach clinic staffed with faculty, post-doctoral, and pre-doctoral candidates from a university medical school, department of psychiatry. For this study, only the primary care physicians participated. The structure of this clinic resembled the “basic on-site” collaboration continuum.
Description of strategies that providers can use to move to a higher level of integration; based on the impact of a primary care clinic including mental health specialists. The structure of this pilot program resembled the “basic on-site” collaboration continuum.
University of St, Frances Health & Wellness Center (HWC) operates three sites: a domestic violence shelter, the main clinic, and a student outreach center for the university’s students. It serves as a practicum for nurses, LCSWs, and psychologists, offering primary care, mental health, and prescription assistance. Most frequent diagnoses are diabetes mellitus, hypertension, Originaly funded by a HRSA grant, but accepting third-party reimbursement for services of licensed professionals (APRN, psychologist, LCSW). The ratio of payment is: 5% derived from private insurance, 10% from Medicare, 13% for cash payment, 72% from Illinois. There was no indication in the article of how these ratios may be adjusted to provide more profitability; current studies are beginning to show how ratios of payment sources predict profitability and are established in business plans.

Major Characteristics of Study
Medical and behavioral visits were coded on CPT codes with corresponding rates as defined by insurance companies. Medical visits were coded on ICD codes with the corresponding rates; medical/behavioral visits were coded with both DSM and ICD codes. Reimbursement rates were divided by minutes spent during the visit and calculated for the entire visit.
Developmental steps taken: identifying potential collaborators, engaging entire staff in a pilot study, and allowing staff to set reasonable goals. Clinical, administrative, and financial changes were studied for 2 years. A psychologist was invited to the primary care physician’s office 1 day/week. No sharing of charts or reimbursement for services occurred during the pilot study. Percentages of patient population and diagnoses most commonly encountered were collected to determine if financial sustainability could be achieved. The study did not include those possibilities.

Reimbursement/Funding Sources
Medical and behavioral minute (M=$4.36, SD=$1.97); blended minute (M=$5.86, SD=$2.93); behavioral visit (M=$96.08, SD=97.02); blended visit (M=$18.00, SD=$18.02); behavioral minute (M=$4.36, SD=$1.97); blended minute (M=$8.46, SD=$2.93). Discussion: pediatricians lost reimbursement by treating behavioral health and medical problems in that it required more time at a lesser rate.

Results
One-way ANOVA revealed significant difference between medical, behavioral, and blended visits (M=118.92, SD=97.02); behavioral visit (M=78.74, SD=35.82); blended visit (M=86.08, SD=65.88). When the reimbursement per minute was calculated: medical minute (M=$18.00, SD=$18.02); behavioral minute (M=$4.36, SD=$1.97); blended minute (M=$5.86, SD=$2). There was an increase in the number of referrals to a mental health specialist. Utilization improved with increased follow-through for appointments and adherence. The mental health specialist realized a financial gain. There were no quality measurements; however, it was assumed patients benefited from having prescriptions written collaboratively for medical and psychological purposes. The patients and the physicians adopted a biopsychosocial model of well-being. It offered excellent training for students from the university to gain insight of integrated models and team collaboration.

Reimbursements for APRNs are not fully reimbursable; HWC cannot be considered a medical home (has to be a physician led); 3-month waiting list for mental health services; the safer mood stabilizers may cost $300-$500/month and are not always provided by pharmacologic companies; in the attempt to be a universal provider, and accepting patients regardless of the ability to pay, many of the patients were chronically mentally ill. Although APNs provided integrated primary care, they were not fully reimbursable, recognized by all insurance companies, and restricted by collaborative relationships.
Table 3. (continued)
Nine Analyzed and Reviewed Articles

