Identify and remedy gaps in quality to drive better outcomes and reimbursements.

Leverage actionable reporting and evidence-based education and training to help correct areas of low performance, improve quality of care, and boost outcomes with our Outcomes Improvement Solution.

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Pursuing Clinical Excellence With Continuous Quality Improvement

Stephen Hunter, DPT, OCS, FAPTA
Pam Dibblee, DPT, OCS

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Learning Goals

- Examine how to develop a learning culture to sustain quality improvement

- Explore ways to integrate data into sustained learning and training of therapists

- Identify potential gaps in clinical learning and implementation of learning into practice

- Introduce strategies to integrate clinical learning with continuous improvement

Chapter 1

Continuous Quality Improvement
and Intermountain

Intermountain Healthcare

Not-for-profit integrated health system based in Salt Lake City, Utah

Utah has among the lowest healthcare costs in the nation

PREVENTION & WELLNESS

88,000 Healthy Plates hospital cafes
12,000 Utah students participating in Live Well assemblies
57,000 Healthy Living participants

HOSPITALS & CLINICS

24 hospitals   **215** clinics
2,700 beds

INSURANCE

900,000 memebers

OUR TEAM

2,400 medical group doctors and APNs
40,000 employees

REHABILITATION SERVICES

1,400 caregivers (PT, OT, SLP, Aud, ATC)
Wellness, acute, IRF, home care, outpatient

Intermountain's Learning Environment

- Culture: Brent James, MD, MStat
- Long-term focus on reducing cost
  - Currently 50% of Intermountain's business is at risk
- Measurement
  - ROMS: Rehabilitation Outcomes Management System
- Standardize processes
- Identify failures
- Continuous improvement
- Support to share (including competitors)

Rehabilitation Services Infrastructure

- Internal process control: five full-time employees (FTEs)

- Rehab services director of research

- Rehab services data analyst

- Access to statistician

- Central rehab reporting structure for all 24 hospitals, all services across the continuum of care

- The team includes physical medicine and rehabilitation (PM&R) physicians and rehab nursing

Quality Improvement

- Aligns with Intermountain's mission and key performance indicators (KPIs)
  - "Helping people live the healthiest lives possible"
  - Quality metric
- Moving toward value-based care
  - Improves care
  - Decreases cost by eliminating waste and reducing variation
- Measurement
  - If you can't measure it, you can't improve it
  - Improving failure to progress (FTP) rates
- Employee engagement through learning

Quality Improvement (cont.)

- **Culture**
  - Top-down (historically)
    - Most initiatives have been set by leaders and implemented by managers
    - Managers "owned the initiatives" and set the agendas
  - Bottom-up (currently)
    - Initiatives should be driven by the passion of the frontline therapist
    - Clinically meaningful and pragmatic
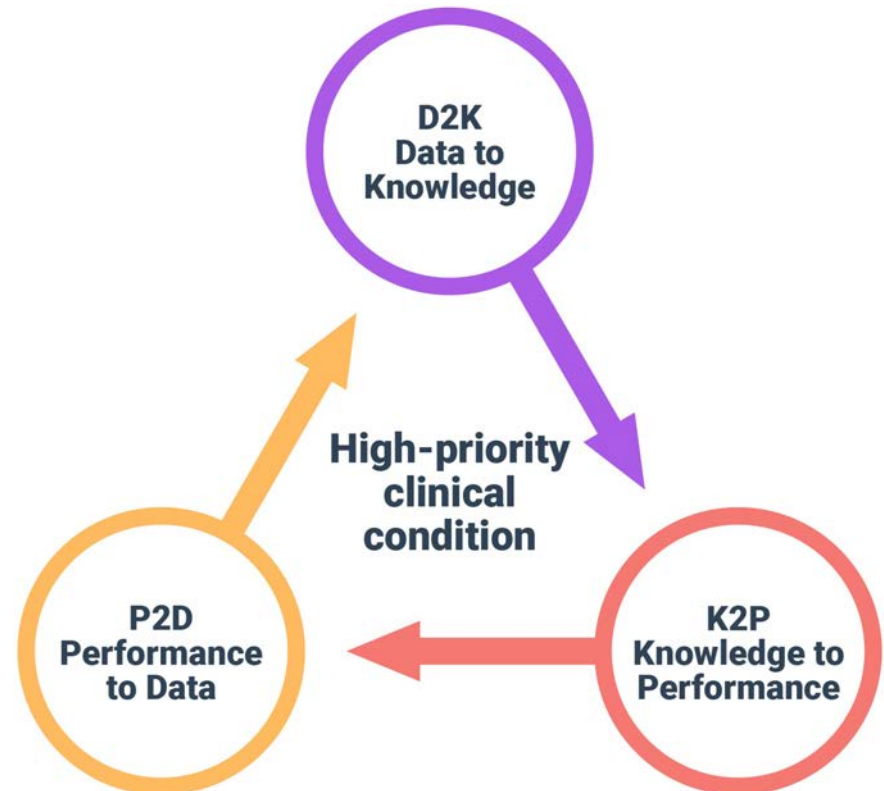   - Infrastructure changes allowed for a new structure for therapist engagement, idea generation, and implementation

