

Making Healthcare Utilization  
**Smart**  
with Artificial Intelligence

# Learning Objectives

- Defining artificial intelligence and related topics, and their relation to utilization review.
- Using AI to improve nurse and clinician workloads, refocusing attention on patient.
- Understanding how the payer-provider relationship is changing through technology.





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Chief Medical Officer  
XSOLIS



**Tonya Harrison, RN, BSN, MHA**  
Director of Clinical Care Management  
Atrium Health



**Sherri Ernst, RN, BSN, MBA**  
Revenue Integrity & UM Officer  
Covenant Health



**Heather Bassett, MD**

*Chief Medical Officer*

XSOLIS

# Background

- Dr. Heather Bassett has served as Chief Medical Officer since January 2013.
- She developed the real-time predictive analytics which drive XSOLIS' technology.
- She received her bachelor's from Carnegie Mellon and her Doctor of Medicine from the University of Texas Medical Branch, completed her residency in Internal Medicine at Vanderbilt Medical Center.



**Tonya Harrison, RN,  
BSN, MHA**

*Director of Clinical Care  
Management*

Atrium Health

# Background

- Clinical background includes two decades as an RN and over 17 years' experience in case management,
- She is a certified case manager and a certified InterQual instructor.
- She received her master's in health administration from Pfeiffer University.



**Sherri Ernst,**

**RN, BSN, MBA**

*Revenue Integrity & UM  
Officer*

Covenant Health

# Background

- Clinical background that includes stints as an RN and NICU nurse, in addition to several years of consulting in the revenue cycle space.
- Sherri was tasked with leading the charge in transitioning Covenant to a centralized UR team.
- Leads a team that now includes almost 60 FTEs and impacts utilization review at Covenant Health's 9 acute care facilities in East Tennessee.

# Utilization Review: Current State

Very manual process

Administrative burden

Limited, task-driven technology

Decisions directly tied to revenue



# | What's the result?

1 Inefficient processes

2 Strained relationships between payers and providers

3 Siloed data in healthcare





# This is where AI can help

But what IS artificial intelligence?

# What is Artificial Intelligence?

The theory and development of computer programs to do specific tasks by processing large amounts of data, recognizing patterns in data and learning from itself.

Technology augments, not replaces

# | AI in Healthcare

AI can be used in disciplines like radiology and imaging to identify patterns and detect tiny changes.



# AI in Action: Utilization Review



# **Interplay between EBM & Analytics**

# The XSOLIS Approach



**Clinical & Financial Data**  
Directly from Your EMR



**Our Real-time, Predictive Analytics**  
Powered by Artificial Intelligence



**Actionable Insight into Risk**  
At Users' Fingertips, 24/7

# Care Level Score

CLS identifies likelihood of inpatient status for each patient in real time, 24/7.

