Coaching and Optimizing Outcomes in Hernia Repair:

“Video-based Collaborative Learning to Improve Ventral Hernia Repair”

Study Objective

- Test the effectiveness of two interventions that provide constructive feedback to improve surgical performance and clinical outcomes
  - Live surgical coaching
  - Asynchronous feedback
  - Wait list control group (everyone eventually gets coaching or feedback)

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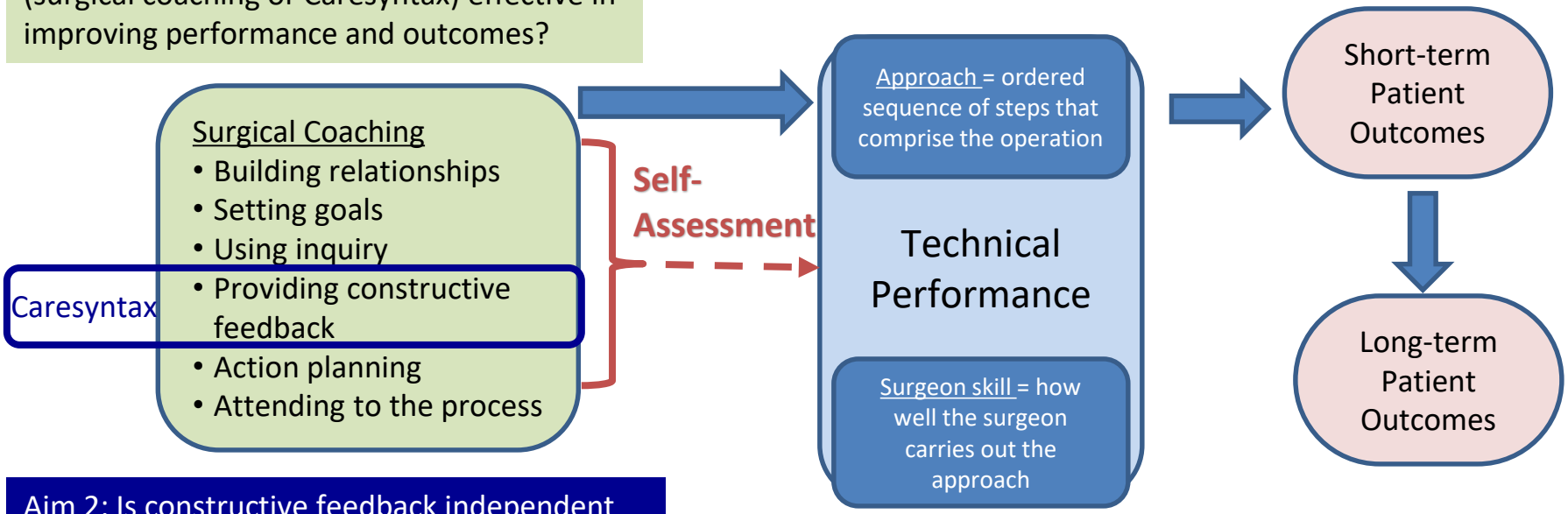
Study Overview

Aim 1: Is video-based collaborative learning (surgical coaching or Caresyntax) effective in improving performance and outcomes?



Aim 2: Is constructive feedback independent of the other activities of coaching (Caresyntax) sufficient to improve performance and outcomes?

Aim 3: Does surgical coaching lead to a more accurate self-assessment of surgical skill than constructive feedback alone?

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Study Design

- Prospective randomized trial of 54 ACHQC surgeons
- Video capture is required for all 3 arms
  - 2 procedural videos pre- and post-intervention
  - Self-assessment and blinded expert review
  - Utilizes a previously validated assessment instrument to measure technical skill.
- Expert-reviewed technical skills will be linked to risk-adjusted patient outcomes before and after intervention.

