

# Building a Digital Workforce for Rural & Critical Access Hospitals

How Predictive Prevention Can Help CAHs Extend Care, Reduce Burnout, and Improve Value-Based Performance



VBCExhibitHall  
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*Educational Webinar Series*

# Acknowledging the Reality We Face



Rural hospitals are the heartbeat of their communities—but the pressure has never been greater.

**The Rural Difference**

- 60M+** Americans live in rural communities
- 1,800+** Rural hospitals across the U.S.
- 20%** Rural residents are age 65 or older
- 2X** More likely to travel farther for care

# What CAH Leaders Told Us

## TOP CHALLENGES FACING CAHs

CHALLENGE	RESPONSES
 Staffing Shortages	31
 Financial Pressures	28
 Chronic Disease Management	19
 Rising Patient Complexity	17
 Care Coordination	15
 Technology Limitations	13



### KEY INSIGHT

Rural hospitals are facing a convergence of workforce shortages, financial pressure, and increasing patient complexity.



These challenges don't exist in isolation.  
They create a perfect storm for rural healthcare.



WORKFORCE  
SHORTAGES



FINANCIAL  
PRESSURE



PATIENT  
COMPLEXITY

# The Workforce Challenge

The question isn't:

"How do we hire enough people?"

The real question is:

"How do we extend the effectiveness of the people we already have?"

That distinction is critical.

## The Staffing Crisis Is Structural



### Rural hospitals face:



#### Nursing shortages

Too few nurses. Too much demand. Critical gaps across all shifts.



#### Care manager shortages

Overloaded care teams can't keep up with patient needs.



#### Physician recruitment challenges

Fewer physicians. More competition. Harder to recruit and retain.



#### Burnout and compassion fatigue

Constant pressure leads to exhaustion, moral distress and decreased wellbeing.



#### High turnover rates

Teams are stretched thin. Continuity of care suffers.



#### Increasing administrative burden

More documentation, reporting and compliance—less time for patients.



“ We are doing more with less—and it's not sustainable. ”



### KEY QUESTION:

*How do we deliver more care without adding more staff?*



**50%+**

of rural hospitals report a nursing shortage



**7,600+**

rural hospital care manager positions unfilled



**2X**

higher turnover rates in rural hospitals vs. urban hospitals



## Poll Question 1

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*What is the biggest operational challenge facing your organization today?*

- A. Staffing shortages and workforce burnout
- B. Financial and reimbursement pressures
- C. Managing chronic disease and patient complexity
- D. Patient engagement and care coordination

# Why Traditional Care Models are Breaking Down

Healthcare has traditionally been reactive.

The problem is that interventions become increasingly expensive and less effective as deterioration progresses.

Value-based care is fundamentally changing this equation.

TRADITIONAL MODEL		TODAY'S REALITY
 Visit-Based	>	 Continuous Care
 Episodic	>	 Longitudinal
 Reactive	>	 Predictive
 Labor-Intensive	>	 Technology-Enabled
 Facility-Centered	>	 Patient-Centered

## Modern Healthcare Requires



**Continuous Monitoring**  
Real-time visibility into patient health beyond the visit.



**Early Intervention**  
Act on risk sooner to prevent complications and deterioration.




**Population Health Management**  
Identify, stratify, and support patients across entire populations.



**Preventive Action at Scale**  
Deliver the right support to the right people at the right time.



**Better Outcomes.  
Lower Costs.  
Stronger Communities.**

 **It's time to move from encounters to continuous, proactive care.**  
A modern model for a healthier future.

# Where Care Actually Breaks Down

Healthcare has traditionally been reactive.






The problem is that interventions become increasingly expensive and less effective as deterioration progresses.

Value-based care is fundamentally changing this equation.



# Survey: Biggest Gaps in Care

## Survey Findings

WHERE LEADERS SEE THE LARGEST GAPS			
CARE GAP			MENTIONS
	After Discharge	<div style="width: 100%; height: 15px; background-color: #4CAF50;"></div>	19
	Between Visits	<div style="width: 90%; height: 15px; background-color: #009688;"></div>	18
	Patient Engagement	<div style="width: 90%; height: 15px; background-color: #9C27B0;"></div>	18
	Medication Adherence	<div style="width: 70%; height: 15px; background-color: #FF9800;"></div>	15
	Chronic Disease Management	<div style="width: 60%; height: 15px; background-color: #2196F3;"></div>	15



### KEY INSIGHT

The biggest opportunities for improvement occur after patients leave the hospital.





