



October 10, 2022

Automation 101:

Buyers Guide to Automation

Introduction and Agenda

A decorative graphic on the right side of the slide consists of a series of dots forming a wave-like pattern. The dots are colored in shades of blue, teal, and red, and their density increases as they move from left to right, creating a sense of motion and depth.

Welcome

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AKASA



Agenda

- Current State of Automation
- Understanding Your Options
- Considerations for Evaluating Automation and Identifying Opportunities
- Deployment Best Practices
- Key Takeaways

Learning Objectives

- Describe how leading health systems have leveraged automation to elevate their staff and enhance operations while improving the patient financial experience
- Review how automation has evolved over the past decade and compare and contrast different approaches
- Discuss potential pitfalls in analyzing revenue cycle automation options
- Identify key best practices when creating key performance indicators (KPIs) for measuring success for automation within the revenue cycle

Healthcare Revenue Cycle Facing Headwinds

Payer complexity is increasing

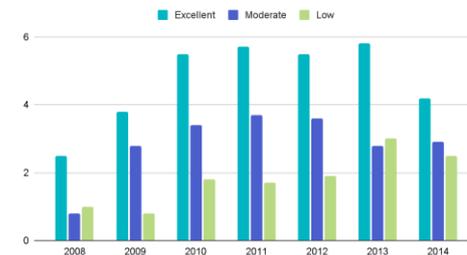
83%

of physician respondents indicated that prior authorizations for prescription medications and medical services have increased over the past five years.

Source: AMA, <https://www.ama-assn.org/system/files/2021-05/prior-authorization-reform-progress-update.pdf>

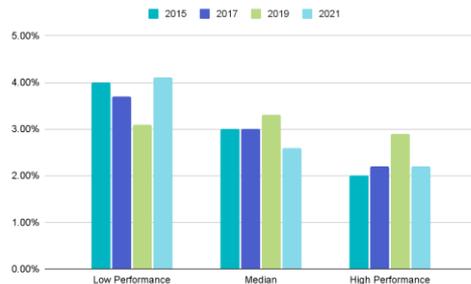
Improving patient experience is a must

Average net margin by hospital rating levels



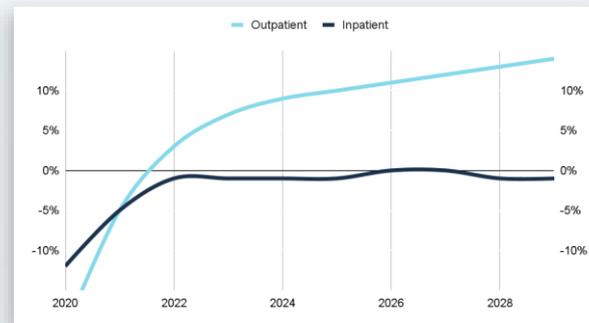
Source: Deloitte, <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-dchs-the-value-of-patient-experience.pdf>

Cost to collect remains stagnant



Source: Advisory Board, <https://www.advisory.com/blog/2019/03/benchmarking-update>

Volumes continue to rise: more work, less staff



Source: Sg2, <https://www.sg2.com/health-care-intelligence-blog/2022/06/sg2-2022-impact-of-change-forecast/>

Revenue Cycle Facing Headwinds



Staffing Challenges



Volatile Economic Conditions



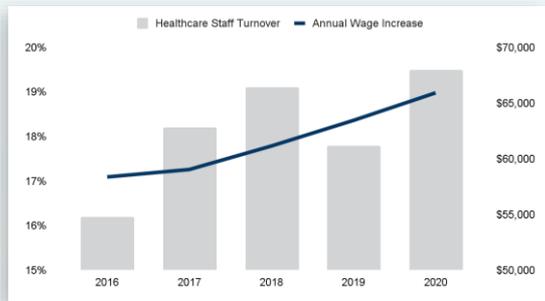
Cost-to-Collect Remains Stagnant



health leaders need to hire
more than 20+
employees in the revenue
cycle

Workforce Challenges Putting Providers on a Collision Course

Staff turnover and wage challenges are on the rise



Source: Gallup, <https://www.gallup.com/workplace/352949/employee-engagement-holds-steady-first-half-2021.aspx>

Positions are left vacant and hiring is time-consuming and expensive

Average time to fill vacant roles*:	
84 days	Entry-level revenue cycle talent (0-5 years)
153 days	Mid-level revenue cycle talent (6-10 years)
207 days	Senior-level revenue cycle talent (10+ years)