Practice Council Communication/ Reporting Structure

Practice council communication/reporting structure

Leadership

Rehabilitation system

Practice council

Professional group

Working groups

Caregiver ideas

IPC

Consulting ◄┄┄┄►

Reporting, communication, escalation ◄───►
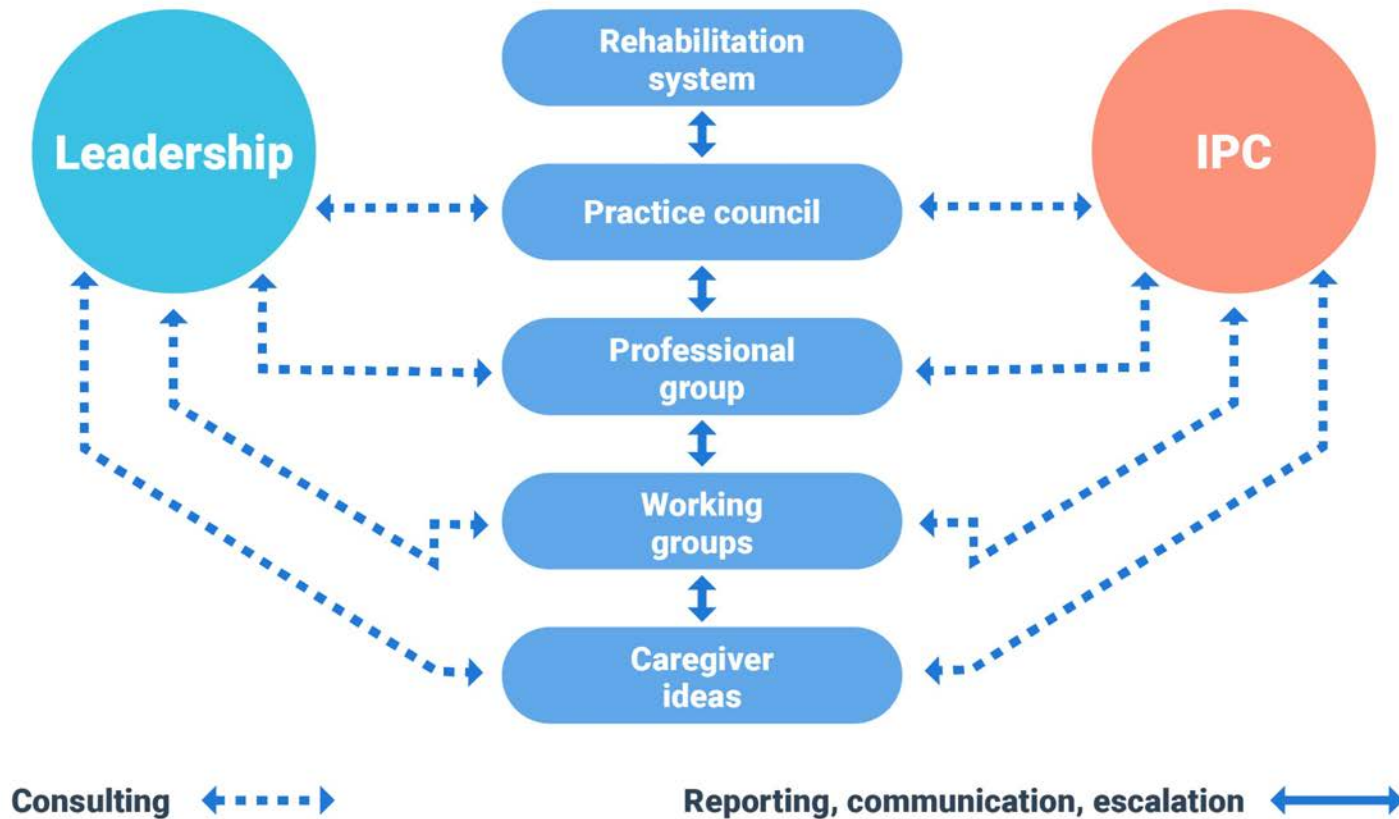
Quality Improvement

- Led by frontline therapists
  - Increased buy-in
- Embed activity into daily workflow
  - Relevant to their population
  - Easy access to data systems and information
- Engage staff to experiment and test: idea generation
- Formation of learning communities
  - Sharing
  - Disseminating
  - Collaborating

D2K
Data to
Knowledge

High-priority
clinical
condition

P2D
Performance
to Data

K2P
Knowledge to
Performance

Improvement Science

1. Select a high-priority clinical condition

2. Generate an evidence-based best practice guideline

3. Blend the guideline into the flow of clinical work
   - Staffing, training, supplies, physical layout, educational training materials, measurement/information flow

4. Embed data systems to track outcomes
   - Intermediate and final clinical, cost, and patient satisfaction outcomes

5. Demand that clinicians vary based on individual patient needs

6. Measure, learn, and eliminate unwanted variation

Chapter 2

Quality Improvement Best Practices

Improvement Science: Select a High-Priority Condition: LBP
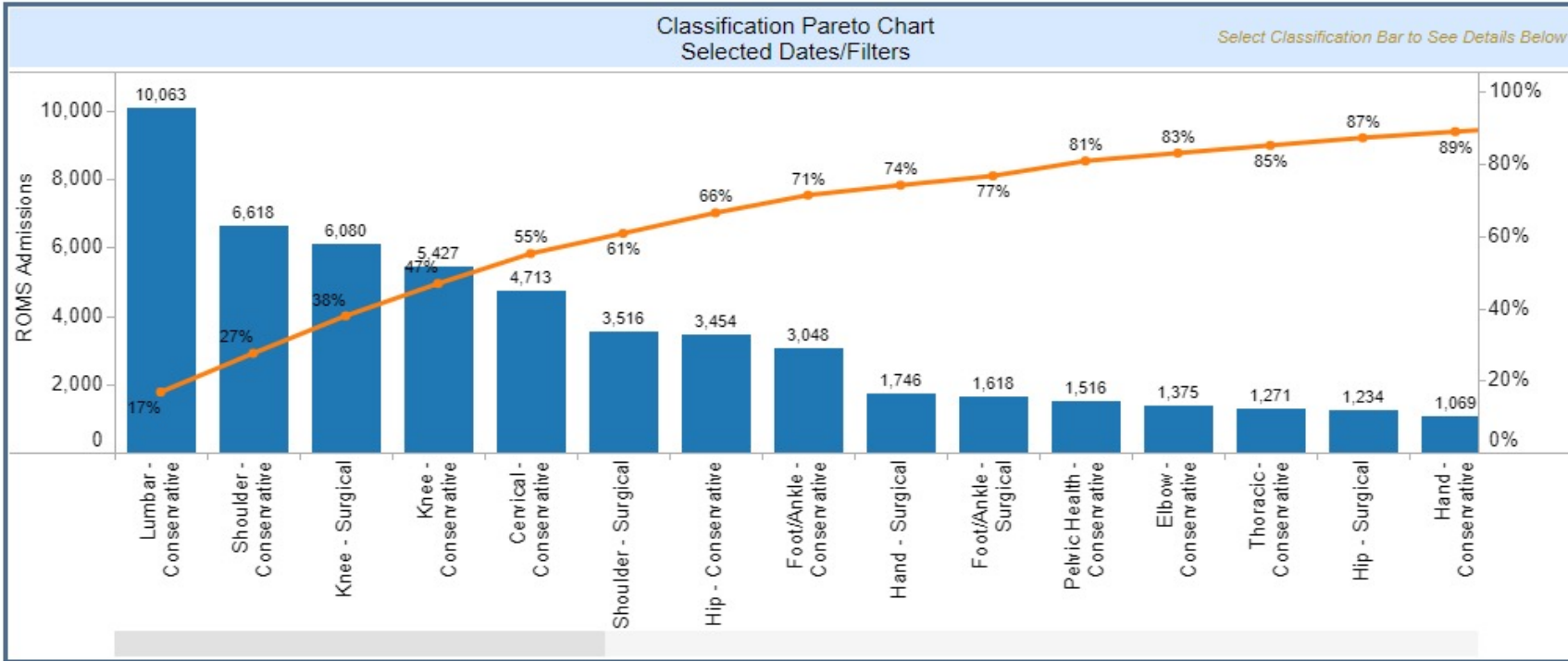
Improvement Science