Care doesn't stop at discharge.  
Our biggest gaps — and opportunities — are outside the hospital.



OUTSIDE THE HOSPITAL



IMPROVE OUTCOMES



REDUCE READMISSIONS



ENGAGE PATIENTS

# The Cost of Reactive Care

When Healthcare Reacts Instead of Prevents

- Reactive care is expensive.
- Both clinically and financially.

Most value-based care programs ultimately succeed or fail based on their ability to prevent avoidable deterioration before expensive utilization occurs.

+ **CLINICAL CONSEQUENCES**

- 🏥 Avoidable admissions
- 🔄 Readmissions
- ER Emergency department utilization
- 📈 Disease progression
- 💊 Medication non-adherence



⚠️ Late intervention means worse outcomes for patients.

\$ **FINANCIAL CONSEQUENCES**

- 📈 Increased cost of care
- 📄 Value-based performance penalties
- 💰 Reduced shared savings opportunities
- 👥 Greater workforce burden



⚠️ Higher costs and penalties threaten financial sustainability.

🛡️

**Prevention today protects patients, preserves margins, and strengthens long-term sustainability.**

❤️  
 Better Outcomes

\$↓  
 Lower Costs

👥  
 Higher Quality Performance

📈  
 Stronger Financial Results



## Poll Question 2

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*Where do you believe the greatest opportunity exists to improve outcomes in your patient population?*

- A. During inpatient care
- B. After discharge
- C. Between office visits
- D. During chronic disease management

# A New Operating Model is Emerging

This brings us to the concept of a digital workforce.

- Not replacing clinicians.
- Not replacing care teams.

But extending their reach and allowing them to focus on the patients who need them most.



# What is a Digital Workforce

Think of it as a force multiplier.

Instead of care teams manually monitoring every patient, technology helps identify where attention is most needed.

This allows limited clinical resources to be used more effectively.

## A Digital Workforce Extends Human Capacity

**Using technology to:**

- 
**Monitor patients continuously**  
 Track vitals, symptoms, and behaviors in real time—24/7.
- 
**Automate routine engagement**  
 Handle reminders, check-ins, and education at scale.
- 
**Detect emerging risk earlier**  
 Identify subtle changes that signal deterioration before it escalates.
- 
**Support adherence and education**  
 Deliver personalized guidance to help patients stay on track.
- 
**Prioritize clinical interventions**  
 Surface the right patients to the care team at the right time.
- 
**Escalate concerns appropriately**  
 Automatically route alerts to the right care team for timely action.





### Think of It As a Force Multiplier

WITHOUT A DIGITAL WORKFORCE	WITH A DIGITAL WORKFORCE
<p><b>Manual. Reactive. Limited.</b></p>  <p>Care teams stretched thin.</p>	<p><b>Automated. Predictive. Scalable.</b></p>  <p>Care teams focused on what matters most.</p>













# Human Workforce vs. Digital Workforce

The objective is not replacing human judgment.

It's helping care teams spend their time where it matters most.

Technology handles routine monitoring while clinicians focus on complex decisions and interventions.

Different strengths. One shared goal: better outcomes for every patient.

HUMAN WORKFORCE	DIGITAL WORKFORCE
 <b>Manual outreach</b> Time-intensive phone calls and follow-ups	 <b>Automated engagement</b> Reminders, check-ins and education delivered automatically
 <b>Limited capacity</b> Care teams can only reach so many patients	 <b>Population-scale monitoring</b> Monitor thousands of patients simultaneously
 <b>Reactive intervention</b> Act after problems are identified	 <b>Predictive intervention</b> Identify risk early and intervene before it escalates
 <b>Episodic visibility</b> Information only during appointments or encounters	 <b>Continuous visibility</b> Real-time data and insights between visits
 <b>Resource constrained</b> Limited by staff availability and workload	 <b>Always available</b> Works 24/7 to support patients and care teams
 <b>Individual focus</b> Care delivered one patient at a time	 <b>Population focus</b> Identify trends and risks across entire populations

