Building a Sustainable Nurse-Managed Clinic System through Faculty Practice and Technology Integration

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UT Nursing Clinical Enterprise Mission:

Consistent With Systems Approach

Health Home Model

- Integrate research/discovery, teaching/learning, and practice/engagement and policy to enhance the well-being of the local to global community
- Emphasize best practice and education that is evidence-based
- Provide excellent learning experiences for our students while serving our community
- Ensure accessible, continuous, compassionate, coordinated and culturally proficient care

UT School of Nursing Clinical Enterprise – Base of Operations

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Nurse-Managed Clinics

Over the past 40 years, academic nursing centers have been developing, implementing, and evaluating alternatives to the failing, mismanaged U.S. health care delivery system.

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Purpose

- Design an integrated, innovative, accessible, high quality, patient and family-centered sustainable model of Nurse-led care

- Create learning, research, and practice collaboratories for nursing and other students and faculty in the Health Science disciplines

- Provide excellent learning experiences for our students while building and sustaining our university community partnerships

Nurse-Managed Clinic Innovations

- Electronic Health Records – GE Centricity (Indiana), EPIC (UTHSC San Antonio)
- Clinic Design
- Cost and Value Analysis
- Population Management
- Rural and Urban health care Delivery
- Medication Reconciliation and Safety
- Continuous Quality Improvement
- Public Health Quality Improvement
- Simulation in Primary Care