Generate an evidence-based best practice guideline
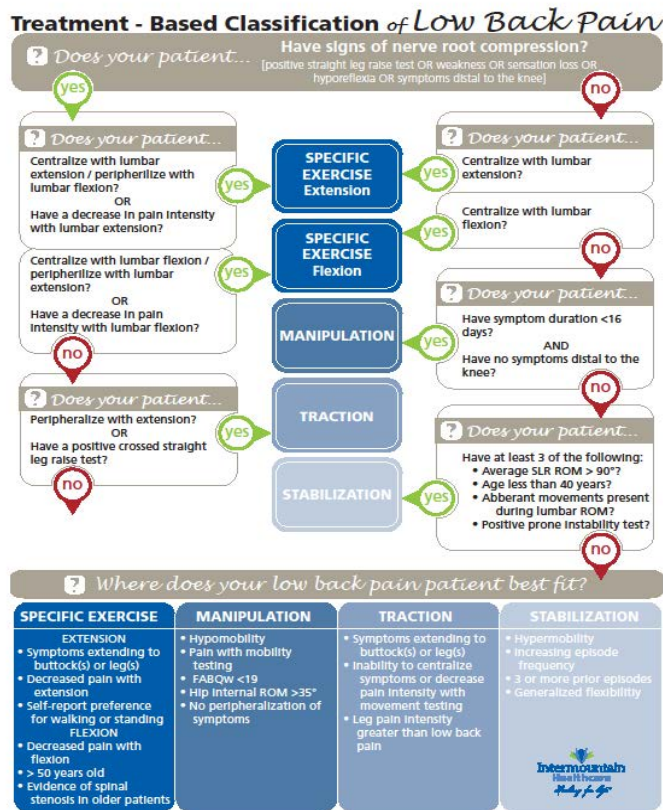
Improvement Science: Blend the Guideline into the Flow of Clinical Work

Classification Factors

Manipulation
- ☐ Symptoms < 16 days
- ☐ No symptoms distal to knee
- ☐ Lumbar hypomobility
- ☐ FABQW < 19
- ☐ Hip internal rotation > 35 degrees

Specific Exercise
- ☐ Flexion
- ☐ Extension
- ☐ Lateral shift
- ☐ Centralizes with movements
- ☐ Directional preference - decreased pain or improved symptoms w/ movement or position

Stabilization
- ☐ Age < 40 years
- ☐ Aberrant movements w/ ARO
- ☐ Positive prone instabilit
- ☐ Average SLP ROM > 91 degr
- ☐ Lumbar hypermobility