Source: AKASA survey of more than 500 healthcare financial leaders

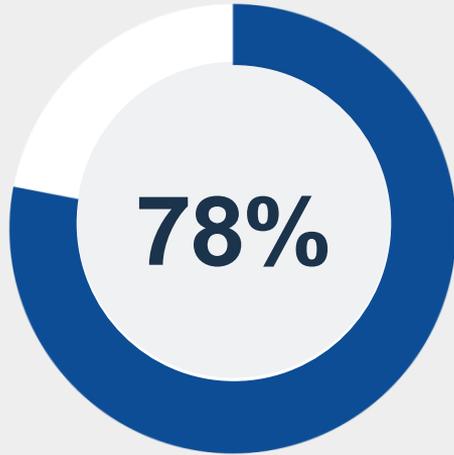
\$750 thousand in turnover costs each year

For a 350-bed standalone hospital, if the median health system employs 43 revenue cycle staff for every 100 beds.

Sources:
Definitive Healthcare
Advisory Board 2021 Revenue Cycle Benchmarks

Not All Automation Is Created Equal

Executives seeking automation...



of organizations have already or intend to automate at least some portion of their revenue cycle within the next year.

... but current solutions fall short



For every \$1 spent on robotic process automation (RPA), an **additional \$3.41 is spent** on consulting services.



Leading healthcare systems currently using RPA/AI for revenue cycle have **low satisfaction at 2.21** on a 5 point scale.

Sources:
AKASA data, Forrester, and the Academy study "The promise of RPA and AI for RCM."

Top 4 Reasons for Investment in Automation and AI

Why Are Executives Investing in AI and Automation in RCM?



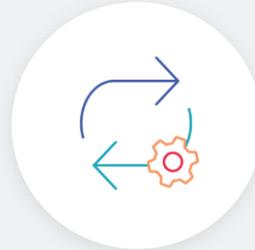
60%

Increase revenue capture



45%

Accelerate cash flow



50%

Increase productivity



35%

Increase cost savings

Source: The Academy

Evolving State Of Automation

- *Evolution of Automation*
- *Comparison of Types of Automation*
- *RPA*
- *AI - ML*

Understanding “Automation”

What is it?

Can't my EHR do it?

It must be magic, but can I trust it?

Can automation do it as well as my staff?

Will I have control over all the pieces?

How do I know it was done correctly?

We have Bots. Now I understand their limitations.

Oh wow! I thought Bots and ML were the same thing. ML can do more than I ever realized.

How can I explain Unified Automation™ to my C Suite?

We need it!

Progression of Traditional RCM Automation

Manual

- Separate “Medical Billing System”
- Manual Account Assignment
- Writing notes on greenbar and reviewing with manager
- Almost all follow up work done over telephone
- Armies of collectors needed
- Age of mass rebills

Some Integration And “Automation”

- ‘Bolt-On’ workflow tools
- More integrated EHR
- Electronic claims filing- DDE, Clearinghouses, Claim scrubbers
- Introduction of work queues and rule-based assignment of accounts
- More targeted working of accounts, for specific issues

Automation and Other Tools

- EHR fully integrated with features for all areas of patient life cycle
- Big players like Epic and Cerner with everything from scheduling to accounting
- More sophisticated Rule Based queue assignments
- Integrated automation

A Look at Emerging Automation Models

1

RPA

Robotic Process Automation (RPA) are macros that control graphical applications or web browsers. It has been around for decades. (e.g., AppleScript)

2

Artificial Intelligence

Computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

3

Machine Learning

Machine Learning is a subfield of Artificial Intelligence (AI) that studies the ability to improve performance based on experience. While ML shares many similarities with AI, it differs because its systems can improve itself when exposed to more data.

Let's Relate Automation to Self-Driving Cars



RPA



RPA breaks, has hidden costs, and fails to scale.



RPA+AI



RPA+AI provides intelligence but lacks responsiveness and resiliency.