<table>
<thead>
<tr>
<th>Primary Study, Date</th>
<th>Design, Level of Evidence, and Sample</th>
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<th>Reimbursement/Funding Sources</th>
<th>Results</th>
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<tr>
<td>Nardi (2011) (continued)</td>
<td>findings. Although the findings have internal validity, the conclusions and generalizability have limitations.</td>
<td>sexually transmitted diseases, hyperlipidemia, obesity, and chronic pain; however, 36% were suffering from depression, 13.35% bipolar disorders, 11.4% substance abuse, and 4.4% post-traumatic stress disorder.</td>
<td></td>
<td>with psychiatrists who were not available for collaboration. Suggestions made: Substantial financial support is needed from grants; APRNs need full reimbursement; and partnerships between public mental health, free clinics, and health care structures already in place in order for this model to be financially sustainable. Nursing organizations enlist legal counsel to explore class action suit to end forced regulation of APRN practice by another profession and the strong lobbying position of the American Medical Association with legislators. It is time to end the monopoly of medicine on the business of health care.</td>
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<tr>
<td>McDevitt, Braun, Noyes, Snyder, &amp; Marion (2005)</td>
<td>Noncomparative, descriptive analysis of a nurse-managed integrated primary and mental health clinic. The study is longitudinal over 6 years with percentages of diagnoses, FTEs of staff, ratios of visits, and visit complexity. Length of time for each visit is correlated with FTEs for a cost basis. Funding streams are defined indicating a transition from academic to grant funding, to fee-for-service, to FQHC with financial sustainability.</td>
<td>The Center for Integrated Health is an academic, nurse-managed center of the University of Illinois College of Nursing, serving those with SPMI. It includes sites for adults at a vocational rehabilitative center, adolescents and young adults at an alternative education center, and a 2-day clinic to serve mothers with SPMI and their babies. Partners in the service are Thresholds Psychiatric Rehab Center, University of Illinois Department of Family Medicine and School of Nursing. Nutritionist was provided by the U.S. Department of Agriculture. Significant grant funding by HRSA to the school of nursing ($1.2 million) over the first 3 years supplied 80% of costs. The remaining came from Medicaid and Medicare, standard rate. Four years after inception, the clinic partnered with a FQHC and began receiving an enhanced payment rate from Medicaid and Medicare, enabling the reimbursement to pay for 74% of the expenses. This is an important change toward financial sustainability; now needing only 13% of its funding from grants/gifts. An area of management including patient volume, ratios, productivity, and efficiency affects sustainability. In the first 2 years, mental health visits are given 45-50 minutes and were then reduced to 20-30 minutes to improve efficiency. More billable hours resulted. To increase efficiency, the level 1 primary care visit may be managed by an RN and a few minutes with the APRN, allowing the APRN to focus time with the level 3 and 4 visits. Diagnoses treated: schizophrenia (48%), mood disorders (35%), SPMI, co-morbidities (31%). Demographics of age, race, and employment indicated ages between 20 and 59; 59% were male; 43% were White and 50% were minorities; 72% were single or never married; and only 15% were fully employed. Over 80% of FTEs were family nurse practitioners delivering primary care; 18% of FTEs were psychiatric clinical nurse specialists. These percentages paralleled the type of visits: 80% were for primary care and 18% were for mental health. There is also a goal to disseminate the knowledge of the nurse-managed health care clinic, while improving performance and sustainability. The population of SPMI requires more frequent visits related to cognitive and motivation deficits. By embedding primary care in a mental health program, individuals with SPMI were provided access to care.</td>
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Table 3. (continued)
Nine Analyzed and Reviewed Articles