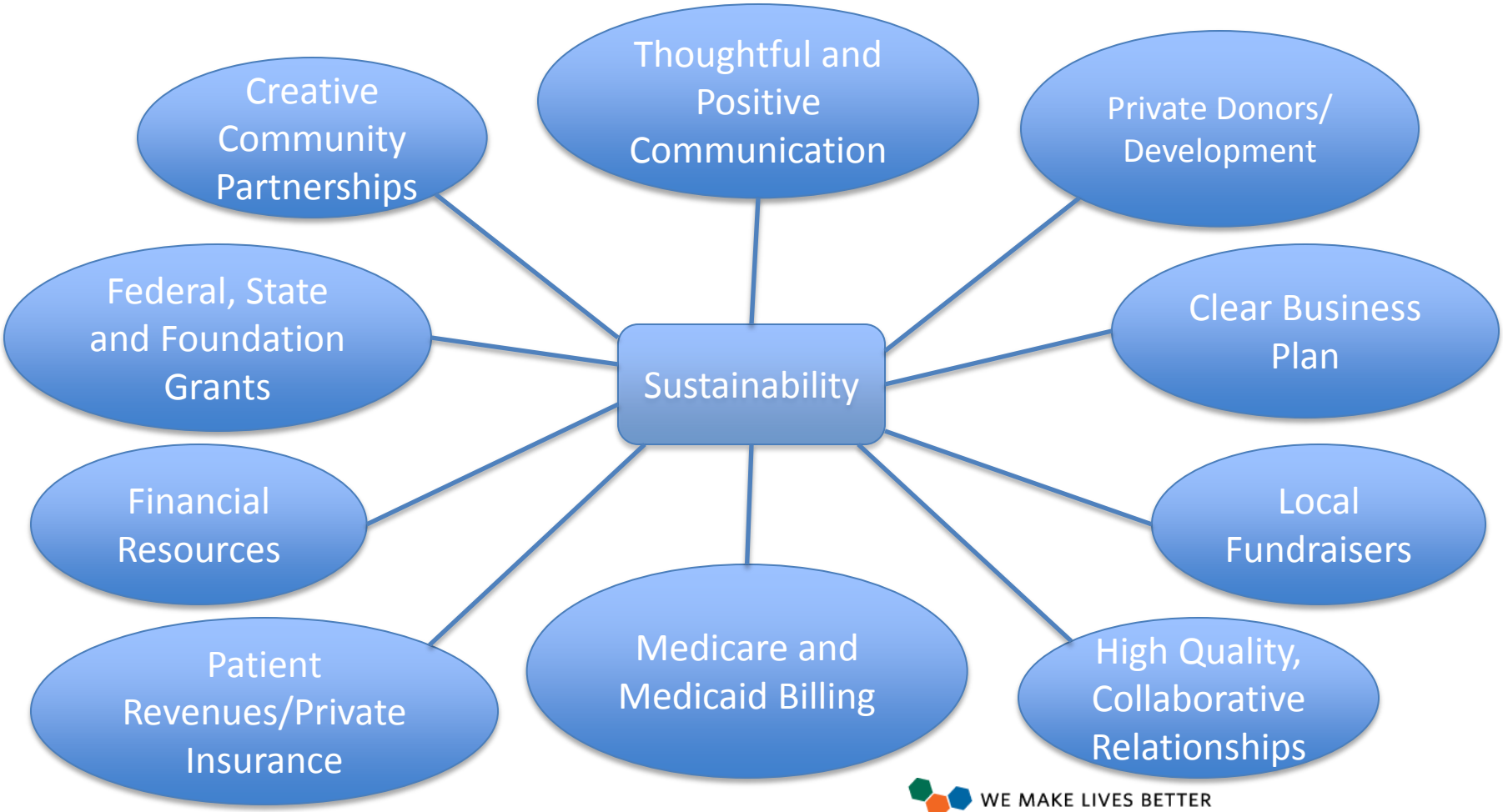
Performance Outcome Measures

- Evidence-based, Value-driven Care
- Patient Safety
- Quality of Care
- Cost
- Patient Satisfaction
- EHR
- Self-care Support and Community Resources
- Developmental Outcomes
- Care Coordination and Tracking
- ER Diversion
- Patient Flow/Wait times
- Needlesticks
- TB Surveillance
- Referral for Hospitalization

Key Elements for Long-Term Sustainability

- Patient and Family Centered Model
- Integrated model of discovery, learning, and engagement
- Diverse Financial Resources (Medicare/Medicaid, private insurance, donors, federal state and foundation funding)
- Human Resources (Critical)
- Administrative and faculty support
- Quality, collaborative relationships
- Thoughtful and positive communication
- Clear business plan
- Creative broad partnerships: Communities, industries, and multiple disciplines

Sustainability: Building a Mosaic of Support



Patient-Centered Medical Home

The patient-centered medical home (PCMH) includes:

1) the fundamental tenets of primary care: first contact access, comprehensiveness, integration/coordination, relationships involving sustained partnership;
2) new ways of organizing practice;
3) development of practices' internal capabilities;
4) related health care system and reimbursement changes.

All of these are focused on improving the health of whole people, families, communities and populations, and on increasing the value of health care.

Jaen C, et al. 2010

PCMH VALUES

The value of the fundamental tenets of primary care is well established. This value includes:

- Higher health care quality, better whole-person and population health, lower cost and reduced inequalities compared to health care systems not based on primary care.

- The needed practice organizational and health care system change aspects of the PCMH are still evolving in highly related ways.

- The PCMH will continue to evolve as evidence comes in from hundreds of demonstrations and experiments ongoing around the country, and as the local and larger health care systems change.

Jaen C, et al. 2010

PCMH MEASURES

Measuring the PCMH involves the following:

- Giving primacy to the core tenets of primary care
- Assessing practice and system changes that are hypothesized to provide added value
- Assessing development of practices' core processes and adaptive reserve
- Assessing integration with more functional health care system and community resources

Jaen C, et al. 2010

PCMH Evaluation

- The PCMH, like primary care, is worthy of support, evaluation and evolution as a fundamental building block for a high-value health care system.

- In these efforts, it will be important to recognize the complex interactions of the PCMH at multiple levels, so that a narrow and short-term focus does not scuttle the potentially transformative nature of the PCMH before it has had a chance to make good upon its promise.

Jaen C, et al. 2010

The Health Home

- **A Health Home is:** "A systemic approach to provide comprehensive primary care that facilitates partnerships between individual patients, and their personal providers, and when appropriate, the patient's family."

