



The Mayo Clinic "OASIS" Project:
Designing a Value-Based Perioperative
Surgical Home in Orthopedic Surgery

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Minnesota Society of Anesthesiology
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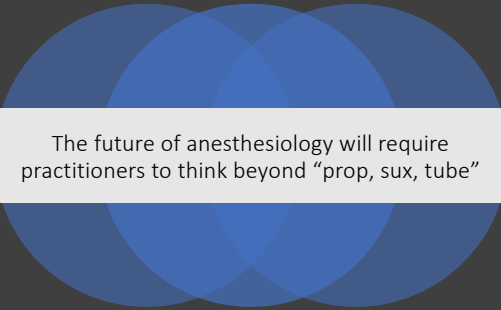


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Disclosures

- I have NO financial disclosures or conflicts of interested with the presented material in this presentation

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The future of anesthesiology will require practitioners to think beyond "prop, sux, tube"

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Thought Experiment:
 Improve passenger volume, comfort, safety and satisfaction at an international airport while reducing cost per traveler





How to Proceed?

- Stakeholders
- Methodology
- Metrics
- Timeline
- Project Management
- Modeling
- Systems Mapping
- Data Management



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Overview

-  The Need for Value-Based Care and the Perioperative Surgical Home Mode
-  OASIS 1.0 (Quick Review)
-  OASIS 2.0 (Deeper Dive)
-  Summary

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O-A-S-I-S

Orthopedic surgery and
Anesthesiology **S**urgical
Improvement **S**trategy



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The Cost of Healthcare

Unsustainable Increases in U.S. Health Care Expenditures as a Percentage of GDP

Background: Health Care Costs

Projections of National Health Care Expenditures and Share of GDP, 2013-2023, source Kaiser Family Foundation

Largest Burden= Hospitalizations (1.1 Trillion) in 2017

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Traditional Surgical Care

Costly Design Flaws

FEATURES	RESULTS
<ul style="list-style-type: none"> Fragmented, 'Siloed' Lack cost-containment mechanisms Non-standardized Provider centered Lack coordination Poor data assessments Rewards Productivity (volume) 	<ul style="list-style-type: none"> Poor, unpredictable patient experience Variable Outcomes Inefficient and Expensive Difficult to manage or improve quality Limited design innovation and optimization Lacks central organization and management Difficult to predict or control care outcomes

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Major Shift in Health Care Reimbursement

HHS and CMS Driving Policy and Value-Based Reimbursement Schedules

Azar says new mandatory oncology pay model is coming

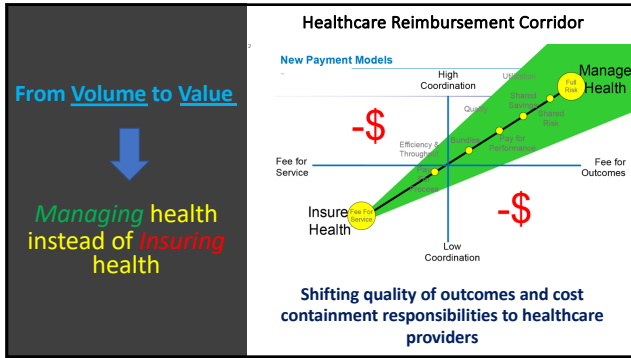
By Vigil Dickson | November 6, 2018
(Story updated at 3:57 p.m. ET)

The CMS plans to unveil a mandatory Medicare payment model for cancer patients, and two new voluntary models for cardiac care in the coming weeks, said HHS Secretary Alex Azar. That means the Trump administration is reversing course from its prior stance that payment models, which put providers at risk of losing money if they don't lower costs of care, should be voluntary.

Pushing a transition from **Fee-for-Service (Volume)** to **Value-Base Reimbursement**

Value-based care aka='**Bundled Care or Bundled Payment**'

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Value-Based Care at Mayo Clinic

Jan 15, 2019

Mayo participating in new program to advance value-based care

More from Bigger Picture

Dr. Gianico Fungia on his leadership, communication style, cultivating joy and more

Discipline Innovation to be focus of many Parkus Course on Health Care Administration

Issues of Hope: Corinne Berg on a devastating diagnosis that inspires her to empower others

Mayo Clinic named as one of the 'Best Employers for Diversity' by Forbes

Mayo Clinic has developed a program to transform its future business model to a value-based model that rewards health care quality instead of the number of patient visits.