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Analysis

Primary Outcomes	Secondary Outcomes
Change in OSATS score	1- and 2-year recurrence
Change in SSO	Patient reported outcomes
Intervention acceptability	Time per intervention
	Accuracy of self-assessment

- 2 phase analysis
  - Either intervention v waitlist control
  - Coaching v video assessment

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Trained Coaches

- Jeffrey Blatnik
- Chad Copper
- Joe Deka
- Thomas Gillespie
- Andrew Kastenmeier
- David Krpata
- Ajita Prabhu
- Kevin Sexton
- Jeremy Warren

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Participating Surgeon Recruitment

- Inclusion criteria
  - ACHQC membership in good standing
  - Submission of a minimum of 10 eligible cases within the 6 months preceding the time of enrollment

- Benefits of participation
  - Free assessment of operative performance by your colleagues
  - Free video-based feedback from a trained surgeon-coach
  - Review de-identified videos to learn from your peers
  - Potential to improve performance and/or clinical outcomes
  - Early experience with new model for CPD

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Randomization

- Randomization will take place at the time of enrollment and will be assigned after baseline videos submitted

- Randomization to intervention
  1) Live surgical peer coaching
  2) Asynchronous video-based constructive feedback
  3) Wait-list control group (will get randomized 6 months later)

- Random assignment to coach

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Video Capture

- Video capture is required for all three arms
- Any type of video that captures the case is acceptable:
  - Robotic
  - Laparoscopic
  - Open surgical field via OR boom cameras, in-light cameras, Go Pros, cellphones, etc.

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Video Upload

Start CX-ADVANCE

Access CX-ADVANCE using the Google Chrome™ browser or the Mozilla Firefox™ browser. Enter your facility-specific URL in the address bar:

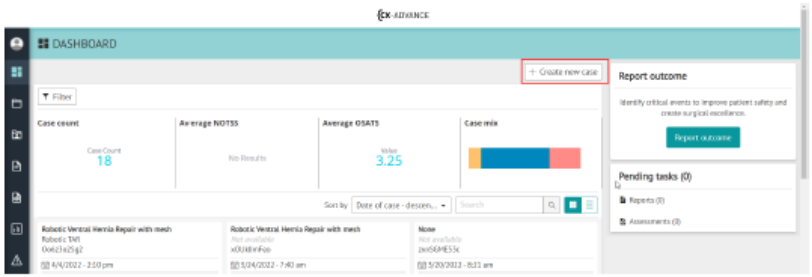
Your URL: https://uwsurgery.caresyntax.com

Create a New Case

Cases can be created from the **Dashboard** or **Cases** screen.

From the **Dashboard** screen:

1. Click on the **+Create new case** button
2. Enter case information in the fields provided.
   - If you are participating in a collaborative or a clinical trial, to keep this case de-identified, leave empty the Patient First Name, Last Name, Gender, and DOB fields.
   - Add de-identified case details to provide context for case reviewers/coaches.



Video Control Bar

Play Media

To play media:

1. Go to the **Media Files** tab.
2. Click on a video file to open that video.
3. Click the **white directional arrow** at the bottom left of the screen to begin playing video.

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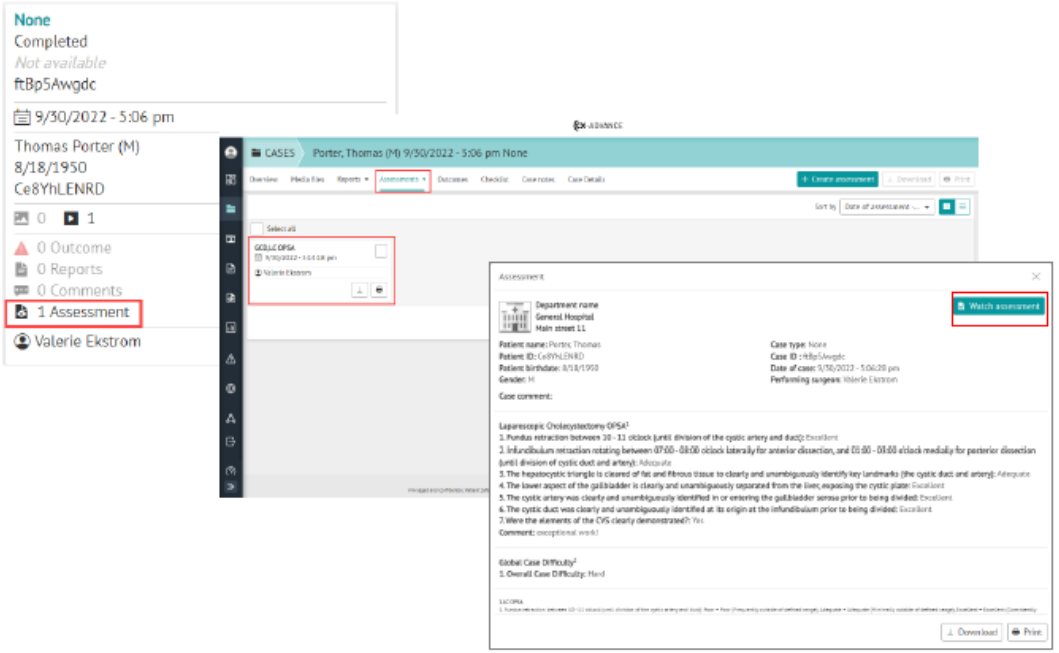
Complete OSATS