<table>
<thead>
<tr>
<th>Primary Study, Date</th>
<th>Design, Level of Evidence, and Sample</th>
<th>Major Characteristics of Study</th>
<th>Reimbursement/Funding Sources</th>
<th>Results</th>
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<tbody>
<tr>
<td>Sefton, Brigell, Yingling, &amp; Storfjell (2011)</td>
<td>Noncomparative, descriptive study investigating common compliance issues with FQHC regulations.</td>
<td>Integrated Health Care (IHC) transitioned from a nurse-managed, academic affiliated, center to a FQHC. Revenue generated did not cover expenses of providing the service and grant funding decreased from 80% to 44%. Insurance revenue accounted for only 19%. The physical space was not great enough to manage the population served.</td>
<td>Criteria to meet eligibility of FQHC status: treat medically underserved; community partners; board of directors must be from that community and 50% are consumers; open 24/7; services offered regardless of ability to pay; offer primary care over the lifespan by a physician. IHC entered a partnership with another area FQHC which was mutually beneficial in meeting the criteria. The study identified unforeseen expenses, including structural upgrades, marketing consultation, and a new EMR system. It required 2 years to complete the transition. The benefit is enhanced reimbursement for services for Medicaid/Medicare patients, related to the cost of providing that service in the particular geographic location. Increased revenue is also generated by the uninsured patients and the enhanced rates. No difference in the reimbursement rate of physicians and NPs.</td>
<td>The clinic achieved financial sustainability and continued to serve the clients from low socioeconomic status with persistent mental illness. The patients were treated holistically and comprehensively.</td>
</tr>
<tr>
<td>Pohl, Tanner, Pilon, &amp; Benkert (2011)</td>
<td>Comparative design using surveys over 4 years of data collection from NMHCs and data collected from the national data system of FQHCs. Purpose was to compare demographics and financial status of NMHCs and FQHCs.</td>
<td>Two types of health centers are defined: NMHC (N=42), largely funded by grants, gifts, private and academic contracts; and FQHC (N=1080), funded by Section 330 of the Public Health Service Act.</td>
<td>Patients served, models of care, payer mix were similar for NMHC and FQHC. Revenue differences were substantial as enhanced Medicaid reimbursement was not available to NMHCs. FQHCs are also eligible for “expanded medical, dental, pharmaceutical, or behavioral capacity grants” not afforded to NMHCs. NMHCs are eligible for HRSA grants at a far-reduced amount ($200,000/year x 3 years). NPs are reimbursed at a lesser rate and often have to pay their liability insurance and collaborative agreements with physicians.</td>
<td>Universities and schools of nursing act as federal government surrogates for NMHCs. NMHCs must be eligible for renewable grants, rather than recommendation to seek FQHC status. Academic affiliation often contradicts the eligibility necessary for FQHCs. NMHCs need access to prospective payment systems (enhanced reimbursement), EMR incentive payments, and access to pharmacy programs. A uniform scope of practice act for APRNs would allow contracting with insurance panels that were more equitable. Otherwise, many NMHCs will fail.</td>
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### Table 3. (continued)

