Perioperative Surgical Home

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Disclosure

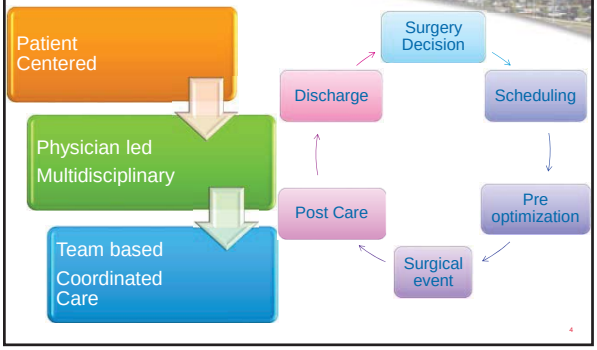
- None

Learning Objectives

Perioperative Surgical Home

- What is the PSH model?
- Why do we need it?
- Role of Anesthesiologist in PSH
- Examples of existing PSH models
- Future models of payment
- What is the ASA doing about PSH?

What is the PSH Model?

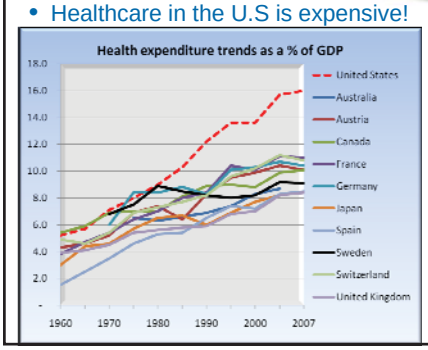


Goals of PSH

- Patient safety
- Efficient, coordinated care
- Better patient outcomes
- Cost effectiveness

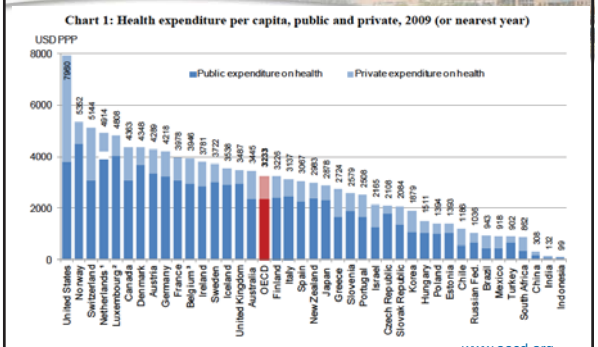
Why do we need a PSH?

- Healthcare in the U.S is expensive!

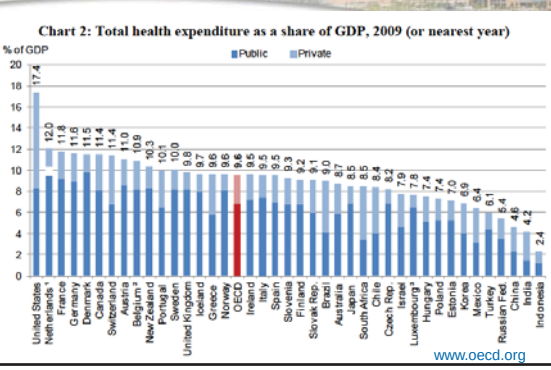


Surgical care accounts for 65% of all hospital expenses

U.S. Healthcare Expenditure

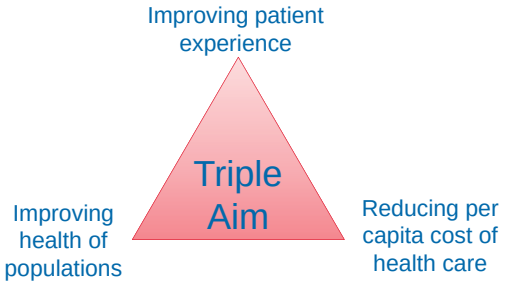


U.S Healthcare Expenditure



Triple Aim

Institute for Healthcare Improvement



Current Perioperative Care

- Extremely expensive
  - ~60% of hospital expenses
- Fragmented care with little coordination
- Physicians practicing with an individualistic, artisan- like approach
- Volume driven reimbursement
- Preoperative evaluation is often variable
  - Little consensus on consults/lab testing

Current Perioperative Care

- Post operative care is variable & disorganized
  - No clinical pathways
- Poor accountability
  - Multiple handoffs
- Multiple preventable complications
  - Pneumonia, VTE, AMI, wound infections

