A Nurse Practitioner Led Interprofessional Chronic Disease Management Model Utilizing Pharmacy Telehealth

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Background

Chronic disease burden in uninsured patients

• Chronic disease affects 6 out of every 10 Americans
  • Leading cause of morbidity, mortality, healthcare cost
  • Diabetes, cardiovascular disease, chronic lung disease, chronic kidney disease
• Uninsured patients diagnosed with chronic disease
  • more likely to be unaware of the diagnosis
  • poor control of the chronic disease
  • increase risk of poor outcomes and increase healthcare costs

(CDC, 2018; Kaiser Family Foundation, 2018; United States Census Bureau, 2018)
Partners in Healthcare (PIH)

Doctor of Nursing Practice led interprofessional (IP) free clinic
- Primary care and chronic disease managed
- Collaboration with College of Nursing and non-profit community service organization that serves > 4,500 families in poverty each year
- IP model of care
Partners in Healthcare Interprofessional Team

Patients
- 75% diagnosed with a chronic disease
- Average age = 50
- 60% female
- 60% white, 40% African American

Providers
- Nurse Practitioners
- Physician
- Social Worker
- Pharmacy*

Students
- Nurse Practitioner
- Registered Nurse
- Physician
- Physician Assistant
- Pharmacy*
Partners in Healthcare Initial Clinic Workflow

**Patient Check-in**
- Patient arrival and check-in
- New patient form, update demographic/health forms

**Triage**
- Nursing student collects chief complaint, brief history
- Vital signs, screening tools, history update

**Provider Visit**
- NP, MD or PA student assess history and physical
- Present to preceptor history, physical, assessment, plan
- Preceptor evaluates patient, completes visit with students and patient

**Check-out**
- Social Worker (prescription assistance, labs/diagnostics, referrals, community resources)
- Schedule follow-up appointment
Partners in Healthcare (PIH)

Need for advanced chronic disease management and medication therapy management
Methods

Integrate an interprofessional chronic disease management model with clinical pharmacy via telehealth in a free clinic.

Integration of clinical pharmacy telehealth
• Provider consultation
• Direct patient care
• Student education (preceptor)
Partners in Healthcare Integration of Clinical Pharmacist

Pre-Clinic Brief
- IP team of providers/students (including pharmacy) pre-visit planning
- Clinical pharmacist connects via telehealth: consultation, academic detailing, precept

Patient Check-in
- Patient arrival and check-in
- New patient form, update demographic/health forms

Triage
- Nursing student collects chief complaint, brief history
- Vital signs, screening tools, history update

Huddle (as indicated)
Partners in Healthcare Integration of Clinical Pharmacist

Provider Visit
- Pharmacy student medication reconciliation
- NP, MD or PA student assess history and physical
- Present to preceptor history, physical, assessment, plan
- Preceptor evaluates patient, completes visit with students and patient
- Clinical pharmacist consults with provider/students and direct-patient care as indicated

Check-out
- Social Worker (prescription assistance, labs/diagnostics, referrals, community resources)
- Schedule follow-up appointment

Debrief
- Post-clinic debrief with all providers, students, staff
- Pharmacy student post-visit patient follow-up via phone call as indicated
Results

Patient
• 578 patient appointments serving 140 patients (2018)
• 447 patient appointments (January – September 2019)
• Decrease blood pressure, A1C and weight loss

Provider
• Faculty practice
• Scholarship and grant funding (3 grants, $330,000)
• Evidence-based practice, quality improvement

Student
• 43 student IP rotations (2018)
• 40 student IP rotations (January – September 2019)
• Quality improvement project (1 complete, 2 development/implementation)
Conclusions

Effective model of clinical pharmacy integration in an interprofessional free clinic.

Disseminated model to Federally Qualified Health Center (7 primary care sites)
References


Founded in 1824 in Charleston, the Medical University of South Carolina is the oldest medical school in the south. Today, MUSC continues the tradition of excellence in education, research, and patient care. MUSC is home to more than 3,000 students and residents, as well as nearly 10,000 employees, including 1,300 faculty members. The College of Nursing has a long and distinguished history of more than 130 years of preparing the finest professional nurses who care, cure and create new knowledge in improving the health of individuals, families and communities. The school educates more than 570 nursing students each year who earn baccalaureate and doctoral degrees through traditional and online learning.