

# The Impact of Evidence-Based Care Plans on Cost and Utilization

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**Annual Conference 2024**

*Building the Future of Health Together*

HIMSS NORTH CAROLINA CHAPTER



# Presenters



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# Agenda

- Care Management + Evidence-Based Care Plans
- What we wanted to know about nurse care management + care plans
- Study Design
- Methodology
- Results-Cost and Quality
- Building our future together

# Learning Objectives

1. Recognize the importance of using evidence-based care management strategies to reduce acute utilization and cost of care in value-based care payment models.
2. Compare methods for finding comparable population to use as controls when analyzing complex population health data.
3. Report on the AHRQ ambulatory sensitive condition definitions and how they can be used in population health analytics.
4. Report on the impact of using evidence-based care plans to guide nurses in the care of large, diverse populations.
5. Describe how evidence-based guidelines reduce care variation and keep accountable to manage large populations successfully.

# Care Management + Evidence-Based Care Plans

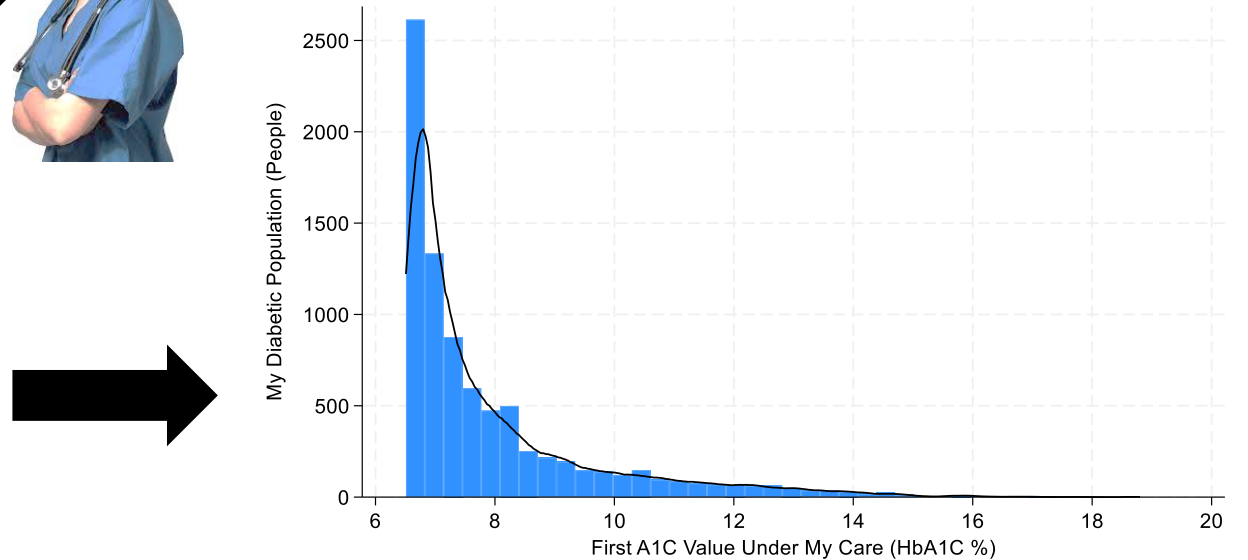
Imagine you have a large, diverse group of diabetic patients and it is your job to help them keep their diabetes in control.



Imagine you are a nurse care manager and have been given 300 patients to manage.



Your first dive into the population shows HbA1C values all over the place. How do I tackle this goal of getting my population into control (ADA says HbA1C= 7% or less)?



# Evidence-Based Care Plans

Choose your care plan in the electronic medical record to guide you through the complex assessment, goal setting and intervention process.

A care plan is not the same as a provider treatment plan. Care managers and providers must talk to align care plan goals with treatment plan goals.

Care Plan Guide  
**Diabetes, Type 2**  
 Setting: Ambulatory  
 Target Population: Adult

## Clinical Description

Care of the ambulatory/primary care patient with hyperglycemia due to insulin resistance and the body's inability to produce enough insulin.