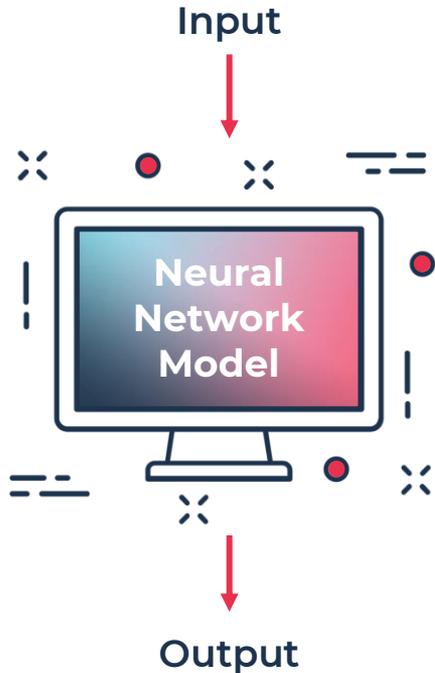
RPA+AI+ Human-in-the-Loop



Adding in AI (specifically machine learning) means true value can be achieved, solving for edge cases with virtually no maintenance or configurations.

Background on Machine Learning: How It Works

Goal: Predict Data Outputs Based On Data Inputs



Skin Cancer Detection



Input

Images of pre-biopsied moles

Output

Biopsy results: Cancerous or Not

Result

Algorithms which detect skin cancer with highest accuracy

Go Board Game



Moves by humans in past Go games

Results of those Go games: Win/Lose

Algorithms which beat the best Go players in world

Self-Driving Cars



Recordings of physical surroundings

Actions taken by human driver

Algorithms which support autonomous driving for all cases

Self-Driving Car Model



Training Driverless Cars

Sensors Throughout Car

Record All Surroundings and
Actions Performed by Drivers

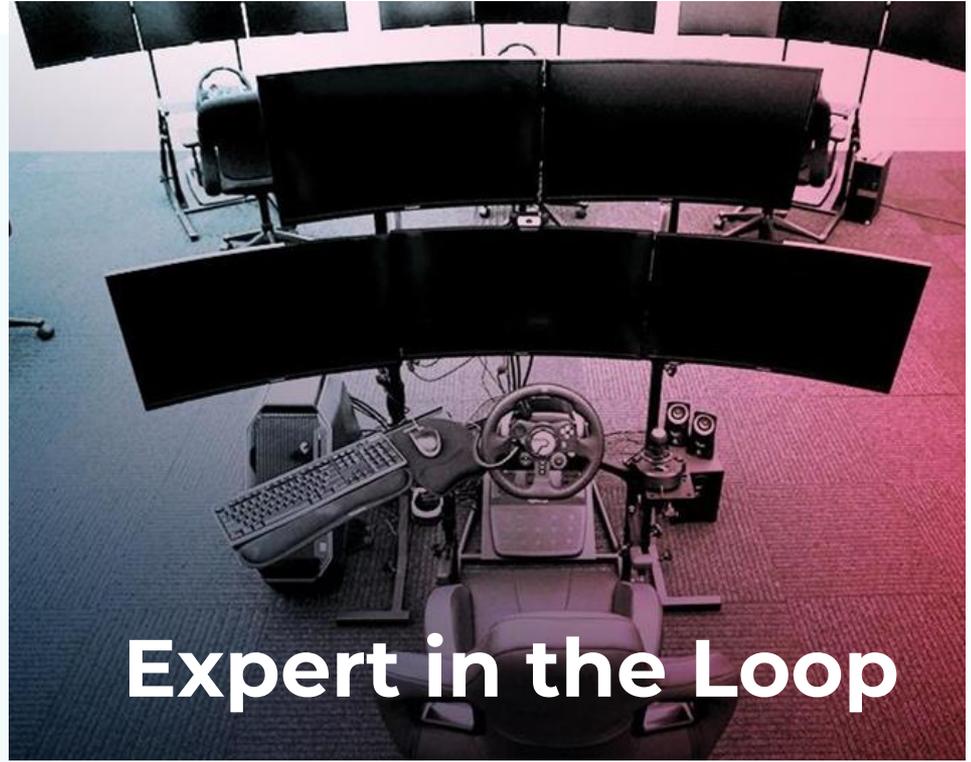
Label All Data

Data Drives Machine Learning

Human Support is Critical For Automation Challenges



Self-driving cars only work if the vehicles can be **operated remotely.**



Machine Learning

Unlike RPA, where a human has to code every step, with true machine learning, a series of inputs are fed into what is called a neural network. The machine then calculates the most probable outputs from the data it is fed.



