

UNIVERSITY OF CENTRAL FLORIDA

**Graduate Student Symposium** 

github.com/dss-hmi/gss-2019-hsr

Health Services Research

Thursday April 25, 2019 12 pm - 3 pm HPA II 247







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#### 01- Olivia Randall-Kosich

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#### 03-Rachel Totaram

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# Reducing healthcare costs while improving health outcomes: Is the adoption of patient-centered care the way?

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- 1. Statement of problem
- 2. Purpose of Study
- 3. Study Summary
- 4. Conclusions
- 5. Limitations/Discussion
- 6. Bibliography

## Statement of Problem

\* The continued rise of healthcare costs compels state governments to implement policies that reduce expenditure in programs like Medicaid

#### \* Problem

☐ Critics of budget cuts argue that reductions compromise health outcomes

#### \* Solution

■ Policy proponents say by adopting patientcentered care (PCC) practices, expenditure can be reduced & health outcomes can be improved

## Purpose of Study

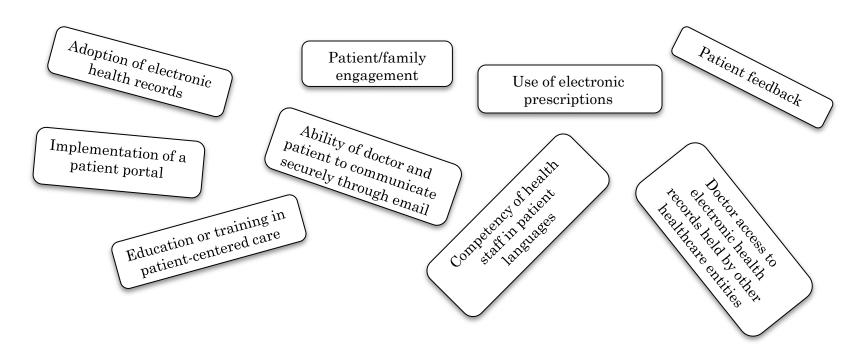
❖ To assess the veracity of the statement that PCC implementation leads to healthcare cost reduction as well as the improvement of health outcomes.

## Study Summary

- Literature review
  - Observational studies
  - ☐ Comprehensive literature review articles
  - Expert opinion in peer-reviewed journals
  - ☐ Articles from grey literature

## Literature Review Findings

\* What are the attributes of PCC?



Can PCC reduce costs and improve health outcomes simultaneously?

Yes, under the right settings and circumstances

## **Primary Research**

## Unit of analysis:

☐ Primary Care Physician (PCP)/facility – one of the strongest determinants of a healthy society

#### \* Data collection method:

□Standardized interviewing using an electronic questionnaire – less intrusive compared to other methods

### \* Sample size:

- □ 43 PCPs (Medicaid providers in a small Midwestern city)
- □17 responded (39.5% response rate)

## Conceptual Framework 1

Patient/Family Engagement

Patient Feedback

Electronic Health Records Adoption

Access to External Electronic Health Records

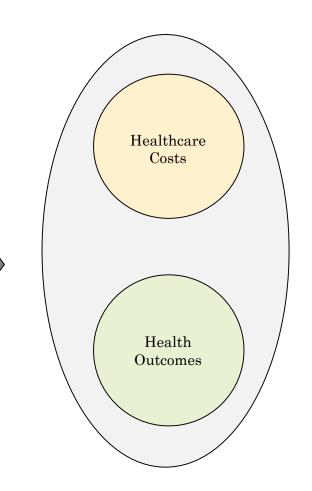
Use of e-Prescriptions

Dr/Patient Email Communication

Patient Portal Implementation

Language Competency

PCC Training



## Hypotheses

## ❖ Null Hypothesis (H₀):

☐ At least 75% of PCPs practice patient-centered care (= they have adopted five or more patient-centered care practices)

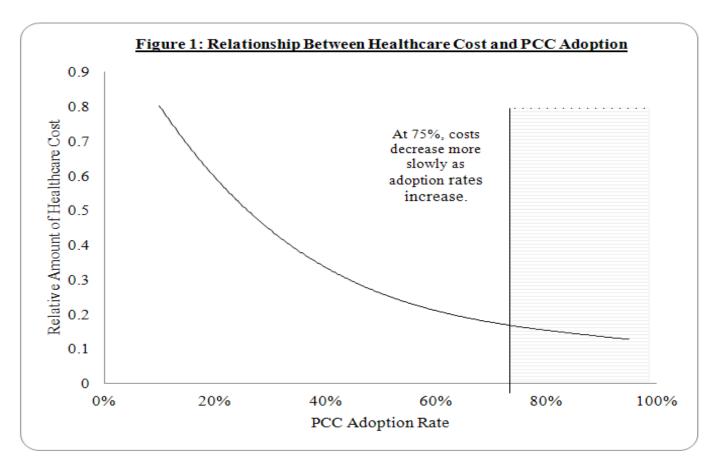
## $\diamond$ Alternative Hypothesis (H<sub>A</sub>):

Less than 75% of PCPs practice patient-centered care

### **\*** Why 75%?

- □ No PCC benchmark identified in the literature
- ☐ Anthem BlueCross BlueShield of CO set a goal to have at least 75% of its PCPs nationwide to be patient-centered practitioners

## Conceptual Framework 2



**Source**: Author's adaptation of the general relationship between two variables having an inverse variation approximating an exponential decay function.

## Hypothesis Testing Using Proportion

- **\*** Hypotheses:
  - $\blacksquare$  H<sub>O</sub>: P = 0.75 and H<sub>A</sub>: P < 0.75
- Level of Significance, (α):
  - $\square$   $\alpha = 0.05$ .
- **\*** Test Statistic:
  - = PCPs deemed to have adopted PCP practices as defined (11 out of 17)
- Probability Calculation:
  - $\square$  Small sample  $\rightarrow$  Probability (P) is binomial  $\rightarrow$  Proportion can be used
  - $\square$  Binomial probability calculated = 0.2347
- Decision :
  - ☐ Decision based directly on binomial probability calculated (= 0.2347)
  - Greater than  $\alpha$  (0.050)
  - $\square$  Null hypothesis cannot be rejected  $\rightarrow$  PCPs tested have adopted PCC

## Conclusion

- Can PCC lower costs and improve health outcomes?
  - ☐ Depends on PCC Adoption Rate of providers
  - □ Suppose the PCC Adoption Saturation Rate is 75%, then:
    - 1) Cost savings possible if PCC Adoption Rate < 75%
    - 2) Insignificant or no cost savings if PCC Adoption Rate  $\geq 75\%$

## Limitations

- \* **Geographical scope**: PCPs in an urban area; Not likely to be representative of PCPs in rural and peri-urban areas (external validity concern). Generizability problem
- \* Small sample size: May not be reliable for accurate estimation or modeling of population (external validity). Generalizability problem
- **EHR ambiguity:** Questionnaire didn't give respondents to clarify whether EHR adopted was basic or fully functional with decision-support capabilities (internal validity problem).
- \* PCC Benchmark: The 75% PCC adoption saturation rate not derived from evidence-based research. Could be flawed, potentially leading to flawed decision-making (internal validity problem).



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## Thank you! Questions? Comments?

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