



THE FLORIDA STATE UNIVERSITY COLLEGE OF MEDICINE

Educating and developing exemplary physicians who practice patient-centered health care

Patient Centered Transformation in Federally Qualified Health Centers in Florida

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Presentation Outline

- What are FQHCs?
- What is a Patient Centered Medical Home (PCMH)?
- Impact of Initial Transformation to a PCMH on Diabetes Outcomes in FQHCs
- Proposed study of PCMH implementation in FQHCs



Federally Qualified Health Centers (FQHCs)

- FQHCs authorized by the Public Health Services Act
- Qualify for grants and enhanced reimbursement
- To be designated as an FQHC by HRSA:
 - Serve an underserved area or population
 - Offer a sliding fee scale
 - Provide comprehensive services
 - Have an ongoing quality assurance program
 - Have a governing board of directors
 - Not-for-profit



FQHC Services

- Primary medical care
- Health Screenings
- Prenatal care
- Family Planning
- Pediatrics
- Immunizations
- Emergency medical
- Vision services
- Diagnostic services (e.g. x-ray, lab)
- Dental
- Mental health services
- Substance abuse services



Florida FQHCs

- 48 FQHCs operating in Florida (2013)
 - 429 clinic sites
 - Serving 1.1 million Floridians each year
 - 4.3 million visits each year
- 85% of revenue from government sources
 - 40% from Federal, State, and Local grants
 - 36% of revenue from Medicaid

Source: Kaiser Family Foundation (KFF.org)



What is Patient-Centered Care?

- First introduced as part of “medical home” concept in 1967 by the American Academy of Pediatrics (AAP)
- Little traction for the concept until its inclusion in the IOM’s *Crossing the Quality Chasm* in 2001
- In 2007, leading medical associations representing primary care identified core features of patient-centered medical homes (PCMH)
- NCQA developed a recognition program based on these core features



PCMH Concept

- Seen as a way to achieve “Triple Aim”
 - Improve individual experience with care
 - Improve population health
 - Reduce costs
- Removes fragmentation in the delivery of care and places greater emphasis on patient involvement in their own care



PCMH Core Features

Core Feature	Elements
Personal physician	Each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous and comprehensive care
Physician-led team	The personal physician leads a team of individuals at the practice level who collectively take responsibility for the ongoing care of patients
Whole-person orientation	The personal physician is responsible for providing for all the patient's health care needs or taking responsibility for appropriately arranging care with other qualified professionals
Coordinated care	Care is coordinated and/or integrated across all elements of the complex health care system
Quality and safety	Quality and safety as hallmarks of medical homes using evidence-based medicine, continuous quality improvement, health information technology and other tools
Alternative scheduling arrangements	Enhanced access to care is available through systems such as open scheduling, expanded hours and new options for communication between patients, their personal physician, and practice staff
Payment reform	Payment appropriately recognizes the added value provided to patients who have a patient-centered medical home



PCMH Programs

- While core features of PCMH are generally agreed upon, there is still variation
- Most include five capabilities
 - Care coordination
 - Health information technology (EHR)
 - Quality measurement
 - Patient Engagement
 - Written policies in place



PCMH Accreditation

- Several accrediting organization have emerged
 - National Committee on Quality Assurance
 - The Joint Commission
 - Accreditation Association for Ambulatory Health Care
- Accrediting criteria has focused on core features but criteria is evolving over time
- Accreditation can impact reimbursement



Early Evidence for PCMH

- Clear evidence for reduced rates of ED visits
- Consistently reduces inpatient admissions
- Improved processes of care with higher rates of diagnostic testing and screening
- Several studies demonstrate lower costs
 - Between 5% and 10% lower total costs
 - Positive return on investment for PCMH transformation (as high as 450%)



FQHCs as PCMH

- According to the NACHC, there has been significant movement towards implementation of PCMH in FQHCs nationally
 - In 2009, <1% of FQHCs were formally recognized as PCMH
 - In 2015, 61% of FQHCs were recognized as PCMH
- The PCMH model is a natural fit for FQHCs given their mission to provide comprehensive primary care