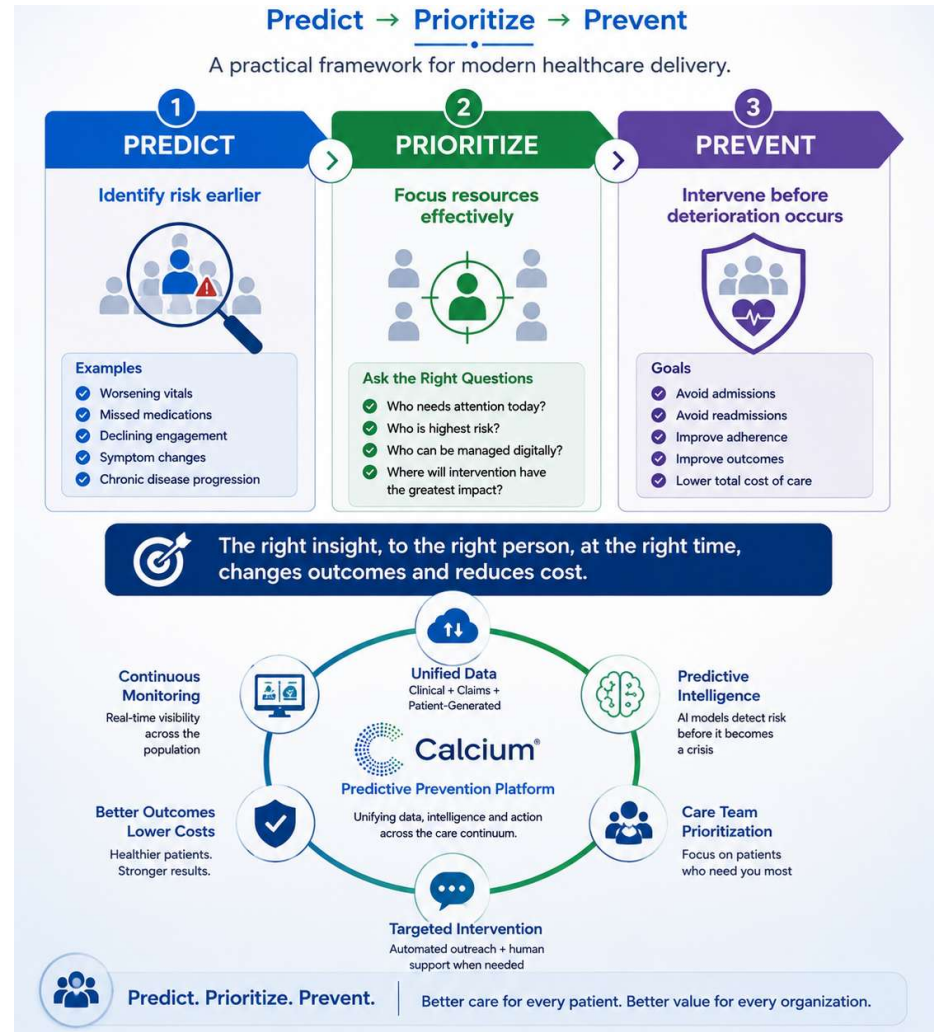
## Together They Create a More Effective Care Model



# Introducing the Predictive Prevention Framework

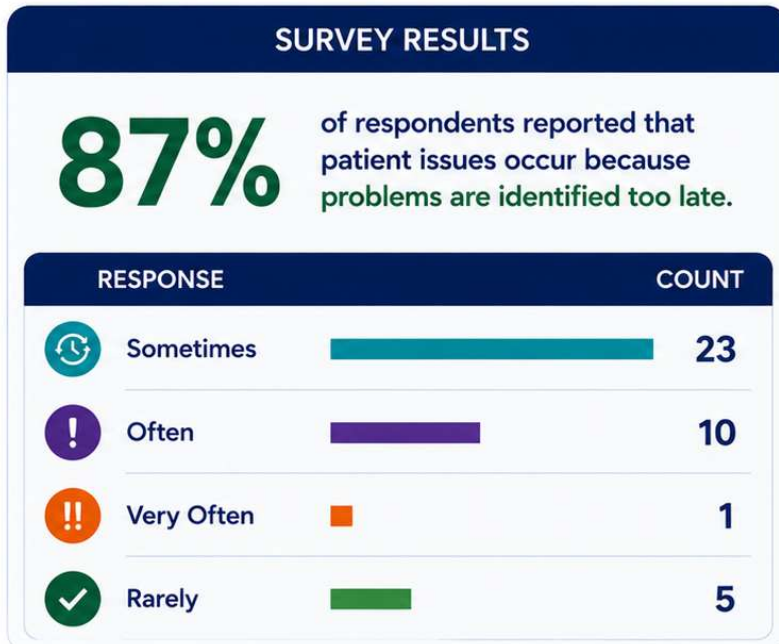
This framework represents the shift from reactive care toward proactive care.