## Key Information

- The chronicity of hyperglycemia is associated with damage, dysfunction and ultimately failure of vital organs and systems, most notably the kidneys, eyes, heart, nervous and vascular systems.
- Patient and family/caregiver involvement are critical to the implementation and success of a treatment plan. The interprofessional team must work with the patient and family/caregiver to identify and overcome barriers to care and redefine patient-defined goals as appropriate.
- Diabetes technologies have become the standard of care for diabetes management. There are two categories: devices for blood glucose monitoring and insulin delivery systems. Both types of devices help patients with self-management and the ability to adjust insulin therapy. The technology provided should be based on the individual's needs, support system and their ability to handle and manage technologies.
- CGM (continuous glucose monitoring) consists of a device placed on the patient's skin, usually on the arm or the abdomen. It tracks blood glucose readings and glycemic patterns, indicates when levels are outside of target ranges and provides real-time feedback to the patient. CGM is most beneficial for patients who can understand the data presented and use it to adjust their insulin therapy. There are websites, apps and software programs to empower patients to use CGM to manage their diabetes.

## Goals

Within a mutually determined timeframe or by transition of care:

- A. The patient will achieve the following:
  - [Disease Progression Prevented or Minimized](#)
  - [Glycemic Management Optimized](#)
  - [Wellbeing and Self-Management Supported](#)
- B. Patient, family or significant other will teach back or demonstrate education topics and points:
  - [Diabetes, Type 2: Overview](#)
  - [Self-Management](#)
  - [When to Seek Medical Attention](#)

## Assessment

Potential Problem or Focus of Care:

- Disease Progression
- Glycemic Management
- Wellbeing and Self-Management

## Intervention

Correlate health status to:

- history, comorbidity
- age, developmental level
- sex, gender identity
- baseline assessment data
- physiologic status
- response to medication and interventions
- psychosocial status, social determinants of health
- barriers to accessing care and services
- health literacy
- cultural and spiritual preferences
- safety risks
- family interaction

# What we wanted to know about evidence-based care plans



Does using a care plan together with care management improve outcomes for our population?

Do we reduce emergency department visits for AHRQ ambulatory sensitive conditions?

Do we reduce the overall cost of care (excluding pharmacy costs)?

# Our Study Design

- **Factors accounted for in our analysis:**
  - Number of touches by care managers (tested with and without variable)
  - Number of time care plan accessed
  - Comorbidity burden (Elixhauser)
  - Age
  - Race
  - Gender
  - Payor
  - State of residence
  - Marital status
  - County of residence
  - Employment status
  - Median household income
- **Treatment (Cases):** Members engaged by a care manager and a care plan was used (n=3,805)
- **Controls:** Members that look similarly like our cases in terms of age, race, gender, comorbidity burden, state of residence, enrollment year and payor but were not enrolled with care management and did not have a care plan used. (n=3,805) **Not Optimal**
- **Time Horizon:** Current ACO enrollment as of May 5, 2023 with a lookback to CY2018.
- **Perspectives:** Payer, ACO, Patient
- **Exclude:** any member that has >\$250,000 in one year due to this being covered under reinsurance. PMPY>\$250,000 n=56



# Methodology Brief

- We had a total of 3,805 cases matched to 3,805 controls. **N=7,610 individuals**
- **Matched on:** age, race, gender, comorbidity burden, state of residence, enrollment year and payor.
- **Treatment effects models**
- **Adjusted for selection bias using multiple methods**



# Results

We found that using a care plan during nurse care management compared to no intervention:

- ✓ 5 fewer ED visits per patient, on average, for ambulatory sensitive conditions over a 3-year period compared to controls (ATE -5.5;95% CI -6.0 to -4.9)
- ✓ \$1,741 less spend per patient, on average, in cases compared to controls over one performance year (ATE -\$1,741;95% CI -\$1,913 to -\$1,569)

# Follow-Up Study to Correct for Sub-Optimal Controls

Picked out specific elements of the evidence-based care plan to reduce time burden to nursing and rolled out program in Oct 2023.



Ran same models and outcomes. Completely reversed the findings and showed 3 more ED visits per member and \$680 in higher spend!

# Building Our Future Together

- ✓ We should assess tools in our Electronic Medical Records (EMRs) for cost-effectiveness.
- ✓ Care plans, order sets and pathways all have shown, in our analyses, to reduce care variation and produce better outcomes...usually at a lower cost of care.
- ✓ Digital tools are interventions and can have dramatic impact on clinical and financial outcomes.

# Questions



# Thank You



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