HealthCatalyst

Positioning Yourself for Success in an Evolving Healthcare Delivery System

Today's Speakers

John League

Managing Director of Digital Health Research, and Adjunct Faculty

Advisory Board

John Janas

Medical Director

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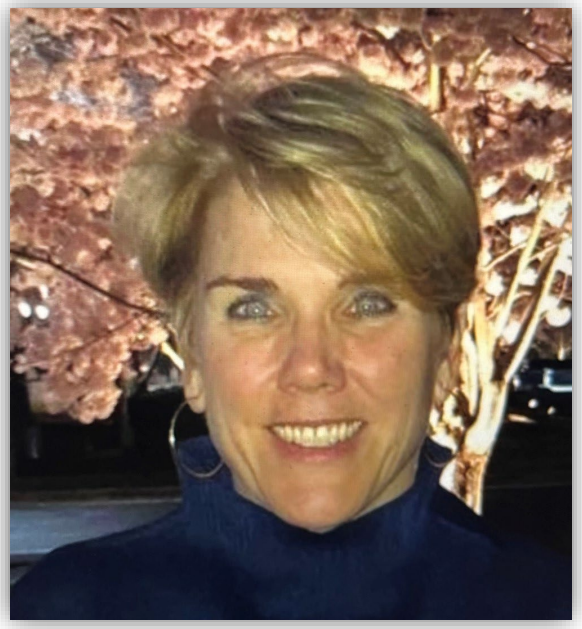

Jackie Matthews

SVP Solutions Consulting

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Agenda

- Advisory Board's Perspective
- Reinventing the Annual Wellness Visit to Boost Preventive Care
- Improving Early Detection with Automated Lung Cancer Screening
- Automated Care Gap Closure: Using Digital Patient Engagement Enhances Care Gap Closure
- Q&A

ABOUT

John League he/him

Managing Director

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John League leads research on digital and ambulatory strategy at Advisory Board. He is responsible for developing Advisory Board's perspective on all things digital, including telehealth, artificial intelligence, digital inequity, and data. He also is responsible for Advisory Board's research and insight on ambulatory strategy, opportunity, and investment, and he serves as adjunct faculty of Advisory Board Fellowship, an immersive leadership development experience.

In a previous role at Advisory Board, John led research on hospital philanthropy, covering fundraising campaigns, grateful patient programs, and clinician engagement.

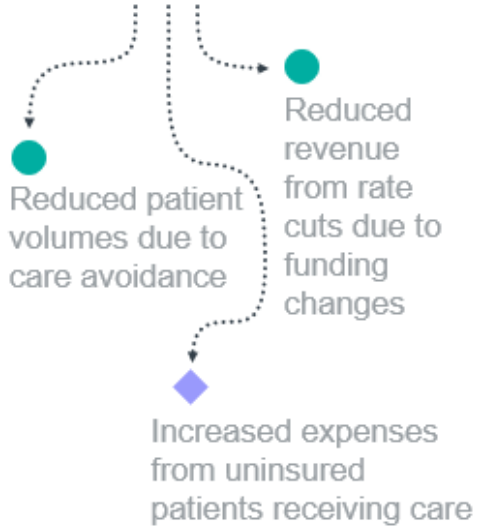
John holds degrees in music from the University of Louisville and the University of North Texas, and he has earned the Chartered Financial Analyst (CFA) designation. He is a Fellow of Advisory Board.

6/13/25

Federal Policies Directly Impact Hospital Finances

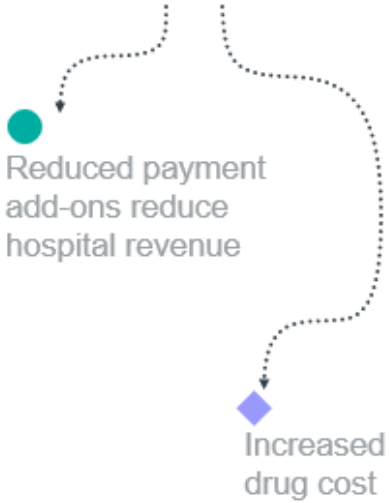
Medicaid and ACA cuts

Work requirements, FMAP changes, ACA subsidy removals



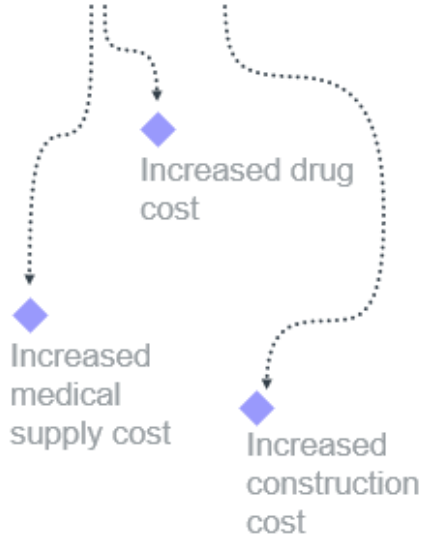
Medicare cuts

Reduced add-on payments and subsidy programs (e.g., site-neutral payments, 340B)



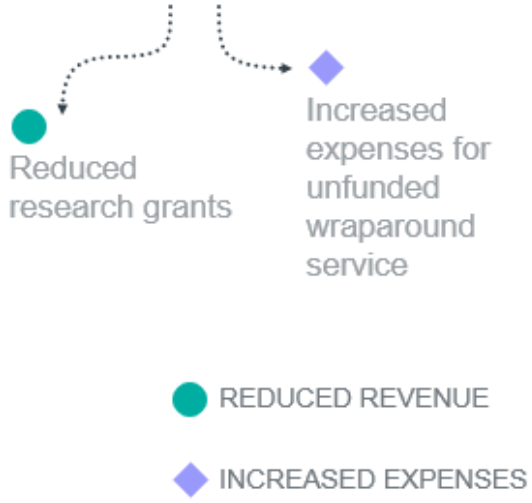
Tariffs

Tariffs and inflation will increase the cost of supplies



Federal grants

Cuts to research and public health funding



Organizational factors mitigate or amplify impacts

- Medicare payer mix
- Medicaid payer mix
- Dependence on federal and state grants

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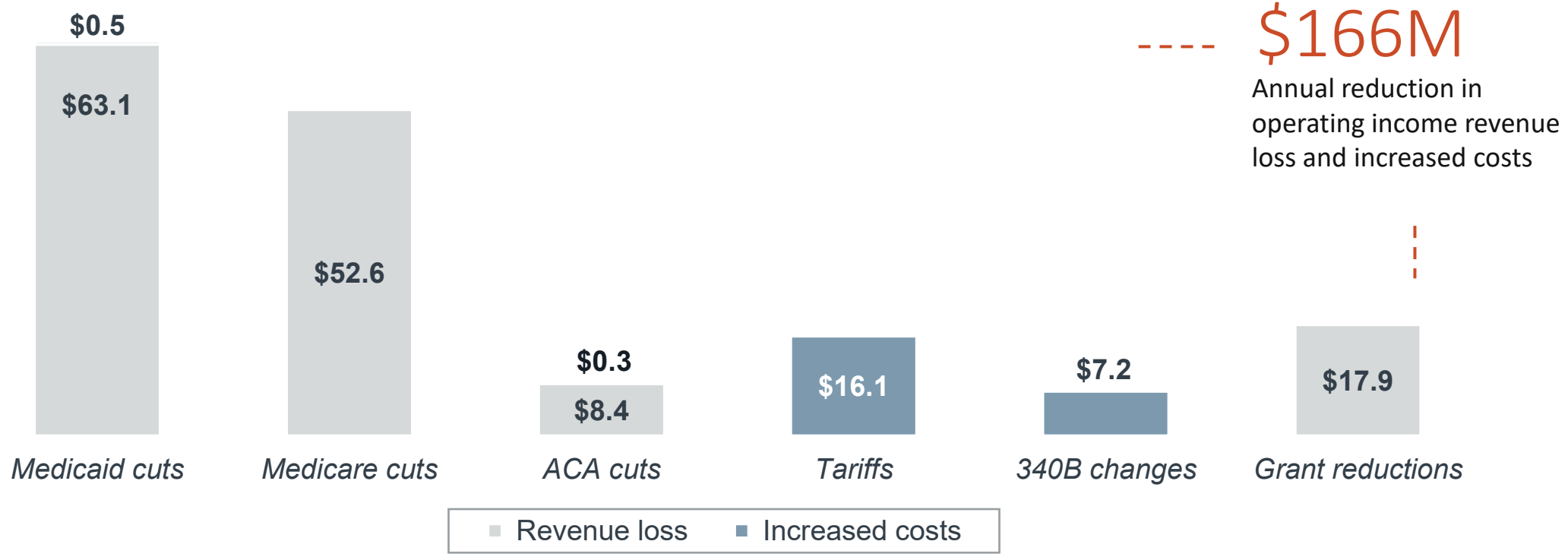
Cumulative Reductions have Substantial Financial Impact

Projected costs increase and revenue loss (in millions of dollars)[1]

Health system with "medium" exposure to Medicaid and Medicare, high dependence on research grants



$166M

Annual reduction in operating income revenue loss and increased costs

1. Based on most likely scenario

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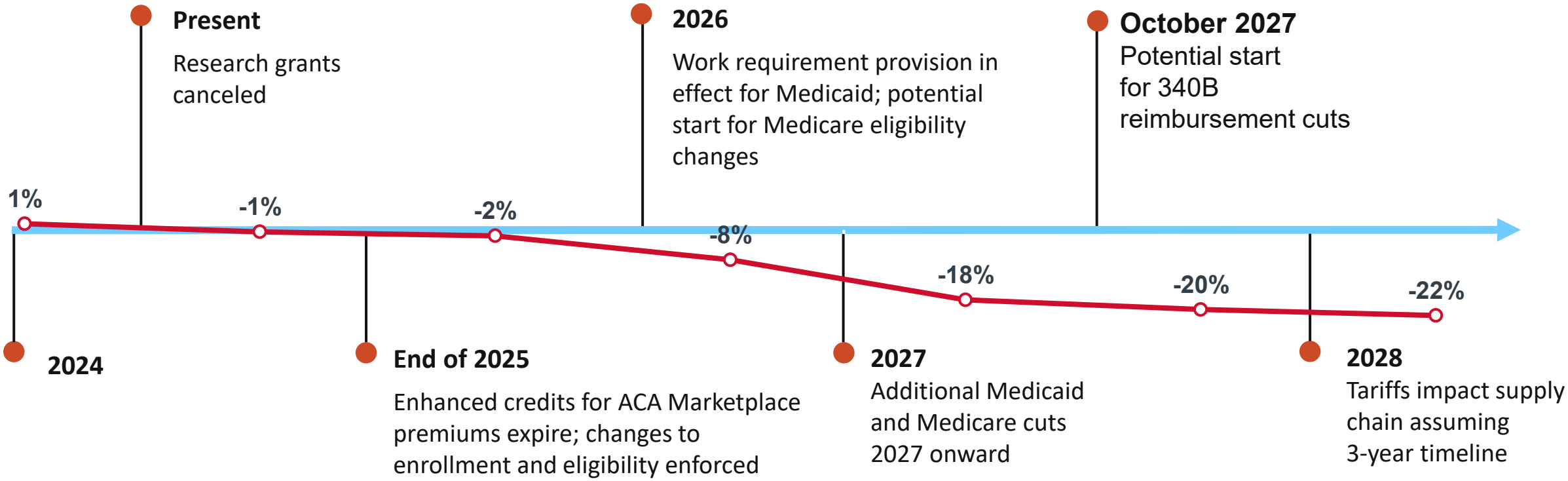
Prioritize Response on Impact and Time to Prepare

Key milestones of proposed legislation and the impact on operating margin

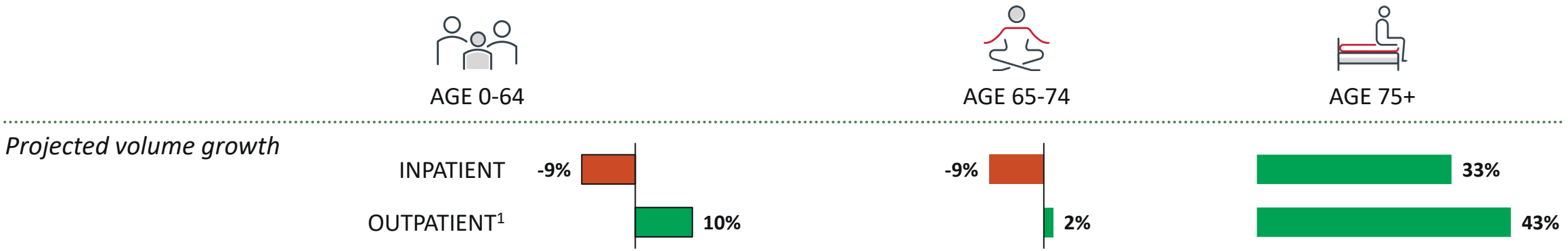
Estimated operating margin following each policy action for a median $1-$2B NOR[1] system by operating margin



1. Net operating revenue

The Utilization Shifts Ahead

Comparison of major volume segments, 2024 to 2034

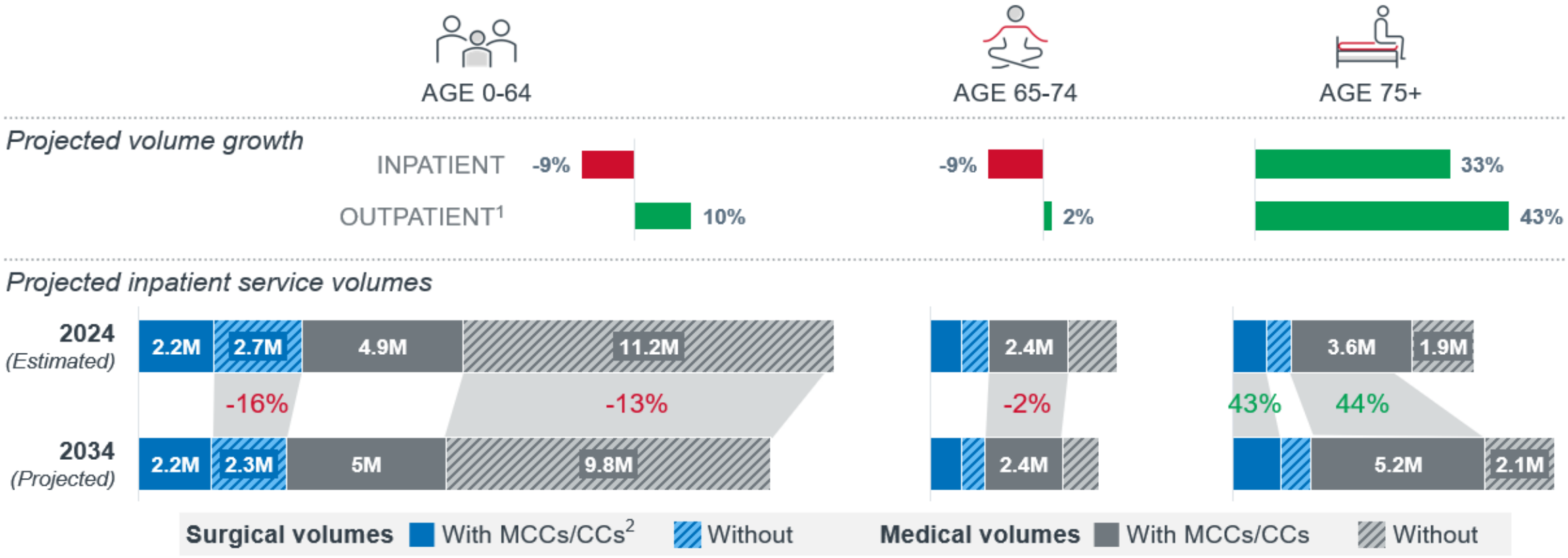


1. Excludes lab, evaluation & management, radiology, physical therapy & rehabilitation, and miscellaneous services.

Source: Market Scenario Planner. Advisory Board. Accessed April 13, 2025.