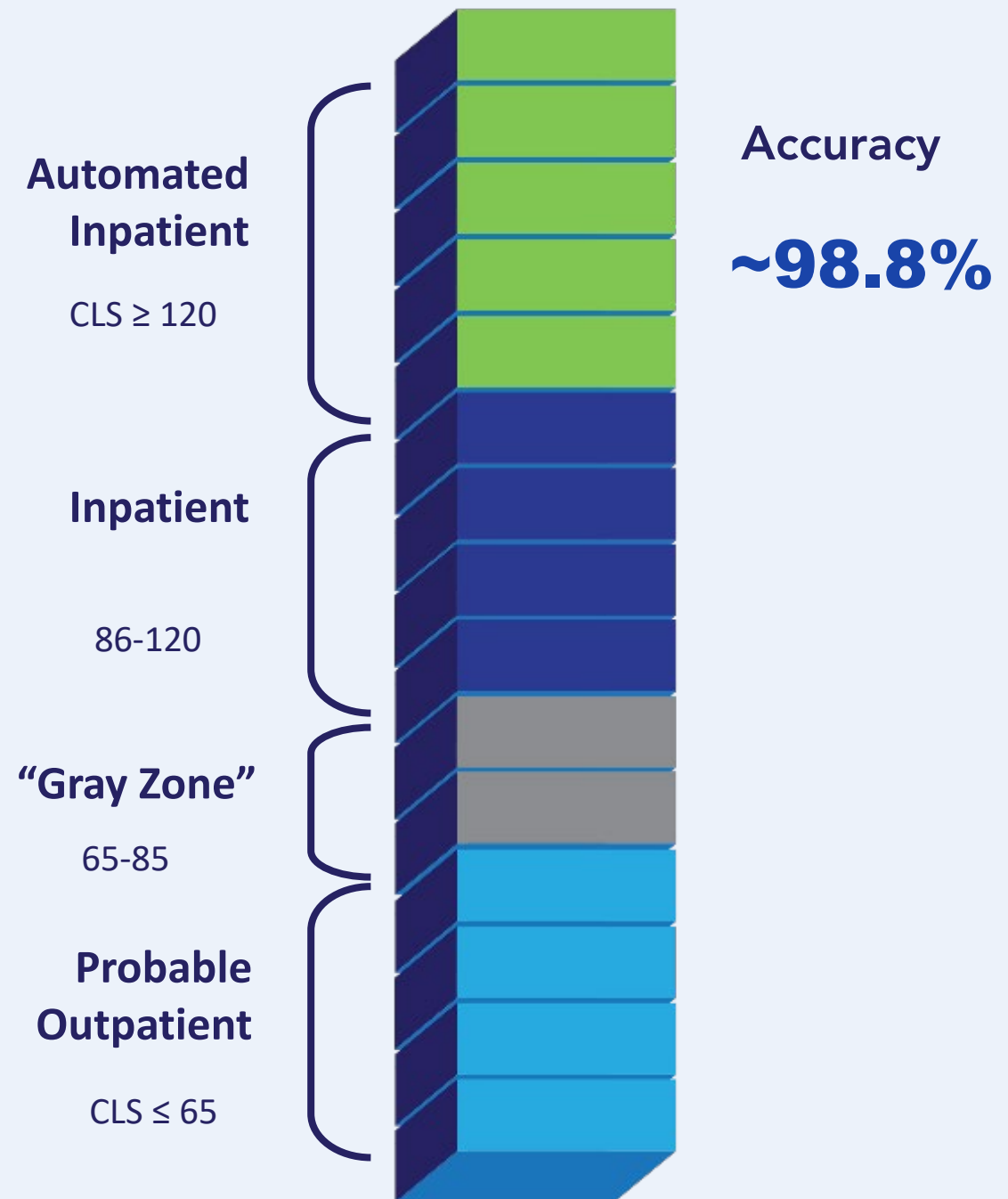
### CARE LEVEL SCORE

MeL Predicts INPT

Current:	Max:
<b>98</b>	<b>120</b>
<u>4/5/2019 4:21</u>	<u>4/4/2019 15:24</u>

Curr CLS: Labs Vitals Wellness Meds Procedures Documents  
Max CLS: Labs Vitals Wellness Meds Procedures Documents

\*example data\*



# Cortex: One platform for payers and providers

1

## Prioritize & Stratify

In real-time, Cortex helps UR nurses identify which cases are in the wrong status and which cases are most time-sensitive for review.

2

## Automate Case Reviews

The patient dashboard cuts through the “noise” of excess data in the EMR to review key information related to medical necessity.

3

## Communication between payers and providers

Using a “visit synopsis,” UR nurses can streamline workflow, save time, and improve the ability to communicate medical necessity to payers

Patient	Last Review	Last PR Review	Next Review Due	Aut #	Present. Date	SPICBS Date	Payer	Sec. Payer	W. Ac.	Int. Ac.	Cur. Ac.	Md.	T	Cur. CLS	Max. CLS	Status
WELLS, KITTY	02/13/2019 08:27			812345	02/08/2019 17:20	02/01/2019 22:42	Humana	None	●	●	●	I	90	110	Admit to SPT	
SMITH, LOU	02/17/2019 10:50		02/28/2019	409877	02/13/2019 01:45		AARP	ROBERT CARE PRO FEE	●	●	●		9		Admit to ED	
PRESTON, AARON	02/19/2019 18:19			552198	02/12/2019 08:28	02/12/2019 10:05	Medicare Advantage	None	●	●	●	I	45	98	Admit to SPT	
LEWIS, JOHN				90771212	02/13/2019 09:42	02/13/2019 02:27	None	None	●	●	●		50	100	Placed in OBS	
BOWEN, DAVID				80981212	02/13/2019 01:42	02/13/2019 02:12	None	None	●	●	●	I	50	100	Placed in OBS	
HENDERSON, LYNN				330485	02/11/2019 08:23	02/11/2019 10:25	Medicare Advantage	HUMANA ADV PRO FEE	●	●	●	I	77	82	Placed in OBS	
REYNOLDS, DENISE				9867012	02/11/2019 08:50	02/11/2019 10:34	Humana PPO	None	●	●	●	I	45	108	Admit to SPT	
SMITH, FRANK				330485	02/08/2019 14:42	02/08/2019 20:01	United HealthCare	UHC COMMUNITY PLAN PRO FEE	●	●	●	O	42	42	Placed in OBS	
WYNNE, TAMMY				984302	02/08/2019 19:25	02/08/2019 10:28	Medicare	BCBS	●	●	●	O	20	35	Admit to SPT	
AULT, GENE				981233	02/10/2019 13:08	02/10/2019 10:31	Medicare	Medicare	●	●	●	I	75	87	Placed in OBS	
CARPENTER, KAREN				402311	02/09/2019	02/09/2019 10:38	BCBS	None	●	●	●	I	50	50	Admit to	



# The Journey towards Smart UM

What is it? How can I get there too?