"Mayo Clinic has developed a program to transform its future business model to a value-based model that rewards health care quality instead of number of patient visits."

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American Society of Anesthesiology Perioperative Surgical Home (PSH) Collaborative 2018-2020

ASA partnership with Premier Inc Collaborative Network

PSH Learning Collaborative 2020 Members


Altru, Cleveland Clinic, DMC, etc.

PSH Objective: Quadruple Aim


- Improve provider collaboration and satisfaction
- Improve population health
- Increase value of care (Quality/Cost)
- Increase patient satisfaction

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What is a Perioperative Surgical Home? (PSH)



SHORT ANSWER:
The future model of surgical care



LONG ANSWER:
A patient-centered, integrated, coordinated, standardized, high quality, cost-effective, data-driven model that improves the processes and outcomes of care

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Why PSH?

A PSH is the Driver of Value-Based Care Objectives (quadruple aim)

Value Proposition for Bundled Payments and Monetizing the PSH

- PSH leaders should convey to hospital leadership:
 - Bundled Payment participants must become experts at care delivery across the care continuum
 - Bundles also enable additional value through the inclusion of opportunities to create provider incentives through sharing episode and/or internal cost savings
 - The PSH model has been shown to assist health systems and providers in succeeding in bundled payments as shown by quality and cost metrics
- PSH drivers of bundled payment outcomes:
 - Reduced LOS
 - Reduced readmissions
 - Reduced HACs
 - Lower internal costs from reducing care variation
 - Lower total episode of care costs
 - Reduced PAC costs

Source: Premier Inc. and ASA PSH Collaborative, 2018-2020)

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Why Anesthesiology?

Anesthesiology Footprint in the Perioperative Space

PreHospital

PreOp

IntraOP

PACU

Floor Care
(APS, CPS, QOR-15)

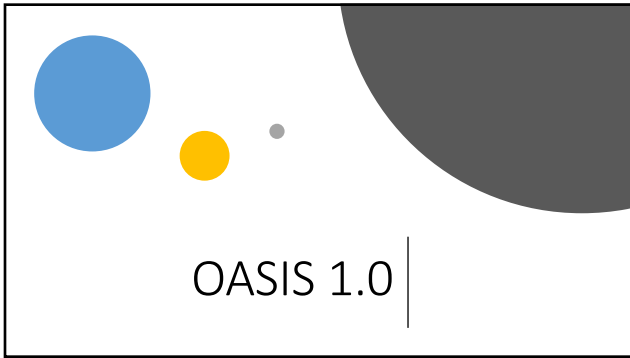
ICU

Follow-Up
(Patient Engagement Tools & Feedback)

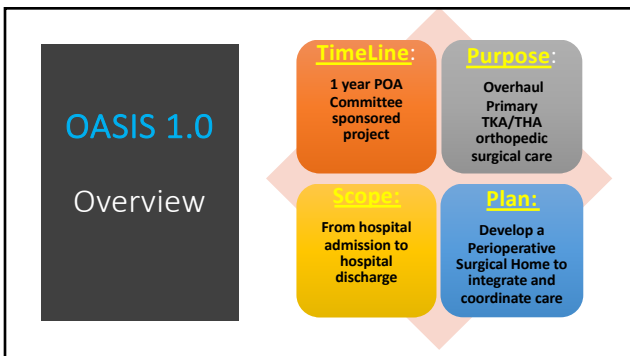
Anesthesiologists:

- Trained in quality and safety
- Trained across the surgical practice
- Best specialists to manage the Perioperative Space