- **Purpose of Health Home:**
  1. Improve access to and continuity of health care
  2. Reduce health disparities among the underserved communities
  3. Increase the utilization of preventive screenings
  4. Increase participation in age-appropriate vaccinations
  5. Reduce risk of preventable emergency rooms visit and/or hospitalizations
  6. Improve continuity of health care delivery that results in meaningful health improvement and reduce fragmented care

UTHSCSA Clinical Enterprise Staffing

- 10 Pediatric, Family, and Women's Health Nurse Practitioners/APNs
- All faculty and staff are cross-trained
- Two collaborating physicians review 10% of charts per Texas Law
- Available 24/7 for consultation
- Physicians spend 4hrs/month in consultation, case discussions, team meetings, and record review

Mark Nadeau, MD, FAAFP

Dennis Conrad, MD, FAAP

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UTHSCSA Student Health Center

2007 - School of Nursing assumed control

2009 – Expansion from 2 to 4 exam rooms and 2 to 9 NPs

Designated medically underserved population (MUP)

3,800 Health Science Center students:

- 10 Faculty Nurse Practitioners (PNPs, FNPs, Women's Health NPs)
- Advanced Practice Public Health/Occupational Health Nurse
- Psych/MH Clinical Nurse Specialists
- 1 BSN/MSN Case Manager
- Clinic/Billing Managers
- Business Administrator
- Project, Grants and Marketing Coordinator
- Medical Assistant
- Health Clerk

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Employee Health and Wellness Clinic

Staffing:

- 2 Faculty Nurse Practitioners
- Advanced Practice Nurse Public Health/Occupational Health
- Psych/MH/NP
- Collaborating Physician (24/7 consultation and chart review)
- BSN/RN
- Medical Assistant
- Clinic/Billing Manager
- Business Administrator
- Project, Grants and Marketing Coordinator
- Health Clerk

Services

***Student Health Center and Employee Health & Wellness Clinic*:**

- Primary Care
- Comprehensive Wellness and Health Promotion
- Behavioral health care
- Women's Health/Men's Health
- Immunizations
- STD Screening/Treatment
- Patient Survey with QR Code
- Smoking Cessation
- Healthy Weight Management
- Pediatric Evening Clinic for Children of HSC Students
- Acute Illness and Minor Injury
- Minor Occupational Injury Assessment/Treatment
- Chronic Disease Management
- *Quest Diagnostics* phlebotomist

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Child Health Evening Clinic
For Children of Health Science Center Students
to Support Community–based Health Homes
Fall 2012 Launch

Executive Director:
Julie Cowan Novak, DNSc, RN, MA, CPNP, FAANP
University of Texas Health Science Center San Antonio
School of Nursing
Professor and Vice Dean, Practice and Engagement
Executive Director, UT Nursing Clinical Enterprise

Staff:

- Lisa Cleveland, MSN, RN - Certified Pediatric Nurse Practitioner
- Rebecca Fenton, MSN, Pediatric CNS - Clinic RN
- Dr. Dennis Conrad, Collaborating Physician, UTHSCSA Department of Pediatrics

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Student Health Center

Top 7 Diagnoses

- Upper Respiratory Infection (sore throat, cold, sinusitis)
- Well Woman Exam
- STD Testing
- Mental Health issues
- Urinary Tract Infection
- Allergies/Asthma
- Immunizations and Titers

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SCHOOL OF NURSING
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EMPLOYEE HEALTH AND WELLNESS CLINIC

The Employee Health and Wellness Clinic

- Adjacent to Student Health Center
- Established November 15, 2010
- 6,000 employees
- 70% from underrepresented groups

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Employee Health and Wellness Clinic

Top 8 Diagnoses

- Mental health issues
- Upper Respiratory Infection (sore throat, cold, sinusitis)
- Well Woman Exam
- Diabetes
- Hypothyroidism
- Hypertension
- Coronary artery disease
- Hypercholesterolemia

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Community Outreach Projects Health Home Goals:

To develop an accessible high quality efficient and cost effective system of care that establishes:

a) A Health Home for all enrolled children.

b) Education and training for all professionals who work with these children and their families.

c) Ongoing data collection at existing health home sites and initiate data collection in new and developing sites.

d) Community Partnerships.