High-Margin IP Surgeries to Shrink as Complex Care Soars

Comparison of major volume segments, 2024 to 2034



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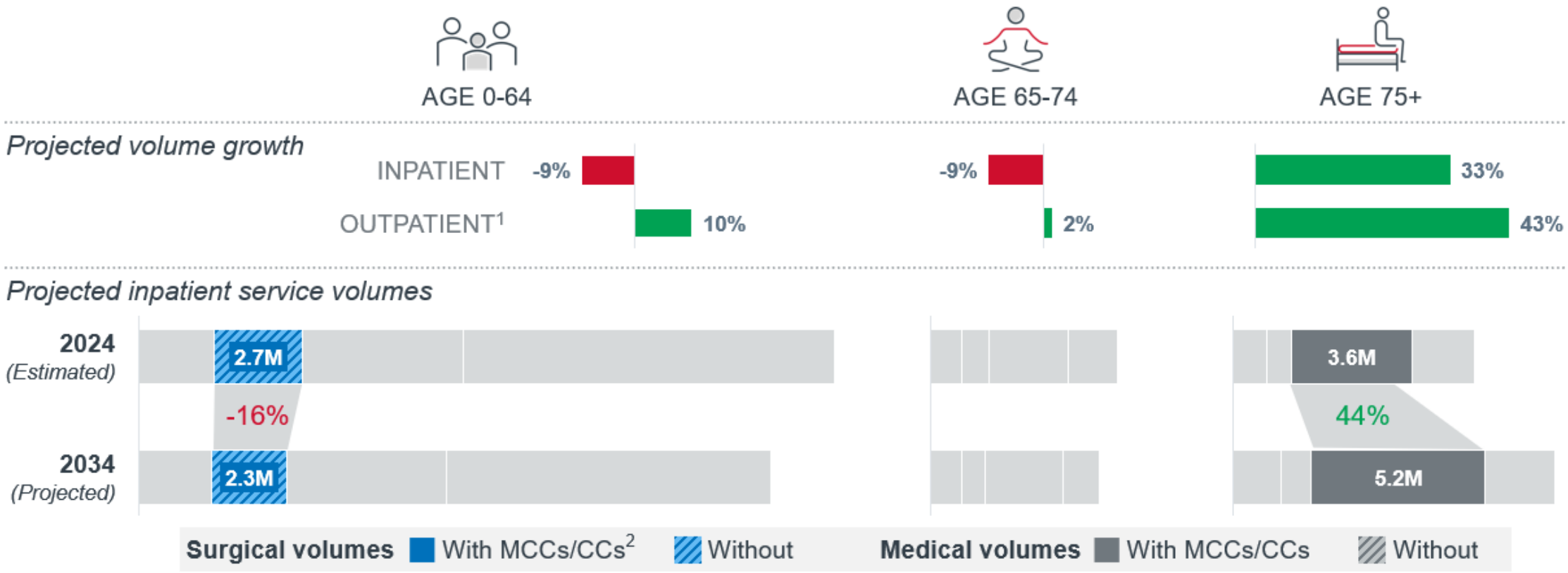

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Source: Market Scenario Planner. Advisory Board. Accessed April 13, 2025.

Staffing Recovery Data Doesn't Tell the Full Story

Some metrics have improved

10%
RN vacancy rate, down from a peak of 17% in 2022

18%
Hospital RN turnover rate, down from a peak of 27% in 2021

86 days
Time-to-fill rate, down from a peak of 95 days in 2022

But beneath the surface, RNs struggle with workload, burnout

63%
of RNs report being **assigned too many patients** at a time

76%
of RNs say they **experienced burnout** in 2023

62%
of RNs report their **workload has increased** since 2020

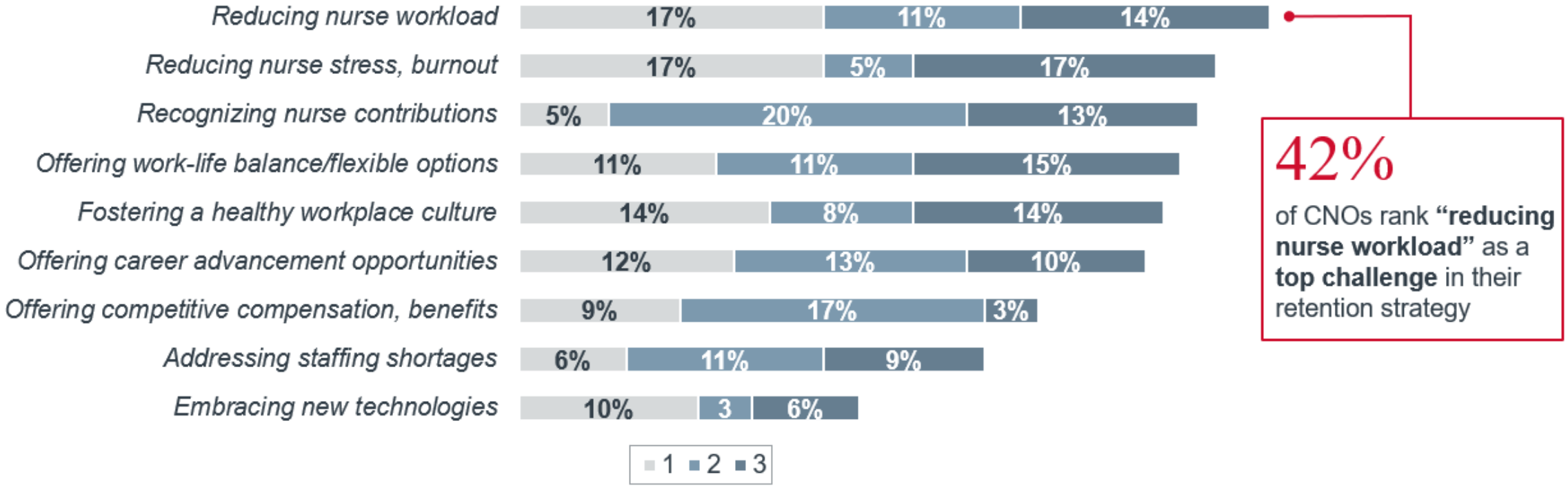
Source: 2024 NSI National Health Care Retention & RN Staffing Report. NSI. 2020, 2021, 2022, 2023, 2024; Workforce shortages and violence are rising concerns in state of nursing poll. American Hospital Association; Real A. Report: Trends in nursing 2024. IntelyCare. 2024; Smiley RA, Allgeyer RL, Shobo Y, et al. The 2022 National Nursing Workforce Survey. *Journal of Nursing Regulation*. 2023;14(1). doi:10.1016/s2155-8256(23)00047-9

Heavy RN workload is the top concern for CNOs

CNOs rank top 3 challenges in implementing RN retention strategies

In your organization's nurse retention strategy, which of the following have been the most difficult to offer or change?

n=115



42%

of CNOs rank **"reducing nurse workload"** as a **top challenge** in their retention strategy

Source: Attracting + retaining the next generation of RNs: Insights from the Becker's-Works CNO survey. Becker's Hospital Review. 2024.

Today's Physician Workforce Remains Fragile

Physician workforce is…

FEELING DISSATISFIED

49% Of physicians report feeling **burnout** in 2024

33% Of academic physicians indicate moderate or higher **intent-to-leave** in two years

CUTTING BACK

40% Of physicians plan to **reduce clinical hours** in the next year

CHANGING JOBS

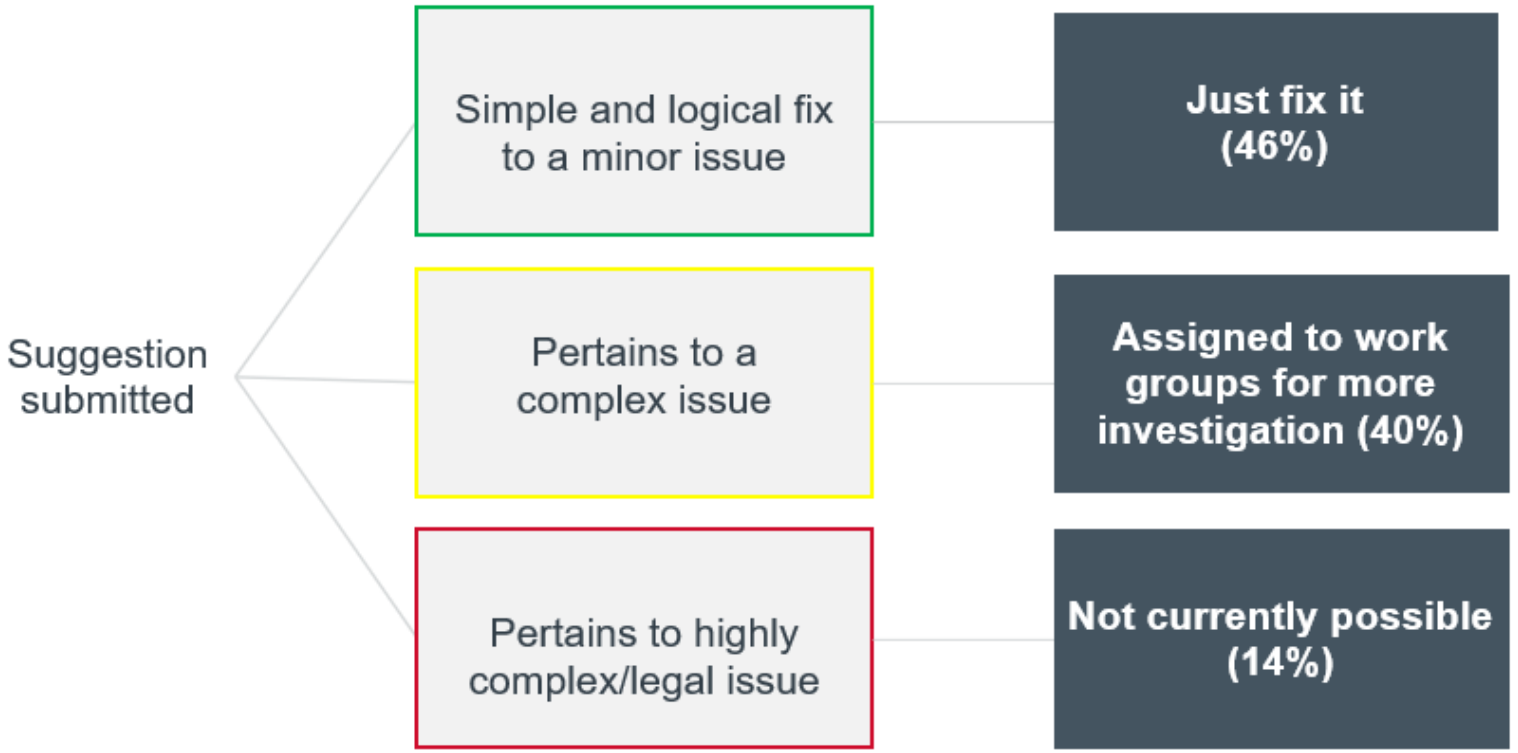
8% Median physician **turnover** in 2022

2 years Average time physicians who finished training in the last six years **spent in their first job**

Sources: McKenna J. Medscape Physician Burnout & Depression Report 2024: 'We Have Much Work to Do. *Medscape.* January 26, 2024; Ligibel J et al. Well-Being Parameters and Intention to Leave Current Institution Among Academic Physicians. *JAMA Network.* December 15, 2023; Shanafelt T et al. Career Plans of US Physicians After the First 2 Years of the COVID-19 Pandemic. *Mayo Clinic Proceedings.* November 2023; Benchmarking. *AAPPR.* Early-Career Physician Recruiting Playbook. *Jackson Physician Search & MGMA.* October 2023.

First, ‘Get Rid of Stupid Stuff’

Hawaii Pacific Health’s ‘Get Rid of Stupid Stuff’ (GROSS) submission system triages requests by feasibility and impact



1,700 hours

Reduction in nursing hours per month systemwide from streamlining a rounding documentation process to one-click

Source: Ashton M. Perspective: Getting Rid of Stupid Stuff. *New England Journal of Medicine.* 2018;379(19):1789-1791. doi:10.1056/nejmp1809698; Hamel G, Zanini M. How One Health System Got Rid of Bureaucratic Busywork. Harvard Business Review. September 26, 2023.

Can't Leap Forward with Tech Until We Nail the Essentials

"A lot of organizations are susceptible to 'magical thinking' where they gravitate towards new technology. This results in them looking past a lot of the **basic foundational technology**."

CIO, large health system in Midwest

Prioritize **building blocks**

Top 3 "back to basics" moves

01 Maximize **value of existing systems** (i.e., *are you using all the functionality built into the EHR[1]?*)

02 Make basic functions like order sets as **accurate, effective, and easy** to execute as possible

03 Prioritize **clinical staff needs**—not "shiny things"—for technology investment

Goal and related problems should inform tech investment decisions

Sample Goal	Retain nursing staff
▼ Potential Root Causes	• Lack of schedule flexibility • Feeling unsafe at work • Undesirable task mix
▼ Targeted Tech Solution	Leverage ambient listening and automated note summaries, reducing time spent on administrative tasks
▼ Caution	Temptation to **add** other undesirable tasks to reallocate newly available nurse time

1. Electronic health record.

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Reinventing the Annual Wellness Visit to Boost Preventive Care

HealthCatalyst

Why You Can't Rely on the "Annual Exam" or Annual Wellness Visit for Preventive Care

A survey from the Kaiser Family Foundation shows 92% of adults in the U.S. agree that annual exams are important, BUT **only 62%** of them report getting them (2018)

Only 60% of adults in the U.S. see a Primary Care Provider
at least once a year but NOT for an annual exam (2020)

39% of adults polled have seen a dentist within the last year, regardless of their insurance status, compared with **only 34%** who have seen a doctor for an annual check-up or physical exam (2023)

Click here for source

Why U.S. Adults Don’t See PCP Annually

- Access to care: Uninsured, No PCP
- Inconvenient
- Too Busy
- Lack of Education or Understanding
- Doesn’t Feel Important or Forgets
- Doesn’t Like the Healthcare System

THE TIMES THEY ARE A CHANGING…

Unpleasant Truths…

- Aging population
- Healthcare provider and staffing shortages
- “Burnout”
- Budget Deficits:
  Federal ➔ State ➔ Local ➔ “Healthcare”
- FFS Reimbursement Rates DECREASING
- MIPS emphasis on cost and quality increasing
- Payment adjustments increasing
- Risk Model contracting evolving
- Quality of care decreasing

Annual Wellness Visit (Medicare)

Prevention: Personalized Prevention Plan of Care

- Medical History and Current Health Review
- Health Risk Assessments (age appropriate): physical, mental, emotional
  - Screenings: Anxiety/Depression, Alcohol Use, Smoking Status, Cognitive Impairment, etc.)
  - Immunizations
  - Functional Assessments (ADLs, IADLs, Falls Risk)
- Counseling & Education
- Care Coordination: current providers, DME suppliers, medication review
  (Rx & OTC)
- Provide Screening Schedule/Check List (5-10 years)

What Medicare Covers

Initial Preventive Physical Exam (IPPE)

Review of medical and social health history and preventive services education.

- ✓ New Medicare patients within 12 months of starting Part B coverage
- ✓ Patients pay nothing (if provider accepts assignment)

Annual Wellness Visit (AWV)

Visit to develop or update a personalized prevention plan and perform a health risk assessment.