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<tr>
<th>Primary Study, Date</th>
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<th>Major Characteristics of Study</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mims (2006)</td>
<td>Noncomparative, descriptive study defining sources of funding, quality outcomes, and projected savings of integrating mental health and primary care. The practice provided 85% of care to low-income residents of a county. Projected annual number is 5,000 residents; 1,663 served for mental illness; 2,272 psychotropic medications prescribed. A business plan is developed to define the clinical integration, analyze populations and rates of mental illness, project personnel and expenses, and develop arguments for state and local stakeholders to finance the project after the grant monies are depleted. The pilot study was funded by the Duke Endowment, a HRSA grant, and Robert Wood Johnson Foundation. Additional staff included a program manager, half-time psychiatrist and pharmacist, and four psychiatrists. Clinicians: 3.75 therapists in the schools, one therapist in the jail, and two office managers. Staff and space costs were $849,439. Revenue projected in the first year: $404,307 fee-for-service, $105,353 state, $170,000 county, $95,000 local hospital and other sources totalling $880,728, which indicates financial sustainability with presented ratios of providers/patients/encounter intensity. In 2005, 2,177 clients sought mental health services which amounted to 7,394 encounters; 45% were face-to-face therapy sessions and 20% were telephone follow-ups. Clinical outcomes over 8 months showed a decline in levels of depression, rising functional levels, and fewer days missed from school or work.</td>
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<td>Storfjell et al. (2008)</td>
<td>Noncomparative, descriptive, plan to increase integrated health care in a nurse-managed center, supported by the College of Nursing, University of Illinois. A care delivery model was developed to include house calls, group visits defined by a disease/ disorder, and telemonitoring for the homebound and socially isolated (Integrated Health Care Without Walls). These services are added to a FQHC, established in 2007. Key concepts are integrated care, transdisciplinary collaboration, continuum of care, and APRN interventions. No percentages were stated; however, the clinics receive fee-for-service (enhanced), university funding, HRSA, private foundation grants, and fundraising. It is projected to be sustainable, without grant funding as the new services increase volume, reduce costs, and higher reimbursement for services. Clinical outcomes and cost analysis will be evaluated after 12 months of service: 75% of those with diabetes will reduce HbA1c by 1%; 75% of obese clients will reduce their weight by 3%; 75% of those with hypertension will have a 5 point decrease in low-density lipoprotein; 75% of those with hyperlipidemia will have blood pressure less than 140/90 mg Hg; those with SPMI will increase socialization.</td>
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<tr>
<td>Pohl, Vonderheid, Barbauskas, &amp; Nagerikerk (2004)</td>
<td>Descriptive, retrospective study of four schools of nursing in Michigan and their service in NMCs, as compared to CHCs; patient mix and funding are important issues in sustainability. Since both academic NMC and CHC are part of the public safety net for vulnerable populations, the funding and patient mix were studied. NMC funding: 48% third-party reimbursement, 32% grants, 18% university cash plus. CHC funding: 54% third-party reimbursement, 17% grants, 22% bureau of public health. The patient mix was similar for both NMC and CHC, with the majority of care being covered with private, Medicaid, and Medicare insurance. The uninsured rate was 26% for the NMC and 39% for the CHC. The financial support from universities to NMCs has been a substitute for the federal funding offered to the CHCs. Both are important in the safety net care provision. Limitations noted are: university contributions have been decreasing since 2001; NPs serving in NMC are often denied enhanced capitation; NPs are often denied credentialing as primary care providers.</td>
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**NOTES:**

APRN = advanced practice registered nurse, CHC = community health center, CPT = current procedural terminology, DSM - Diagnostic and Statistical Manual of Mental Disorders, EMR = electronic medical record, FTE = full-time equivalent, FQHC = federally qualified health center, HRSA = Health Resources and Services Administration, ICD = International Classification of Diseases, LCSW = licensed clinical social worker, NMC = nurse-managed center, NMHC = nurse-managed health center, NP = nurse practitioner, SPMI = serious and persistent mental illness.
to draw conclusive arguments, but new practice models that can reach financial stability need to be investigated to remain current in the rapidly changing health care environment. The question is: “What various kinds of funding streams promote financial sustainability and what trends are seen that may prevent balancing expenses and income?” The next step, as illustrated in Table 4, is to organize the collected data into categories to answer the research question.

**Findings**

In integrated reviews of literature, themes and repetitive patterns are identified from the studies selected and resynthesized into logical conclusions. Repetitive themes are (a) the degree with which the clinic is integrated in primary care and mental health; (b) the population served; (c) the mission of the clinic; (d) the staff required to provide services; (e) the amount of reimbursement received for services; (f) whether the procedures are coded on the Current Procedural Terminology (CPT), International Statistical Classification of Diseases and Related Health Problems (ICD), or Diagnostic and Statistical Manual of Mental Disorders (DSM) standards; (g) the financial structure of the clinic (FQHC, NMHC, academic affiliate, or transitioning); (h) and the ratio of private insurance, public insurance, private pay, or no insurance. All of these themes are important in determining financial sustainability.

