VIZIENT CONNECTIONS SUMMIT

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Measuring the Impact of Advanced Practice Providers on Patient Outcomes

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Learning Objectives

- Discuss the benefit of an objective methodology in evaluating APP contributions and value toward patient care.

- Explain how to leverage an APP workforce to drive efficient and cost-effective care models while improving APP retention and fulfillment.

Measuring the Impact of Advanced Practice Providers on Patient Outcomes

Clair Kuriakose, MBA, PA-C, FACHE
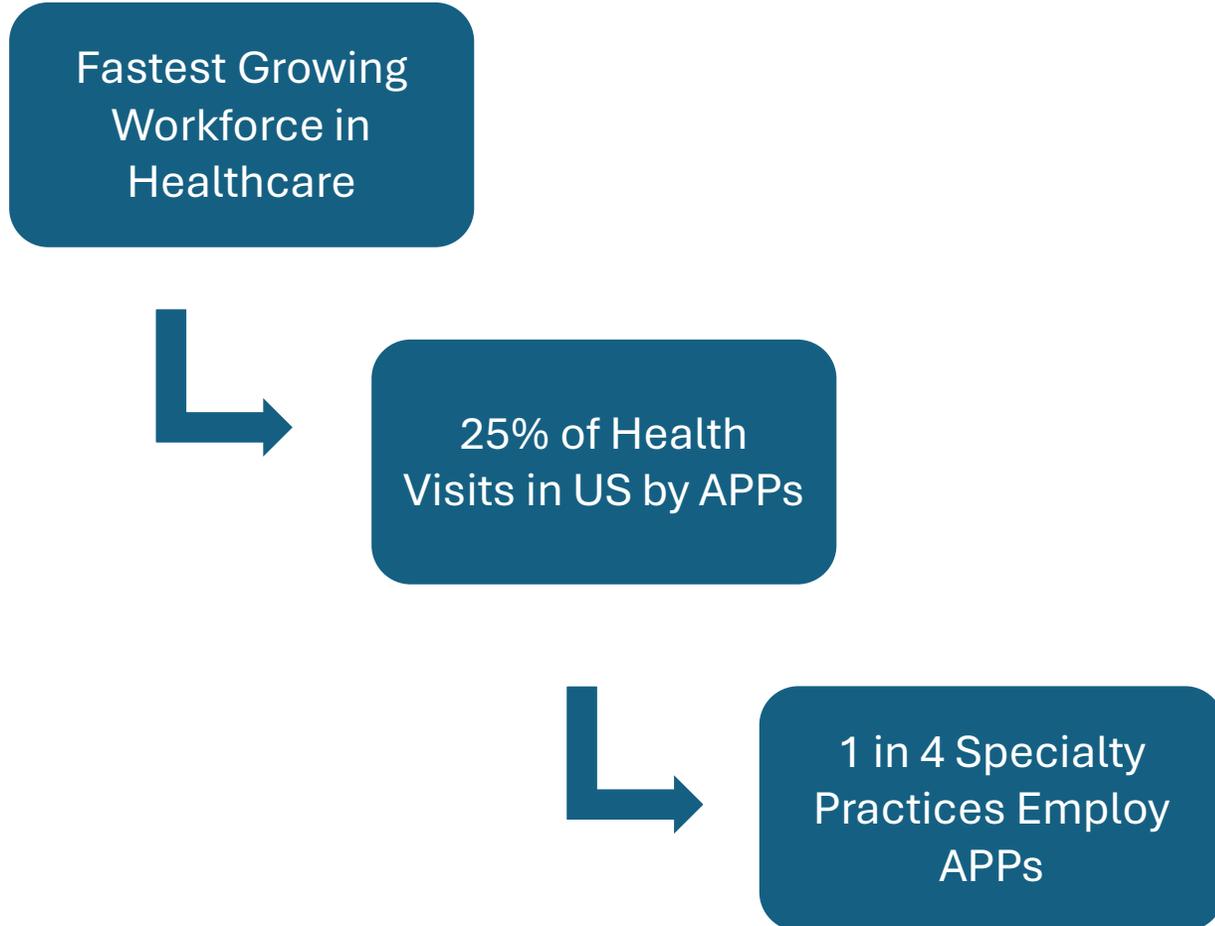Chief Advanced Practice Officer, Vice President, Stanford Health Care

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Evolution of Advanced Practice