Traction
- ☐ Peripheralizes w/ multiple movements
- ☐ Sign of nerve root compression
- ☐ No centralization or directional preference
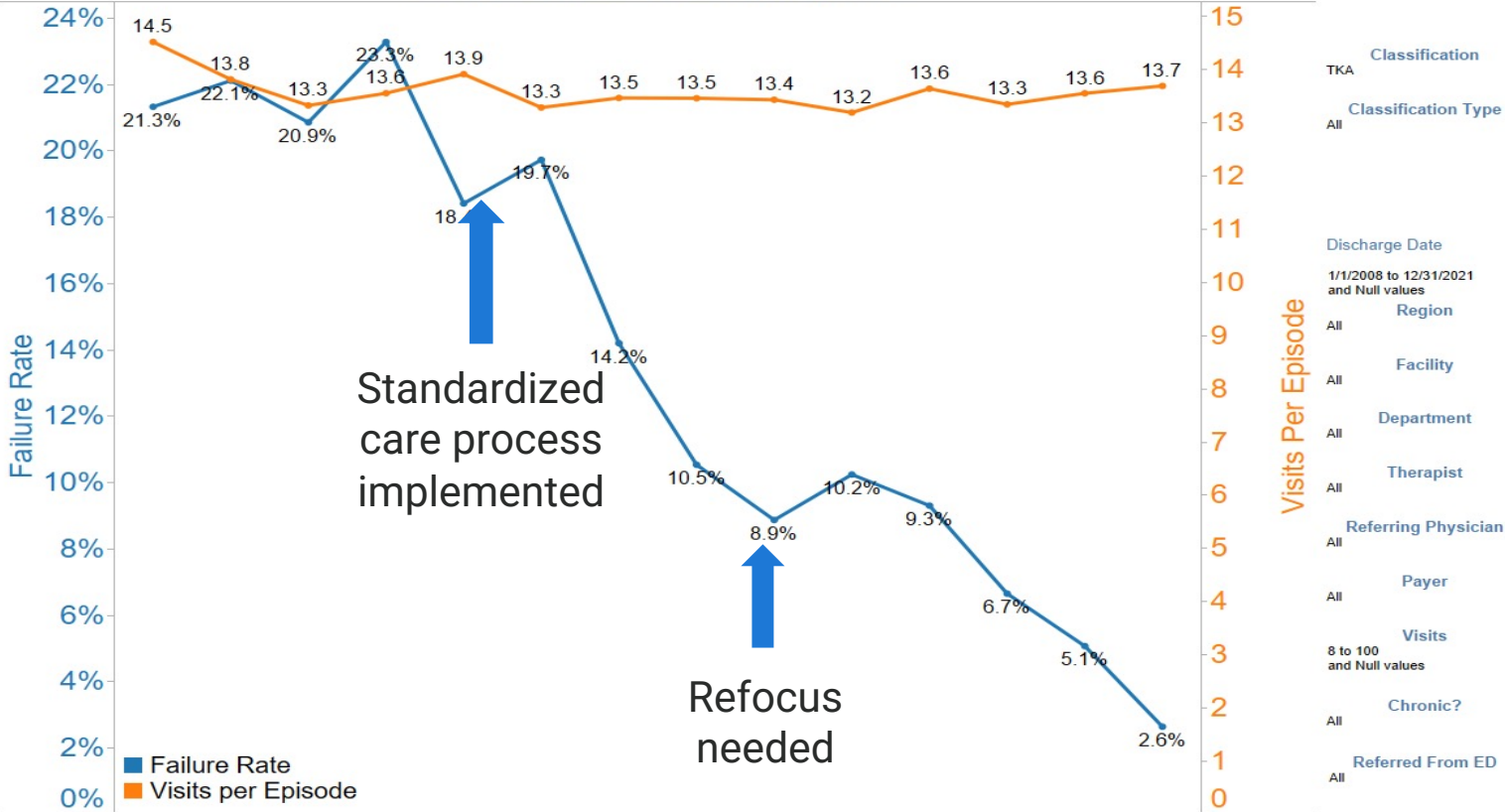
Classification Comment

Improvement Science

Embed data systems to track outcomes

LBP Failure Rate vs Visits per Episode
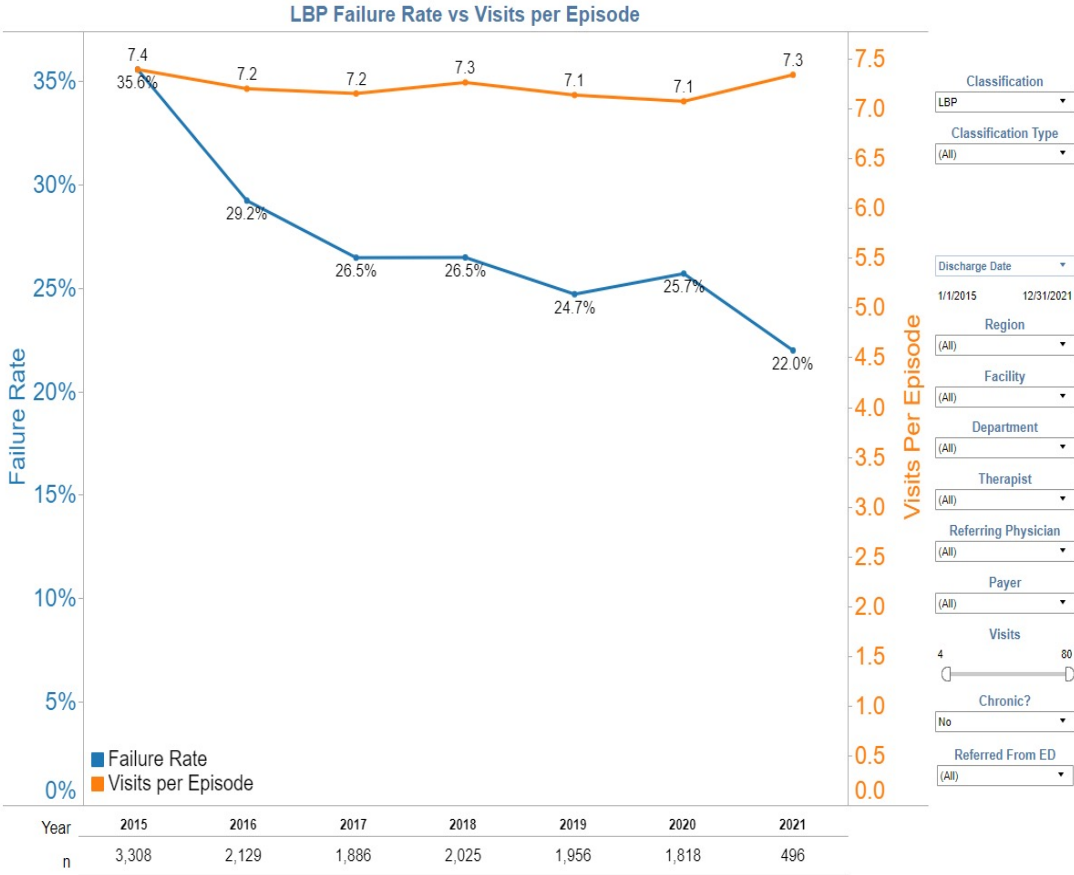
Improvement Science (cont.)