Assessments

The number and type of completed assessments can be viewed on each case tile/record in either **Dashboard** or **Cases** screens:

Cases with completed assessments will display a number within the case details.

1. Single-click on the tile for which you want to view the assessment.
2. Navigate to the **Assessment tab**. Click on the **Assessment** tab to open the tab.
3. Single-click on the tile for which you want to view the assessment.
4. Click **Watch assessment** to view the video that has been assessed.



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Arm 1: Live Coaching

- Coach facilitates an introductory meeting with surgeon
  - Explore each other's background, experience, and motivation
  - Set overall goals and specific goals for the first coaching session
  - Develop action plan, type of first case for review
- Peer coaching sessions scheduled at in-person meetings or via video conference platform
- Surgeons record and upload a self-selected video to Caresyntax® platform for advanced coach review if desired
- 3 coaching sessions during 6-month intervention period

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Arm 2: Asynchronous Feedback

- No real-time interpersonal contact with coaches
- Surgeons upload self-selected procedural video to Caresyntax® platform with short case description and any specific questions
- Coach reviews video within one week of its posting, provides time-stamped feedback via platform
- Surgeons review coach feedback and responds
- Coach and surgeon continue communication via platform until no further comments are made on that case video
- Review three videos during 6-month intervention period

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Arm 3: Wait List Control

- One third of surgeons will be randomized to intervention and coach but wait-listed to provide a control group
- These surgeons will submit two videos for technical skill evaluation during each of the baseline and follow-up periods
- ACHQC data will be tracked for short-term outcomes prior to their crossover to the intervention for long-term follow-up

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Baseline and Post-Intervention Assessment

- Objective Structured Assessment of Technical Skill (OSATS)
  - Judged by experts
  - Self-assessment

- OSATS Domains
  - Respect for tissue
  - Time and motion
  - Instrument handling
  - Knowledge of instruments
  - Flow of operation
  - Use of assistants
  - Knowledge of specific procedure

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New Roles / Skills

Coach	Participating Surgeon
The art of inquiry or asking good questions	Don’t defend or explain, be open and engaged
Give constructive feedback	Receive feedback
Support goal identification and action planning	Set individual goals and follow through on action plan

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YOUR RESPONSIBILITY: Goal Setting & Follow Through

- Identify initial opportunities for improvement – technical, cognitive, interpersonal, stress management, practice management, other

- End sessions in with clearly identified next steps and agreement with coach about planned changes

- Track impact of practice changes to share with your coach

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Cheat Sheet for Being a Great Coachee

- Be self-directed, take responsibility, set goals
- Shift to curious
- Listen intentionally
- Be truly “in the moment”
- Guard against defensiveness
- Inquire – ask questions for understanding
- Be forward-focused – set plans for action

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Descriptive Analysis: Participating Surgeons

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Primary Outcome Measures

- Technical skill (Video-based OSATS)
  - Review of 2 baseline and 2 follow-up videos
  - Skills for each of 7 domains rated from 1 to 5
  - Maximum summary score: 35
- SSO rate
- Recurrence rate at 1 year

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Descriptive Analysis (n=59)

Characteristic	Percent
Surgeon Specialty	
Gen Surg	44.1
Hernia	22.0
MIS	16.9
Surgical Onc.	3.4
Unknown	13.6
Female	18.6
Fellowship	58.6
Institution Type	
Teaching	49.2
Community	32.2
Surgery Center	18.6
Mean Years in Practice	
<5	12.3
5-9	33.3
10-19	45.6
≥ 20	8.8