Evidence for PCMH in FQHCs

- Numerous rigorous studies of PCMH transformation in private primary care practices, but limited for FQHCs
- Shi et al (2015) found that adoption of PCMH components in FQHCs were associated with improvements in childhood immunizations, cervical cancer screening, pap tests, and diabetes control using 2009 UDS data



Evidence for Diabetes Care

- Calman et al (2013) found increased use of support services by diabetic patients after FQHC PCMH transformation
- Kahn et al (2015) found an association between PCMH accreditation and increased use of HbA1c tests, eye exams, and nephropathy tests
- These studies focused on processes of care and not clinical outcomes



Impact of Initial PCMH Transformation on Diabetes Outcomes in FQHCs

- Our team conducted a study to examine clinical outcomes for patients with diabetes receiving care in Florida FQHCs that recently transformed and received Level 3 PCMH accreditation from NCQA



PCMH Accreditation in Florida FQHCs

- Many of Florida's FQHCs have achieved NCQA PCMH recognition
- Conducted a study to examine changes in the likelihood of achieving 3 target clinical outcomes among diabetic patients after achieving NCQA Level 3 PCMH accreditation
- Assessed whether the impact varied by race, age, and type of insurance



Study Setting

- Patients with diabetes receiving care at five of Health Choice Network (HCN) of Florida's FQHCs
 - 27 clinic sites
 - All achieved NCQA Level 3 PCMH accreditation in 2011
 - Extracted data from the EHR from 2010-2012



Study Population

- Patients with a Type II Diabetes diagnosis
- Sample excluded
 - Children (under 18)
 - Pregnant women
 - Women who gave birth in the previous year
- Final sample of 14,136 observations at the person-year level (each person could provide up to three observations)



Study Outcomes

- Well controlled glucose
 - HbA1c < 7.0
- Well controlled blood pressure at two thresholds
 - BP < 140/90 and BP < 130/80
- Normal weight
 - BMI between 18.5 and 24.9
- Used the last recorded value in the medical record of the calendar year



Study Methods

- Examined changes in the odds of achieving target outcomes after PCMH accreditation
- Used population average logistic regression
 - Controlled for clustering by year, patient, and center
 - Controlled for age, gender, race, ethnicity, primary language spoken, payer source, baseline BMI, and clinic size



Study Methods – Moderating Effects

- Based on initial results from the primary analysis, tested whether African American race, age group, or payer source moderated the impact of PCMH transformation
- Assessed by including interactions of race, age, and payer source with PCMH indicator variable (e.g. Medicaid*PCMH)



Baseline Characteristics (2010)

- Mean age was 59
- 60% Female
- 50% Caucasian, 42% African American
- 46% Latino
- 58% English as primary spoken language
- 67% Uninsured, 17% Medicaid, 12% Medicare
- 41% controlled glucose, 62% controlled BP, 14% normal weight BMI



Multivariate Results

Measure	Odds Ratio	P-value
HbA1c under < 7.0	1.19	0.004
Blood pressure less than 140/90	1.05	0.420
Blood pressure less than 130/80	1.06	0.338
Normal Weight: BMI 18.5 - 24.9	1.06	0.308



Moderating Factors – HbA1c and Weight

Measure	Odds Ratio	P-value
HbA1c under < 7.0		
Black*PCMH	0.84	0.114
Age3564*PCMH	1.75	0.420
Age65*PCMH	1.72	0.437
Medicaid*PCMH	0.94	0.647
Medicare*PCMH	0.63	0.005
Private*PCMH	0.81	0.576
Normal Weight		
Black*PCMH	0.97	0.774
Age3564*PCMH	2.67	0.010
Age65*PCMH	2.35	0.025
Medicaid*PCMH	0.98	0.913
Medicare*PCMH	1.02	0.897
Private*PCMH	0.56	0.132



Moderating Factors – Blood Pressure

Measure	Odds Ratio	P-value
Blood pressure < 130/80		
Black*PCMH	0.81	0.074
Age3564*PCMH	1.35	0.528
Age65*PCMH	1.41	0.481
Medicaid*PCMH	0.88	0.400
Medicare*PCMH	1.24	0.274
Private*PCMH	1.51	0.357
Blood pressure < 140/90		
Black*PCMH	0.77	0.015
Age3564*PCMH	0.75	0.605
Age65*PCMH	0.77	0.638
Medicaid*PCMH	0.91	0.502
Medicare*PCMH	1.19	0.337
Private*PCMH	1.08	0.846