Measure, learn, and eliminate unwanted variation

TKA Failure Rate vs Visits per Episode

Standardized care process implemented

Refocus needed

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
n	422	416	513	640	706	887	1,042	1,148	1,352	1,454	1,536	1,607	1,398	302

Clinical Education and Training

- Clinical improvement meetings
- Means of clinical information dissemination
  - Care processes
  - High-priority conditions
  - Areas for clinical improvement and development
- Pre-COVID
  - 90 minutes monthly
  - Lecture and one central lab location

Clinical Improvement Meeting

- **July 2020**

  – 90 minutes monthly

  – Lecture via teams platform

  – Live local lab session

  – Initially 10 therapists per site

Live Lab Sessions

- Pre-recorded lab techniques

- 30-minute review session with local lab leads prior to the session

  – Take-home points

  – Discussion topics

  – Problem-solving

Clinical Learning

- **Opportunities with new structure**
  - Align care across the system
  - Engage a greater number of therapists in hands-on learning
  - Allow others to mentor and lead
  - Allow therapists from across our system to interact
  - Develop resource library and build out knowledge tracks
    - Videos
    - Recordings of the meeting

📁	August CIM-Foot and Ankle evaluation	8/20/2020
📁	December-Ankle Sprain and Achilles Tendi...	12/17/2020
📁	April CIM-CSM presentations	4/16/2020
📁	July CIM-Cervical Spine Mobility deficit	7/16/2020
📁	June CIM Tendinopathy	6/16/2020
📁	May CIM COVID and Vital Signs	5/21/2020
📁	November CIM-LET	11/19/2020
📁	October CIM-Planter Fasciitis	10/15/2020

General ▶ 2020 CIM PPTS ▶ **NOVEMBER CIM-LET**

	Name ⌄	Modified ⌄
📄	20 Nov 03 Lateral Elbow Tendinopathy edit...	11/24/2020
📄	LET Videos.docx	11/19/2020
📄	Link to the web.docx	11/19/2020

Chapter 3

Case Study 1

Patellofemoral Pain

Aims

- Decrease the Failure to Progress (FTP) rate for patients with patellofemoral dysfunction (PFD)

- Develop and implement a standardized outpatient physical therapy care process model for rehabilitation of patients with PFD

Patellofemoral Pain Failure Rate vs Visits per Episode

Year	2015	2016	2017
n	786	906	788

Failure Rate: 37.7%, 34.5%, 36.0%
Visits per Episode: 5.0, 5.2, 5.4

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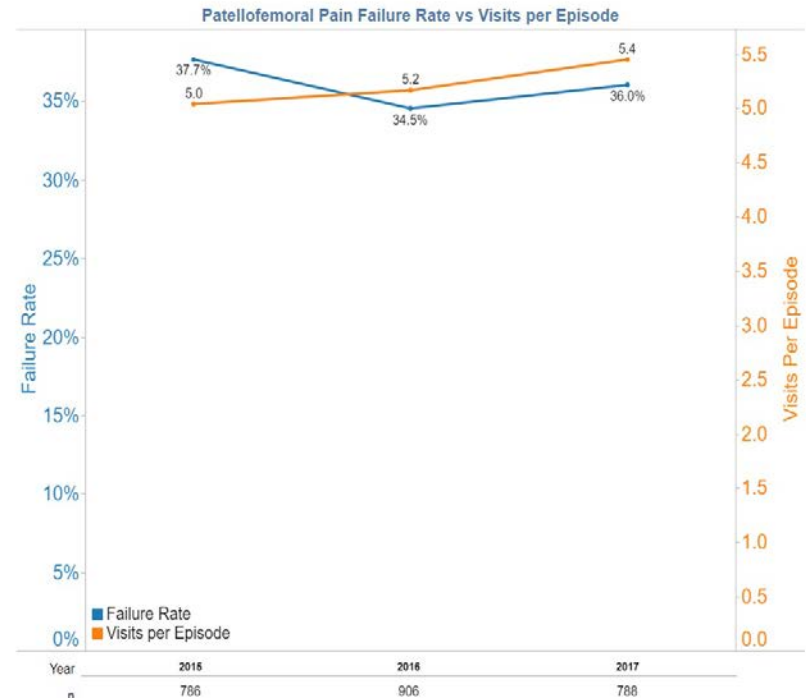
Patellofemoral Pain (cont.)

- Review the literature
- Standardize the evaluation process
  - Identify subjective complaints, signs and symptoms
  - Identify clinically significant objective findings
- Recommend treatment based on the evidence
- Determine compliance measures
- Develop training strategies
  - One-page algorithm with supporting document
  - Clinical Improvement Meeting (CIM)
  - Videos of evaluation and treatment interventions

Patellofemoral Pain (cont.)

Determine minimal data set, based on the evidence, to drive decision-making

1. Identify Patient's Complaint Symptoms

- Pain at the patella or directly adjacent to the patella
- Symptoms with squatting, prolonged sitting, stairs, jumping, and/or running

2. Clinical Findings

- Tenderness to deep palpation of the patella, patellar facets or patellar border not isolated to the patellar tendon or quad tendon
- Crepitus
- Decreased knee, hip and/or ankle ROM
- Hypermobility or hypomobility the of patella
- Decreased quadriceps, hamstring and/or IT-Band flexibility
- Decreased hip Strength
- Decreased quad strength
- Poor lower extremity alignment in standing
- Poor quality of movement and/or pain with functional tests

Patellofemoral Pain (cont.)

Standardize the Evaluation

Based on the best available evidence, identify objective measures that assist in decision-making

3. **Evaluate Impairments of Body Function: PT evaluation process**

- Knee, hip and ankle ROM with end feel
- Patellar mobility
- Patellar palpation
- Quadriceps, hamstring and IT-Band flexibility
- Hip abduction and extension strength
- Quad strength: extensor lag
- Lower extremity alignment in standing
- Functional test reporting pain and quality of movement

Patellofemoral Pain (cont.)