Rather than waiting for complications, organizations identify risk, direct resources strategically, and intervene early.



# Survey: Earlier Detection Matters

• Problems Are Often Identified Too Late •



**KEY QUESTION** | How can we identify risk before deterioration becomes hospitalization?

## Poll Question 3

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*How often do patient problems occur because issues are identified too late?*

- A. Very Often
- B. Often
- C. Sometimes
- D. Rarely

# Step 1: Predict

Identify Risk Before Deterioration Occurs

The earlier risk is identified, the more options providers have.

Early signals often appear days or weeks before admissions occur.

The goal is to detect deterioration before it becomes a crisis.



# Step 2: Prioritize

*Focus Resources Where They Matter Most*

Every care team has limited resources.

Prioritization helps ensure attention is directed toward patients most likely to benefit.

This allows organizations to scale care without scaling staff.

We can't help everyone at once. Prioritize based on risk, impact and capacity.

### Patient Prioritization Dashboard

<b>High Risk Patients</b> 128 12% of panel	<b>Rising Risk</b> 247 23% of panel	<b>Stable</b> 842 65% of panel	<b>Total Patients</b> 1,217 100%
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Patient	Risk Level	Risk Score	Trend	Top Risk Drivers	Recommended Action
Robert Johnson ID: 847392	HIGH	92		Missed meds High BP	Care team outreach today
Linda Martinez ID: 638271	HIGH	88		Declining engagement Weight gain	Provider review today
James Williams ID: 562901	MEDIUM	64		Elevated glucose Low activity	Digital pathway adjustment
Emily Chen ID: 731558	MEDIUM	58		Mild symptoms BP trending up	Monitor & engage digitally
Michael Davis ID: 991235	LOW	28		No major issues Engaged	Continue digital management

● HIGH (80-100)   ● MEDIUM (50-79)   ● LOW (0-49)

### Ask:

- Which patients need attention today?
- Who is showing signs of deterioration?
- Which patients can be managed digitally?
- Where will intervention have the greatest impact?

### Intelligent Prioritization Drives Better Outcomes

```

graph LR
    A[1. IDENTIFY  
Capture and analyze continuous data across all patients.] --> B[2. PRIORITIZE  
AI and clinical rules surface the right patients to the top of your list.]
    B --> C[3. ALLOCATE  
Direct care team capacity to those who need it most.]
    
```

**Limited Resources Require Intelligent Prioritization**  
Right patient. Right time. Right intervention.

# Step 3: Prevent

*Intervene Before Escalation is Required*

Prevention is where value-based care delivers its greatest return.

Every avoided admission represents better outcomes for patients and better economics for providers.

Proactive interventions today prevent costly complications tomorrow and help patients live healthier, better lives.

### GOALS

- Avoid hospital admissions
- Prevent readmissions
- Improve medication adherence
- Improve chronic disease control
- Enhance patient engagement
- Improve outcomes