Study Conclusions

- PCMH transformation resulted in better diabetes control but did not impact blood pressure or weight
- Subsets of patients did not benefit as much from PCMH transformation (African American and younger patients)
- Additional research is needed to understand why PCMH transformation impacts some groups more than others



PCMH Implementation Proposal

- Partnering with HCN of FL to examine implementation of PCMH components in 9 of their centers across 48 clinic sites
- Will combine quantitative and qualitative analyses to better understand how differences in implementation of PCMH components impact outcomes
- Will develop an evidence-based model of implementation for FQHCs to assist with patient-centered transformation



PCMH Implementation Challenges

- Health information technology (HIT)
 - Most practices have now implemented EHRs
 - Rural and smaller practices lag in adoption
 - Engaging stakeholders to meaningfully use HIT
 - Need to encourage and train providers and patients to use EHR features and patient portals
 - Lack of interoperability across practices
 - While most physician practices have implemented EHRs, other settings such as long term care and some specialties lag or might be on different platforms



Implementation Challenges

- Often requires whole practice redesign
 - Scheduling and access processes
 - Staffing needs in off hours
 - Coordination with other healthcare organizations
 - Novel ways of bringing evidence to point of care
 - New quality improvement activities
 - Implementing team-based care practices
 - Methods to increase patient engagement



Implementation Challenges

- Requires change in perspective
 - Team approach to decision making
 - Population health vs. individual patient
 - Getting patients to be more proactive
- Change fatigue
 - Can lead to stress, burnout, and turnover
 - Needs to be monitored and managed



Implementation in HCN FQHCs

- We conducted 4 in-depth interviews with FQHC administrators
 - Demonstrated that implementation approaches varied across clinic sites
 - Composition and leadership of care team varies
 - Use of “team huddles” to start each workday
 - Methods of communicating with staff about PCMH concepts and domains
 - Person leading PCMH transformation varies
 - Physician-led vs. non-physician administrator



Study Aims

- Evaluate the incremental impact of achieving NCQA PCMH accreditation in 2011, 2014, 2017 on clinical outcomes, patient engagement, utilization and costs
- Qualitatively assess causes of variation in study outcomes across sites
- Develop and disseminate an applied, evidence-based model of PCMH implementation