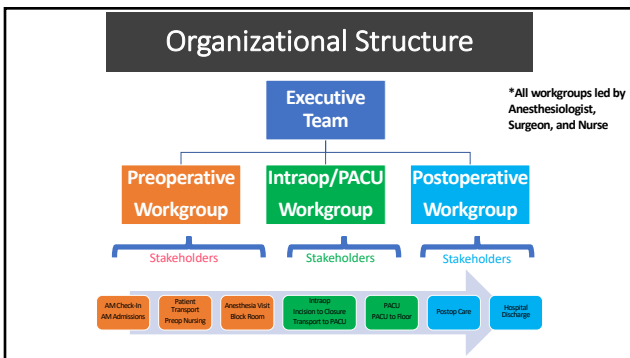
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OASIS Project Objectives

- Create**
- Create an integrated, standardized end-to-end surgical service line for lower extremity surgery
- Increase**
- Increase patient satisfaction and quality of outcomes
- Improve**
- Improve provider collaboration and job satisfaction
- Value**
- Increase cost-effectiveness of care (high quality/low cost)

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Redesigning an Episode of Care


Learn Constraint Theory, Think Holistically

Canadian National Health System
Analysis of 700 Practice improvement initiatives:

- Key Finding: *Typically, flawed initiatives focused on too small a segment of the patient journey to properly address the impediments to flow.*

Must think of an episode of care as an integrated single entity, an organic whole.

If you want to speed up an entire train, you have to do more than just grease the wheels of a single box car.



Kreindler SA. Six Ways How Not to Improve Patient Flow. BMI Qual Saf 2017;26:388-394

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TEAM GENIUS

Lessons from The Challenger Deep Expedition

Transformative Leadership

- **Deep Empathy**
(Shared and Sustained Vision, Appreciation of Member's Roles and Challenges, Gratitude)
- **Deep Endurance**
(Stamina, Leading from the Front, Bump Tolerance)
- **Deep Eloquence**
(Communication, Shared Data, Encouragement, Correction, Feedback)

Due to PSH scope and complexity, *strong leadership* from WITHIN the team is required.

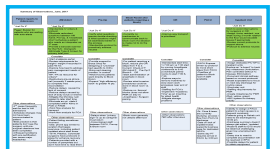


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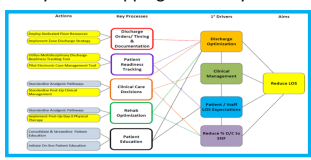
Health Systems
Engineering Approach
&
Methodology

Examples:
-Waste Walk
-Systems Mapping

-End-to-End Efficiency Analysis (Waste Walk)



-Systems Mapping to Primary Aims



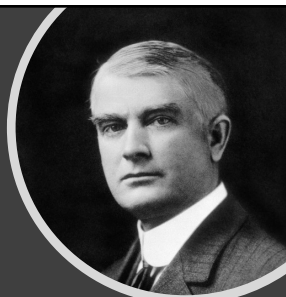
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Project Priorities

Patient Care #1

"The best interest of the patient is the only interest to be considered,.....

....and in order that the sick may have the benefit of advancing knowledge, union of forces is necessary."



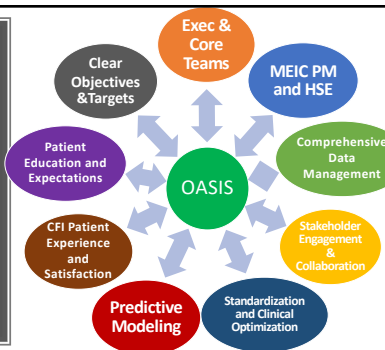
William J. Mayo, M.D. (1910)

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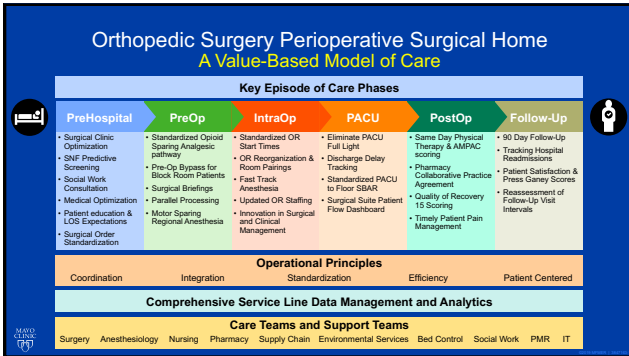
Union of Forces