**Early intervention changes everything.**

- ✓ Right patient
- ✓ Right time
- ✓ Right action
- ✓ Better results

**At Risk**  
Early signs are detected

**Timely Intervention**  
Personalized outreach and support delivered

**Follow Plan**  
Patient engages and stays on track

**Improved Health**  
Metrics improve and risk decreases

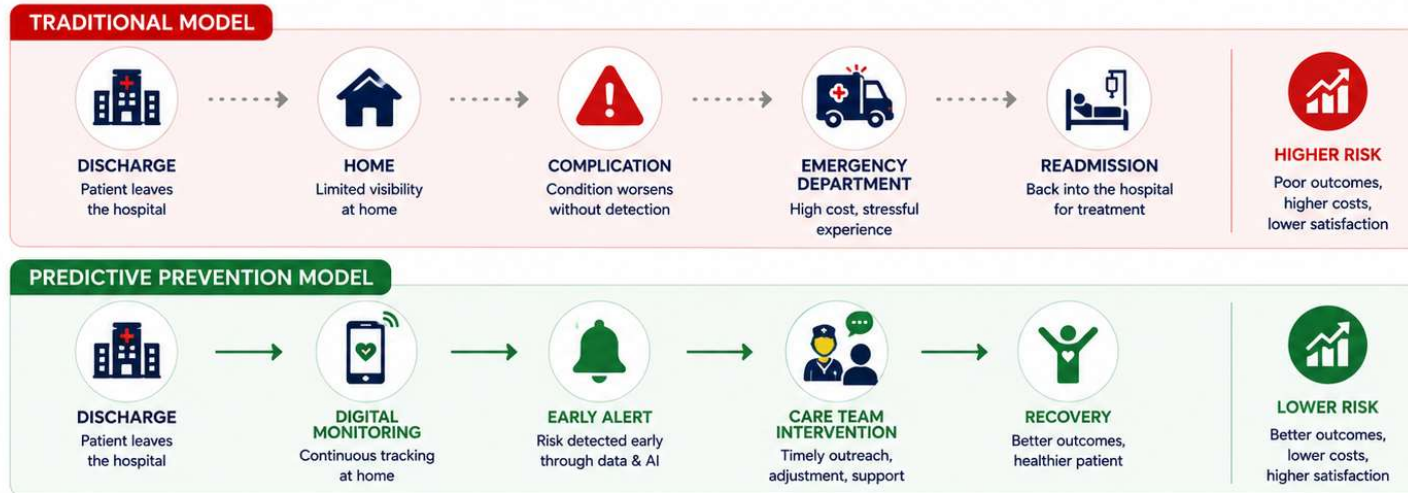
**Better Outcomes**  
Complications prevented. Health and value improved.

## Prevention Creates the Greatest Value

Better care for patients. Better results for providers. Lower costs for everyone.

# Use Case: Post-Discharge Recovery

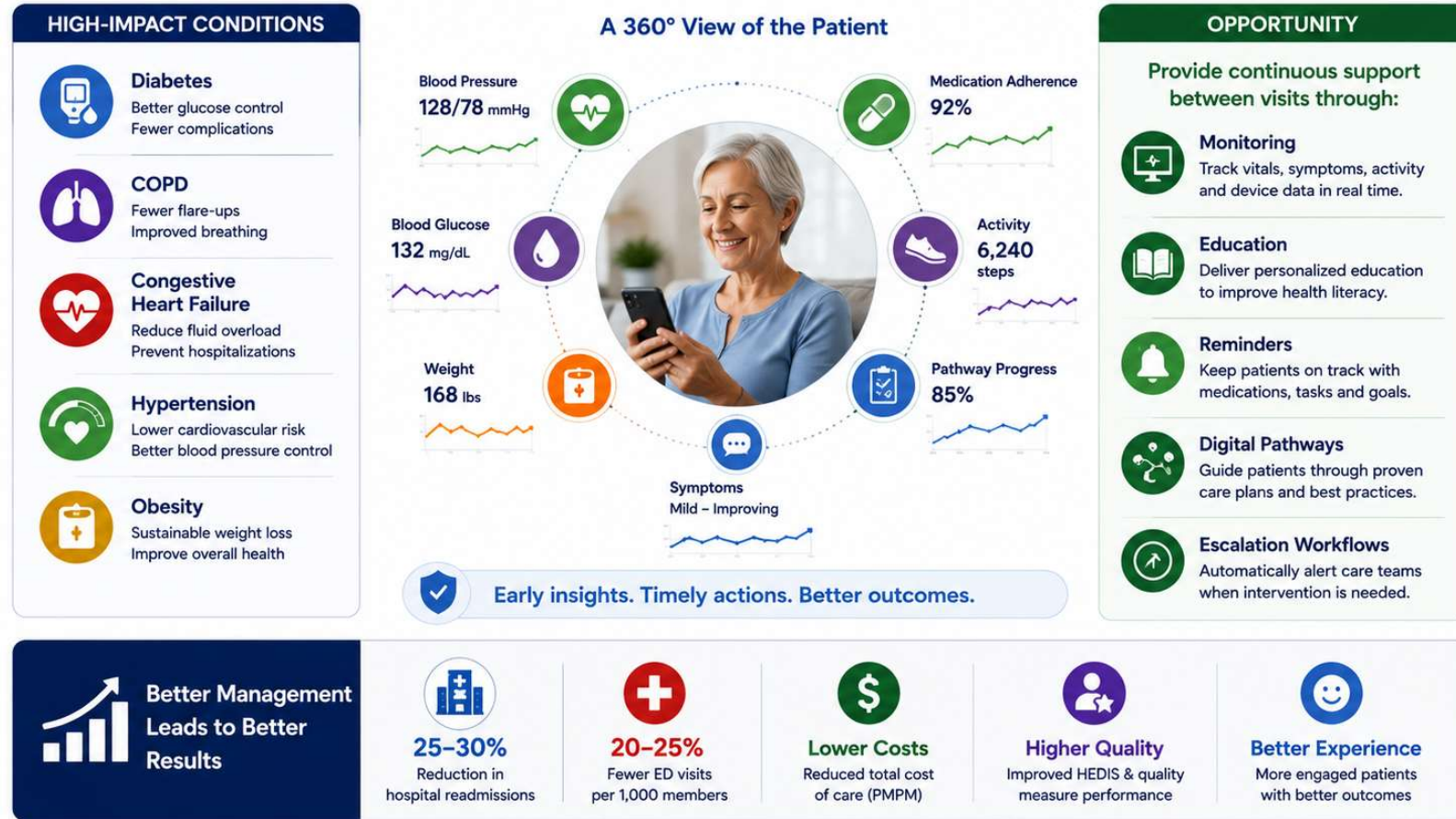
Technology-enabled care continuity prevents complications and reduces avoidable readmissions.