Learns from Humans to
Resolve Outliers and
Complex Situations

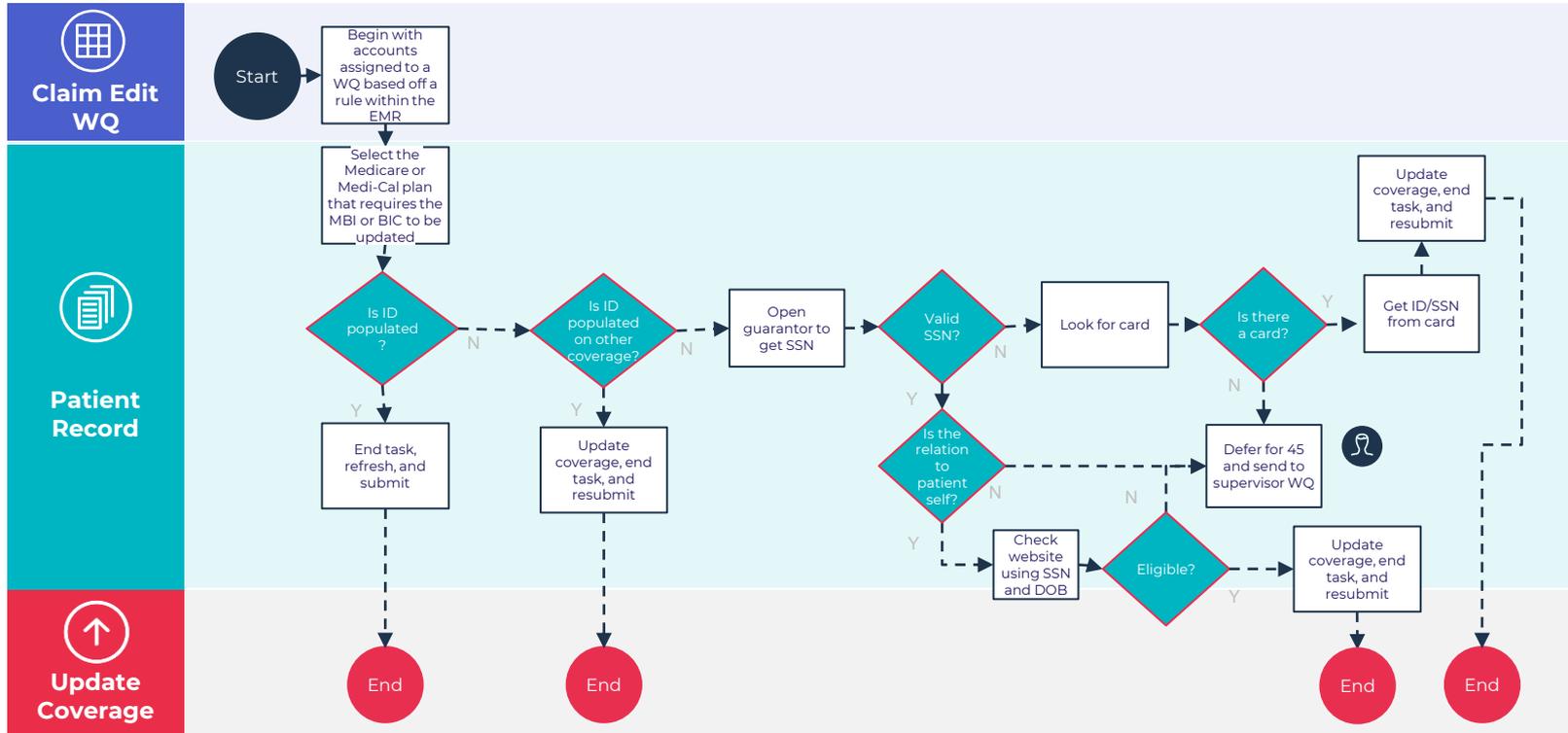


The More Data for
Algorithms to Learn From,
The Better



Trust the Process

Traffic Jam of Failure Points



Machine Learning is Reinventing Revenue Cycle



**Machines are Learning
and Observing**



AI Performs



**Revenue Cycle Expertise
Resolves Edge Cases and
Teaches Machines**

- + **Operates remotely and on top of existing billing and EHR systems**
- + **Eliminates the need for consultants, in-person implementations, multiple vendors, or new staff to manage processes**
- + **Allows value to be delivered faster and on a constant basis, with almost no maintenance**

Identifying Opportunities

- *Which Automation Do You need?*
- *Workflow*
- *Roadmap*
- *Vendor Selection*

Which Automation is Best For Your Organization

Selecting the best automation may involve different considerations than it did a year or two ago

1

What challenges am I trying to solve? Where do I start?

2

What is the business goal for implementing automation?

3

What infrastructure do you have in place to support an implementation?