- Broad group of stakeholders, resources, expertise

- Over 100 tactical and clinical interventions implemented



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Lessons and Translational Opportunities

The Importance of Standardization

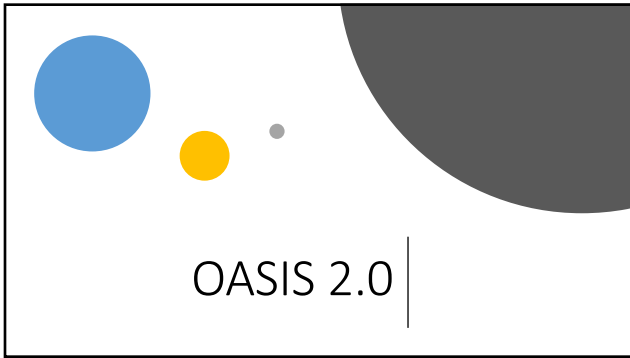
- Variation/Variability is the Enemy of Value-Based Care
- Standardization →
 - Anticipation & Efficiency
 - Increased Productivity
 - Measurability & Improved Quality
 - Patient Satisfaction/Provider Satisfaction
 - System and Process Control
 - Optimization & Innovation
 - Frees resources for complex patients/problems*

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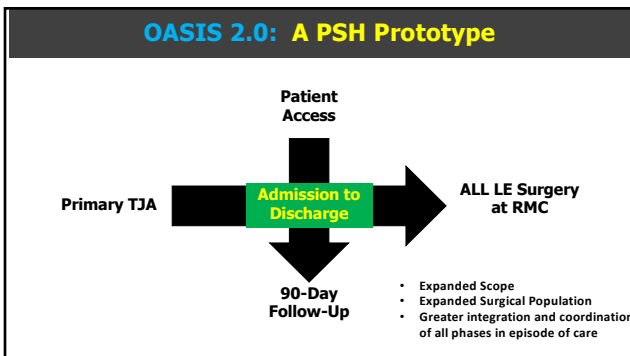
OASIS 1.0: Summary of Wins (Admission to Discharge)

ELIMINATION OF PACU FULL LIGHT	PREOP BYPASS & PARALLEL PROCESS EFFICIENCIES (45 MIN/PT)	~90% OF PATIENTS RECEIVE POD 0 PHYSICAL THERAPY	OPERATING ROOM REORGANIZATION AND SET UNIVERSAL BRIEFINGS	OPIOID-SPARING AND STANDARDIZED PAIN PROTOCOLS
MEAN LOS DECREASED BY 0.6 DAYS	SURGICAL VOLUME INCREASED BY 5% (2% OVER HISTORICAL)	ESTABLISHED MAYO CLINIC'S 1ST PSH	ROI ~ 2.5 MILLION DOLLARS	

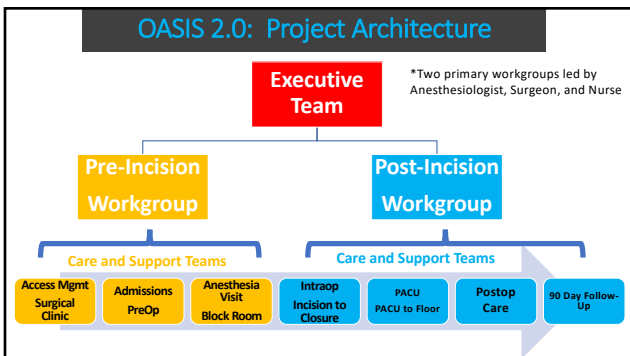
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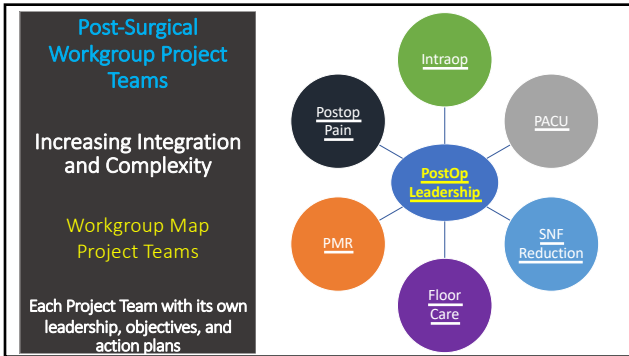
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OASIS 2.0 Objectives