# Atrium Health

Headquartered in Charlotte, NC, Atrium Health is one of the leading healthcare organizations in the Southeast.

## Atrium Health by the numbers:

- 10 acute-care hospitals
- more than 7,600 licensed beds
- nearly 60,000 employees
- almost **12 million** annual patient interactions

# Why choose this UM model?



Manage denials related to medical necessity



w/ 2 MN rule, put extended obs patients "on someone's radar"



Help nurses work to top of license – what tasks require an RN?

# | Challenges

## Traditional UM

- Two Midnight Rule Considerations & Constraints
- Doing the same things, with fewer staff & resources
- Manual, time-consuming reviews & processes

## COP/Medicare Guidelines

- Admission based on Severity of Illness and Intensity of Service
- Ambiguity around clinical guidelines
- Well Documented UM Plan

# Atrium Medicare Population

\* Volume based on core metro hospital group of 12 hospitals.

157,000

Total Atrium Inpatient  
Population\*

20-30% are Medicare  
Beneficiaries

Up to 36%  
of Atrium's Medicare  
Patients Eligible for  
Smart Review

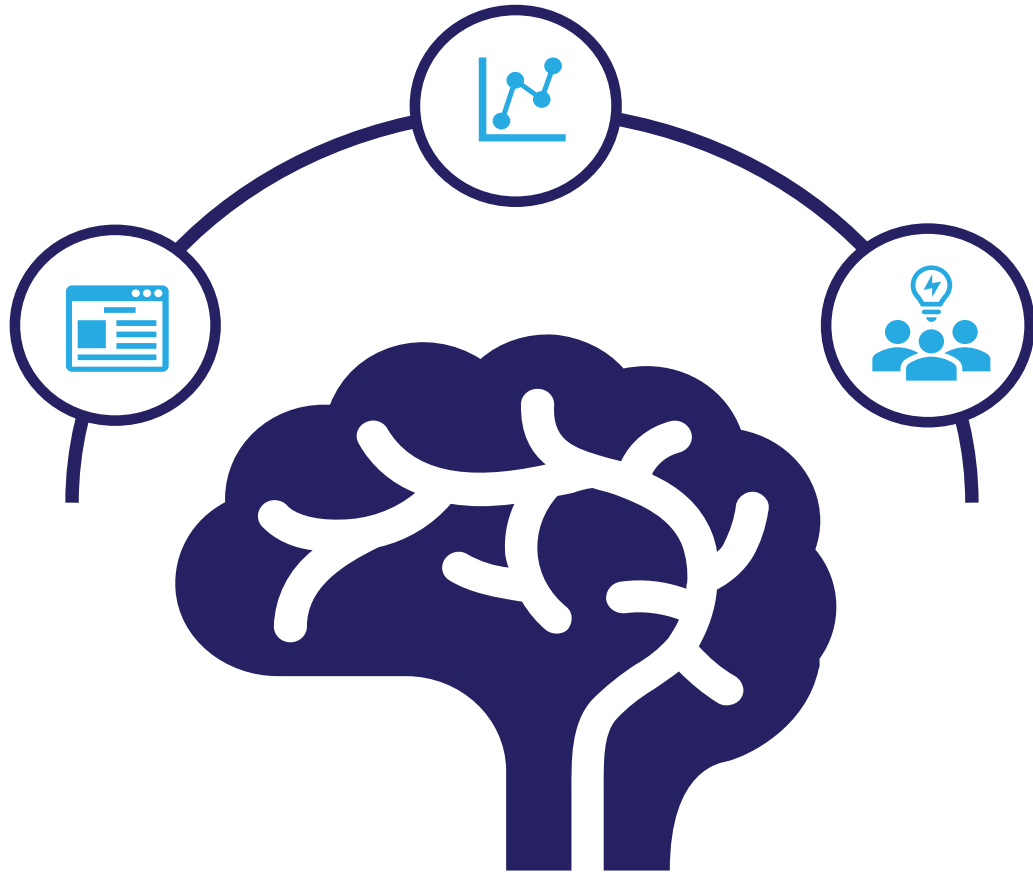
# Undertaking Due Diligence

- How did you first envision the approach?
- What considerations did you face when actualizing a new and unfamiliar model?