Select the solution that best solves *your* problem areas

1

There is no “right” answer on where to start

- Start with your highest return opportunities FOR YOU and expand from there
 - Losing money because of inconsistent processes, inadequate staffing to work all accounts, low return on investment on burdensome, time consuming, administrative tasks?
- Large workforce dedicated to required but low return on investment tasks? For instance: claim status, adjustments, rebills.
- What areas of your RCM are you struggling to reach goals due to staffing levels and capacity constraints?
- Are there areas you are struggling with achieving and maintaining consistency and accuracy?

The Automated End-to-End Revenue Cycle



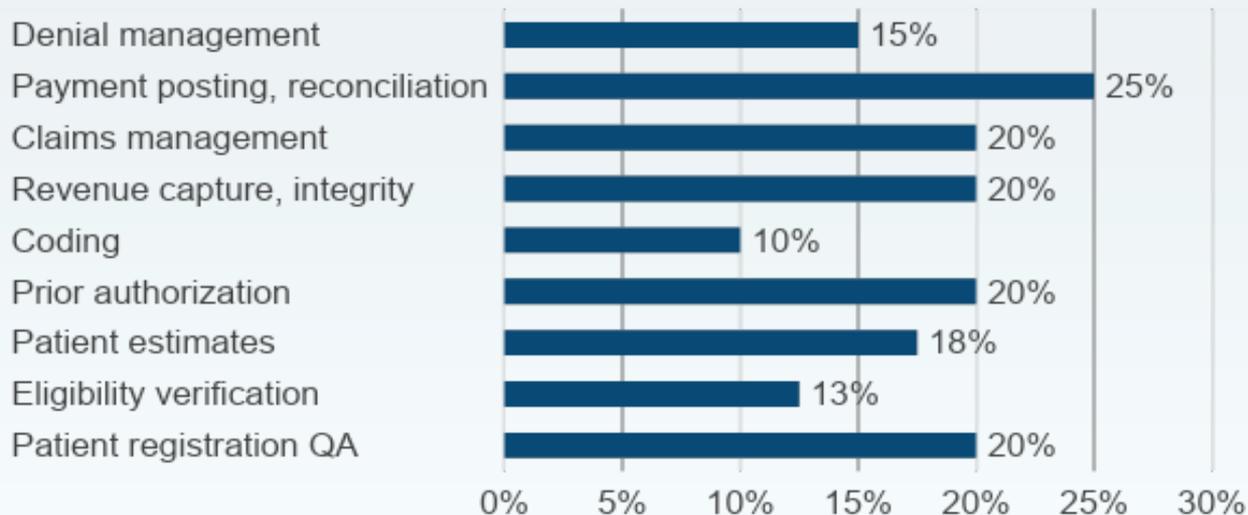
\$3M to \$18M

Impact of moving a quartile in performance on denials write-offs, bad-debt, and cost-to-collect yields for an average 350 bed hospital

Source: Advisory Board 2021 Revenue Cycle Benchmarks

Ample Opportunity Exists to Drive Efficiency

Percent of Executives Considering Automation by Part of Revenue Cycle



Top Priorities for Revenue Cycle Automation

Eligibility Driven off Insurance Cards



Use machine learning (ML) to automate insurance card data input to eligibility checks. Real time eligibility and accuracy checks for Patient Access

Prior Authorization

Authorizations are a leading cause of denials. Use ML to learn requirements, implement checks, and obtain authorizations



Follow Up to No Response Claims



Complete claim status checks on payer portals for all claims with no response and write response back into EHR and prioritize next action by payer response

Denials Management: Rebills, Appeals, and Write Offs

Appeal or rebill technical denials by understanding payer requirements, pulling necessary information from EHR or writing off if indicated



Revenue Cycle Technology Typical Offerings

Workflow and Dashboards

Previous Generation:

Legacy systems focus on workflow and analytics



Simply staff augmentation, often delivering insights or facilitating human staff workflows

Basic RPA Automation

Current Generation:

Stated goals of staff automation, but falls short of full vision



blueprism



RPA works best on basic, linear, stagnant workflows, but frequently fails in complex, dynamic environments

Determine Your Goal To Understand Which Product To Use

2

Top Initiatives Across Revenue Cycle Management

Metrics

- Decrease Cost to Collect
- Mitigate financial risk

Areas Needing Support

- Staffing shortages
- Employee Engagement
- Patient Satisfaction
- Increase payment rates across payers

Remote Implementations

3

What kind of implementation can your organization support and how can the vendor support YOU in that?