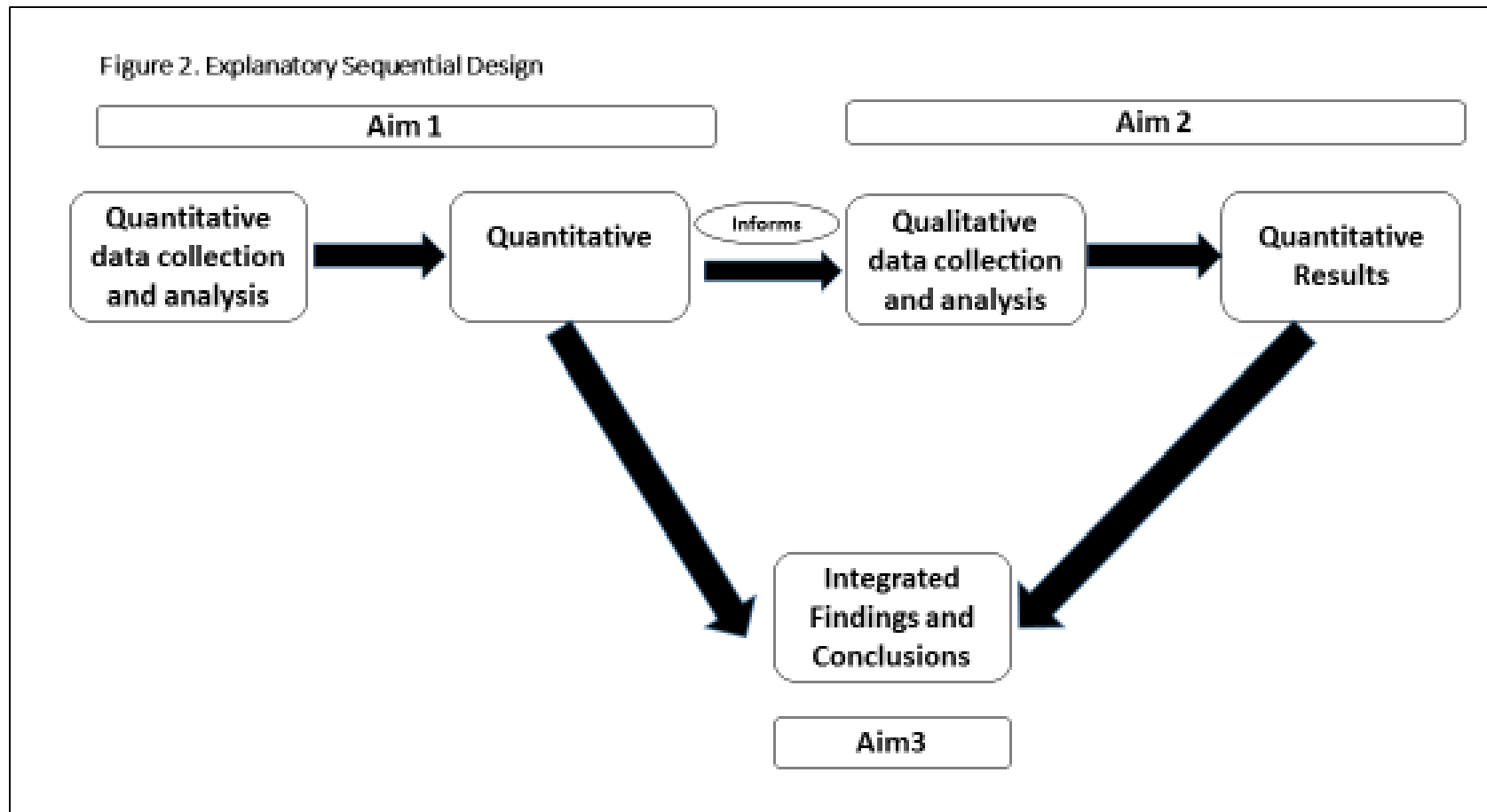


Study Outcomes

- Clinical outcomes from EHR
 - LDL, blood pressure, glucose, BMI, depression
- Engagement outcomes from EHR
 - Appointment no-show rates, completed lab orders, completed specialist referrals
- Utilization and costs
 - ED visits, inpatient admissions, ACS inpatient admissions, 30-day inpatient readmissions, immunizations, well child visits, total expenditures
 - Disease specific utilization for children with asthma



Study Approach





Quantitative Analysis

- Data will be collected for all patients receiving care at 9 HCN of FL Centers (48 clinics) from 2010-2019
 - Served 213,282 unique patients in 2015
- Time series analyses will be conducted to identify incremental changes in study outcomes associated with achieving 2011, 2014, and 2017 NCQA PCMH criteria
 - Stratified by children vs. adults
 - Subanalysis for children with asthma, adults with diabetes



Qualitative Analysis

- Uncover and describe the process of transformation to a PCMH
- Describe how the various sites implement specific PCMH components
- Qualitative findings will be used to provide context to quantitative findings and provide perspective on the transformation process
- Qualitative data from in-depth interviews and review of documented policies and procedures



Qualitative Methods

- Grounded theory approach will link implementation processes, PCMH constructs, and site outcomes
 - Information will be categorized based on events, processes, and occurrences that share a feature, attribute, or characteristic with each other
 - Will use constant comparison analysis to merge, modify and clarify codes
 - Example – patient communication could be categorized as email, printed material, online material, telephone



PCMH Implementation Model

- Will use a mixed-method approach that employs quantitative and qualitative data integration
 - Create joint display that list quantitative and qualitative findings side-by-side
 - Weights of different perspectives will be developed based on how often themes are raised by key informants
 - A visual diagram will be developed based on findings
 - Present diagram and obtain feedback from advisory committee made up of FQHC managers and other key stakeholders



Dissemination

- Final and most important goal is to disseminate our findings
- Plans to regularly engage with key stakeholders (FQHCs, clinicians, community agencies, NCQA) throughout the course of the project
 - Present findings
 - How to interpret findings
 - How to translate findings into practice



Questions and Comments?

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