Fastest Growing Workforce in Healthcare

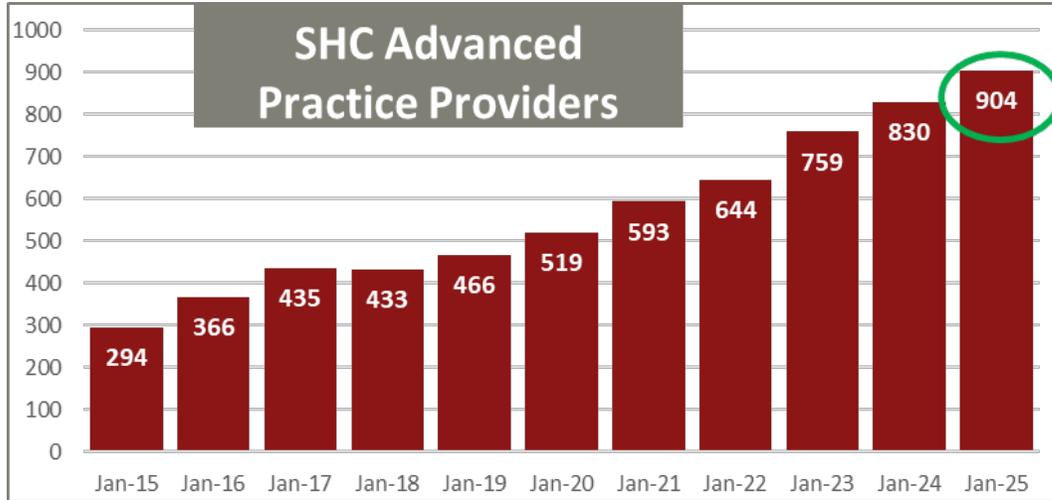25% of Health Visits in US by APPs

1 in 4 Specialty Practices Employ APPs

41% of the Provider Workforce as of 2025

Miller J. A Fourth of U.S. Health Visits Now Delivered by Non-Physicians | Harvard Medical School. hms.harvard.edu. Published September 14, 2023. https://hms.harvard.edu/news/fourth-us-health-visits-now-delivered-non-physicians.
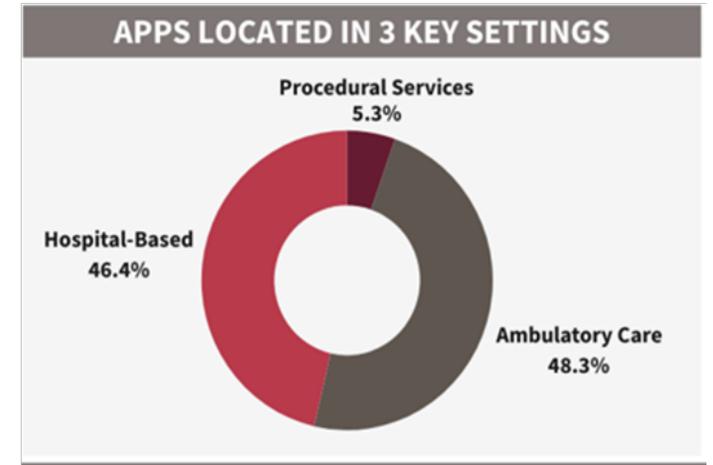
Kaufman, Hall & Associates, LLC. *Physician Flash Report*.; 2025. Accessed May 2025. https://www.kaufmanhall.com/sites/default/files/2025-05/KH-PFR_Report-Q1-2025-Metrics.pdf

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APPs at SHC

SHC Advanced Practice Providers

Date	Value
Jan-15	294
Jan-16	366
Jan-17	435
Jan-18	433
Jan-19	466
Jan-20	519
Jan-21	593
Jan-22	644
Jan-23	759
Jan-24	830
Jan-25	904

Source: Stanford Health Care Center for Advanced Practice Dashboard

904 APPs
(764 FTEs)

34% of the Provider Workforce

APPS LOCATED IN 3 KEY SETTINGS

- Procedural Services 5.3%
- Hospital-Based 46.4%
- Ambulatory Care 48.3%

Source: Stanford Health Care Center for Advanced Practice Dashboard

$$V = \left[\frac{Q+S}{C}\right]E$$

Journey of Advanced Practice
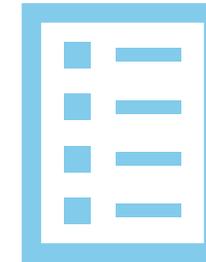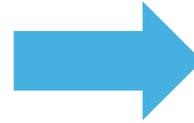
Invisible → Visible → Indispensable

Developing a Solution

Goals

Capture and attribute APP work to measure productivity and utilization

Develop a method to quantify APP work efforts and patient volumes to ensure APPs were working at top of license
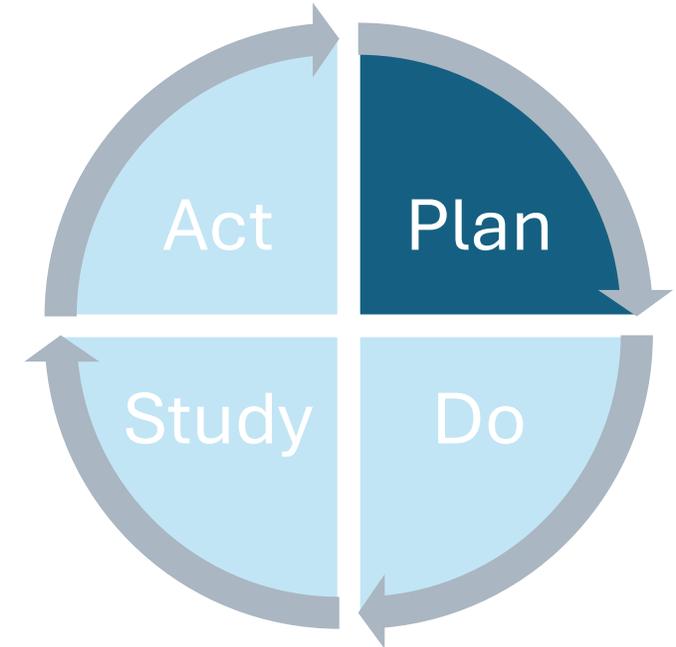
APP Statistical Codes

APP Inpatient and Outpatient Shared Visits and Time-Based Non-Billable Codes

Developing the Codes

- Brainstorming with operational leaders
- Involve stakeholders for the creation of APP-specific codes embedded within the EMR
  - EMR developers
  - IT
  - Billing and Compliance
  - Revenue Integrity
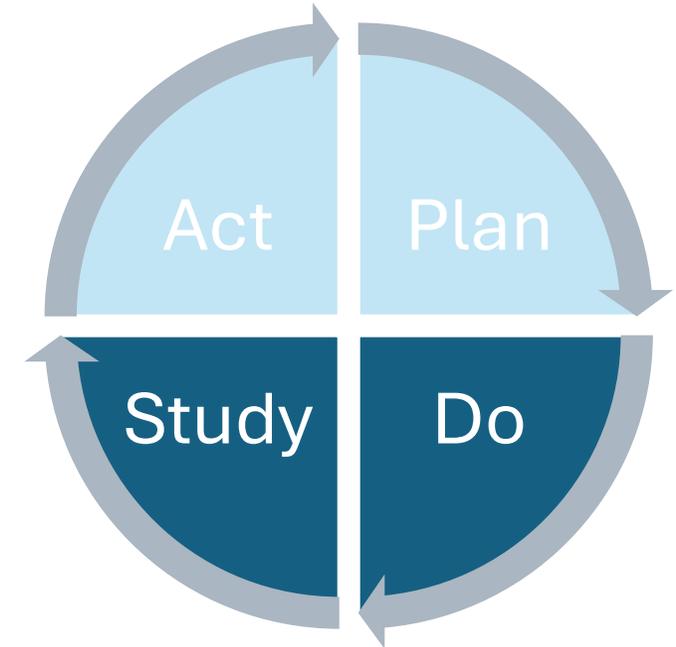 - Coders

Dissemination

- Pilot phase
  - Receive feedback from early adopters
  - Engage APP champions

- Department-specific training and roll out
  - APP leaders integrated within various teams for training and implementation
  - Online training modules and creation of tip sheets
  - Team meetings/webinars