# Conditions of Participation

- **Must have a well documented/approved UR plan** – “It should also establish procedures for the review of medical necessity of admissions, the appropriateness of the setting, the medical necessity of extended stays and the medical necessity of professional services” – COP §482.30
- **For Medicare (and a majority of commercial payer contracts), no one screening tool is required** – “While utilization review (UR) committees may continue to use commercial screening tools to help evaluate the inpatient admission decision, the tools are not binding on the hospital, CMS or its review contractors.” – CMS 2 MN IP Admission Guidance
- **Must assess** “the need for and duration of care based on complex medical factors such as history and comorbidities, the severity of signs and symptoms, current medical needs, and the risk of an adverse event, which must be clearly documented.” – CMS 2 MN IP Admission Guidance

# Considerations



## Compliance

- Conditions of Participation
- Final discharge status
- Does this approach meet regulatory requirements?



## Data

- Building upon existing XSOLIS technology
- Retrospective intake of claims information
- At what point is the real-time review actionable?



## UM Committee Buy-in

- Leadership sign-off
- Comfort range for accuracy
- Integrating into UM training and methodology



# What is a Smart Review?

# | The Two-Step Smart Review

For any cases with CLS >120, only two touches are required:



Look at record to verify there is an order in the chart



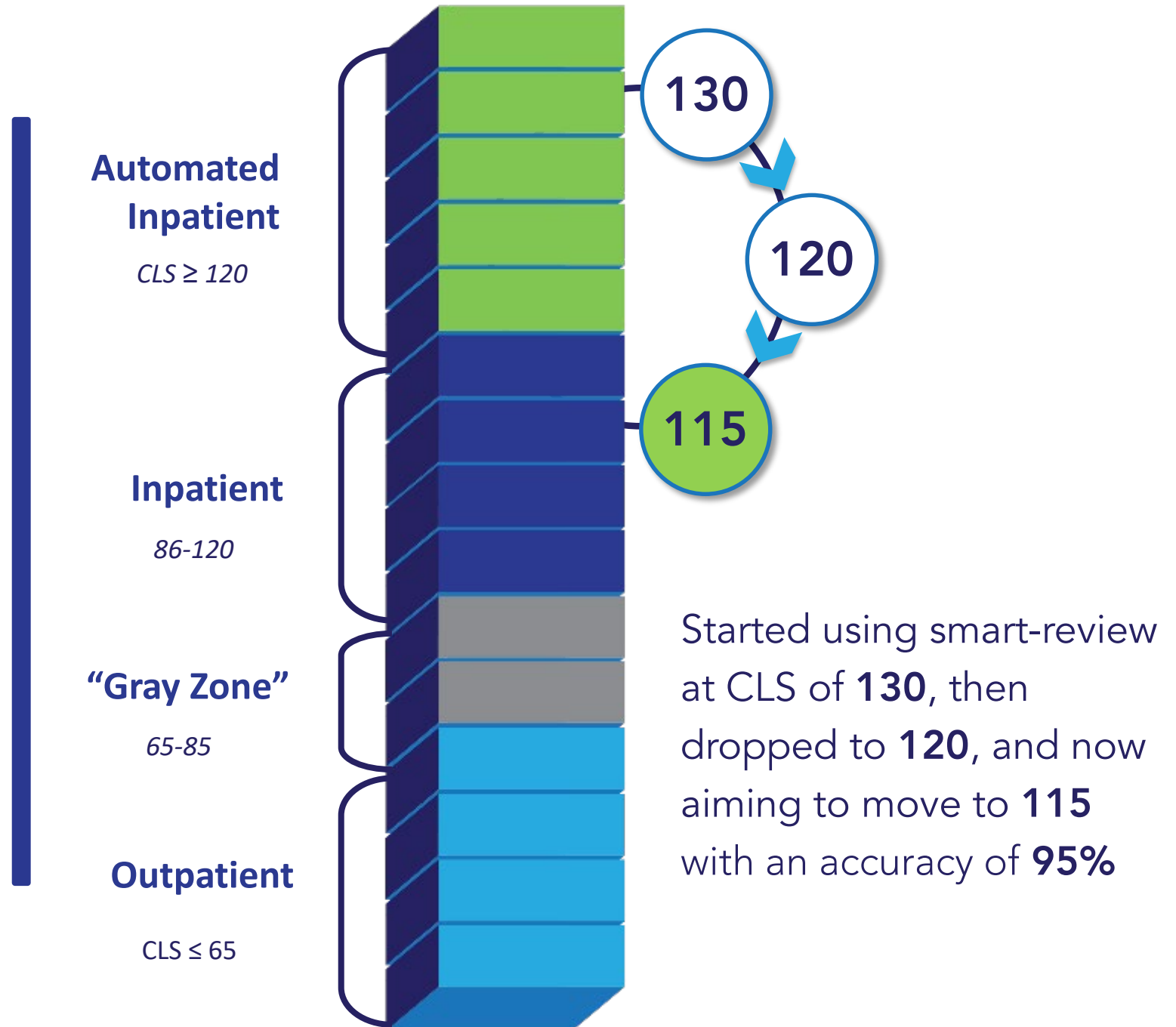
Verify that the payer qualifies

## Payers currently included:

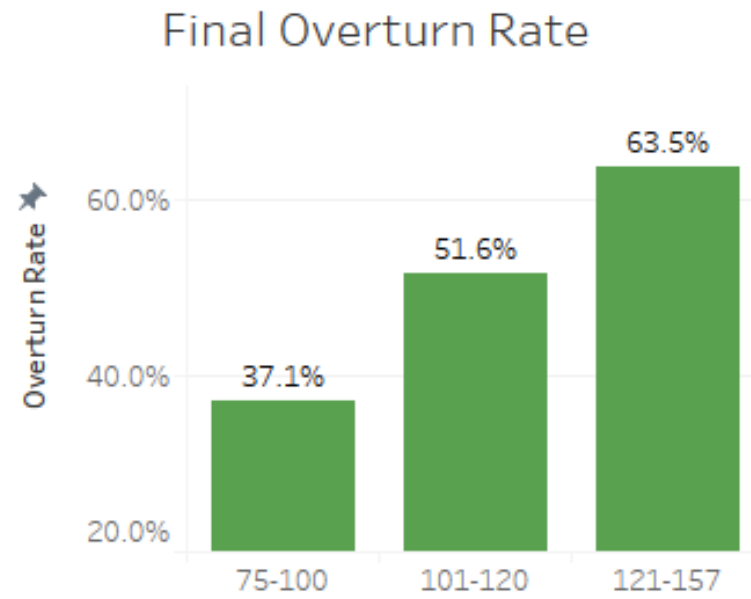
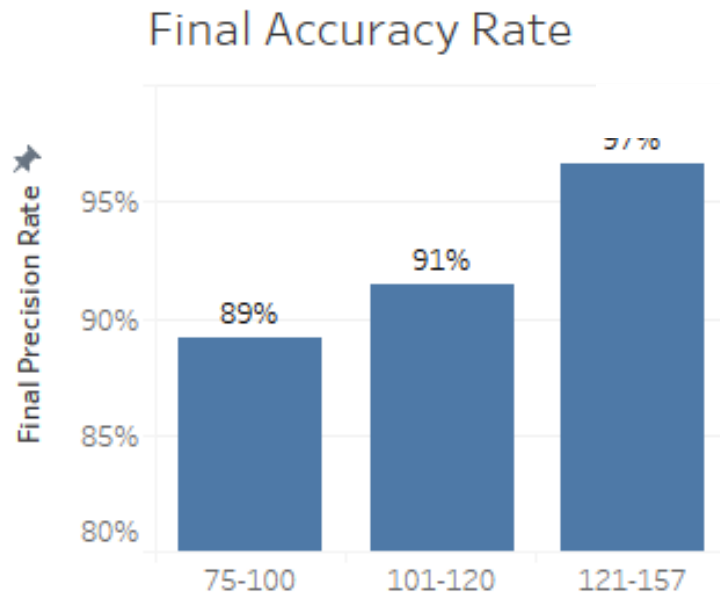
- Medicare, Medicaid,
- Select commercial plans
- Medicare Advantage plans which have EMR access

# What's the Right Score?

- How did you implement the smart-review function?
- Did you do any compliance audits?
- Did you update your UM plan? If so, how?