Treating Clinically Significant Impairments

Based on individual evaluation findings

4. **Intervention**

Clinically Significant Impairments:
- Decreased knee ROM
- Decreased quad flexibility
- Extensor lag
- Decreased hip strength
- Impairments found on functional testing
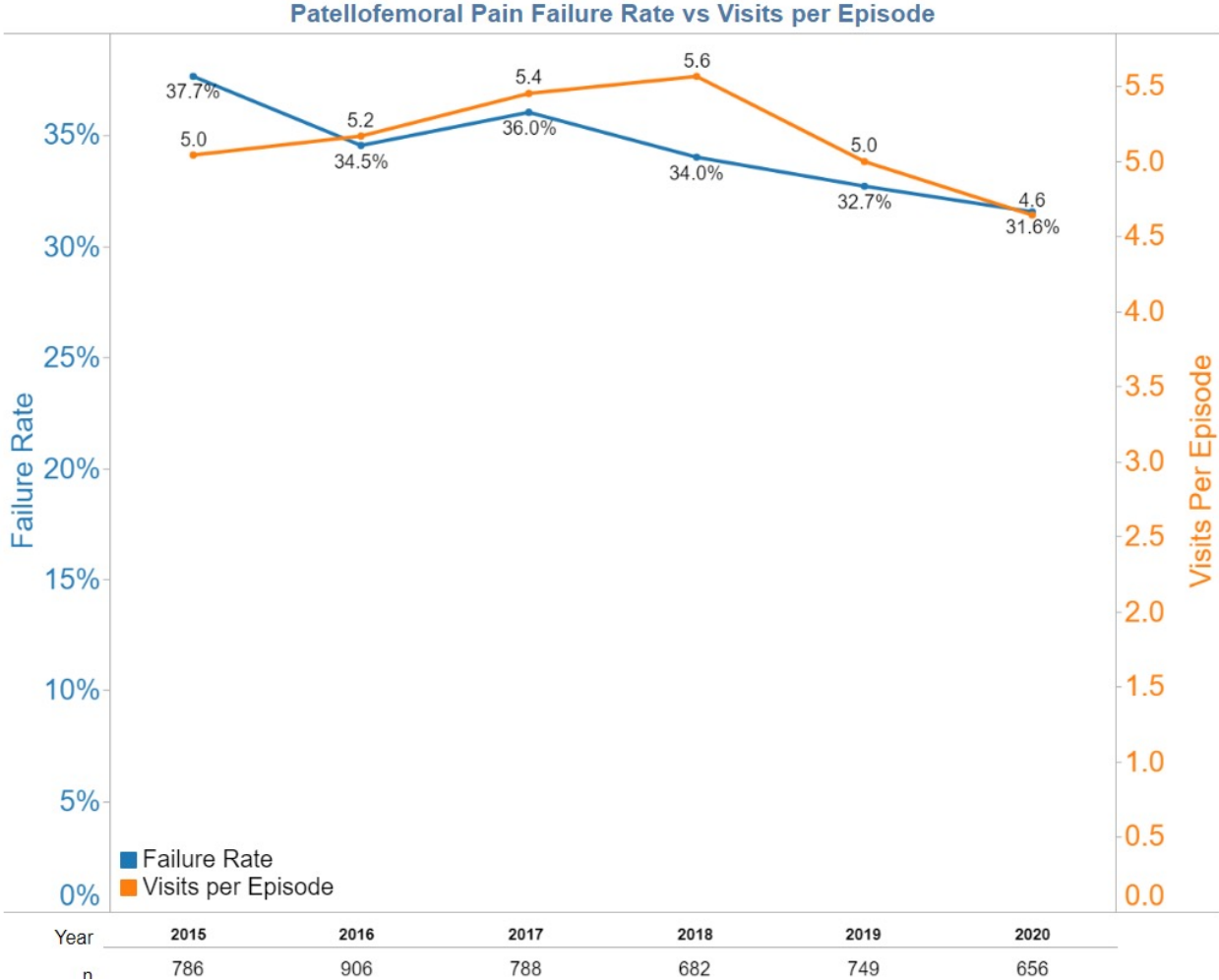
Patellofemoral Pain (cont.)

Providing Feedback

Audit Tool

Patellofemoral Pain Syndrome - Select Health Goal Quality Review		Review Key											
		0 = Not performed											
		1 = Performed *or* Justified in note with reason not performed											

		Evaluation Compliance Measures - for all patients classified as PFPS											
Patient Name	Patient MRN	ROM of knee - flx/ext	ROM of hip IR	ROM of ankle DF	Patellar palpation	Flexibility - hamstrings	Flexibility - Quadriceps	Flexibility - IT Band	Strength - hip ABD	Strength - hip extensors	Quad extensor lag	LE alignment	Functional Test	Chief Complaint PFP symptoms

Treatment Compliance Measures - for PFPS patients with 3 or more visits												
Treatment of Clinically Significant	Treatment of Clinically Significant Impairment 2	Intervention - Functional Progression 1	Intervention - Functional Progression 2	Functional Test Re-test	Goal 1 reviewed & progressed	Goal 2 reviewed & progressed	Home Program Education	Number of Visits	Total Achieved	Total Possible	Compliance Rate

Patellofemoral Pain (cont.)

Patellofemoral Pain Failure Rate vs Visits per Episode

Year	2015	2016	2017	2018	2019	2020
n	786	906	788	682	749	656

Lessons Learned

- **Feedback loop**
  - Feedback was provided to managers and not to frontline staff
    - Method of delivering feedback to therapists was variable
  - Feeding a lag measure in FTP
    - Therapists had little understanding of how to change that lag number
    - Education and training on looking at data
    - Education and training on guidelines, minimum data points

Lessons Learned (cont.)