- No longer can you have teams of consultants coming on site to shadow processes, so how will you accomplish the implementation
- The vendor should have clearly outlined processes and project plans in place to support your organization in the information required for an implementation
- The vendor should have a clear understanding of your work flows, processes in place to take variables and outliers into account and the ability build an ML that can handle the scenarios needed

Benefits of Automation

People Management

- Transparency into account receivable health
- Productivity Tracking
- Matching the Right Staff to the Right Job (by specialty, experience level, queue assignments)

Results

- Decrease Cost to collect
- Increase First Pass Claims Payment
- Decrease Days A/R
- Increased Job Satisfaction and Engagement

Account Management

- Effective and efficient Follow Up
- Shorter time per task
- Quicker identification of payer trends and issues
- Increased consistency

The True North: Improve Patient Financial Experience

Leaders should be leveraging automation to enable their teams to be patient advocates

1

Help patients get their full benefits

4

Secure prior auth in a timely manner

2

Ensure patients get a correct bill the first time, every time

5

Enable price transparency

3

Prevent surprise bills!

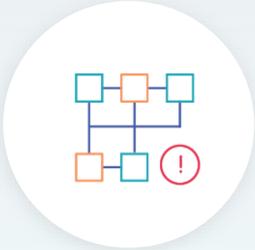
6

Provide the best possible patient financial experience

Keys To Success

- *Effective Change Management*
- *Cost and ROI*
- *Common KPIs to Track*

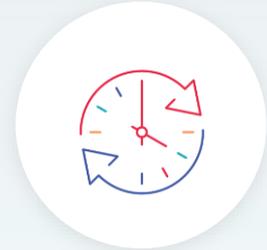
Potential Barriers to Total Value



Ineffective
Change Management