**Smart review doesn't  
replace smart nurses**



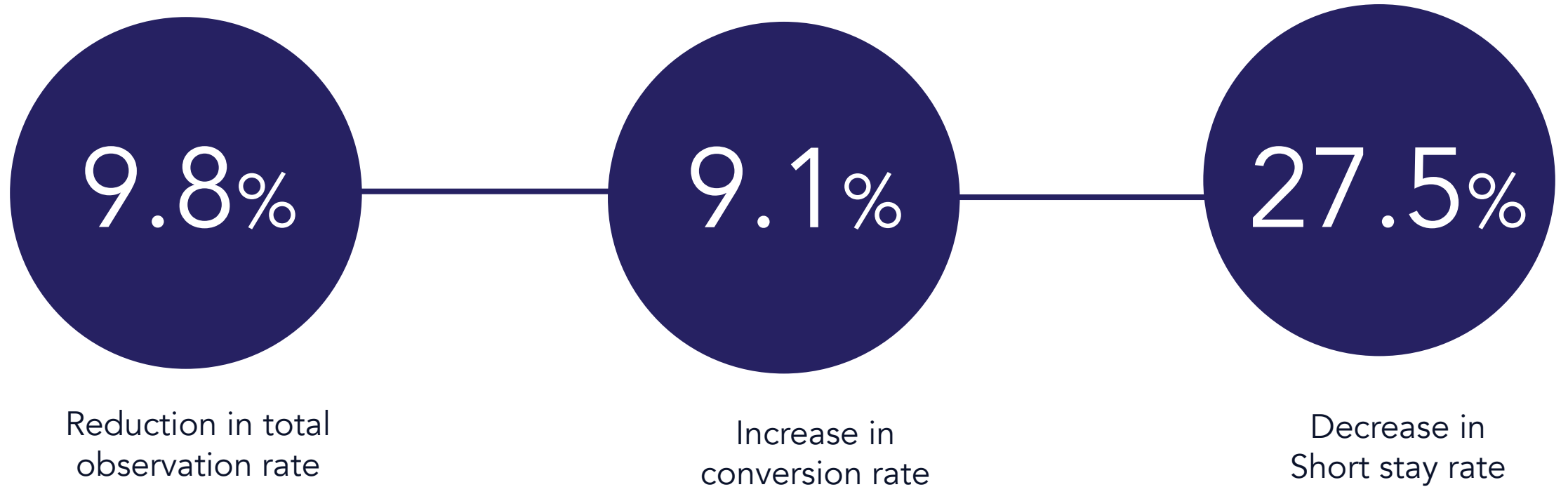
## CLS Accuracy Analysis

# | Outcomes

- Has this approach made staff more efficient?
- How has Smart Review impacted workflow?
- How has it impacted compliance?



# | Partnership Results



1.6 efficiency gain per FTE

“Rip off the Band-aid — use Cortex exclusively”