Principle of Health Home

- To identify and evaluate methods for expanding access to primary health care to Medicaid enrolled in local K-12 school districts.
- Provide health care for pre-kindergarten through first grade students (7,750 are Medicaid enrolled) at 58 elementary schools.
- 7 pods: Feeder schools to the 7 High Schools.
- Provide primary health care, dental and psychological behavioral health care and health education services for K-12 children enrolled in Texas Medicaid.

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Health Home Population

- Early Head Start and Head Start Federal Programs are required to perform health screenings on each enrolled child.
- A Health Home designation must be made for the enrolled child.
- Over 3,000 San Antonio children enrolled in Avance Early Head Start and Avance Head Start need screenings and Health Home confirmation.
- Second target population: 7,750 Pre-K through second grade children enrolled in the local Independent School Districts

Health Home Partnership

- UTHSCSA School of Nursing, Community Pediatrics, Dental School, Behavioral Health, and Sub-specialties
- City of San Antonio
- Mayor's Office
- Early Head Start / Head Start - Avance
- Healy Murphy Alternative High School and Child Care Center
- Local Independent School Districts
- Metro Health District – San Antonio Public Health Dept.

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Key Components

- **Texas Workforce Commission Training/Education**
  - Pediatric nursing faculty as educators
  - Training for child development staff/Bexar and surrounding county; 10 week certification course for childcare providers

- **Head Start**
  - Health Home
  - Statutorily required screenings
  - School nurses
  - Pediatric Nurse Practitioners
  - Interdisciplinary health care team
  - Model for the city, region, state and beyond
  - $5 million under review
  - Local Independent School Districts

School Nurses on Head Start and Elementary School Campuses

Triage - Screening - Health Promotion

Injury & Infectious Disease Prevention

Mental Health Team Partners

PNP or FNP Oversight – Head Start Health Home

Assessment-Intervention Plan-Evaluation

Avance , Healy Murphy, 10 Additional Sites

Community Pediatrics and other UTHSCSA Providers, e.g., Mental Health and Dental

Health Home Maintenance

•**Assessment** – Analyze Texas Health Steps data and determine if additional assessment, intervention, and referral needed

•**Intervention Plan** – Identification of target areas such as asthma, lead exposure, childhood obesity, diabetes, developmental delay, based upon Texas Health Steps data analysis

•**Education** -Provide health education regarding healthy lifestyle choices, injury and disease prevention and other focus areas presented by community members

•**Referral** – Refer children whose needs are beyond the scope of the Pediatric Nurse Practitioner to a UTHSCSA Collaborative Partner

•**Evaluation of intervention plan -** Ongoing

Health Home Sustainability

- Health Home:
  - ✓Create health home model
  - ✓Facilitate nursing, medical, psychiatric/mental health, developmental and dental care

- Intervention/Referral
  - ✓Determine need for additional intervention and referral
  - ✓Take appropriate action to meet psychosocial, psychoeducational, developmental and financial needs

- Environmental Assessment
  - ✓ Provide assessment of each Partner Head Start and elementary school campus in collaboration with Metro Health

- Care System Development
  - ✓Develop systems that promote quality care and safe, healthy environments for children and whenever possible, their families

Rich Educational Experiences:
DNP Projects Will Emphasize System Development

- APN/DNP students data collection and analysis
- Evaluation of evidence-based care
- Medication and other patient safety and quality improvement systems
- Optimal scheduling patterns, patient flow, and clinic design and sustainability
- Local to global health policy
- Lead Education Research Project
- Scope of Practice – IOM Future of Nursing Recommendations

Improving Lead Related Knowledge Among Health Care Providers in South Texas

Lisa Cleveland RN, MN, IBCLC, Andrea Berndt PhD, Victor German MD, PhD, & Anthony Scott PhD

Presented at the 35th Annual National Association for Hispanic Nurses' Conference in Washington DC

Purpose: To design and administer an inter-professional lead education program for San Antonio physicians and nurses and to compare pretest/posttest knowledge.