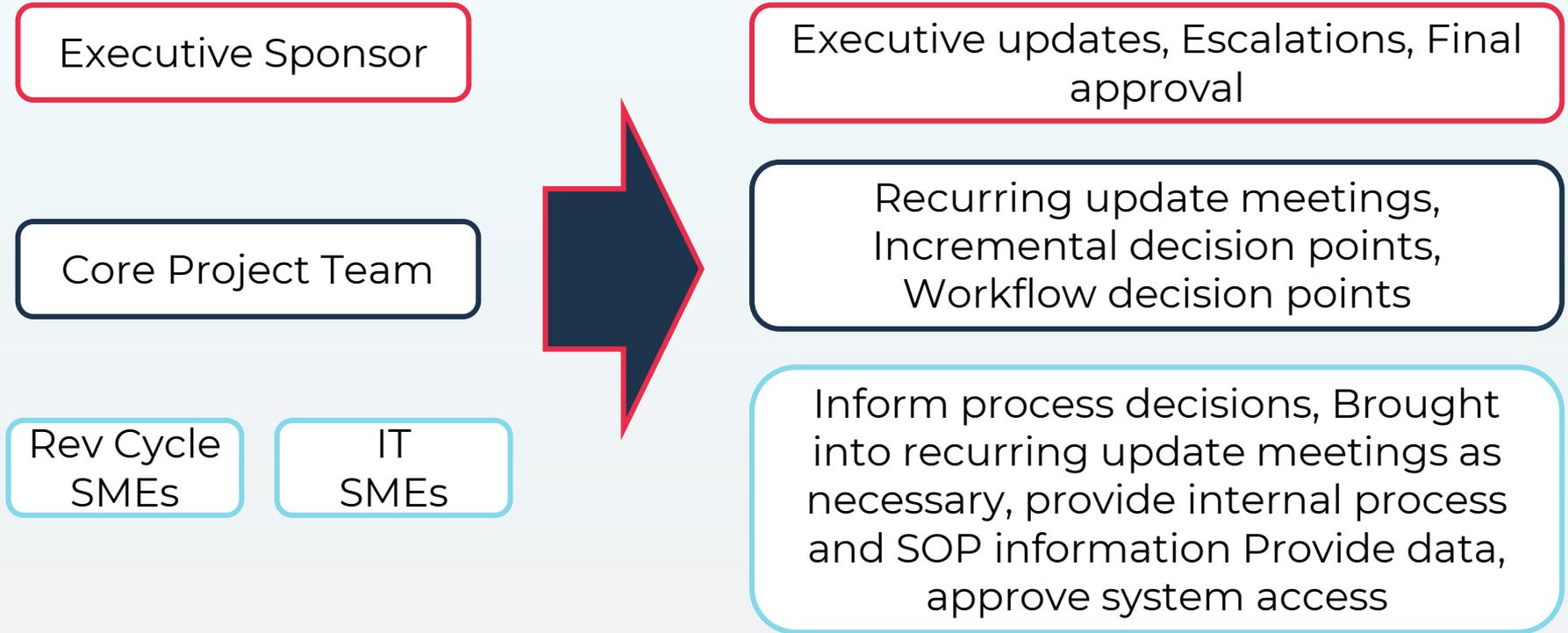
Staff Resistance
to Automation



Unrealistic
Timelines

Set Clear Governance Structure

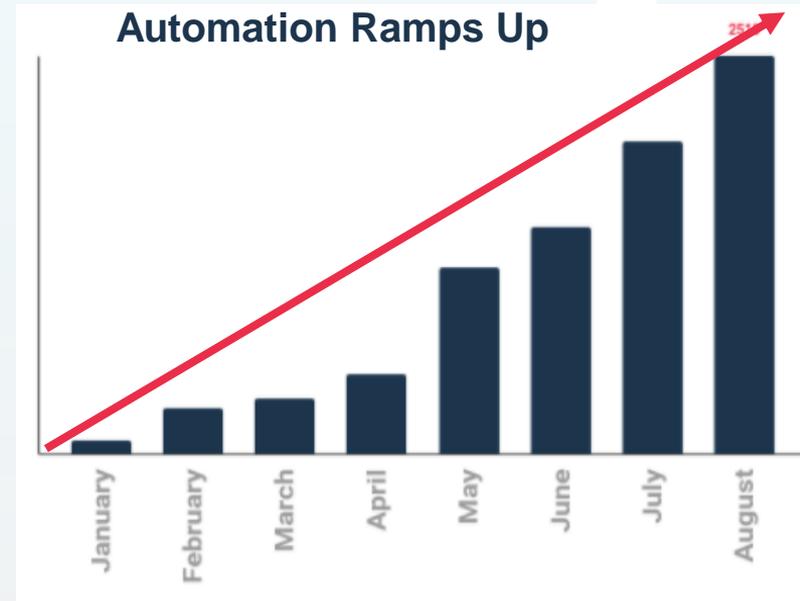
Identify Appropriate Resources to Support Project



Prepare Management for Change

Change Management is a critical piece to the puzzle, in order to realize the full value of automated workflows.

As automation ramps up and begins taking on more volume:
Monitor queues and volume reporting to assess current assignments
Reallocate staff to new, more complex, or additional work.



RCM Goals: KPIs to Measure Success

Reduce Cost to Collect



Cost to Collect

Percentage of Net Patient Revenue (% of NPR) for all revenue cycle resources

3.0% of NPR

Industry low and high quartiles for CTC is 2.2%-3.7% of NPR

Drivers

- Staff levels and comp
- Technology costs
- Office space, admin, etc.

Lower A/R



A/R Days

Days in Accounts Receivable (A/R) measured as total A/R against the average daily revenue

47.8 Days

Industry range for hospital-based A/R days is 37-58 days

Drivers

- Staff capacity
- Staff effectiveness
- Payer responsiveness

Optimize Revenue



Total Patient Collections

Dollars actually collected for patient services rendered; differs from total billed dollars

Provider-Specific

Total revenues dependent on patient volumes, contracts, payer mix, and collections effectiveness

Drivers

- Preventing denials
- Successfully appealing denials
- Identifying contractual underpayments

Hard ROI vs. Soft ROI

Hard return-on-investment measures used by health systems don't reflect the full impact of automation, AI for RCM.