— *Tonya Harrison*



# Reframing

the payer-provider **relationship**

Covenant Health is paving the way for smart collaboration



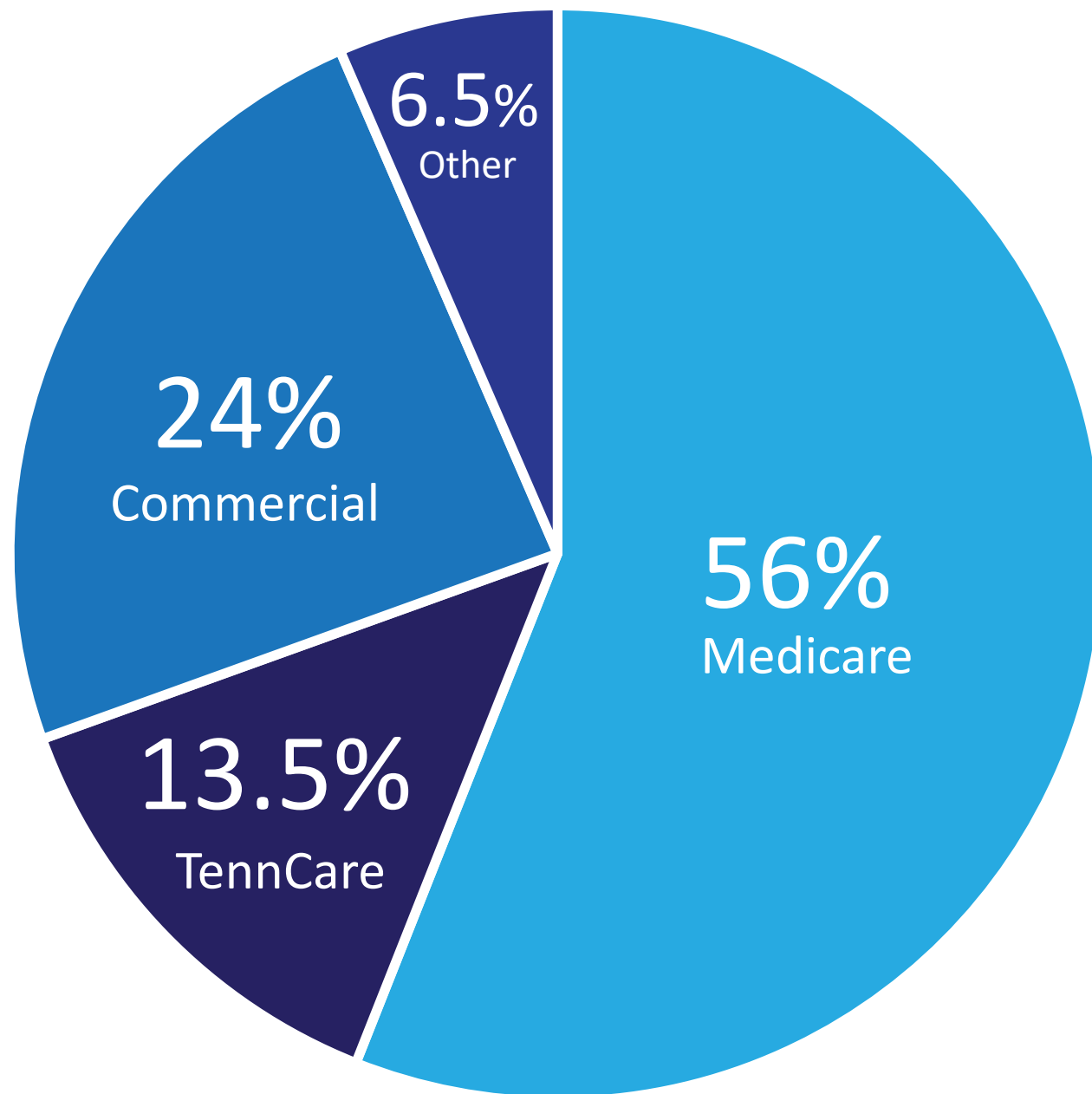
# Covenant Health

Headquartered in Knoxville, TN, Covenant Health is a community-owned, not-for-profit healthcare system and the area's largest employer.

## Covenant by the numbers:

- 9 acute care hospitals
- 1,500 affiliated physicians
- More than 10,000 employees

# Covenant Health Payer Mix





**Sherri Ernst,  
RN, BSN, MBA**

*Revenue Integrity & UM  
Officer*

Covenant Health

# Centralization Goals

- Processes are efficient.
- Processes bring value to our organization.
- Equity in our workload.
- Continue to improve communication efforts.

# | State of the Industry: The 3 V's

## Volume

doing more  
with less



## Variability

subjectivity in  
medical necessity  
determinations

## Viability

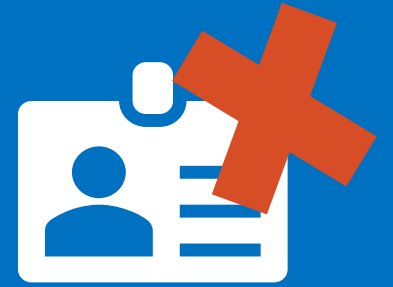
revenue protection for sustained operations;  
shift towards outpatient reimbursement



Ability to perform  
payer notifications



Performing  
Clinical  
Reviews



Review  
incorrect  
patient  
status

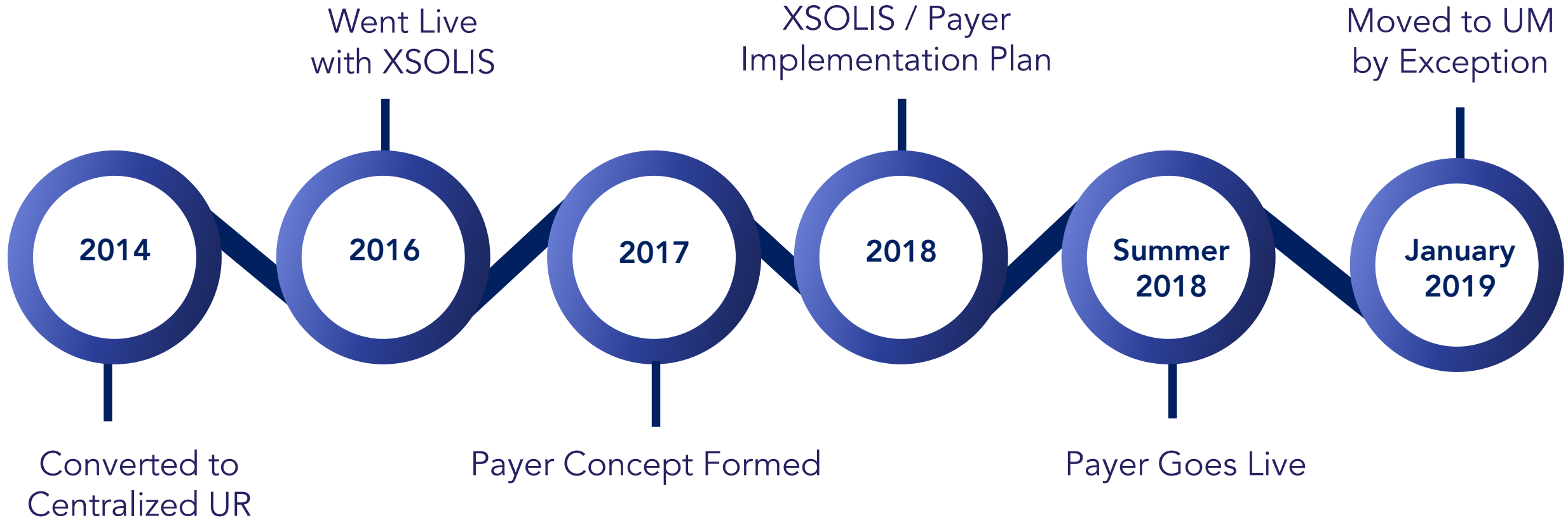


Manage the phones,  
man the faxes



Manually performing  
observation calculations

# | From Idea to Solution



Aligning the Vision: Covenant & Payer

Communicate.