- ✓ Covered once every 12 months
- ✓ Patients pay nothing (if provider accepts assignment)

Routine Physical Exam

Exam performed without relationship to treatment or diagnosis of a specific illness, symptom, complaint, or injury.

- ✗ Medicare doesn't cover a routine physical
- ✗ Patients pay 100% out-of-pocket

Click Here for Source

Audience Poll 1

Medicare Annual Wellness Visits (AWV)

What percent of Medicare Beneficiaries in the community received an AWV in 2022?

A. 90 percent

B. 80 percent

C. 70 percent

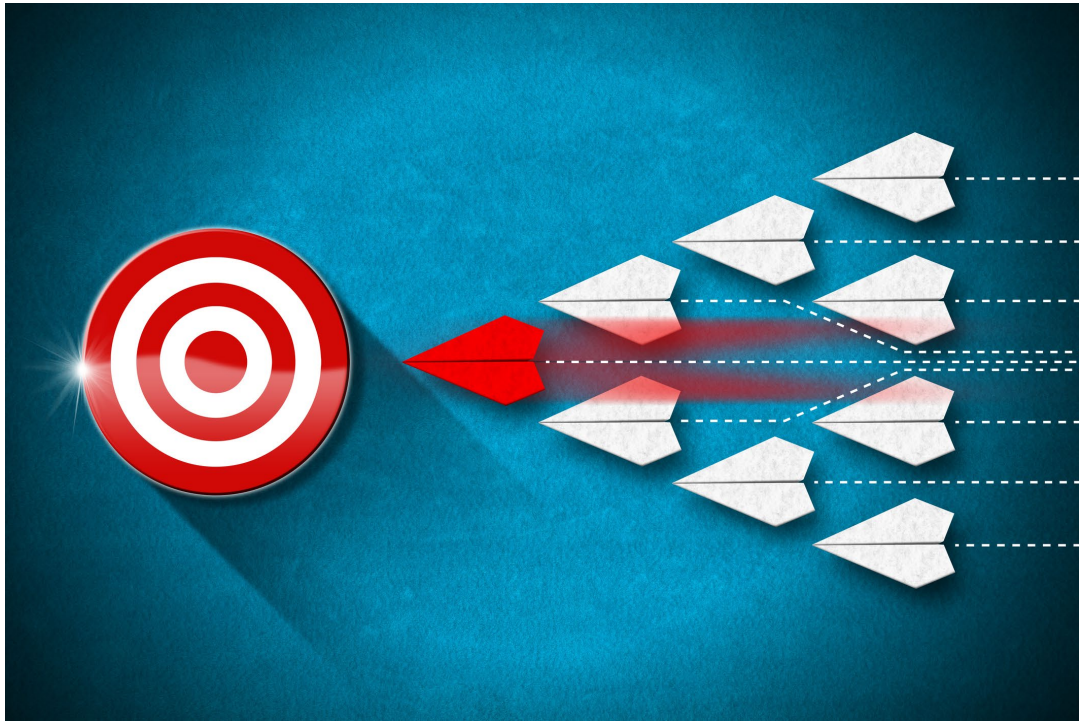
D. 60 percent

Answer: 60 Percent

2022 Use of Preventive Care Services Among Medicare Beneficiaries

- **Among Medicare beneficiaries living in the community in 2022, 60 percent had an annual wellness visit.**
- Approximately 73 percent of Medicare beneficiaries received a flu shot, with individuals under the age of 65 being least likely to get a flu shot (54 percent) compared with people aged 65 and over.

- **Among Medicare beneficiaries living in the community in 2020, 45 percent had an annual wellness visit.**
- In 2020, 94 percent of Medicare beneficiaries living in the community had a blood pressure screening and 86 percent had a cholesterol screening at least once.



IPPE Components (Minimum)

AKA Welcome to Medicare

- **Review:** PMH/PSH, FH
- Current Medications (Rx & OTC)
- Diet Hx & Physical Activities
- Social Activities & Engagement
- Alcohol, tobacco, & illegal drug use
- Depression Risk Assessment: e.g. PHQ9 Current or Past Hx of Depression or Mood Disorders
- Ability to Perform Activities of Daily Living (ADLs)
- Fall Risk Assessment
- Home and Community Safety, including driving when appropriate
- **Measure:** HT, WT, BMI, BP, Balance/Gait, Visual Acuity, & other factors deemed appropriate based on PMH/PSH/SH and/or current clinical standards
- End of Life Planning: Verbal or Written
- Opioid & Substance Use Risk Screening and Plan of Care
- Educate, Counsel, & Refer as needed
- Written Preventive Care Plan (brief)
  - Preventive Services
  - once-in-a-lifetime screening electrocardiogram (ECG), as appropriate
- Hearing Impairment Screening

First & Subsequent AWV Components (Minimum)

Perform a Patient-centered Health Risk Assessment (HRA)

- Get patient self-reported information
- You or the patient can update the HRA before or during the AWV

At a minimum, collect this information:

- Demographic data
- Health status self-assessment
- Psychosocial risks, including, but not limited to, depression, life satisfaction, stress, anger, loneliness or social isolation, pain, and fatigue
- Behavioral risks, including, but not limited to, tobacco use, physical activity, nutrition and oral health, alcohol consumption, sexual health, motor vehicle safety (for example, seat belt use), and home safety
- Activities of daily living (ADLs), including dressing, feeding, toileting, and grooming; physical ambulation, including balance or fall risks and bathing; and instrumental ADLs (IADLs), including using the phone, housekeeping, laundry, transportation, shopping, managing medications, and handling finances

First & Subsequent AWV Components (Minimum)

- **Review:** PMH/PSH, FH
- Current Medications (Rx & OTC)
- Diet Hx & Physical Activities
- Social Activities & Engagement
- Alcohol, tobacco, & illegal drug use
- Depression Risk Assessment: e.g. PHQ9 Current or Past Hx of Depression or Mood Disorders
- Ability to Perform Activities of Daily Living (ADLs)
- Fall Risk Assessment
- Home and Community Safety, including driving when appropriate

- **Measure:** HT, WT, BMI, BP, Balance/Gait, Visual Acuity, & other factors deemed appropriate based on PMH/PSH/SH and/or current clinical standards
- Cognitive Assessment required for AWV
- End of Life Planning: Verbal or Written
- Opioid & Substance Use Risk Screening and Plan of Care
- Educate, Counsel, & Refer as needed
- Written Preventive Care Plan (brief)
  - Preventive Services
- Hearing Impairment Screening

Medicare Preventive Services

HealthCatalyst

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AWV Does NOT have to be Done by Provider

AWV billing must be directed by a provider with an NPI number

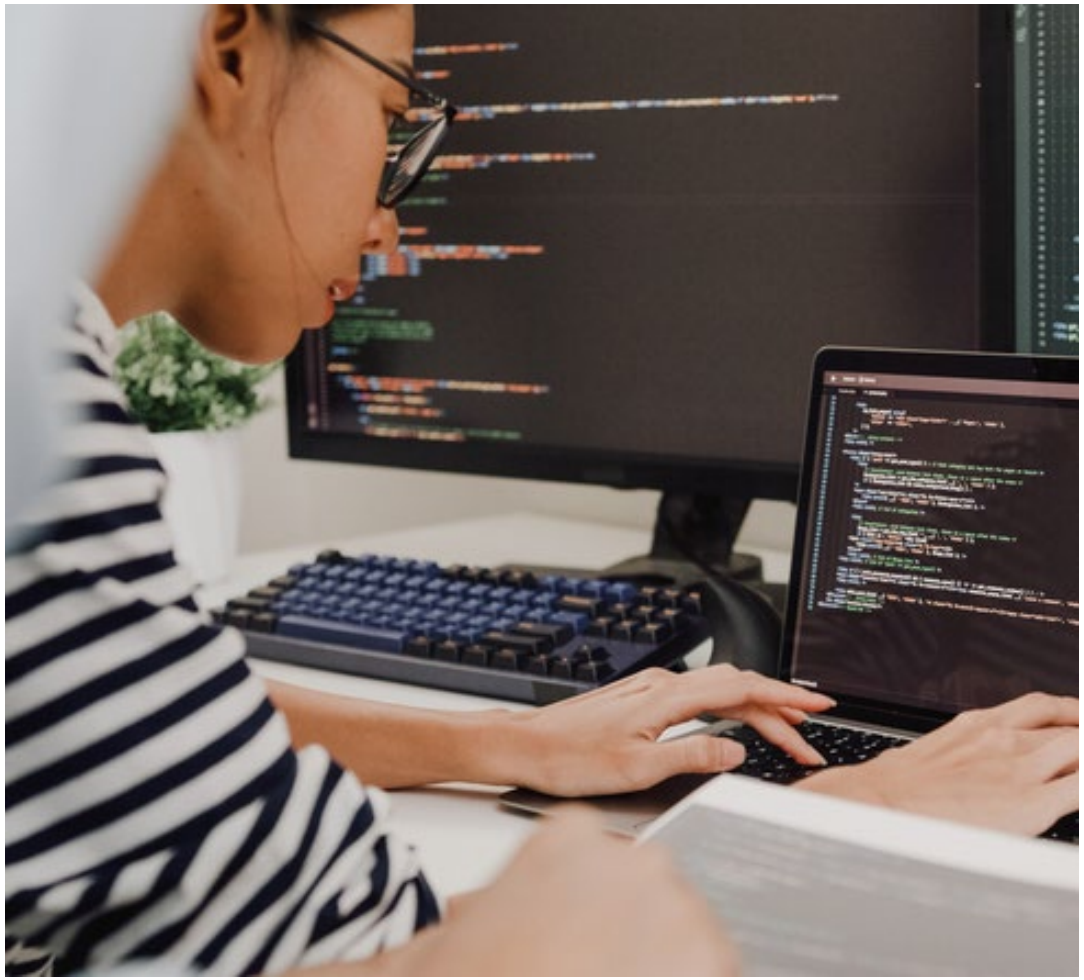
Eligible providers include:

- Physicians
- Physician assistants
- Nurse practitioners
- Certified nurse midwives
- Clinical nurse specialists, medical professionals such as health educators, registered dietitians, nutrition professionals, or other licensed practitioners, Pharmacists

Five items are required for claim:

1. A CPT Code for the specific type of AWV provided
2. An ICD-10 code for a general adult medical examination (Z00.00)
3. Date of service
4. Place of service
   - most office in-office
   - or Telehealth
5. Submit NPI number

Coding for AWV



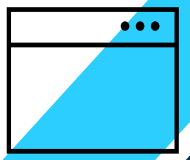
- **G0402-IPPE, G0438-Initial AWV, G0439-Subsequent AWV**
- Federally Qualified Health Centers (FQHC) can bill for AWVs, but they utilize additional codes: **G0468**
- AWVs can be billed concurrently with problem visits, just not under the same code
- Add-on services that can be billed concurrently, including:
  - Advance Care Planning (CPT codes 99497 – 30 mins. and 99498 – add'l 30 minutes)
  - Depression screening (CPT code G0444) – not permitted with the initial AWV, however.
  - Smoking cessation counseling (CPT codes 99406 and 99407)
  - Obesity counseling (CPT code G0447)
  - Substance use disorder screening and counseling (CPT codes G0442 and G0443)
  - Assessing SDOH (CPT code G0136) – 5-15 mins. Every 6 months. Standardized tool

Know the Rules & How To Code

- **EXAMPLE**
- Depression Screen: G0444 — Annual depression screening, 5 to 15 minutes
- Medicare Covers: Patients with Medicare Part B - ANNUALLY
- Patient Pays: No copayment, coinsurance, or deductible
- Deliver the screening in primary care settings or through telehealth with staff-assisted depression care support in place to ensure accurate diagnosis, effective treatment, and follow-up:
- Use place of service (POS) code 10 when providing the service through telehealth and the patient is located in their home
- Use POS code 02 when providing the service through telehealth and the service is provided somewhere other than in the patient's home

Reinventing the Annual Wellness Visit

You or the patient can update the HRA before or during the AWV



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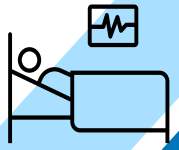
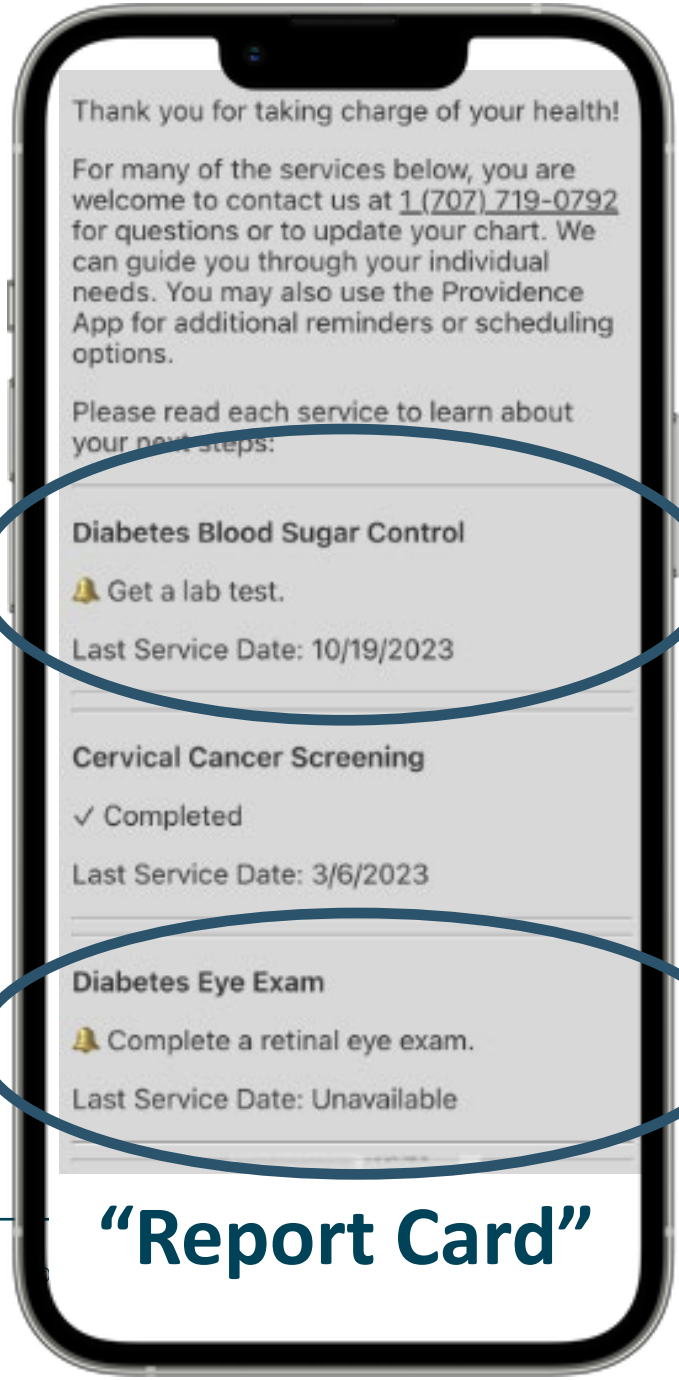