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Descriptive Analysis

- Range of OSATS scores: 23-27 (avg. 25)
  - Correlation 2 baseline videos: 0.79

- Average domain scores (min=1, max=5):
  - Respect for tissue: 3.9
  - Time and motion: 3.3
  - Instrument handling: 3.5
  - Knowledge of instruments 4.0
  - Flow of operation 3.5
  - Use of assistants 2.9
  - Knowledge of specific procedure 4.1

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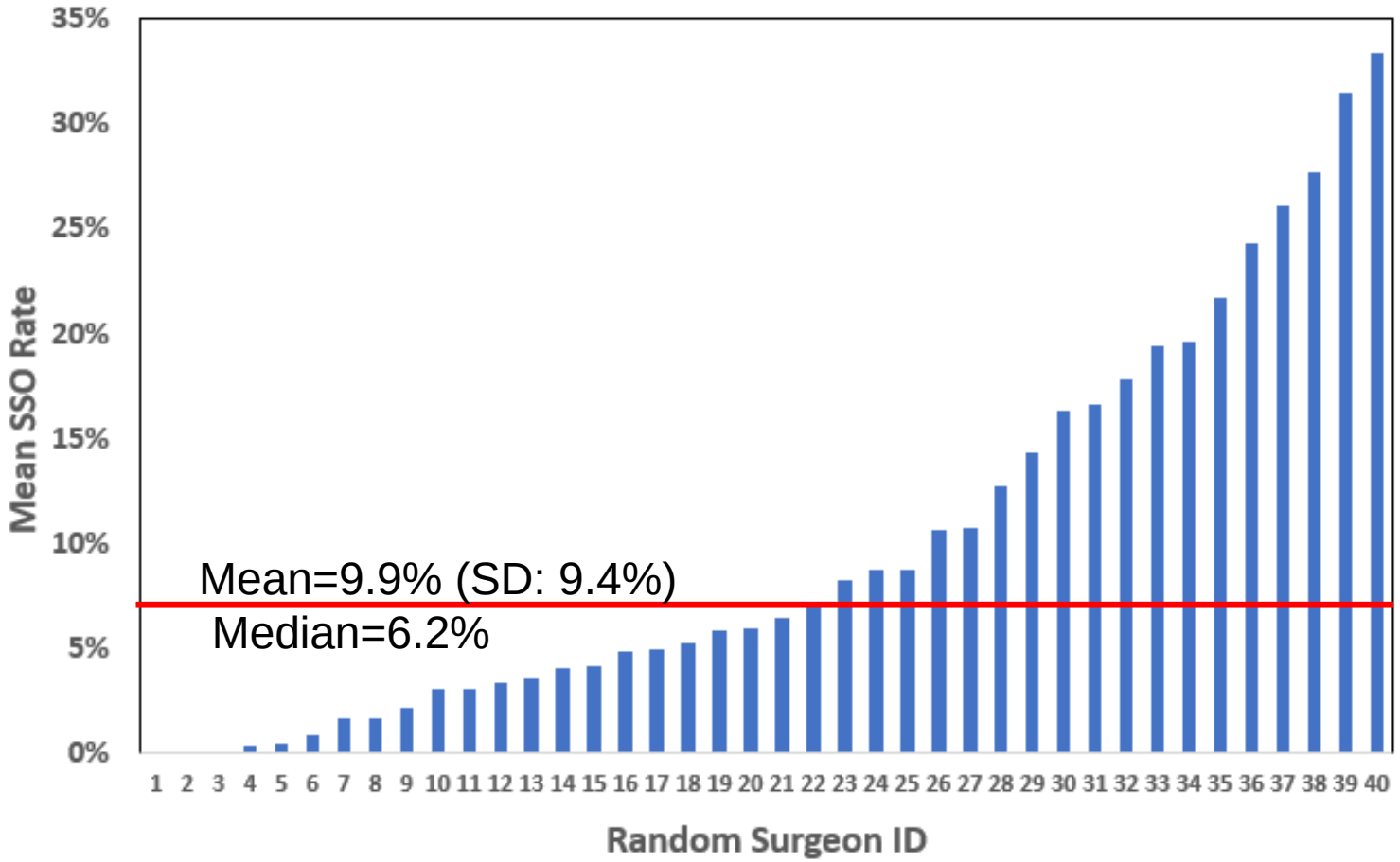
Distribution of Surgeon SSO Rates