In studies by Meadows, Valleley, Haack, Thorson, and Evans (2011) and Walker and Collins (2009), the degree of integration that was attained by the clinics impacted the amount of revenue. In both of these studies, mental health services were provided on-site along with primary care, but by another specialist with a separate billing, reimbursement, and revenue system. In both studies, the possibility of a fully integrated clinic was investigated and the strengths and weaknesses were determined. The difference between the CPT and corresponding DSM IV for diagnosing mental illness and ICD codes, which are used for diagnosing medical disorders, is difficult to totally integrate. The revenue generated from the mental health codes is far less per unit of time. For example, a 15-minute visit with a family nurse practitioner with a diagnosis of fractured tibia may generate three procedures: assess/diagnose, x-ray, splint or cast, along with a prescription and a followup visit. Revenue generated would be 10 times that of a 45-minute counseling session where the patient was deemed incapable of caring for self and required a referral to case management of the living situation.

Another repetitive theme in the studies was the mission of the clinic and the populations served. There was an accepted need to serve the marginalized, underserved population of the mentally ill and to serve them regardless of the ability to pay. The means of financing the care for the uninsured population varied and is a continual problem today. The NMHCs could marginally maintain financial integrity and cover the indigent population with substantial revenue from the academic affiliations and HRSA grants. The mission of the university to serve that community of marginalized persons and use the clinic for clinical sites was an integral part of the clinic’s ability to be financially stable. The threat, as mentioned by Pohl, Vonderheid, Babauskas, and Nagerkerk (2004) is that there has been a decline in contributions from universities since 2001.

Other evidence that is important to the understanding of integrating care is found in work of McDevitt, Braun, Noyes, Snyder, and Marion (2005). The percentages of primary care visits compared to that of mental health visits is a determinant of financial balance, as the reimbursement rates of the full-time equivalents vary depending on the population served. In that particular pilot study, the ratio noted was 80% primary care to 20% mental health care, being a ratio of financial balance. This 8:2 ratio is not reflective of the national population that suggests comorbidities of mental disorders and physical disease ranging from 50%-70%. It is certainly another argument for holistic, integrated care offered by an interdisciplinary team with adequate reimbursement to care for vulnerable populations.

Both studies that describe the difference between NMHC and FQHC are important evidence in the effort to understand financial sustainability of integrated clinics (Pohl, Tanner, Pilon, & Benkert, 2011; Selfon, Brigell, Yingling, & Storfjell, 2011). The financial reasons for NMHCs to convert to FQHCs are stated as declining revenue from grants, declining contracts with affiliated academies, and the inferred rationale universities are no longer accepting the role of community service. The latter inference would have to be substantiated with more study, but has been a trend since the economic recession.
The study comparing the grant funding that is available to FQHCs as opposed to substantially less grant funding for NMHCs demonstrates another barrier for financial sustainability of NMHC. The FQHCs, which are physician dependent by definition, receive federal funding streams that are renewable and can generate additional funds with every added service (e.g., dental, pharmacy, electronic medical records, optometry). The conversion to a FQHC of a NMHC that is affiliated with a university is often impossible, as the board of directors of a FQHC cannot be a university board, but instead must be comprised of 50% consumers of the clinic. In summary, if the NMHCs contribute quality care to the underserved areas and marginalized populations, there must be significant policy changes at the federal, state, and local levels that will enhance financial sustainability.

Conclusion

Nurse-managed, integrated clinics offer access, affordability, and quality to the health care environment. The nursing profession has been challenged to meet the health needs of an additional 32 million Americans by functioning at the highest level of their education and scope of practice. The integration of mental health and primary care is a holistic, comprehensive model that addresses the complicated needs of those with mental illness. Advanced practice nursing, as practiced in the NMHC, can improve quality outcomes, reduce hospitalization, and reduce the cost of managing those with comorbid mental illness, cardiovascular disease, diabetes, and respiratory diseases.

As nurses increase their education in leadership, financial management, and business, there is a correlating increase in the number of nurse-managed clinics. However, the financial viability of the NMHC has decreased in recent years, simultaneously as federal legislation has improved financial security of FQHCs. The eligibility for federal funding is more restrictive for NMHC and less lucrative. This study substantiates those barriers and benefits and hopes to contribute to the evidence for integrated, nurse-managed centers and the policies that benefit their financial sustainability.

REFERENCES