AWV Does NOT have to be done by Provider

AWV can be done in the Office OR by Telehealth

Reinventing the Annual Wellness Visit

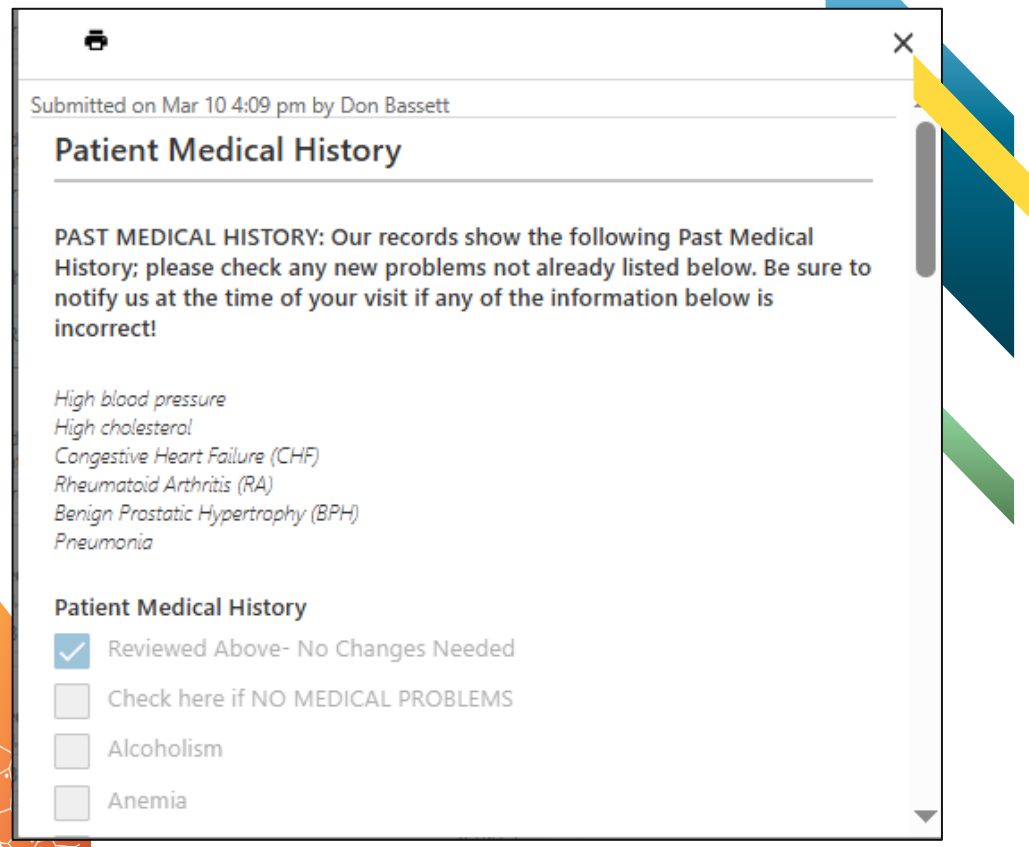
- You or the patient can update the HRA before or during the AWV
- All components of the AWV (HRA) should be sent for review and completed by the patient (or caretaker) BEFORE the AWV and automatically scored, summarized, and entered into the EHR
  - Reviewed by eligible healthcare provider during the next routine follow-up visit OR during a Telehealth Visit

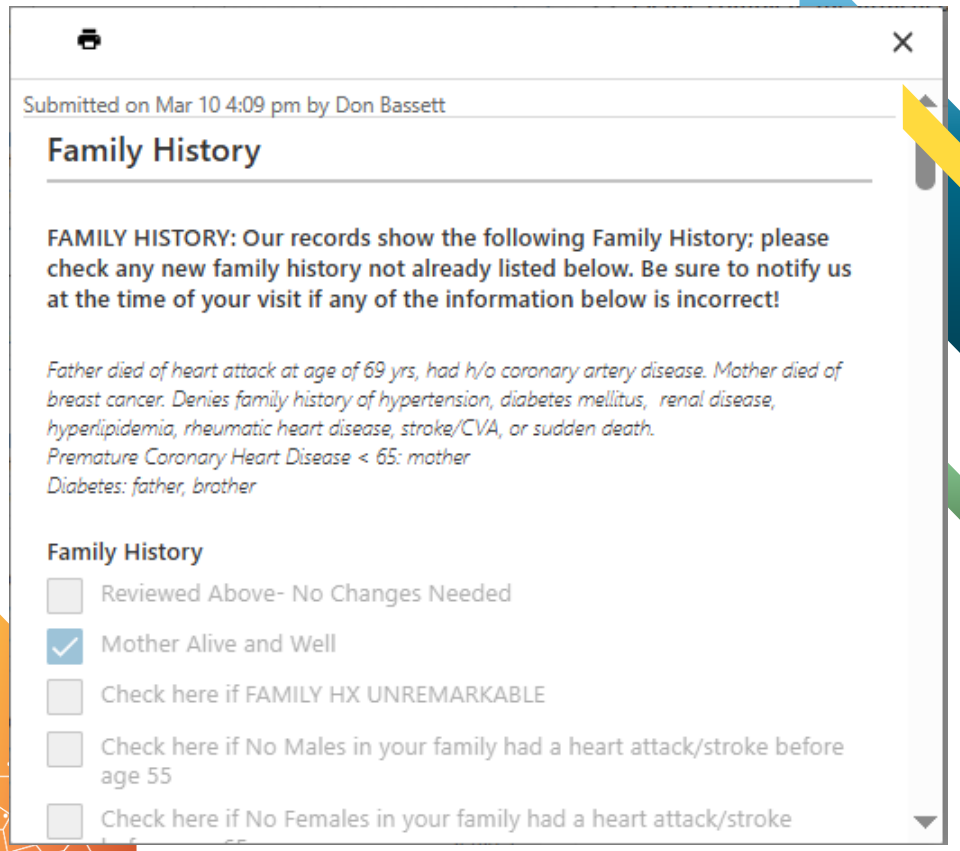


"Report Card"

Patient Entered History

All AWV (HRA) components should be completed by the patient or caretaker before the visit, then auto-scored, summarized, and entered into the EHR.





Automated Care Gap Closure – Clinical Pathways

CASE USE EXAMPLE 1: DEPRESSION SCREENING (PHQ9)

CMS 2: Preventive Care and Screening: Screening for Depression and Follow-Up Plan

Percentage of patients aged 12 years and older screened for depression on the date of the encounter or 14 days prior to the date of the encounter using an age-appropriate standardized depression screening tool AND if positive, a follow-up plan is documented on the date of the eligible encounter.

EXCLUDES:

Patients with an active diagnosis for depression or bipolar depression
Exceptions: Medical Reason, Patient refuses to participate

AUTOMATED WORKFLOW:

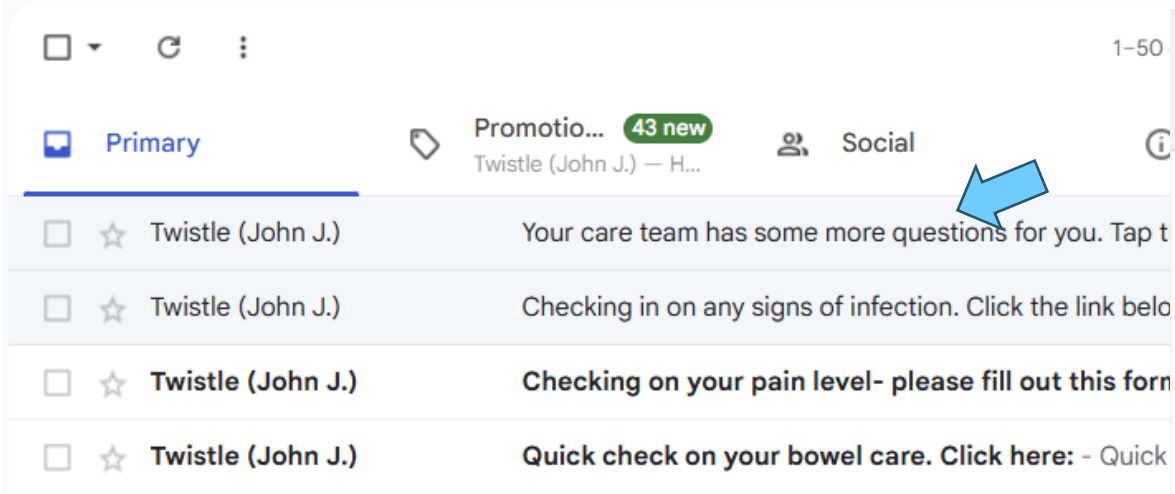
- 1-14 Days before scheduled appointment
  ➔ Depression Screening Pathway automatically launched
  ➔ Reminders at 7, 2, and 1 day PRIOR to appointment
  ➔ Pt completes ➔ Automatically scored ➔ Results to EHR

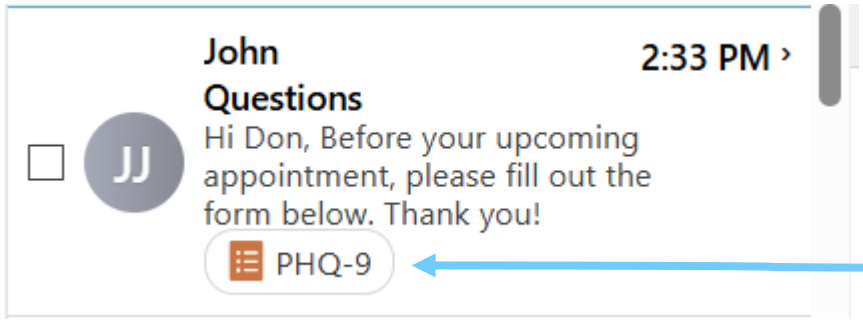
CMS 2: Preventive Care and Screening: Screening for Depression and Follow-Up Plan

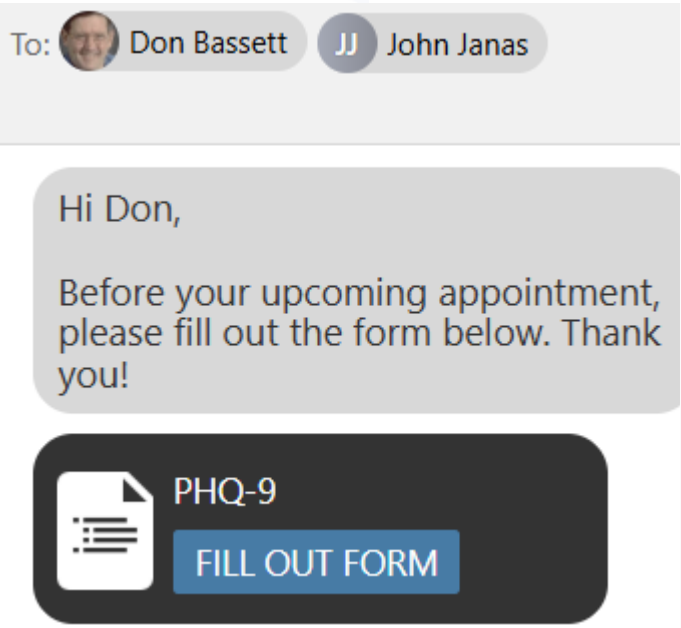
Version	9
Measure Type	Process
High Priority?	Yes
Subject Type	Patient
Inverse?	No
7 Point Maximum?	No

Depression Screening Automated Clinical Pathway

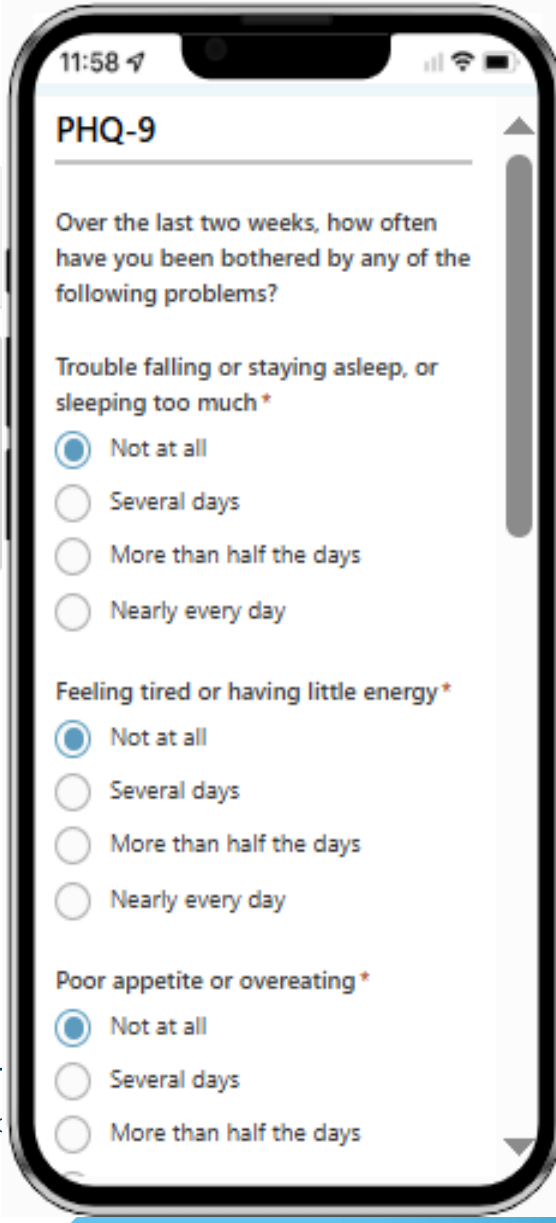
The patient receives a secure text or email and clicks the link to open an encrypted message in a secure browser.







Click Form to Fill Out



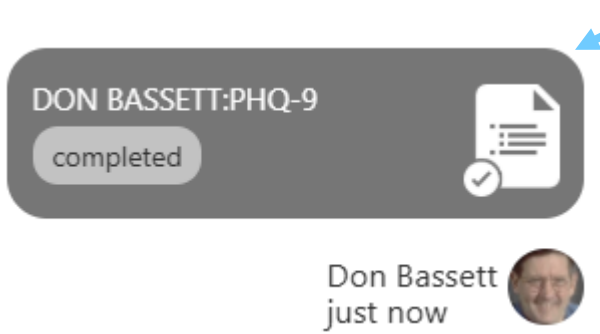
Depression Screening Automated Clinical Pathway

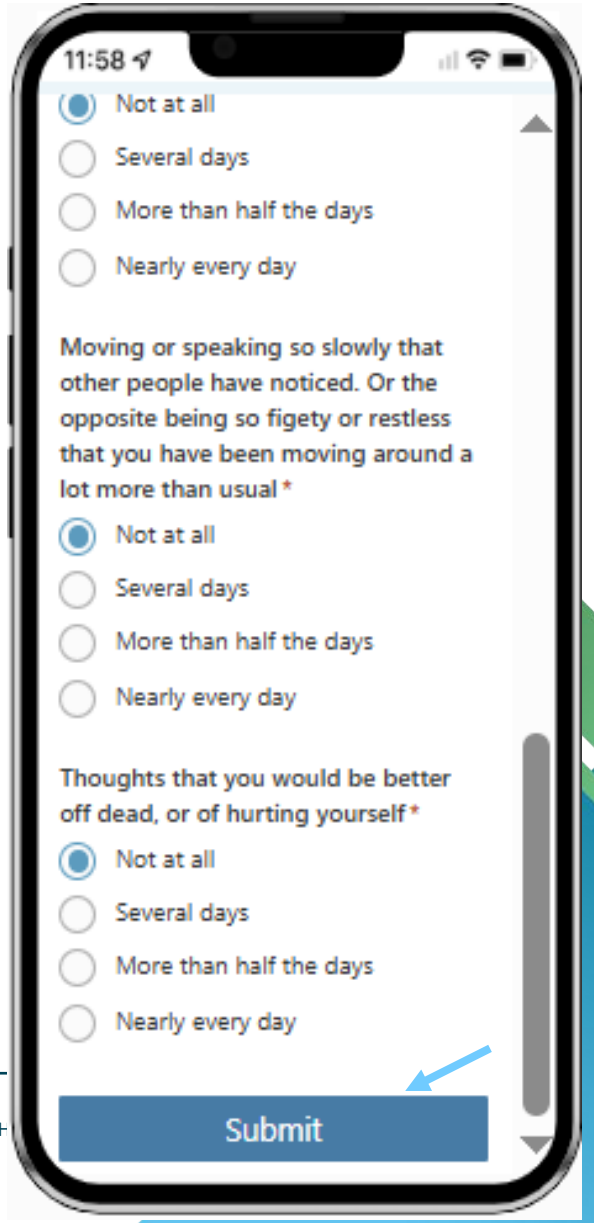
Form completed and “submitted”

Automatically scored with results to IGNITE/MeasureAble ➔ EHR

IF “ABNORMAL” Screen, customizable options (Site Specific):

- SEND SECURE MESSAGE to CARE TEAM (Provider/Staff) to document Follow-up Plan of Care
- LAUNCH “Suicide Risk Assessment” Pathway (optional)
- LAUNCH AUTOMATIC SELF REFERRAL Pathway to Behavioral Health (Make Care Primary Program)





Reinventing the Annual Wellness Visit

- AWVs can be billed concurrently with problem visits, just not under the same code
- AWV Does NOT have to be done by Provider

- For adults with active medical problems, the AWV should be automatically “compiled” and reviewed with the patient by an eligible healthcare provider during a routine follow-up visit
  - Preventive Care Services “Due” scheduled
  - Education Provided
  - Referrals Completed
  - Brief Summary (Report Card) provided

Hi Don,

Based on your responses, you're at average risk for colon cancer. Please view the handout below to learn about why regular screenings are important.