- Additional training for professional coders
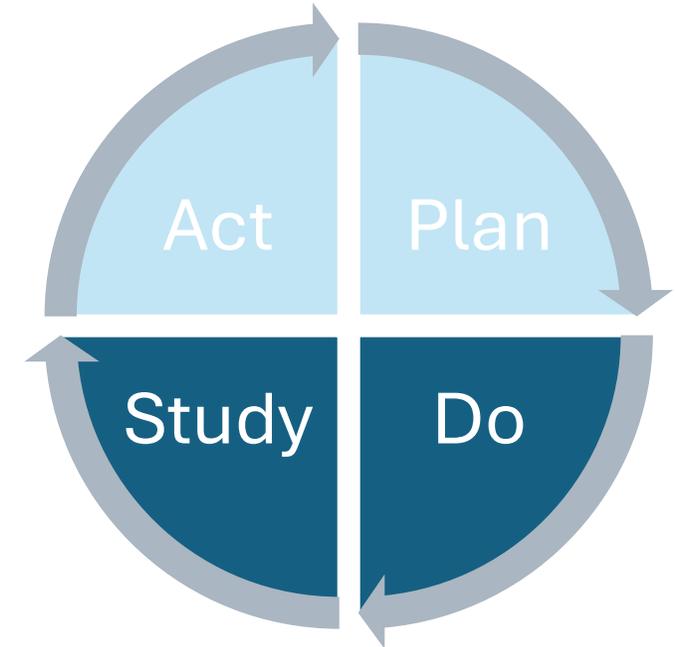
Code Utilization and Opportunities

- APP Scorecards
- Performance Dashboards
- Budget Dashboards
- Service line expansion and development
- Integration into Organizational Quality Dashboards

Measuring Quality Outcomes

Integrated Strategic Plan

Operational Plan (Quality and Safety Goals)

OUTCOME MEASURE DASHBOARDS	MORTALITY	READMISSIONS	LENGTH OF STAY (LOS)	HOSPITAL-ACQUIRED CONDITIONS (HAC)	HEALTHCARE-ASSOCIATED INFECTIONS (HAI)	AQA
PROCESS MEASURE DASHBOARDS	GIP DASHBOARD	READMISSIONS MGT PROCESS MEASURES DASHBOARD	LOS MGT PROCESS MEASURES DASHBOARD	PATIENT SAFETY (SAFE) DASHBOARD	HAI MGT PROCESS MEASURES DASHBOARD	AMBULATORY VIZIENT OPPORTUNIY SCORECARD
	QUALITY & CDI EXPECTED VALUE OUTCOMES DASHBOARD		CASE MANAGER/ SOCIAL WORKER DASHBOARD	PATIENT SAFETY INDICATORS DASHBOARD		

Source: Stanford Health Care Quality Dashboard

Measuring Quality Outcomes

- Attribution of APPs for Quality and Safety initiatives – partnership with Quality Analytics
- Integration into Quality Dashboard: fits into our suite of patient quality and safety measurement tools

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Source: Stanford Health Care Quality Dashboard

MD/APP Care Filter

- Enables measurement of patient outcomes where an APP was part of inpatient care team (primary), excluding consults

- Leverage statistical process control charts to assess common vs. special cause variation

- Able to measure pre vs. post interventions

FILTERS

VIZIENT ATTRIBUTION

Q&A Methodology ⓘ
Vizient Q&A S... ▾

Q&A Scorecard Service L..
(All) ▾

Vizient Service Line
(All) ▾

Vizient Sub-Service Line
(All) ▾

SHC ATTRIBUTION

MD Dept (Discharge)
(All) ▾

MD Division (Discharge)
(All) ▾

Discharge Unit
(All) ▾

POPULATION

Days to Readmission
0-30 Day Readmissi... ▾

ICU Population
(All) ▾

Status Admit
(All) ▾

Status Discharge
(All) ▾

APP Care ⓘ
(All) ▾

APP Care Definition:

Identified using professional billing transactions. APP's shared visits for inpatient service use a shared visit charge code CC2234.

Excludes APP providers from the following teams:
 ACUTE PAIN
 NEPHROLOGY
 PALLIATIVE CARE
 PSYCHIATRY
 INTERVENTIONAL PULMONOLOGY
 IR INPATIENT CONSULTS