Escalate.

**Collaborate.**



## Value for Providers

- Supports accurate status decisions
- Analyzes the clinical merit of each case automatically
- Increases efficiency, productivity and throughput
- Helps in managing Obs and Conversion Rates
- Identifies trends on an individual and aggregate level



## Common framework of data

## Value for Payers

- Allows payer staff to review and approve cases concurrently
- Offers the same analytics and insight to payer nursing staff
- Reduces administrative burden of managing reviews and appeals
- Ensures access to the right clinical data

# How does the relationship evolve?

- Broader access across payer teams/functions
- Leverage more connectivity and data
- Move to reviews “by exception”

Could you  
imagine a  
day?



When you could exchange case information with each payer within a common platform?



When a nurse or physician from a payer accesses your review and all relevant information?



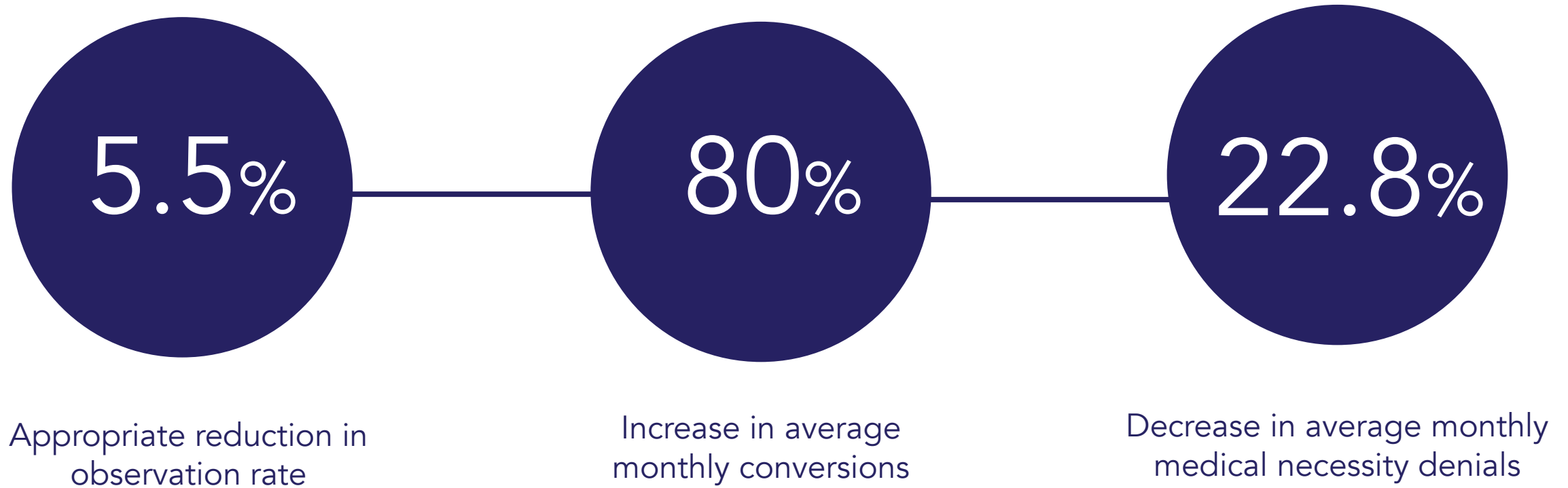
When reviews and authorizations for a subset of cases can be automated?

“The most compelling thing about this venture [with the payer] was the relationship.

When I look back to where we were from where we are today, I am very happy to say we’re collaborating.”

— Sherri, October 2018

# | Partnership Results: Covenant



**“We all need to be asking for this”**

Start  
| planting  
the seed  
now

- Payer alignment is possible, and preferable
- Challenge the status-quo, always ask “what if?”
- Get your regional payer rep(s) on board
- Journey begins with internal buy-in

**2019 & beyond...a new approach to UM**



Q  
& A



# TAKEAWAY CHECKLIST



Reach out to a peer who is using XSOLIS



Schedule your personalized demo with our team



Get your payer reps engaged in your journey towards smarter utilization

**Thank you for attending!**

We'll be in touch soon.