Thank you!
Twistle Care Team

Reinventing the Annual Wellness Visit

AWV can be done in the Office OR by Telehealth

For adults without active medical problems, the patient should be offered the option of a Telehealth Visit at a time that is convenient to review the Personalized Wellness Plan of Care and schedule necessary Preventive Care Services “Due”

Hi Don,

A low-dose CT scan is a quick, painless, and non-invasive approach to screen for lung cancer. Your screening will last around 15 minutes, and you'll be lying down the entire time. There are no medications or needles involved.

The test will create a 3-D picture of your lung. Around 75% of people who are screened test negative. However, there is a chance that a positive result is a false positive.

Please see the document below for more info.

Thank you,
Atrium Health Care Team

Reinventing the Annual Wellness Visit

- MAXIMIZE Use of the Patient and other eligible healthcare providers
- Interactive (patient-entered) health risk assessments
- Screening tools, such as ADL, CAGE, DAST-10, GAD-7, MDQ, PAC, PHQ-2, and a mini cognitive exam completed PRIOR to AWV and automatically scored and summarized in EHR
- Automated Patient-specific Preventive Care (Wellness) Report Card:
  - Summary report of Personalized Prevention Plan Services
  - Care Gaps summary with recommended interventions
  - Automated Clinical Pathways for Patient Education/Self-Mgmt.
- Comprehensive care planning tools
- Automated CPT code assignment for accurate billing

Improving Early Detection with Automated Lung Cancer Screening

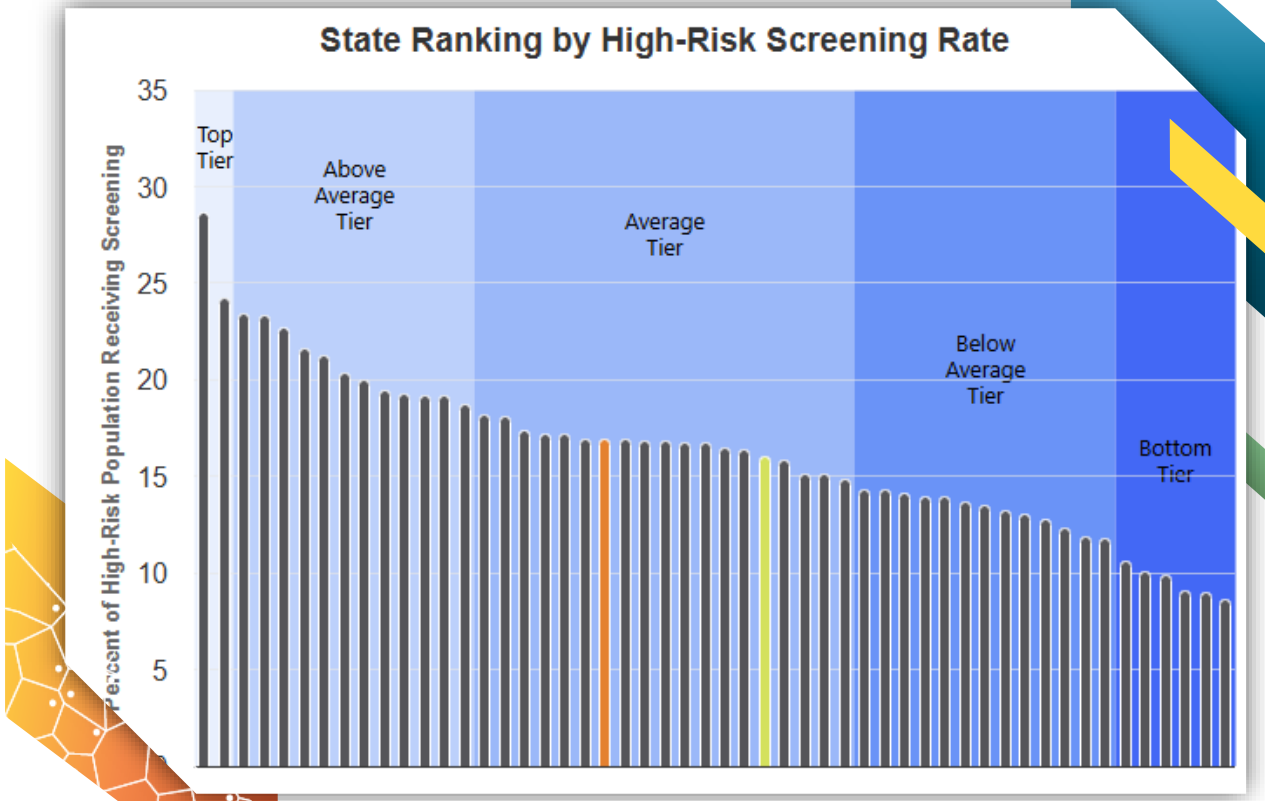
HealthCatalyst

Lung Cancer Screening Opportunity (FFS &/or VBC)

Lung Cancer Screening (LCS) rates ~6.5% as of 2020; compared to 63% for colon and 64% for breast cancer screening in 2019.

- In CA < 1% LCS rate

Increased to 16% in 2024



Why are LCS Rates so Low?

1. **Provider & Patient Awareness** of screening recommendations, outcomes, and options
2. **Data Availability & Accuracy:** Smoking status, year started, year quit, pack years history
3. **Access and Workflow Issues:**
   - Medicare requires a shared decision-making (SDM) visit PRIOR to the first LDCT scan: CPT G0296: Evaluation and Management charges for an LDCT SDM visit
   - Scheduling SDM Visit & LDCT

Improved Lung Cancer Screening through Automation FFS Revenue & Value-Based Care Cost Savings

Total Increased Annual Revenue

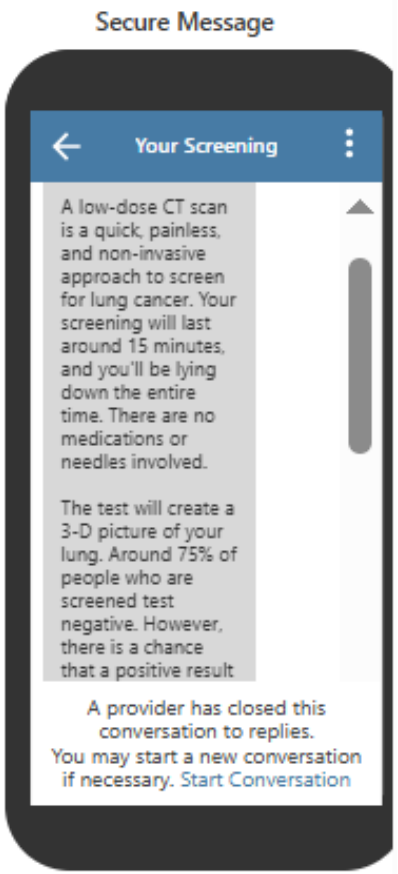
from implementing the Health Catalyst Automated LCS Clinical Pathway Workflow with increased G0296 & 71271 = $1,389,230.67
~ 10-fold increase from $129,220

Potential cost savings

~ 25-33%/year = $2,400,000-$5,600,000 in total per patient health care costs for lung cancer post diagnosis ➔ *improved outcomes and reduced treatment costs from earlier detection!*

Automated Lung Cancer Screening (LCS)

1. **Cohort Generated (IGNITE/MeasureAble/Pop Analyzer or any 3rd Party Reporting Tool)**
   - Patients age 50-80 years, Current smoker OR Former Smoker, NO Exclusions
2. **Lung Cancer Screening Automated Clinical Pathway Launched (flat file or API call)**
3. **Patient CONFIRMS Eligibility AND confirmed data returned to EHR**
   - Current Smoker or Former Smoker quit < 15 years; 20 pack years Hx of smoking
   - NO Exclusions (Hospice, Frailty or Advanced Illness, Palliative Care, Lung Cancer
   - Patient healthy enough and willing to undergo “curative” surgery
4. **Patient OPTS IN or OPTS OUT of Lung Cancer Screening**
   - IF OPTS OUT ➔ automatically write to EHR patient declines screening
   - IF OPTS IN ➔ automated Lung Cancer Screening Pathway continues
5. **Patient completes the Shared Decision-making Module OPTS IN or OPTS OUT LCS**
   - IF OPTS OUT ➔ automatically write to EHR patient declines screening
   - IF OPTS IN ➔ automated Lung Cancer Screening Pathway continues
6. **Care Team confirms with patient (Telehealth or during F/U visit, e.g. COPD F/U)**
7. **Low Dose CT Scan Scheduled**



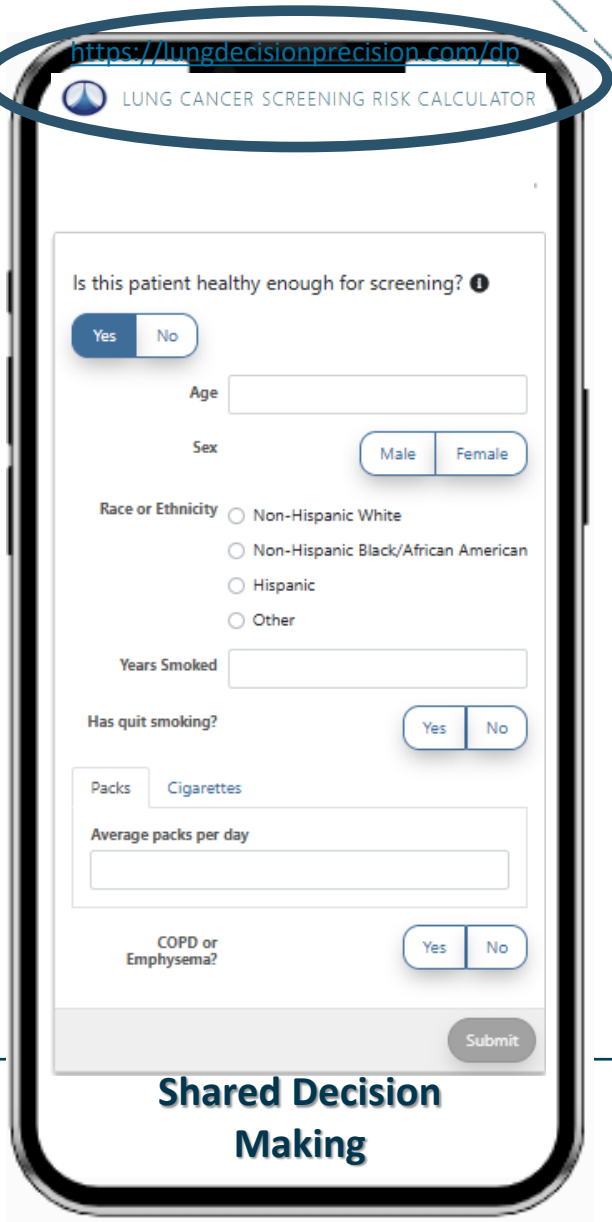
Automatically Receive Add'l Information

- Patient Education and/or
- Shared Decision Making (SDM)

Use your preferred SDM Tools, Example:
Reference Here (Link)

BEFORE:

- Schedule: Automatically writes order to EHR then patient self scheduling OR
- Document EXEMPTIONS or DEFERRALS



Shared Decision Making

Financial Impact of LCS: Healthcare System (FFS)

Using System Data & Analytics:

- # of LDCTs for Lung Cancer Screening in 2024 = 1,075 (~7% of eligible patients)
- average reimbursement $288; average Medicare Reimbursement $115
- Only ~10% billed for a G0296 SDM Visit; average reimbursement was $70, national average $30
- Assuming 6.5% screening rate (national average), 100% screening rate = 16,538

- If all “at risk” patients received SDM for LCS and only 60% opt in for LDCT LCS, then 9,923 patients would be screened (~10-fold increase)
- If 60% of pts opted in for LDCT for a G0296 SDM visit, annual revenue = **$ 297,692.31** (9,923 X $30) ~30-fold increase from $10,970
- If 60% of pts LDCT Scan 71271, annual revenue would be **$1,091,538.36** (9923 X $110) ~ 10-fold increase from $118,250
- **TOTAL INCREASED ANNUAL REVENUE** from implementing the Health Catalyst Automated LCS Clinical Pathway Workflow with increased G0296 & 71271 = **$1,389,230.67** ~ 10-fold increase from $129,220

EARLIER DIAGNOSIS = LOWER TREATMENT COSTS

Non-small cell lung cancer (NSCLC), total per-patient per-month health care costs after diagnosis significantly higher among those diagnosed at a Stage IV and lower among those diagnosed at Stage I ($7,239 Stage I, $9,484 Stage II, $11,193 Stage IIIa, $17,415 Stage IIIb, and $21,441 Stage IV)

STAGE OF NSCLC	TOTAL PER-PT PER-MONTH COSTS
I	$7,239
II	$9,484
IIIa	11,193
IIIb	$17,415
IV	$21,441

Financial Impact of LCS: Healthcare System (VBC)

- Assuming 2-3/100 (initial scans) and 1-2/100 (f/u scans) identify a new lung cancer diagnosis, then this site would identify **100-300 new lung cancer diagnosis/year**
- AND Assuming **50% of LDCT scans identify lung cancer at an earlier stage (I of II),** then this site would identify 50-150 new diagnosis of lung cancer at an earlier stage
- AND Assuming mean incremental cost-effectiveness ratio of $72,564 per quality-adjusted life-year (QALY) gained per earlier Stage Lung Cancer Diagnosis
- non-small cell lung cancer (NSCLC), total per-patient per-month health care costs after diagnosis significantly higher among those diagnosed at a Stage IV and lower among those diagnosed at Stage I ($7,239 Stage I, $9,484 Stage II, $11,193 Stage IIIa, $17,415 Stage IIIb, and $21,441 Stage IV)
- **This sites potential cost savings ~ 25-33%/year = $2,400,000-$5,600,000** in total per patient health care costs for lung cancer post diagnosis.