TRUE
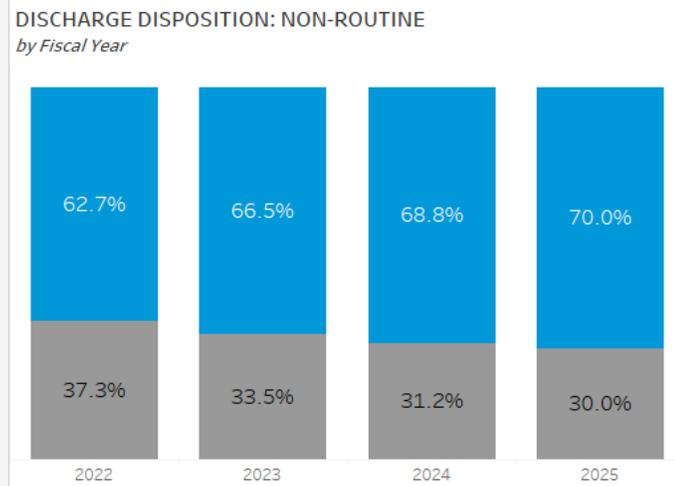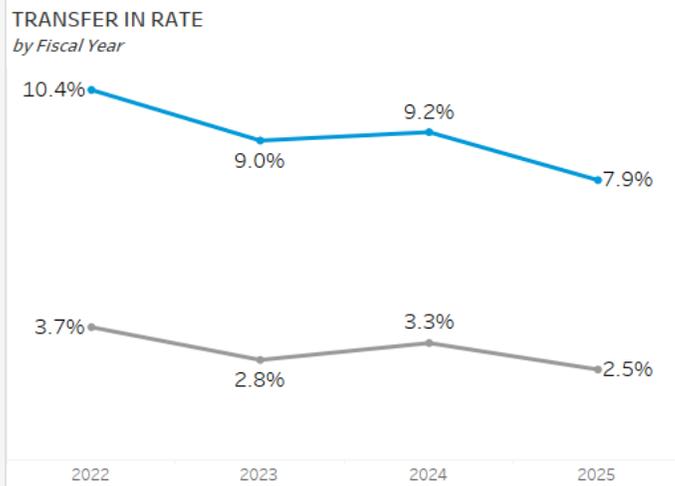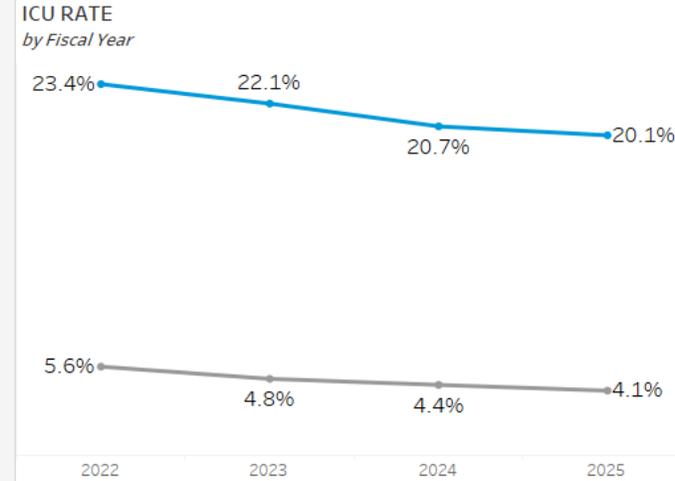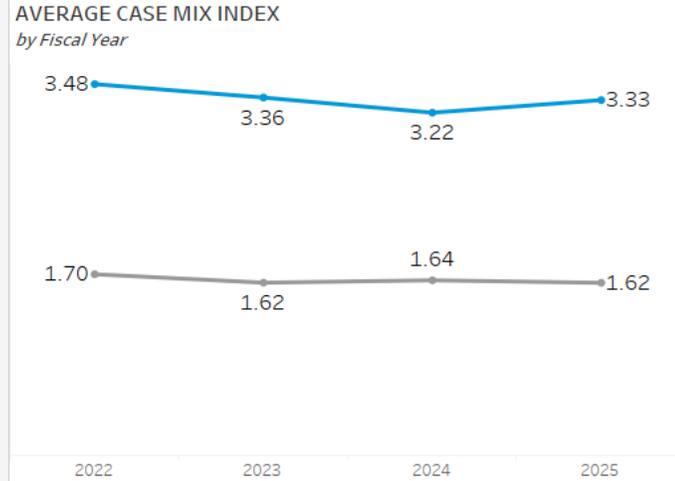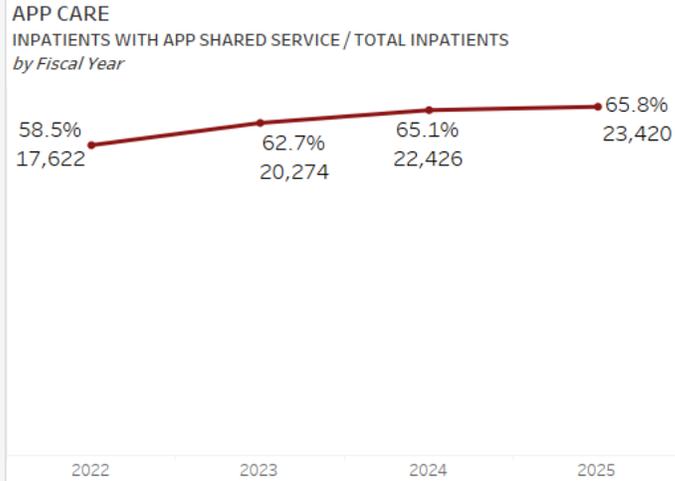 Patient has attending MD and was also billed by an APP for shared inpatient service.

FALSE
 Patient has attending MD and was NOT billed by an APP for shared inpatient service.

(ALL)
 Entire inpatient population (TRUE + FALSE)
 Patient has attending MD and was NOT billed by an APP for shared inpatient service.

Source: Stanford Health Care Quality Dashboard

SHC Inpatient Population
# MD/APP Care Team (Primary) Prevalence

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APP CARE
INPATIENTS WITH APP SHARED SERVICE / TOTAL INPATIENTS
by Fiscal Year

- 58.5% 17,622 (2022)
- 62.7% 20,274 (2023)
- 65.1% 22,426 (2024)
- 65.8% 23,420 (2025)

AVERAGE CASE MIX INDEX
by Fiscal Year

- 3.48 (2022), 3.36 (2023), 3.22 (2024), 3.33 (2025)
- 1.70 (2022), 1.62 (2023), 1.64 (2024), 1.62 (2025)

ICU RATE
by Fiscal Year

- 23.4% (2022), 22.1% (2023), 20.7% (2024), 20.1% (2025)
- 5.6% (2022), 4.8% (2023), 4.4% (2024), 4.1% (2025)

TRANSFER IN RATE
by Fiscal Year

- 10.4% (2022), 9.0% (2023), 9.2% (2024), 7.9% (2025)
- 3.7% (2022), 2.8% (2023), 3.3% (2024), 2.5% (2025)

DISCHARGE DISPOSITION: NON-ROUTINE
by Fiscal Year

	2022	2023	2024	2025
MD/APP Care Team (Primary)	62.7%	66.5%	68.8%	70.0%
No APP on Care Team (Primary)	37.3%	33.5%	31.2%	30.0%

LEGEND
- ■ MD/APP Care Team (Primary)
- ■ No APP on Care Team (Primary)