Background: Elevated lead levels in children are associated with cognitive deficiencies, learning disorders, and behavioral problems. Nationally, Hispanic children under 5 years of age have higher lead levels than non-Hispanic whites. One of the most common sources of lead exposure is deteriorating lead based paint and dust often found in homes built prior to 1978. Many of San Antonio's Hispanic children reside in neighborhoods with old housing. Due to these risk factors, it is essential that health care providers in San Antonio are knowledgeable about lead exposure and prevention.

Pre/Post-test Scores

	N	Pretest Mean (SD)	Posttest Mean (SD)	*P Value*
RN	259	6.66 (1.60)	8.23 (1.36)	<.001
Nurse Practitioner	23	6.78 (1.28)	8.78 (1.04)	<.001
OB/Gyn.	37	7.57 (1.30)	8.73 (.99)	<.001
Pediatrics	57	7.81 (1.43)	9.02 (.83)	<.001

Method: Physicians and nurses (N=448) responded to a 10 item lead knowledge pretest followed by a one-hour presentation focused on lead poisoning prevention. After the presentation, the 10 item posttest was administered . Open-ended questions were added to assess the most useful information and reactions to the presentation.

Results: While both nurses and physicians demonstrated significant increases in knowledge scores, the increase for nurses was almost double that observed in physicians.

Discussion: While all providers should be knowledgeable about lead, nurses are likely to perform the initial screening for lead related risk factors. Therefore, nurses must possess sufficient knowledge about lead exposure and prevention to ensure patient well-being.

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Funded by the Department of Housing and Urban Development

Opportunity for Growth

- EHR implementation grant funding resulting from the HITECH Act

- Federal USDHHS/HRSA grant received to support EHR – Health Home Linkage – “Go Live” 2011

- Comparative Effectiveness Research Funding from AHRQ

- Expansion of UTHSCSA interprofessional health care provider educational programs and associated opportunities for funding

Avance Community Partnership Clinic & Healy Murphy Alternative High School and Day Care Center

- Established relationships 2005, Early Head Start Clinic opened in 2007
- Patient, family-centered primary care health home
- Nurse-led model: PNPs, MA, Health Assistant, collaborating pediatrician from UTHSCSA Community Pediatrics
- PNPs provide pediatric primary health care to 600 children enrolled in the Avance Early Head Start program and Healy Murphy Day Care Center
- Targets vulnerable children and families
- Sites for faculty practice and integration of the mission
- 95% of population of Hispanic origin
- 50% of Healy Murphy high school students are pregnant or parenting
- Public Health, Senior Leadership, Capstone and PNP preceptorships
- Site for masters and doctoral research
- Interdisciplinary service learning projects

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Avance Community Partnership Clinic & Healy Murphy Alternative High School and Day Care Center

Services:

- Developmental assessment/ health promotion/disease prevention
- Parent coaching/counseling
- Behavioral health care
- Acute illness diagnosis and treatment
- Chronic condition management
- Specialty referral and collaboration
- Lead education research project

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Conclusions

- Performance outcome measures reflecting health care delivery in nurse-led, nurse-managed clinic networks provide a systematic process for continuous quality improvement.
- Clinic model serves over 3,800 Health Science Center Students, 6,000 employees, and 2,000 children enrolled in Head Start and day care centers.
- Health promotion, disease prevention, client, family, and community education, self-care emphasis, acute, episodic illness care, and management of stable chronic conditions are provided by the School of Nursing advanced practice nursing faculty and undergraduate/graduate students.
- This faculty practice Health Home model of health care delivery and evaluation provides early evidence of an accessible, safe, patient and family-centered, cost-effective, and efficient system of care by advanced practice nurses and members of the interdisciplinary health care and educational team.
- Holistic, evidence-based child and family centered models must continue to develop and evolve for optimal health care delivery enhanced by university community partnerships.
- Preparing for AAAHC accreditation and NCQA Level III Medical Home designation over the next two years.