EARLIER DIAGNOSIS = LONGER SURVIVAL

ACS 5-year survival rate for all stages of NSCLC is approximately 28%;

5-Year survival based on EARLIER (LOCALIZED) Stage 65-80%

Source: https://www.lung.org/research/state-of-lung-cancer/states

Lung Cancer Screening:
2025 MIPS Improvement Activity

Implementation of Protocols and Provision of Resources to Increase Lung Cancer Screening Uptake (IA_PM_24)

Improvement Activities 15%

- **104 Improvement Activities for 2025**
  - **2 new in 2025:**
    - **Implementation of Protocols and Provision of Resources to Increase Lung Cancer Screening Uptake (IA_PM_24)**
    - **Save a Million Hearts: Standardization of Approach to Screening and Treatment for Cardiovascular Disease Risk (IA_PM_25)**

Automated Care Gap Closure: Using Digital Patient Engagement Enhances Care Gap Closure

HealthCatalyst

Digital Patient Engagement Enhances Care Gap Closure

Providence

Problem

- Providence sought an automated, personalized digital solution to replace labor-intensive outreach methods that limit scalable care gap closure and hinder population health efforts.

Solution

- ***Providence*** leverages Twistle by Health Catalyst to digitally engage patients in care gap closure—improving outcomes, meeting health plan obligations, reducing financial risk, and lowering care coordination costs.

Results

$

$827K increased revenue by closing **21K care gaps** and improving patient outcomes in CY2024, including:

- **$516K increased revenue** and **13K lives positively impacted** by improving preventative screening for adults.
- **$167K increased revenue** and **4K lives positively impacted** by improving diabetes measures.
- **$143K increased revenue** and **4K lives positively impacted** by improving cardiovascular measures.

Digital Patient Engagement Enhances Care Gap Closure

Providence

Problem

- Providence sought an automated, personalized digital solution to replace labor-intensive outreach methods that limit scalable care gap closure and hinder population health efforts.

Solution

- ***Providence LA region*** leverages Twistle by Health Catalyst to digitally engage patients in care gap closure—improving outcomes, meeting health plan obligations, reducing financial risk, and lowering care coordination costs.

Results

$429K increased revenue through care gap closure in CY2024.

7.8K lives positively impacted by improving preventative screening for adults, including:

- **82%** breast cancer screening adherence, an **4% relative increase**.
- **79%** cervical cancer screening adherence, an **6% relative increase**.
- **68.6%** colon cancer screening adherence, an **11% relative increase**.
- **62.9%** chlamydia screening adherence, an **6% relative increase**.

1.6K lives positively impacted by improving diabetes measures, including:

- **71.6%** HbA1c <8.0, a **2% relative increase**.
- **83.5%** had HbA1c less than eight, an **1% relative increase**.
- **81%** received a kidney health evaluation, an **5% relative increase**.
- **66.8%** received an eye exam, an **8% relative increase**.

1.3K lives positively impacted by improving cardiovascular measures, including:

- **76.4%** high blood pressure control adherence, a **6% relative increase**.

“DO NO HARM”

Major Barrier to current “Care Gap Closure” solutions:

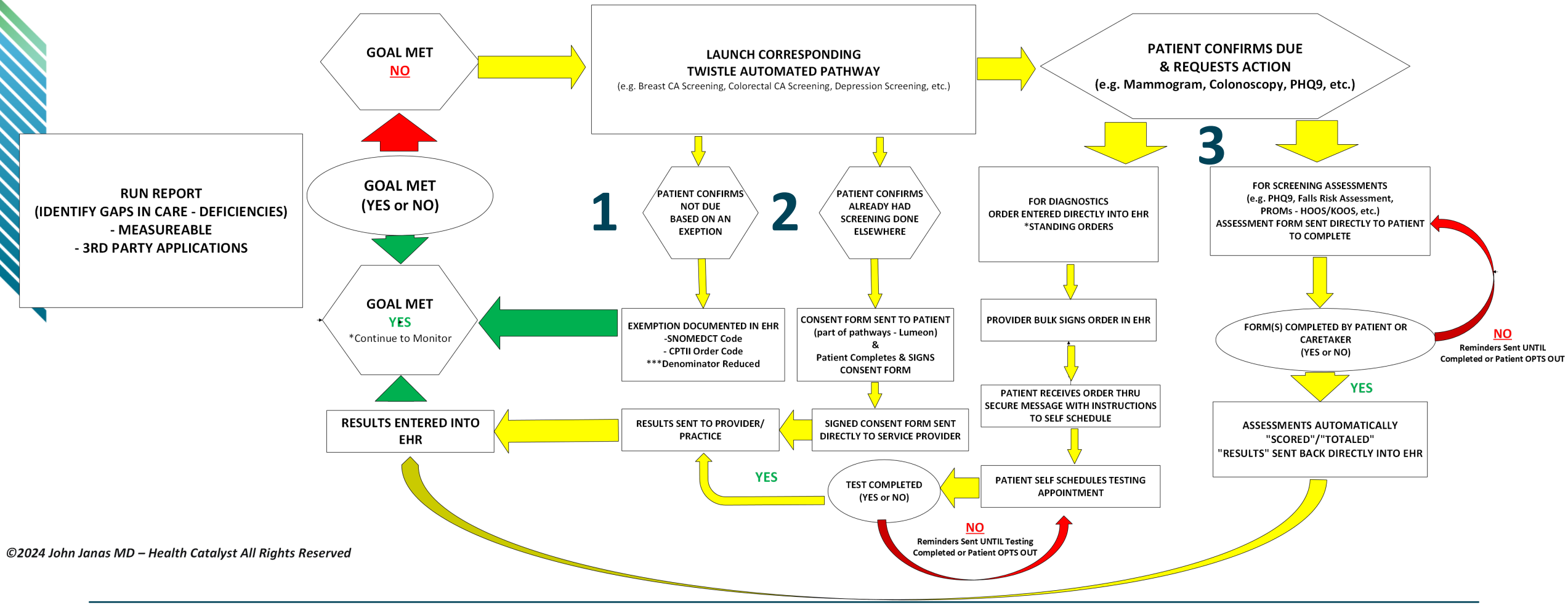
TIME/COST: Staffing Shortages, overworked & overwhelmed Providers & Staff: “we don’t have the staff or time to do that…” “you’re creating more work for us…”

CONTROL/TRUST/OWNERSHIP: “How do I know these are my patients…”, “I have more important things to deal with…”, “How does this help us…”

➔ ***AUTOMATED CARE GAP CLOSURE <u>DOES NOT HARM</u> PROVIDERS & STAFF***

➔ ***IT DOES HELP PATIENT & IMPROVE OUTCOMES!***

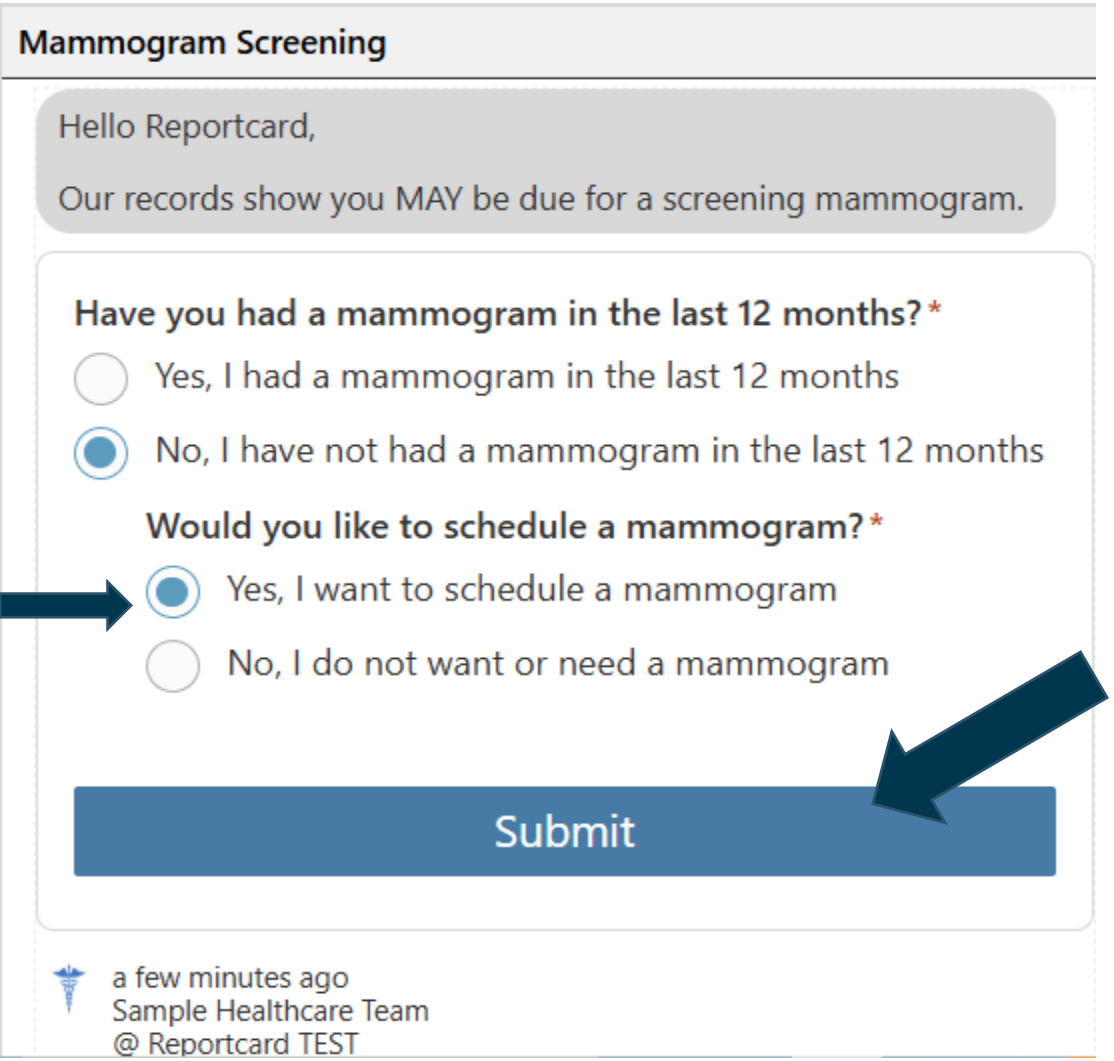
Automated Care Gap Closure Workflow



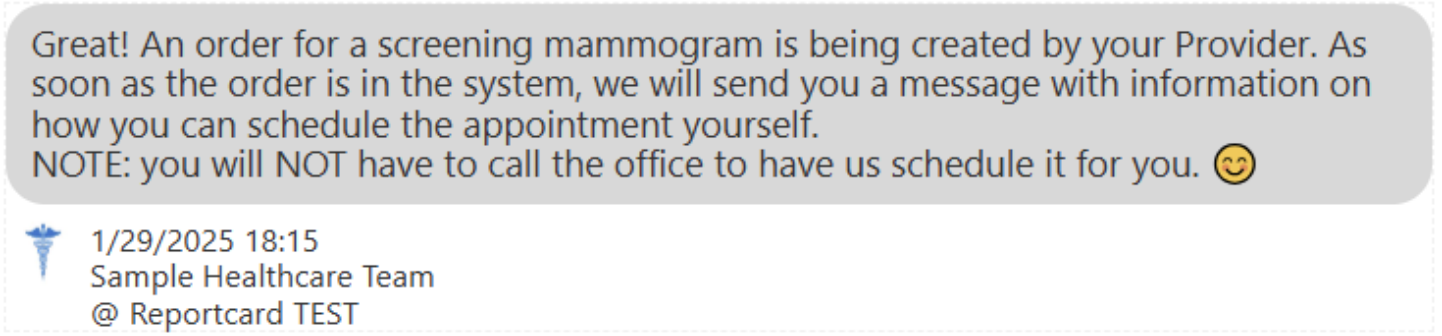
Major Enhancements for Automated Clinical Pathways

1. AUTOMATIC WRITING OF ORDERS INTO EHR
2. PATIENT SELF-SCHEDULING WORKFLOW
3. AUTOMATED RELEASE OF INFORMATION
4. AUTOMATIC WRITE-BACK OF CODED DATA TO EHR FOR EXEMPTIONS / EXCLUSIONS

Wants To Schedule Mammogram



AUTOMATIC WRITING OF ORDERS INTO EHR



Patient Self Scheduling

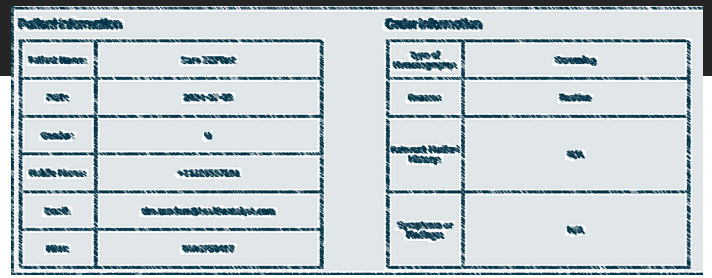
Hi Sara ZZZTest, it's time for you to schedule your mammogram! Regular screenings are important for your health, and we want to make it as easy as possible for you.

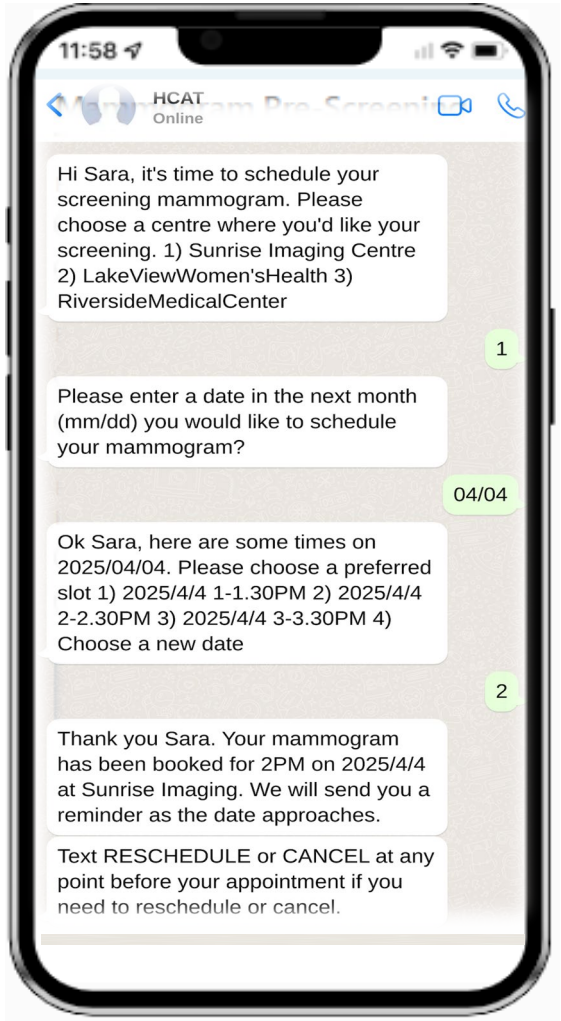
Here's what you need to do:

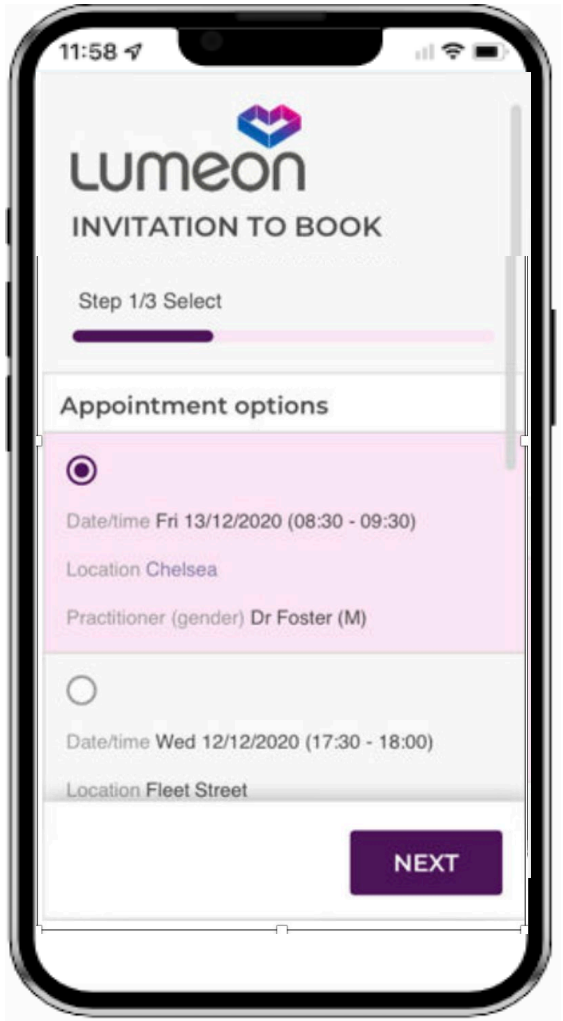
1. **Choose a location:** Below are three options where you can schedule your mammogram:
   - **Sunrise Imaging Center** – (555) 123-4567
   - **Lakeview Women's Health** – (555) 987-6543
   - **Riverside Medical Imaging** – (555) 456-7890
2. **Bring your requisition form:** You can access it here: **View Form**

If you have any questions or need assistance, feel free to reach out.