Source: Stanford Health Care Quality Dashboard
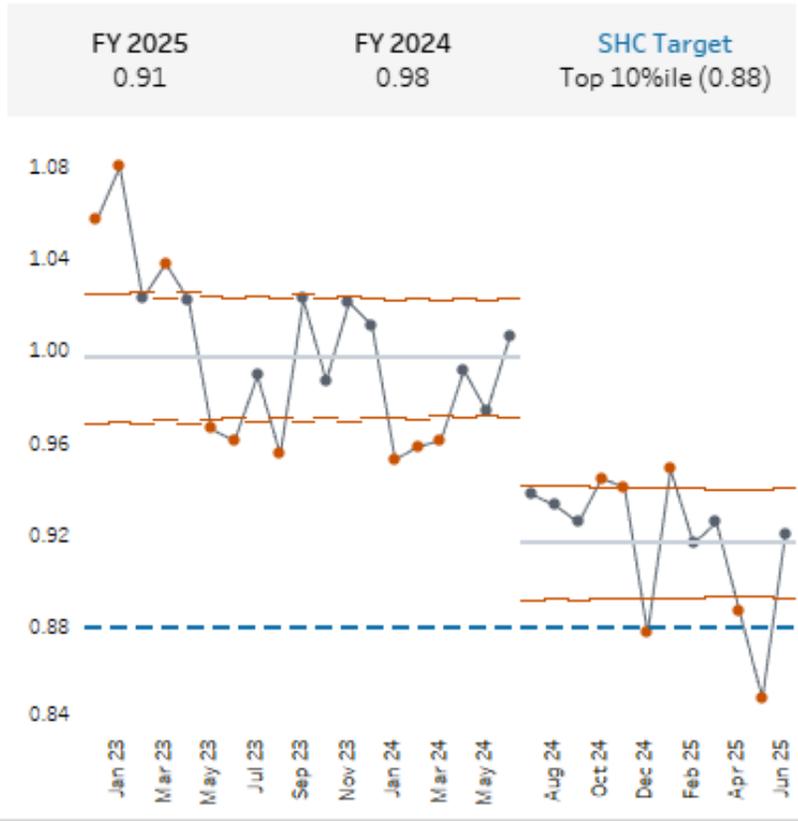
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Readmissions Outcomes
MD/APP Care Team