- Rewards: incentive payments
  - Ineffective in creating long-term change
    - "Strategies that focus primarily on the use of extrinsic rewards do, indeed, run a serious risk of diminishing rather than promoting intrinsic motivation"[1]
  - Intrinsic motivation is a stronger predictor of performance than extrinsic
- Continuous and enduring process
  - Behavior change
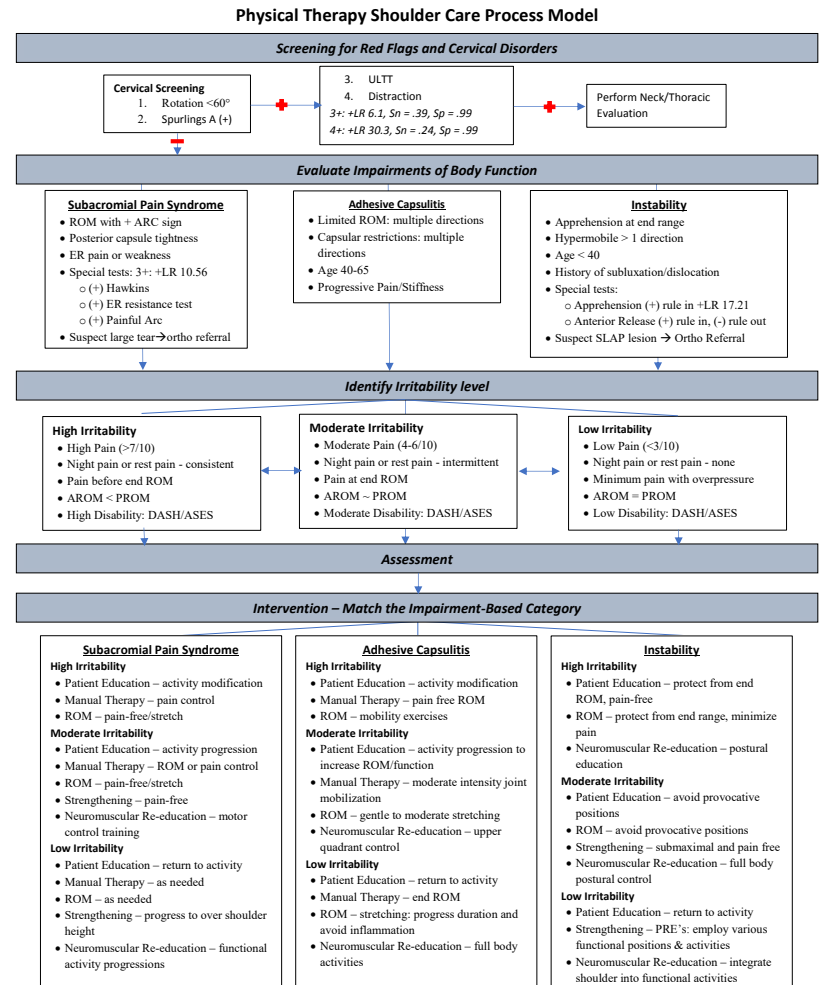 - Reflective, engaged clinician
  - Providing value

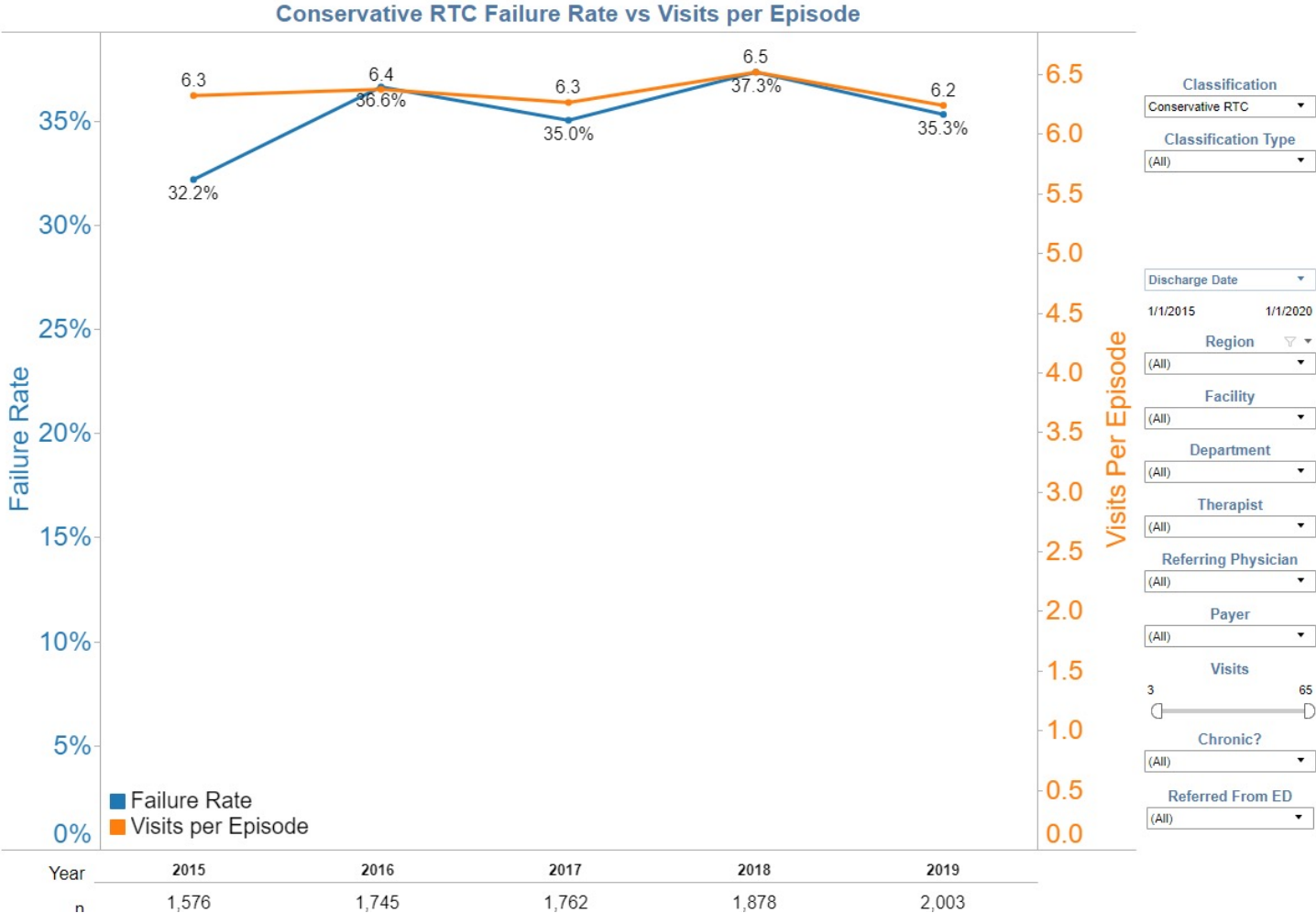1. https://hbr.org/2013/04/does-money-really-affect-motiv

Chapter 4

Case Study 2

Conservative Cuff

- FTP rates
- 2018: developed care process for conservative shoulder care
- Implemented at the end of 2018
  - One-page algorithm
  - Three 90-minute education sessions
- No feedback provided other than lag measure of FTP

Physical Therapy Shoulder Care Process Model

Conservative Cuff (cont.)