- Your Care Team







Once order is automatically entered and signed by Provider, patient gets notification with instructions on where to call or how to self schedule. Different options based on local service setup. Email instructions vs SMS self-scheduling vs Invitation to Book.

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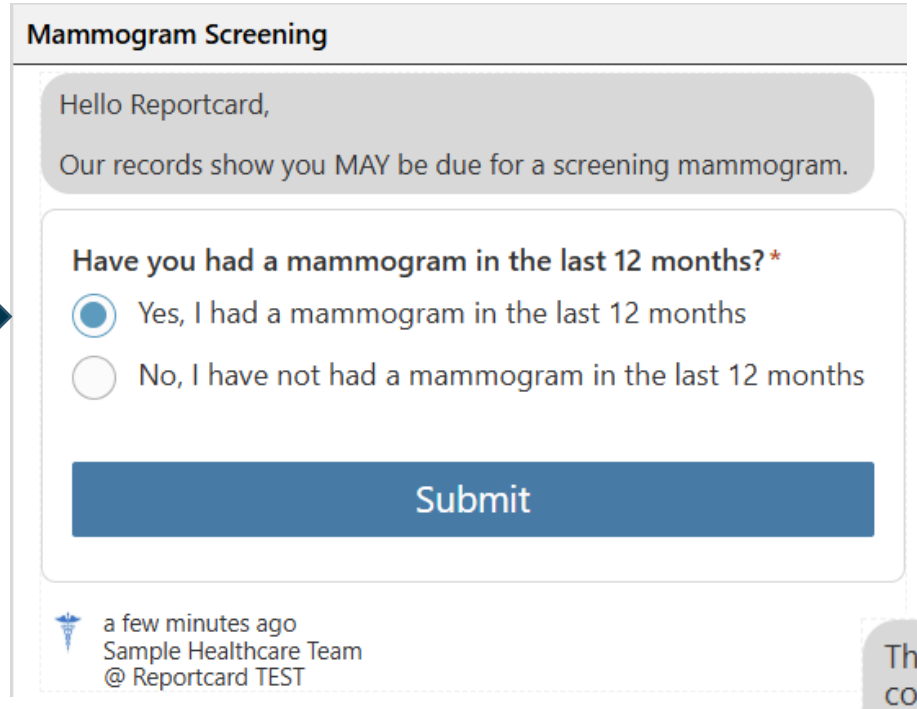
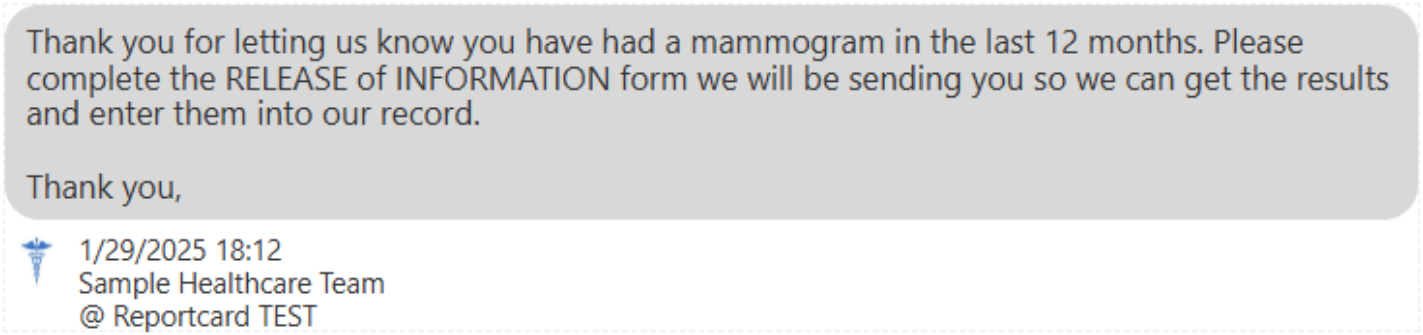
Already HAD, NOT in Data Base



20-50% of patients have already received the “service” OR DO NOT require just NOT DOCUMENTED as structured data within the EHR or Reporting Database



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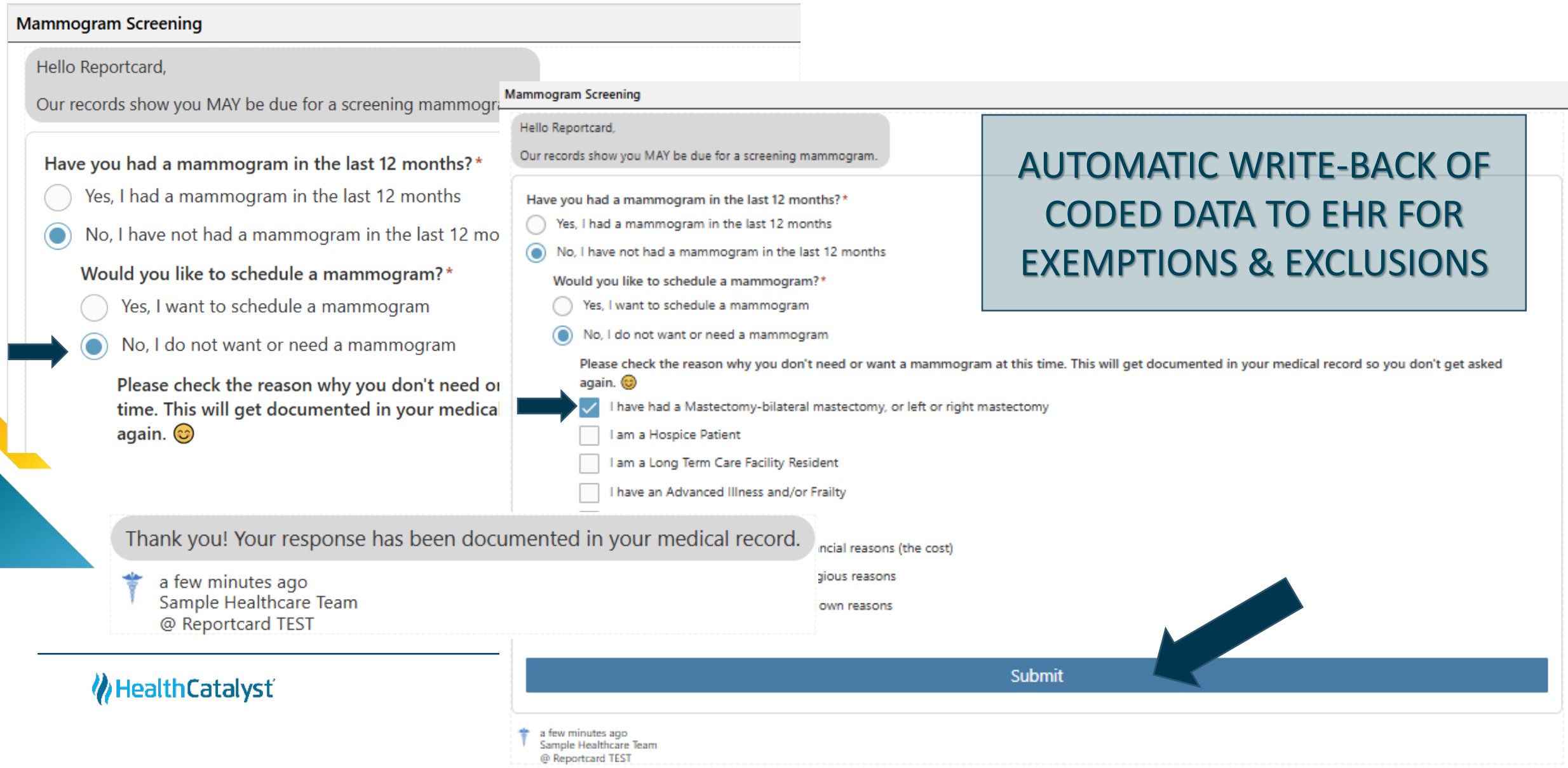
AUTOMATED RELEASE OF INFORMATION

Release of Information Workflow

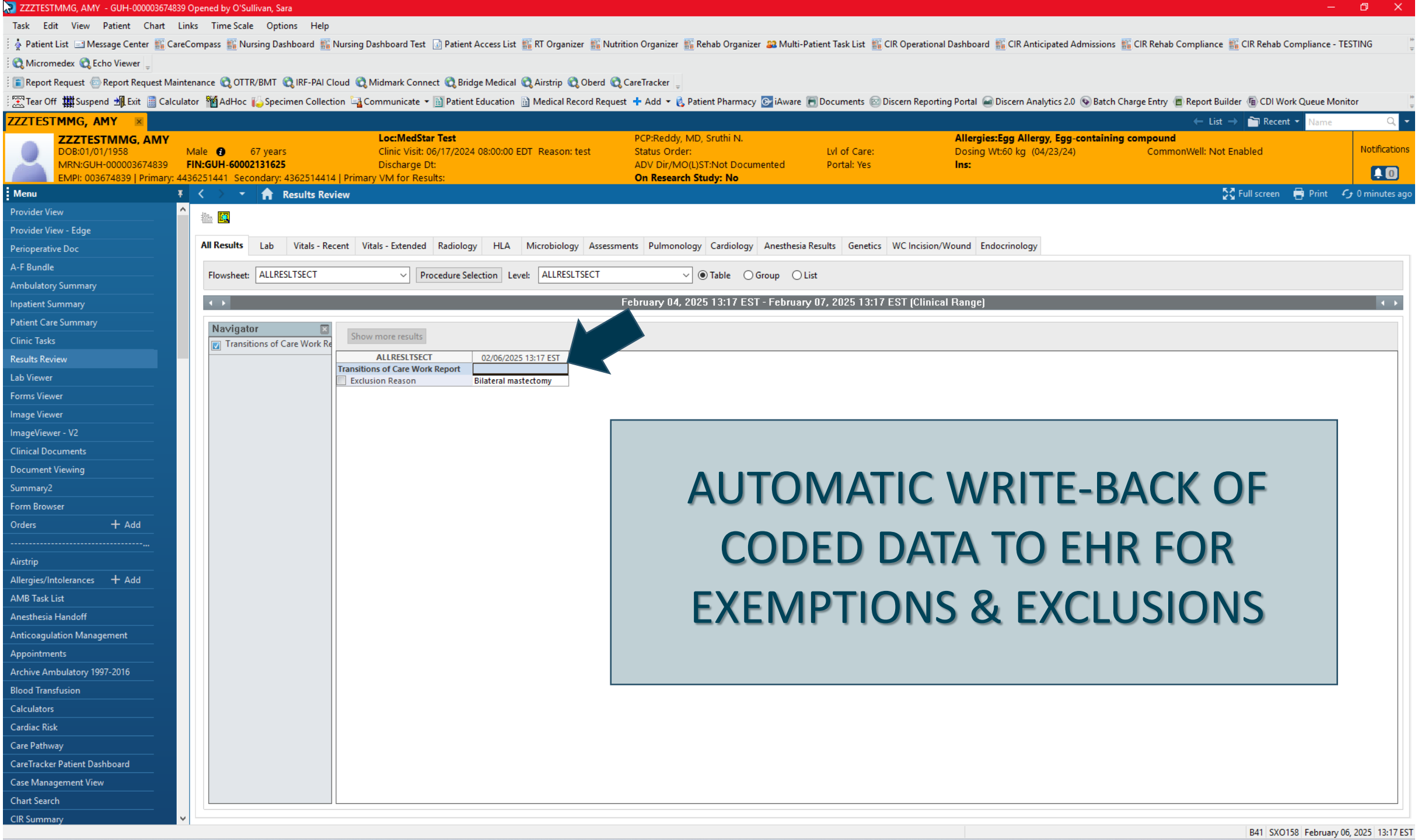
- Patient receives digital Release of Information form (API call)
- Patient completes the ROI Form
- Form automatically sent back to EHR and alert to staff to request copy of Diagnostic (Current Workflow)
  - Future: Automatic HIE Inquiry/Request and FHIR transfer of results into EHR
- Report received by practice and manually entered into EHR (Current Workflow)
  - Future: Automatic HIE Inquiry/Request and FHIR transfer of results into EHR
- Care Gap Closed!