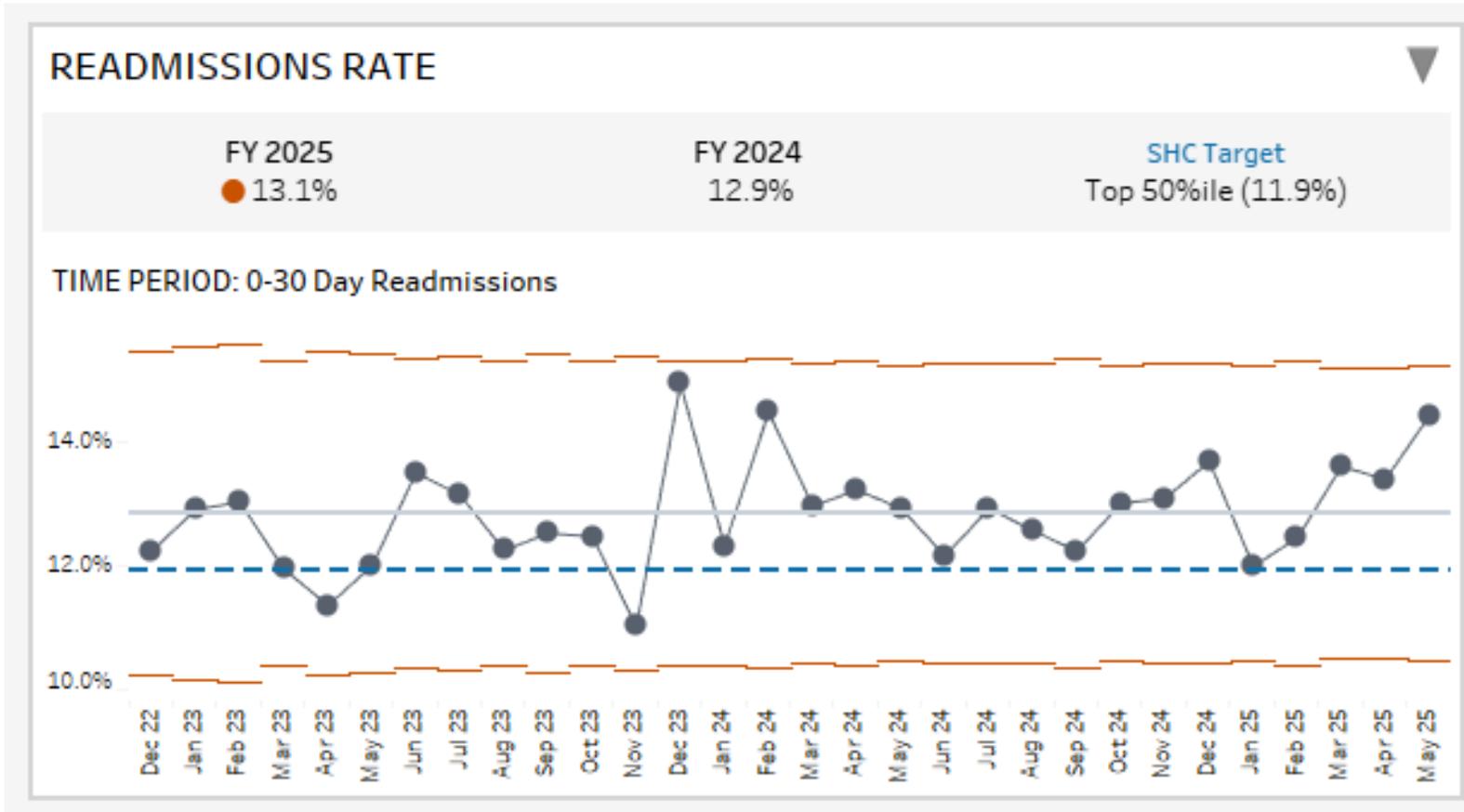
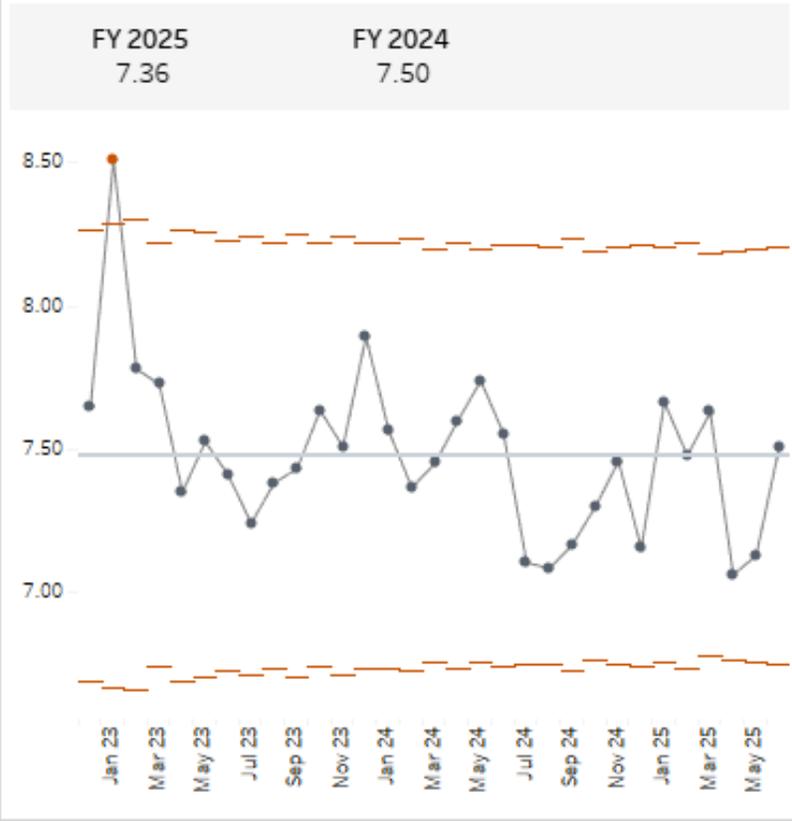
Source: Stanford Health Care Quality Dashboard
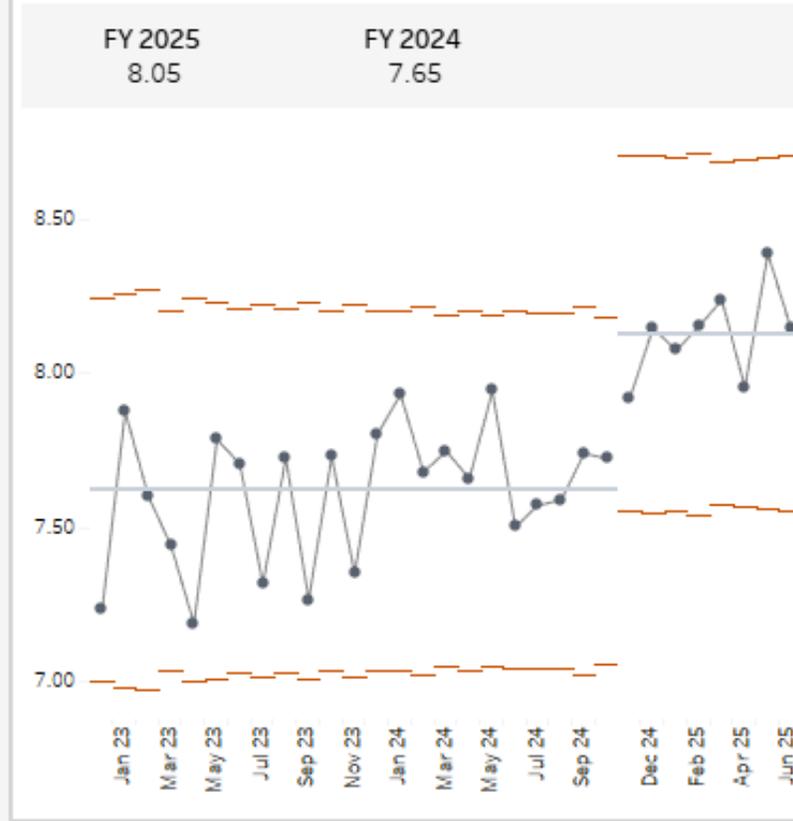
Length of Stay Outcomes
MD/APP Care Team