Conservative RTC Failure Rate vs Visits per Episode

Year	2015	2016	2017	2018	2019
n	1,576	1,745	1,762	1,878	2,003

Lessons Learned (cont.)

- Don't assume adoption will occur
  - Lack of buy-in from caregivers
  - Resistance to use of guidelines
  - Significant increase in new-hire therapists
- Don't assume parameters used in other conditions will work for all conditions
  - Examine the data with different lenses

Lessons Learned (cont.)

Conservative RTC Failure Rate vs Visits per Episode
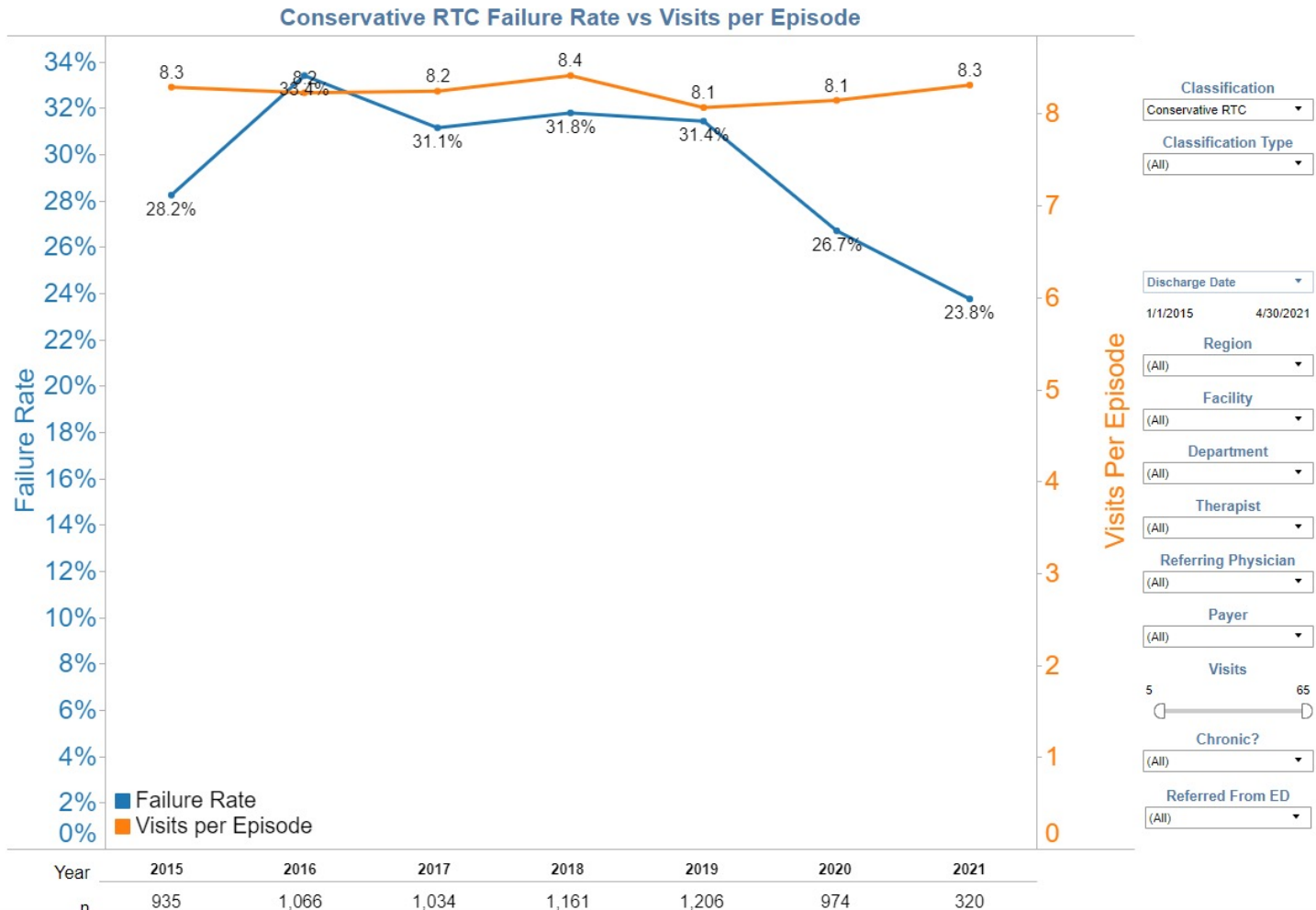
Lessons Learned (cont.)

- Encourage idea generation and experimenting
  - Irritability

Irritability	High	Moderate	Low
○ High ○ Moderate ○ Low	* High pain (> or = to 7/10) * Night or rest pain: consistent * Pain before end ROM * AROM < PROM * High Disability (DASH, ASES)	* Mod pain (4-6/10) * Night or rest pain: intermittent * Pain at end ROM * AROM ~ PROM * Mod Disability (DASH, ASES)	* Low pain (< or = to 3/10) * Night or rest pain: none * Min pain w/overpressure * AROM = PROM * Low Disability (DASH, ASES)

* Make selection based on choice most consistent with patient's condition.

  - Sharing in learning communities

- Continued refinement
  - Better aligning documentation with classification system
  - Sharing with others outside of Intermountain

Summary

- Culture

- Culture takes time to develop

- "Culture will eat strategy for breakfast and structure for lunch, right? What people tend to do is develop strategy and create structure and they ignore culture, and they fail or they get nowhere close to optimal results . . . [but] one has to attend to all three. Most people don't know how to affect culture . . . And yet, it's fundamentally the most important component."[1]

1. Morain et al., 2017

Summary (cont.)

- Select a high priority condition, blend it into the workflow, and have frontline engagement

- Track outcomes
  - Only way to tell if change is occurring

- The patient remains the focus of care

Question and Answer Session

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