DOES NOT Want Mammogram

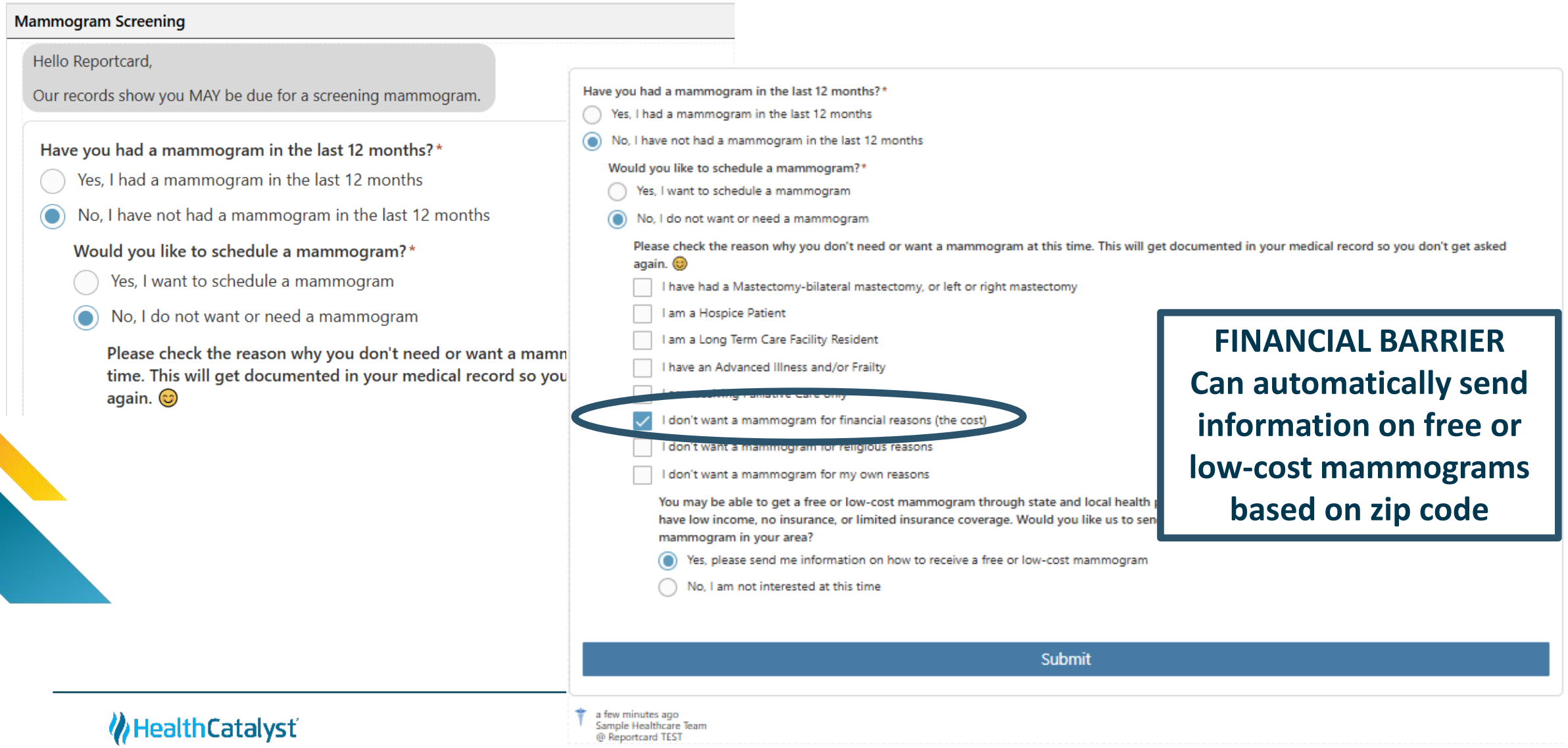


AUTOMATIC WRITE-BACK OF CODED DATA TO EHR FOR EXEMPTIONS & EXCLUSIONS

HealthCatalyst


ZZZTESTMMG, AMY - GUH-000003674839 Opened by O'Sullivan, Sara
Task Edit View Patient Chart Links Time Scale Options Help
Patient List Message Center CareCompass Nursing Dashboard Nursing Dashboard Test Patient Access List RT Organizer Nutrition Organizer Rehab Organizer Multi-Patient Task List CIR Operational Dashboard CIR Anticipated Admissions CIR Rehab Compliance CIR Rehab Compliance - TESTING
Micromedex Echo Viewer
Report Request Report Request Maintenance OTTR/BMT IRF-PAI Cloud Midmark Connect Bridge Medical Airstrip Oberd CareTracker
Tear Off Suspend Exit Calculator AdHoc Specimen Collection Communicate Patient Education Medical Record Request Add Patient Pharmacy iAware Documents Discern Reporting Portal Discern Analytics 2.0 Batch Charge Entry Report Builder CDI Work Queue Monitor
ZZZTESTMMG, AMY
ZZZTESTMMG, AMY
DOB:01/01/1958 Male 67 years
MRN:GUH-000003674839 FIN:GUH-60002131625
EMPI: 003674839 | Primary: 4436251441 Secondary: 4362514414 | Primary VM for Results:
Loc:MedStar Test
Clinic Visit: 06/17/2024 08:00:00 EDT Reason: test
Discharge Dt:
PCP:Reddy, MD, Sruthi N.
Status Order:
ADV Dir/MO(L)ST:Not Documented
On Research Study: No
Lvl of Care:
Portal: Yes
Allergies:Egg Allergy, Egg-containing compound
Dosing Wt:60 kg (04/23/24)
Ins:
CommonWell: Not Enabled
Notifications
Menu
Provider View
Provider View - Edge
Perioperative Doc
A-F Bundle
Ambulatory Summary
Inpatient Summary
Patient Care Summary
Clinic Tasks
Results Review
Lab Viewer
Forms Viewer
Image Viewer
ImageViewer - V2
Clinical Documents
Document Viewing
Summary2
Form Browser
Orders + Add
Airstrip
Allergies/Intolerances + Add
AMB Task List
Anesthesia Handoff
Anticoagulation Management
Appointments
Archive Ambulatory 1997-2016
Blood Transfusion
Calculators
Cardiac Risk
Care Pathway
CareTracker Patient Dashboard
Case Management View
Chart Search
CIR Summary
Results Review
Full screen Print 0 minutes ago
All Results Lab Vitals - Recent Vitals - Extended Radiology HLA Microbiology Assessments Pulmonology Cardiology Anesthesia Results Genetics WC Incision/Wound Endocrinology
Flowsheet: ALLRESLTSECT Procedure Selection Level: ALLRESLTSECT Table Group List
February 04, 2025 13:17 EST - February 07, 2025 13:17 EST (Clinical Range)
Navigator
Transitions of Care Work Re
Show more results
ALLRESLTSECT 02/06/2025 13:17 EST
Transitions of Care Work Report
Exclusion Reason Bilateral mastectomy
AUTOMATIC WRITE-BACK OF CODED DATA TO EHR FOR EXEMPTIONS & EXCLUSIONS
B41 SXO158 February 06, 2025 13:17 EST

DOES NOT Want Mammogram



FINANCIAL BARRIER
Can automatically send information on free or low-cost mammograms based on zip code

Free Mammograms By City in New Hampshire

- ✓ Berlin *(1)*
- ✓ Colebrook *(1)*
- ✓ Concord *(1)*
- ✓ Conway *(1)*
- ✓ Derry *(1)*
- ✓ Franconia *(1)*
- ✓ Franklin *(1)*
- ✓ Gorham *(1)*
- ✓ Hillsboro *(1)*
- ✓ Laconia *(1)*
- ✓ Lancaster *(1)*
- ✓ Lebanon *(1)*
- ✓ Manchester *(5)*
- ✓ Nashua *(2)*
- ✓ New London *(1)*
- ✓ Newmarket *(1)*
- ✓ Newport *(1)*
- ✓ North Conway *(1)*
- ✓ Peterborough *(1)*
- ✓ Plymouth *(1)*
- ✓ Portsmouth *(1)*
- ✓ Raymond *(1)*
- ✓ Somersworth *(2)*
- ✓ Wolfeboro *(1)*

Focus on a Key Number of Preventive Care & Chronic Disease Management to Start then Expand

INITIAL AUTOMATED PATHWAYS

- **Controlling High Blood Pressure**
  - Monitor, diagnose elevated BP, and manage/titrate antihypertensive meds
- **Colorectal Cancer Screening**
  - Automated outreach, triage and screening for colorectal cancer
- **Breast Cancer Screening**
  - Automated outreach and screening for breast cancer
- **Screening for Depression and Follow-up Plan**
  - Automated outreach and screening for depression

NEXT STEP AUTOMATED PATHWAYS

- **Screening for Future Fall Risk**
  - Automated outreach and screening for falls risk
- **Diabetes/Prediabetes Screening, Education, and Management**
  - Automated diabetes/prediabetes screening
- **Patient Self-Management and Education**
  - Reduce Diabetes: Hemoglobin A1c (HbA1c) Poor Control
- **Screening for Social Drivers of Health (SDoH)**
  - Automated SDoH Screening and assistance

Automated Clinical Pathways Roadmap Priority Rankings

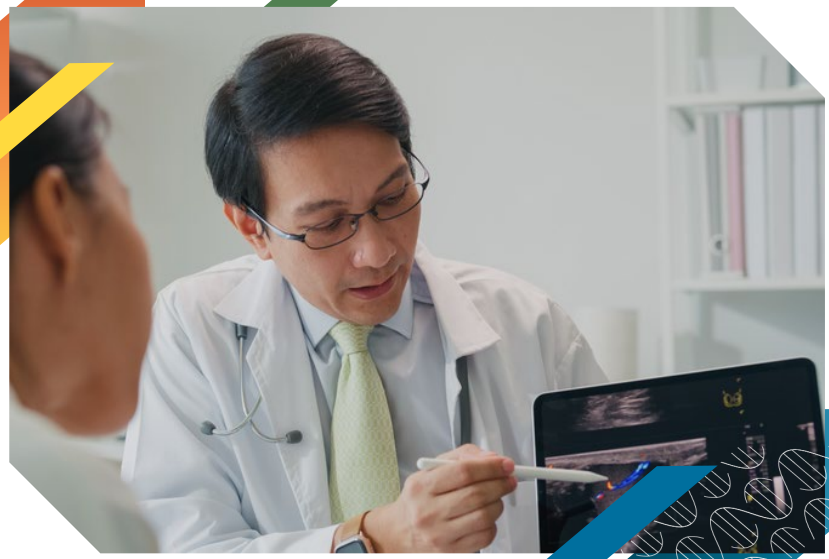
Initial Consideration Breast Cancer Screening Only

TIER 1 - INITIAL RELEASE
Breast Cancer Screening may be due: Average Risk
Lung Cancer Screening may be due: Increased Risk
Controlling Blood Pressure
Total Knee Arthroplasty Patient-Reported Outcome Pre-op Assessment
Total Knee Arthroplasty Patient-Reported Outcome Post-op Assessment
Total Hip Arthroplasty Patient-Reported Outcome Pre-op Assessment
Total Hip Arthroplasty Patient-Reported Outcome Post-op Assessment
Prediabetes Screening and Management
Cardiovascular Risk Assessment Due
Cardiovascular Risk Reduction Education and Plan of Care
Blood Pressure Due
Confirm Elevated Blood Pressure
Colorectal Cancer Screening may be due : Average Risk
Annual Wellness Visit Due Reminder???
NOTE: Priority/Tier Positioning MAY move up or down based on Customer Needs!

Automated Clinical Pathways Roadmap Priority Rankings

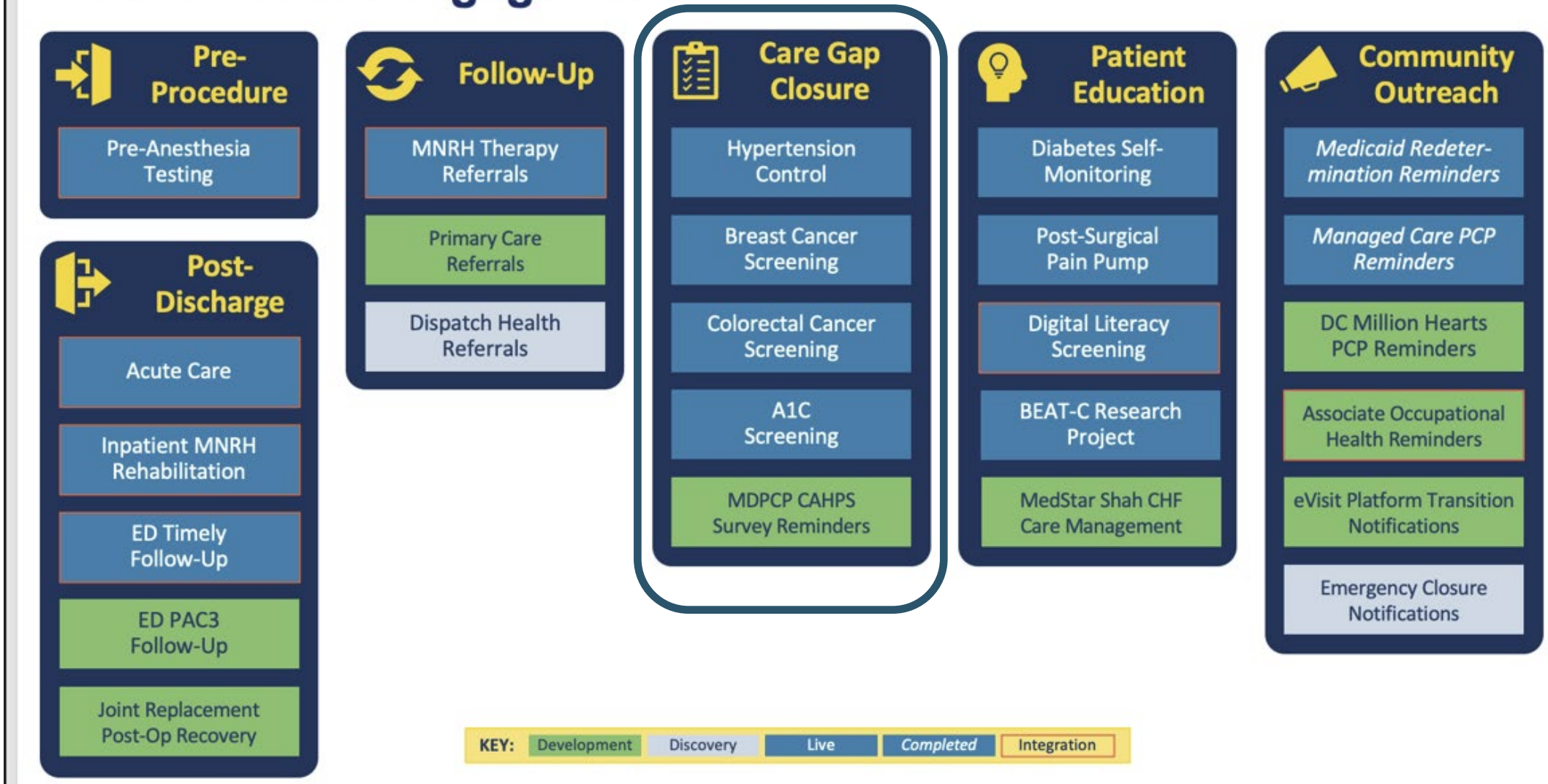
Also consider Lung Cancer Screenings due to significant potential downstream revenue and cost savings based on projections

TIER 1 - INITIAL RELEASE
Breast Cancer Screening may be due: Average Risk
Lung Cancer Screening may be due: Increased Risk
Controlling Blood Pressure
Total Knee Arthroplasty Patient-Reported Outcome Pre-op Assessment
Total Knee Arthroplasty Patient-Reported Outcome Post-op Assessment
Total Hip Arthroplasty Patient-Reported Outcome Pre-op Assessment
Total Hip Arthroplasty Patient-Reported Outcome Post-op Assessment
Prediabetes Screening and Management
Cardiovascular Risk Assessment Due
Cardiovascular Risk Reduction Education and Plan of Care
Blood Pressure Due
Confirm Elevated Blood Pressure
Colorectal Cancer Screening may be due : Average Risk
Annual Wellness Visit Due Reminder???
NOTE: Priority/Tier Positioning MAY move up or down based on Customer Needs!



Twistle Patient Engagement Use Cases

Updated February 2025



Tier 2 & 3 Automated Pathways

TIER 2
Increased BMI Plan of Care: Adult
Depression Screening (PHQ9) and Document F/U Plan of Care
Substance Use Disorder Screening
Cholesterol Education and Management
Maintaining Control of Blood Pressure
Statin Medication Adherence
Aspirin or Antiplatelet Medication Adherence and Monitoring
Diabetes Management: Services MAY BE DUE
Diabetes Management: HGBA1C NOT AT GOAL
Falls Risk Assessment: patient/family or caretaker
Increased Falls Risk Plan of Care
Smoking/Tobacco Status and Cessation Counseling
Social Drivers of Health Screening

TIER 3
Adult Immunizations Report Card and Recommendations
Cervical Cancer Screening may be due: Average Risk
Increased BMI Plan of Care: Adult BMI Obesity Class I – 30.0 to 34.9 kg/m2
Increased BMI Plan of Care: Adult BMI Obesity Class II – 35.0 to 39.9 kg/m2
Increased BMI Plan of Care: Adult BMI Obesity Class III – ≥40 kg/m2
Breast Cancer Risk Assessment
Breast Cancer Screening may be due: Increased Risk
Colorectal Cancer Risk Assessment
Colorectal Cancer Screening may be due: Increased Risk
Substance Use Disorder Plan of Care
Depression Plan of Care: Psychotherapy
Depression Plan of Care: Antidepressant Monitoring
Depression Plan of Care: Combination Treatment

Major Enhancements for Automated Clinical Pathways

1. AUTOMATIC WRITING OF ORDERS INTO EHR
2. PATIENT SELF-SCHEDULING WORKFLOW
3. AUTOMATED RELEASE OF INFORMATION
4. AUTOMATIC WRITE-BACK OF CODED DATA TO EHR FOR EXEMPTIONS / EXCLUSIONS

Questions?

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