Optimize Surgical Clinic


Overhaul of Surgical Clinic Staffing Model

- Assessing introduction of RN model surgical clinic
- Reduce percentage of non-operative patients seen by surgeon
- Revise number and frequency of postoperative follow-up visits, to increase slots for new consults

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OASIS 2.0 Objectives

Risk Management, Stratification, and PreOperative Patient Optimization



- AI/Data Science Risk Stratification for CDI/Patient Optimization
- Apply evidenced-based screening criteria to support patient preoperative optimization
- Data-driven criteria
 - BMI>45
 - Active Smoking
 - Uncontrolled DM (Hb A1C>8)
 - High Chronic Opioid Use
- Patient referral to medical optimization services prior to surgical consultation

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OASIS 2.0 Objectives

Defining The Value of Care

Value = $\frac{\text{Quality}}{\text{Cost}}$

TDABC Analysis of TKA Analgesic Options

- PAI lowest relative cost
- SACB + PAI, offers analgesic benefit compared to PAI alone, at 1.4 x cost
- CACB + PAI is 2.3 x cost, and no increase value (outcomes/cost) for patients undergoing TKA

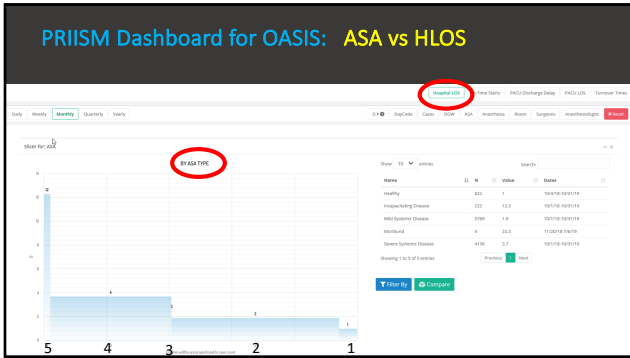
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OASIS 2.0 Objectives: Integrative Data Management Plan

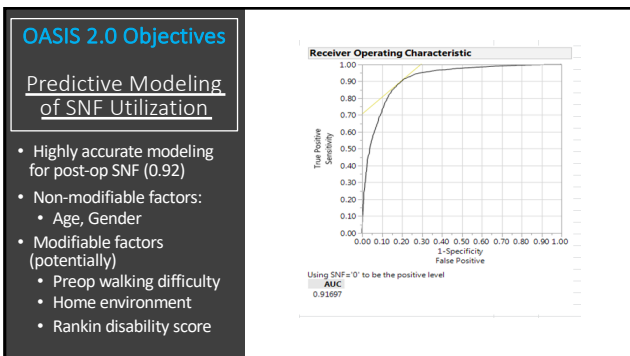
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Prioritization & Utilization of Data