Source: Stanford Health Care Quality Dashboard

Mortality Outcomes
MD/APP Care Team
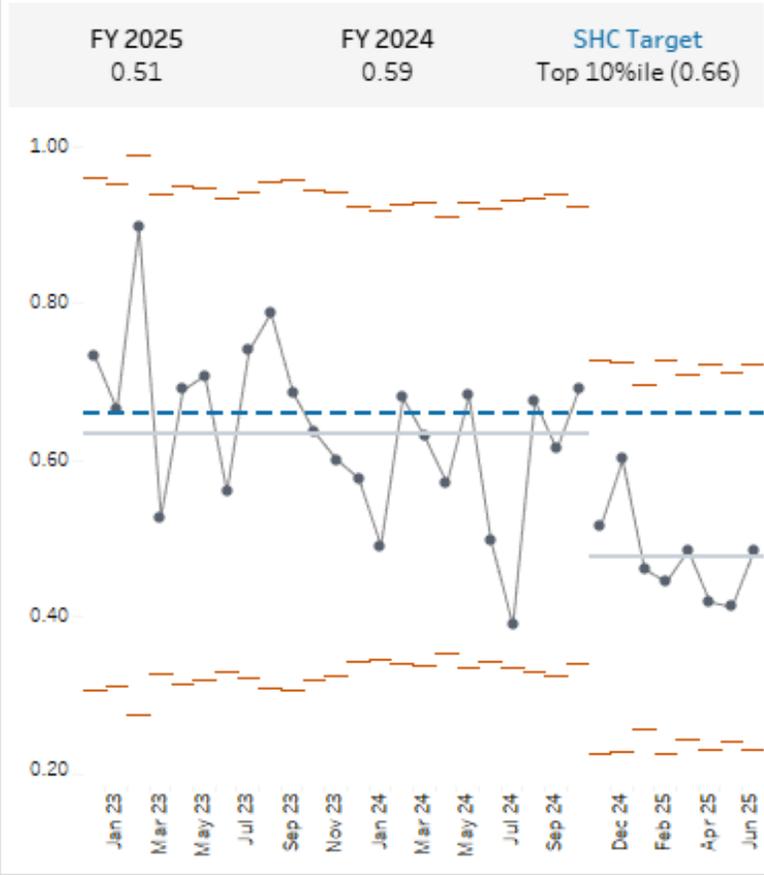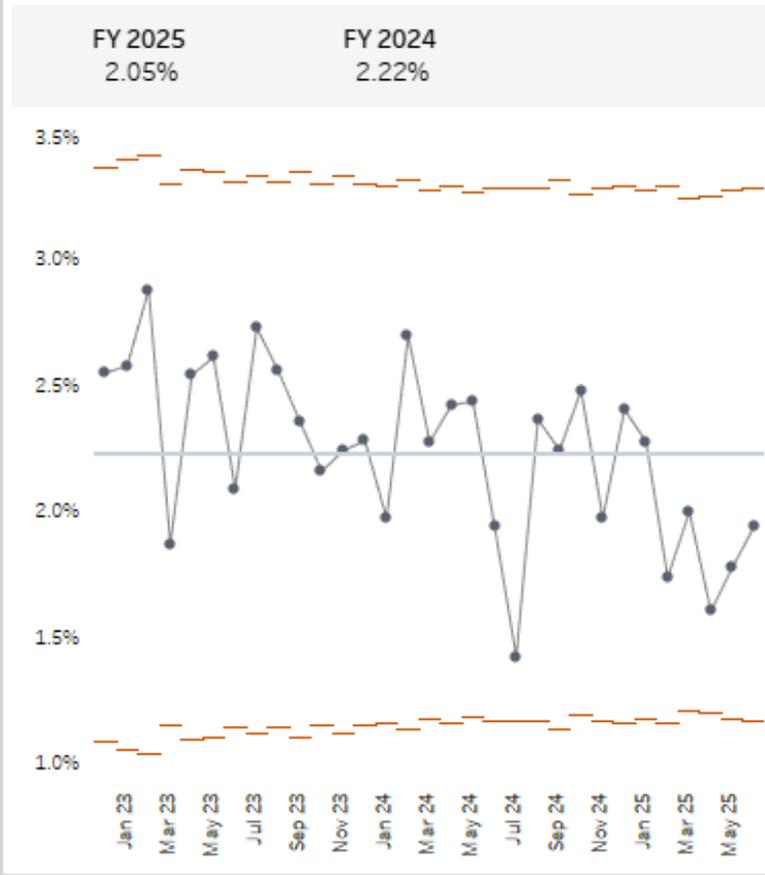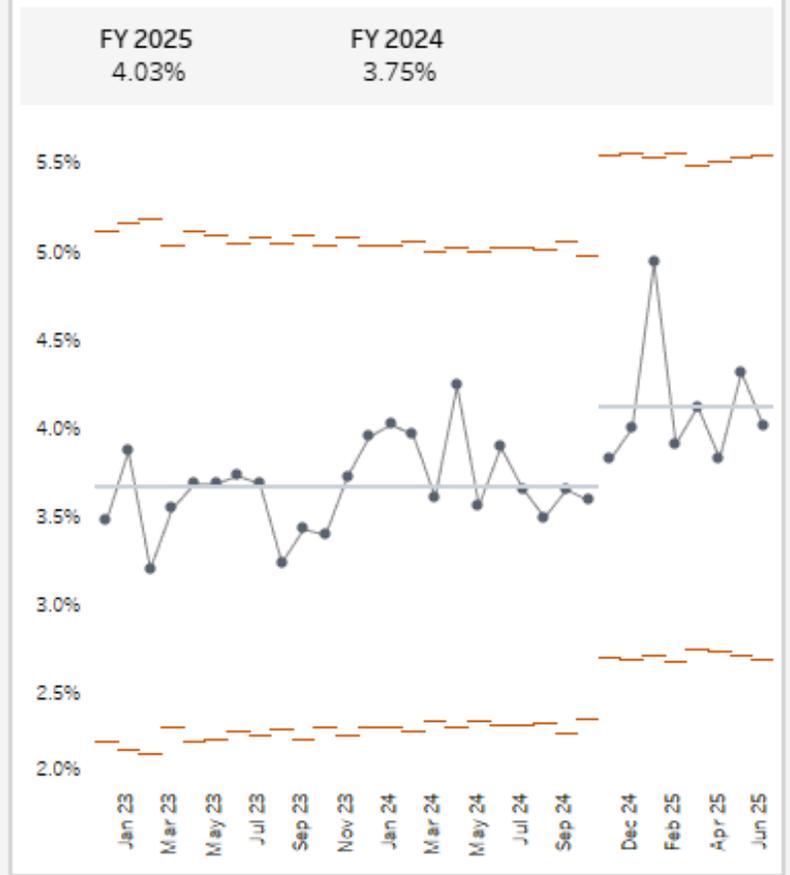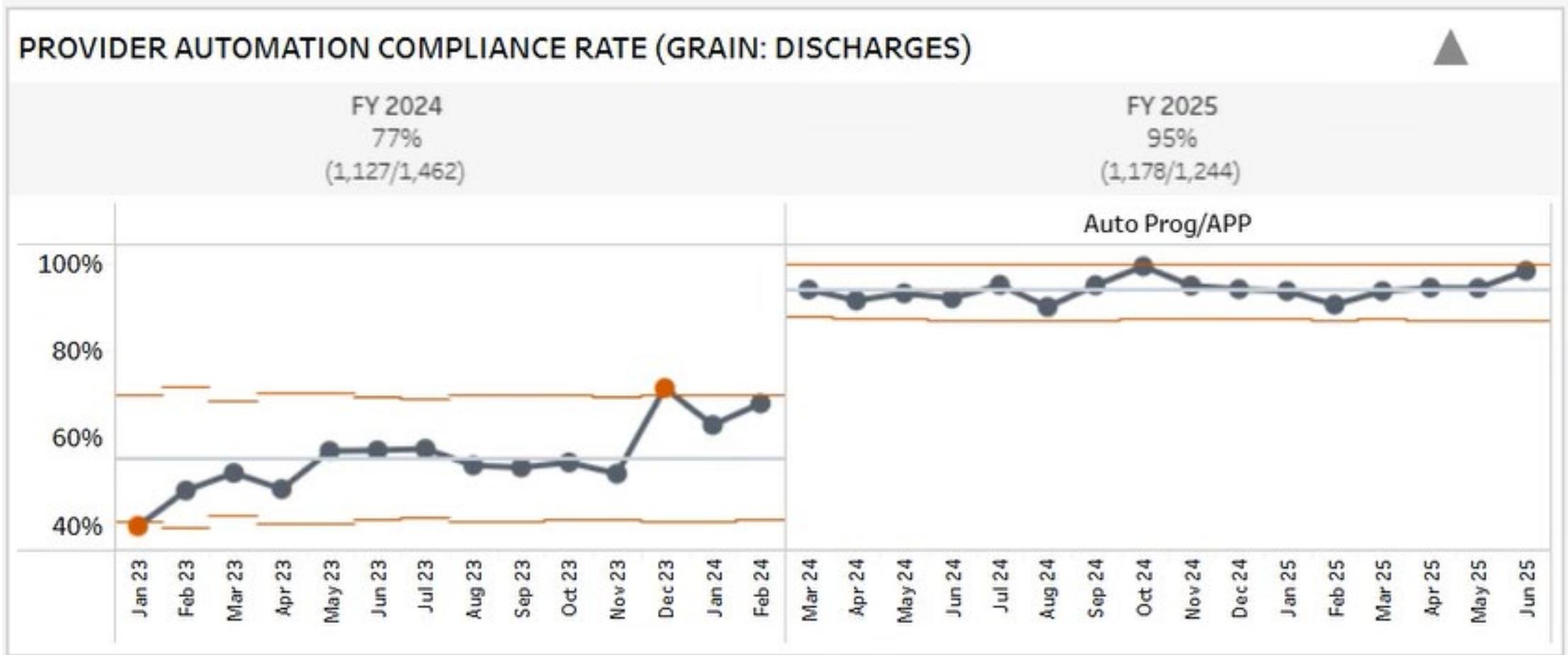