- ### BENEFITS
- Improved visibility**  
Continuous monitoring provides a complete view of patient recovery.
  - Earlier intervention**  
Issues are identified sooner, before they become serious.
  - Reduced readmissions**  
Prevent complications that lead to unnecessary hospital returns.
  - Better patient experience**  
Patients feel supported, informed and confident in their recovery.

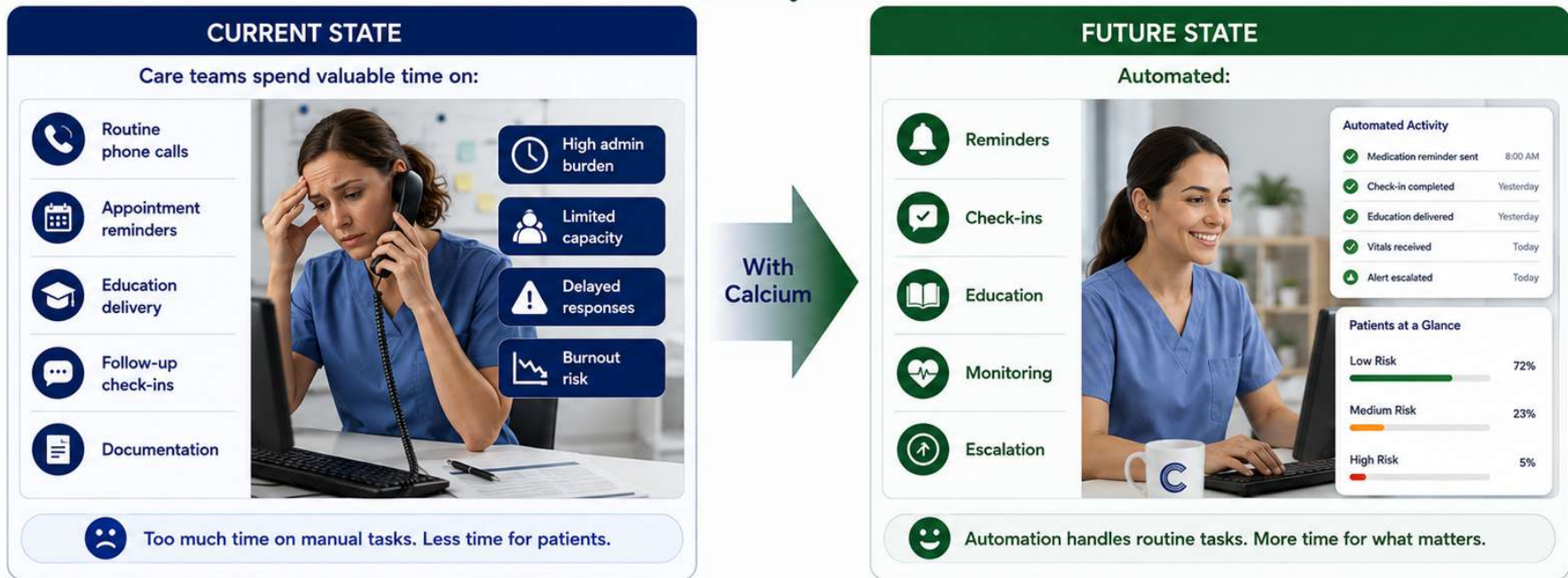


# Use Case: Chronic Disease Mgmt



# Use Case: Workforce Relief

Automating routine tasks frees care teams to focus on what matters most—patients.