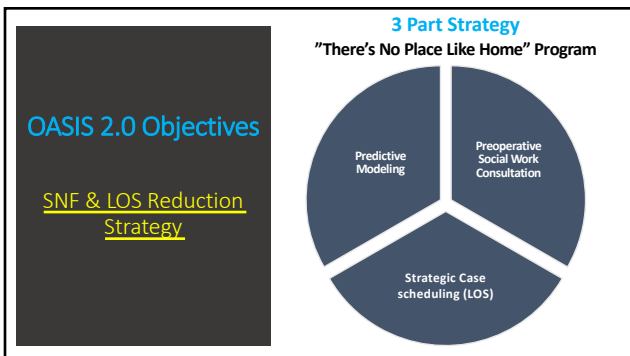
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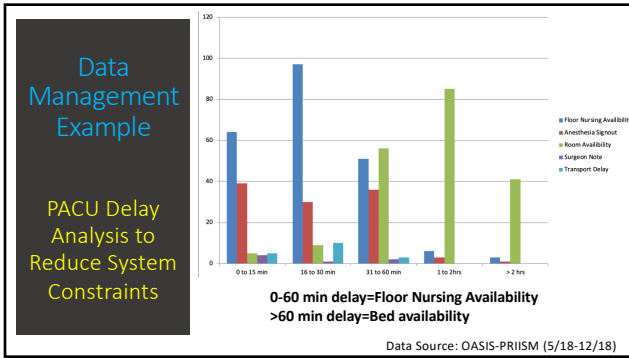
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OASIS 2.0 Objectives

Standardized PACU-Floor Transfer Process

- Utilizing Ortho PACU Report Form to Reduce PACU Discharge Delays
- Phone call from PACU RN to Floor HUC, return number provided
- Floor RN to take PACU patient report within 15 minutes

Result: Improved communication, efficiency, patient safety & patient satisfaction

Orthopedic PACU Report Sheet
Department of Nursing

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Implementing the Quality of Recovery - 15 Score for Postoperative Assessment of Orthopedic Surgery Patients for Practice Optimization in an Academic Medical Center

Quality of Recovery-15

2018 Mayo Foundation for Medical Education and Research

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Putting It All Together

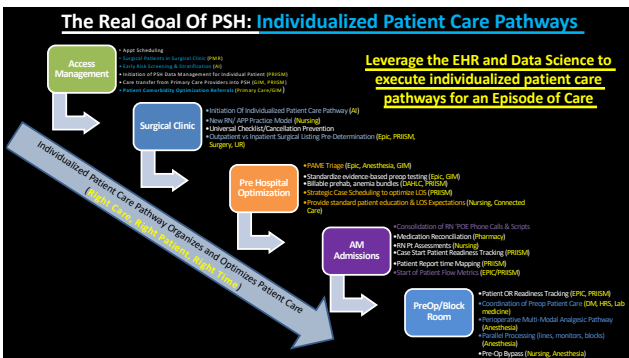
- PSH Value-based Care should be delivered via **Individualized Patient Care Pathways** that leverage the power of modern data science and an integrated EHR.

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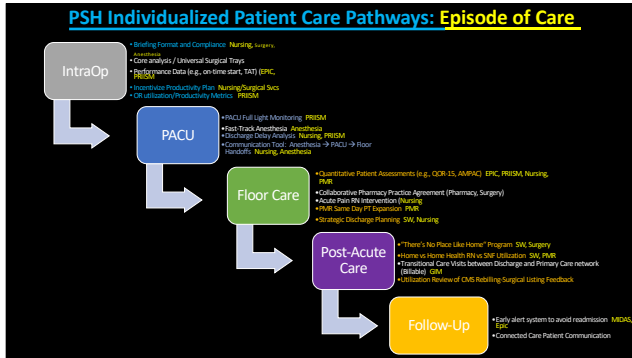
Individualized Patient Care Pathways Rationale

- Hip/Knee patient population not homogenous, need different resources and management. Goal: "right care, right patient, at right time".
- 3 basic groups:
 - 1) Healthy primary total joint
 - 2) Medically complicated
 - 3) Surgically complicated
- Use integrative individualized patient care pathways to coordinate, map and monitor patient progress
- Optimizes care, Enables detailed cost analysis, distributes resources efficiently, better outcomes and patient satisfaction

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Summary

Many care processes exist because of historical tradition, not because they are intrinsically logical or efficient.

Process changes should be intuitive, logical and simplify care processes

Standardization, optimization, innovation and integration drive process improvement and efficient workflow

Shared Consciousness, shared vision, and broad stakeholder engagement are critical to success

PSH leadership must *think globally* (perioperative space) *but act locally* (single service line)

Expanding the footprint of anesthesiology, education, and translation of shared care PSH models is the future of our specialty

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Questions?

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