Hard ROI

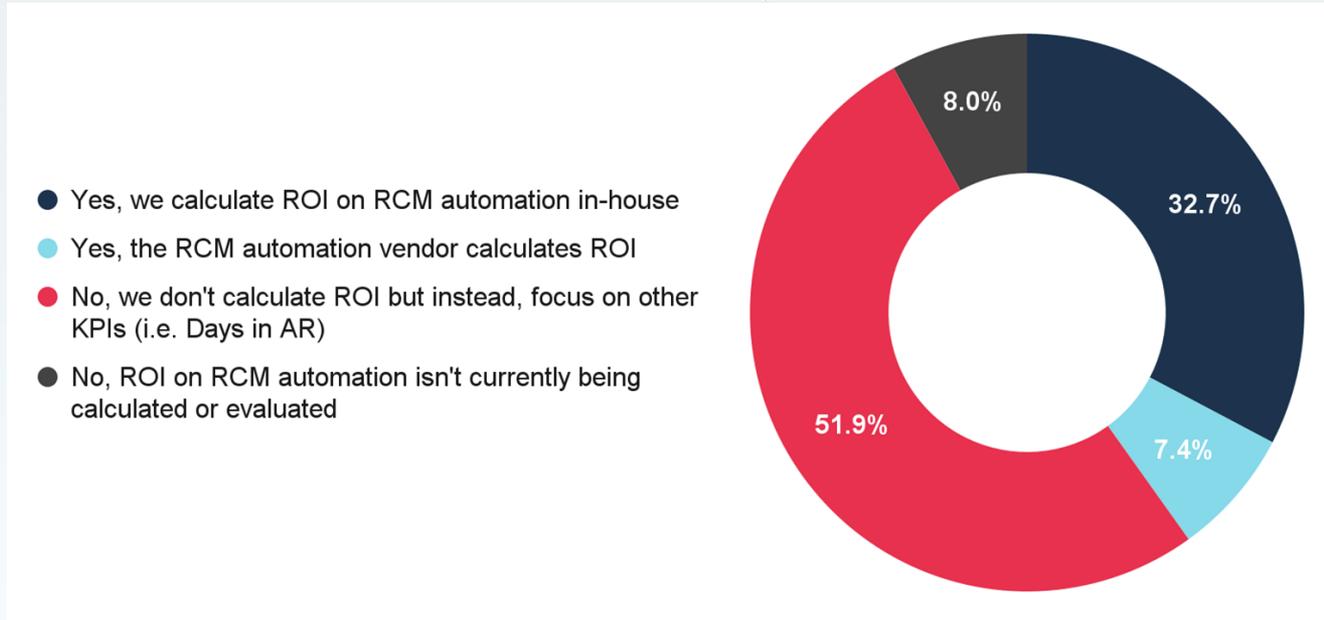
- Reduced cost-to-collect
- Increased yield
- Avoidable denials write-off rate
- Net A/R Days
- Overall denial rate
- Net collection rate

Soft ROI

- Hours saved
- Authorization rate
- Initial denial rate
- Clean claim rate
- First pass resolution rate
- Charge lag
- Insurance verification rate
- Pre-registration rate
- Number of patients engaged (through specific process)
- Employee engagement score
- Vacancy rate
- Turnover rate
- Compliance

Effective ROI Measurement = Vendor Involvement

Do you actively calculate your return on investment (ROI) on the tools you use to automate the revenue cycle?



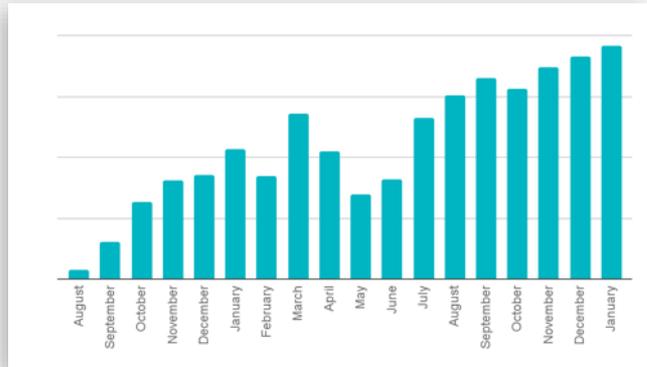
Ensure right KPIs are set up according to workflows which leverage automation so both hard and soft ROI can accurately measured

Case Study: AKASA Automation Outcomes



\$970M in NPR

- Multi-State Health System
- 4 Hospitals, 33 Clinics



Claim Status Automation Production

19,000+

Claim status checks per month



19+ FTE equivalents

that are all meeting productivity goals

Expanded Production

Patient Access/Financial Clearance

- Eligibility
- Prior Authorization
- Price Estimation
- RQA Alerts

Denials Management Resolution

- Rebilling Eligibility Denials
- Coverage Discovery Checks

An icon showing a bar chart with an upward-pointing arrow, representing a yield increase.

\$30M
yield increase

An icon showing a circular progress indicator with a red segment, representing 86% less time on status checks.

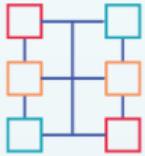
86%
less time on status checks

Key Takeaways

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Automation Provides Resiliency

**Business
Continuity**



Staff Productivity



**Machine
Learning the
“Special Sauce”
for Automating
RCM Workflows**

Cost Efficiency



**Improved Patient
Financial Experience**



Questions?