## The Impact: Healthier Teams. Better Care. Stronger Outcomes.



**More Time for Patients**  
Care teams focus on high-value interactions.



**Increased Capacity**  
Manage more patients without adding headcount.



**Reduced Burnout**  
Less repetitive work leads to happier teams.



**Faster Response**  
Issues identified and addressed earlier.



**Lower Costs**  
Improved efficiency reduces operational expenses.

# Why This Matters So Much for VBC

Predictive prevention aligns directly with value-based care incentives.

Organizations that prevent deterioration perform better clinically and financially.

Value-based success depends on preventing problems, not just reacting to them.



# Financial Impact Areas

PREDICTIVE PREVENTION DRIVES BETTER OUTCOMES, LOWER COSTS, AND STRONGER PERFORMANCE

## POTENTIAL ORGANIZATIONAL BENEFITS



### CLINICAL



-  Reduced readmissions
-  Reduced avoidable admissions
-  Improved chronic disease outcomes

 **20-30%** Typical reduction in readmissions with proactive intervention.



### OPERATIONAL

-  Lower care management burden
-  Greater workforce efficiency
-  Better patient prioritization



 **30-40%** Reduction in time spent on routine tasks and manual follow-ups.



### FINANCIAL

-  Better quality performance
-  Improved VBC results
-  Reduced cost of care



 **10-25%** Potential reduction in total cost of care through predictive prevention.



**Better Outcomes**  
Healthier patients, better quality of life.



**Stronger Performance**  
Higher quality scores and value-based success.



**Lower Costs**  
Reduced unnecessary utilization and total cost of care.



**Sustainable Growth**  
Financial stability and long-term success.



## Poll Question 4

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*If your organization could improve ONE area over the next 12 months, which would have the greatest impact?*

- A. Reduce avoidable admissions and readmissions
- B. Improve workforce efficiency and reduce burnout
- C. Improve value-based care performance
- D. Increase patient engagement and adherence

# Rural & Critical Access Hospital Sustainability

This isn't simply a technology discussion.


It's a sustainability discussion.






The organizations that thrive will find ways to deliver more care without proportionally increasing labor costs.

Creating sustainable access to high-quality care for rural communities.

### ! THE CHALLENGE


How do we continue delivering high-quality care with limited resources?








-  **Limited clinical staff**  
Recruitment and retention challenges
-  **Tight budgets**  
Rising costs, limited margins
-  **High patient demand**  
Growing needs, aging populations
-  **Geographic barriers**  
Long distances, travel burdens
-  **Risk of service reduction**  
Threatens access and community health

### 💡 THE OPPORTUNITY


Extend care through a digital workforce that:





-  **Expands clinical reach**  
Care teams can support more patients across wider geographies.
-  **Supports prevention**  
Early identification and intervention prevent deterioration and costly admissions.
-  **Improves efficiency**  
Automated workflows and digital tools reduce manual work and optimize resources.
-  **Enhances patient engagement**  
Patients stay informed, engaged and connected in their care, anytime, anywhere.