Source: Stanford Health Care Quality Dashboard

APP Integration in CDI and Expected Value Improvement Interventions – CT Surgery

Source: Stanford Health Care Quality & CDI Expected Outcomes Dashboard

Overall Impact & Lessons Learned

Quality → Targeted Quality Improvement Initiatives

Productivity → Ensure Accountability

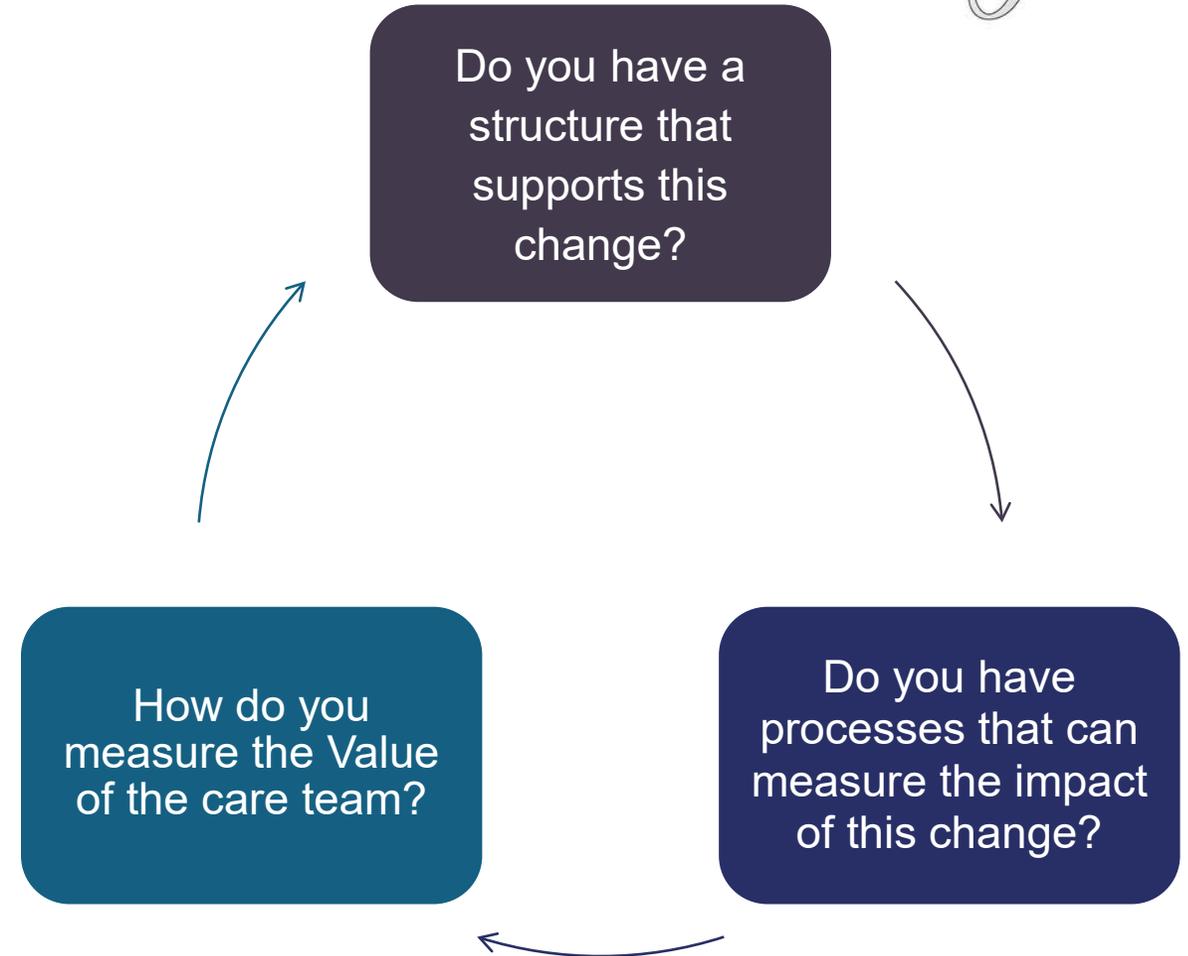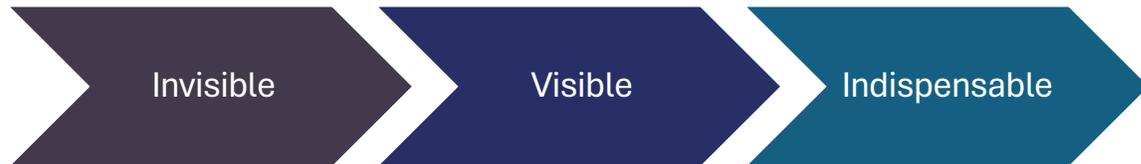**Engagement** → Recognition of APP Contributions

Informed Decision Making → Workforce Expansion

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Key Takeaways

The Provider Workforce within Health Systems is **Evolving**

Invisible ▶ Visible ▶ Indispensable

Do you have a structure that supports this change?

How do you measure the Value of the care team?

Do you have processes that can measure the impact of this change?

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Questions?

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Angela Graf, agraf@stanfordhealthcare.org