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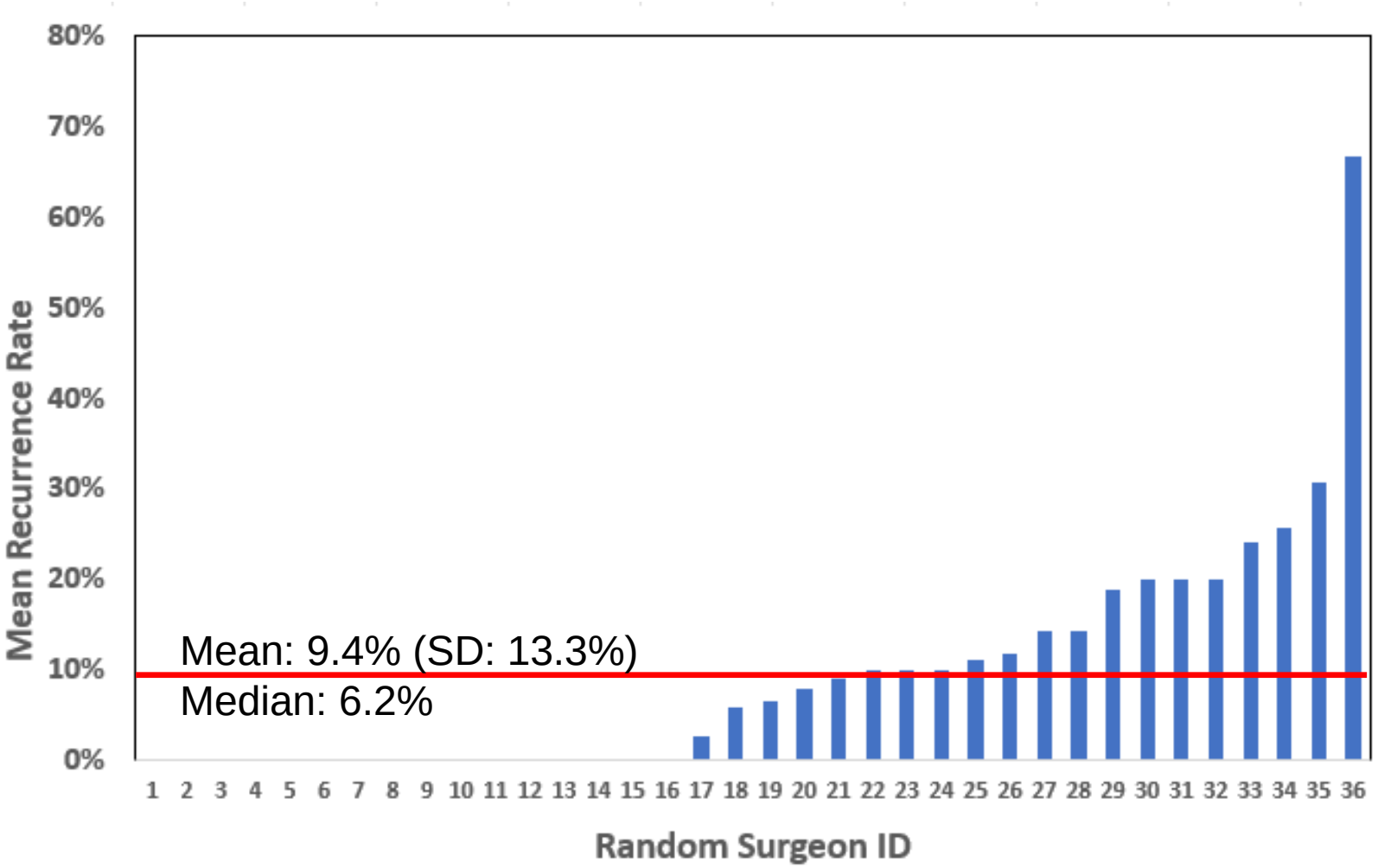
Distribution of Surgeon Recurrence Rates



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Benefits for ACHQC

- Incorporation of video sharing allows evaluation for future video-based projects
- Members will get benchmarked OSATS performance evaluation
- Trial of peer coaching to improve performance takes QI activities to the next level
- Resources to trial better capture of long-term clinical outcomes and PROs

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Thank You

- Study team is here to help.

Sudha Pavuluri Quamme, MD, MS

- Scan QR code or talk to Sudha to enroll or move to the next step.

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