**Digital health extends your reach.**  
**Stronger communities. Sustainable care.**

  
Better Access

  
Better Outcomes

  
Lower Costs

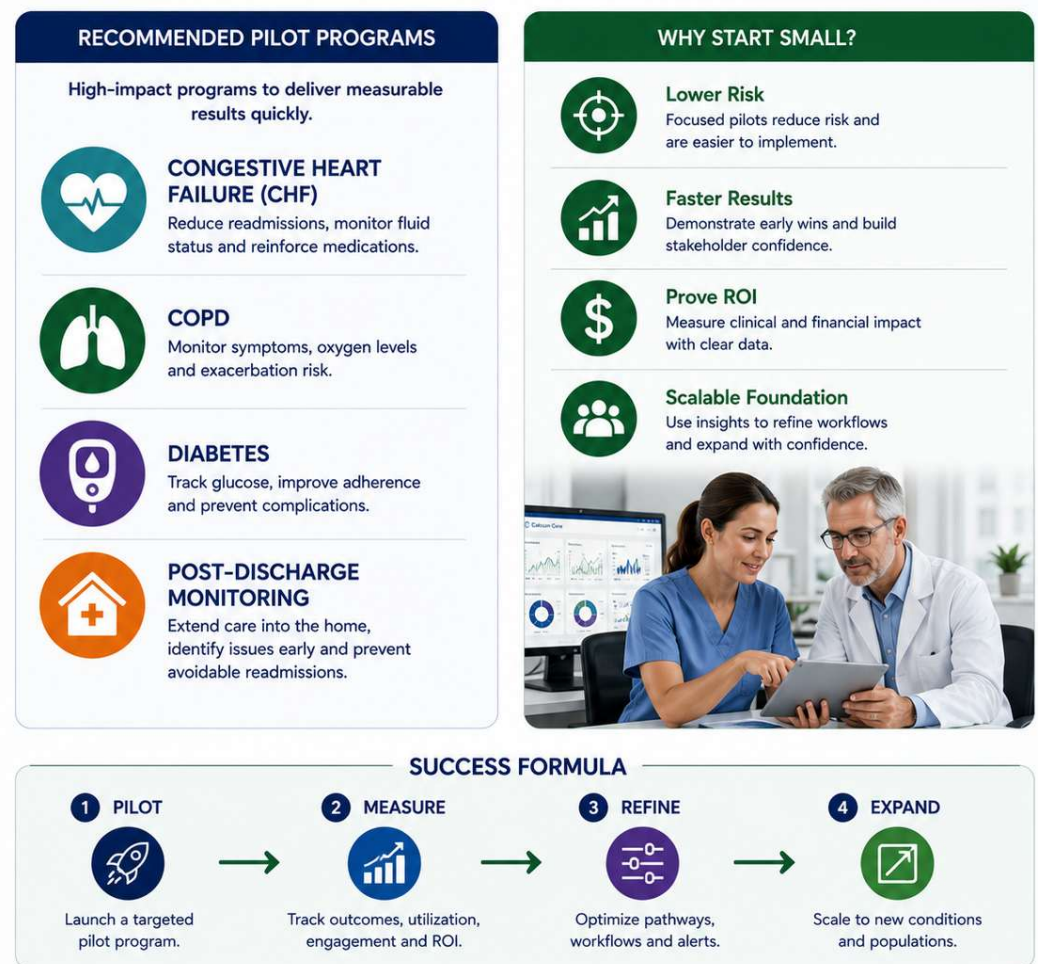
  
Stronger Communities

# How to Get Started

*Start Small. Demonstrate Value. Scale.*

The most successful organizations don't start enterprise-wide.

They begin with a focused problem, demonstrate measurable value, and then expand strategically.



# Key Takeaways

If there is one message to remember today, it's this:

***The future of rural healthcare will increasingly depend on our ability to extend care beyond traditional encounters and intervene before deterioration occurs.***

The organizations that successfully combine human expertise with digital workforce capabilities will be best positioned to thrive.

## Rural Healthcare Needs

- ✓  Continuous care beyond the visit
- ✓  Earlier intervention
- ✓  Workforce extension
- ✓  Predictive prevention
- ✓  Sustainable operating models
- ✓  Technology that supports—not replaces—clinicians

 Building stronger rural communities through smarter, connected care.

 Our goal: Healthier patients, stronger hospitals, sustainable communities.

 Better Outcomes

 Lower Costs

 Operational Efficiency

 Stronger Communities



# The Calcium Predictive Prevention Platform

Predict → Prioritize → Prevent

A Digital Workforce for Continuous Care



- Avoid Admissions
- Reduce Readmissions
- Better Outcomes
- Lower Costs

## One Integrated Platform. End-to-End Impact.



### CALCIUM CORE

Provider intelligence, analytics, alerts, and population health management



### CALCIUM AI STUDIO

Create and manage digital pathways and automated interventions



### CALCIUM SUPER APP

Patient engagement, monitoring, education, and continuous care delivery

# Q&A

Stop by our VBCExhibitHall.com Virtual Booth:



[Visit the Calcium Health exhibit booth](#)

**Rey Villar**  
Digital Solutions  
Architect @  
Calcium