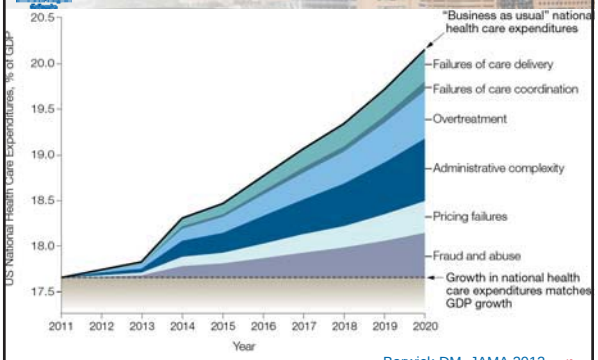
Eliminating Waste in U.S. Healthcare

	Average Cost *($ Billion)
Failures of care delivery	128
Failures of care coordination	35
Overtreatment	192
Administrative complexity	248
Pricing failure	131
Fraud and abuse	177
Total	910
% of Total Spending	34%

* Average annual cost to US Healthcare in 2011

Berwick DM, JAMA 2012

Eliminating Waste in U.S. Healthcare



Berwick DM, JAMA 2012

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Added Value

- Purchasers of care are demanding **added value**
- Value = Quality/Cost
- Patient outcomes per $ expended
- Reward for
  - Best overall care
  - Lowest cost
  - Minimize complications

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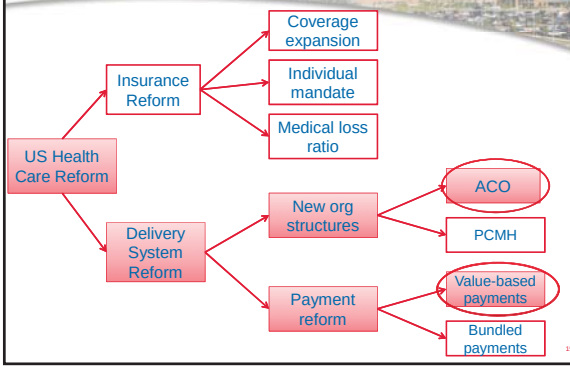
Redesign of US Health Care System



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Value Based Purchasing

- New program from CMS to measure a hospital's quality of care and adjust Medicare reimbursements
- Hospitals receive incentive payments based on how well they perform

No.	Measures	Weightage
12	Clinical process measures	70%
9	Patient experience measures	30%

Shoemaker P. Healthcare Financial Management 2011, 65(8):60-68.

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VBP Clinical Process Measures

- Healthcare Associated Infections
  - Prophylactic Abx within 1 h of surgical incision
  - Prophylactic Abx selection
  - Abx discontinued within 24 h
  - Cardiac surgery pts with controlled 6 am postop glucose
- Surgical Care Improvement
  - VTE prophylaxis ordered in surgery pts
  - VTE prophylaxis within 24h
  - Periop beta blocker use
- Acute MI-
  - Fibrinolytic therapy within 30 min of hospital arrival
  - PCI within 90 min of arrival
- Heart Failure
  - Discharge instructions
- Pneumonia
  - Blood Cx in ED before Abx
  - Initial Abx selection for CAP in immunocompetent pts

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VBP Patient Experience Measures

HCAHPS Survey

- Nurses communicated well (always)
- Physicians communicated well (always)
- Help received quickly (always)
- Pain controlled well (always)
- Staff explained medicines (always)
- Room and bath kept clean (always)
- Area quiet at night (always)
- Given discharge instructions (yes)
- Overall hospital rating (high)
- Would recommend hospital (definitely)

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Value based purchasing

- Hospitals are scored for each measure and how much improvement they show
- Hospitals with higher scores get more incentive payments
- Percentage reduction in DRG payment to fund the incentive payment

FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1%	1.25%	1.5%	1.75%	2%

Shoemaker P. Healthcare Financial Management 2011, 65(8):60-68.

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Hospital Acquired Conditions

- Retained foreign objects
- Air embolism
- Blood incompatability
- Stage III/IV pressure ulcers
- Falls & trauma
- Poor glycemic control- DKA, hypoglycemic coma
- Catheter associated UTI
- Surgical site infections
- Mediastinitis after CABG
- SSI after bariatric surgery for obesity
- SSI after Ortho: spine, neck, shoulder, elbow
- SSI after Cardiac Implantable Electronic Device
- DVT/PE following knee/hip replacement
- Iatrogenic pneumothorax with venous catheterization

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30-Day Readmission Rates

The Revolving Door:
A Report on U.S. Hospital Readmissions

An Analysis of Medicare Data by the Dartmouth Atlas Project
Stories From Patients and Health Care Providers by PerryUndem Research & Communication

- One in eight Medicare patients were readmitted to the hospital within 30 days after surgery in 2010
- One in six patients returned to the hospital within a month after medical care

Robert Wood Johnson Foundation

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Hospital Medicare Payment at Risk

	Oct 2010	Oct 2011	Oct 2012	Oct 2013	Oct 2014	Oct 2015	Oct 2016	Oct 2017	Oct 2018	Oct 2019	Oct 2020
Value Based Purchasing			1%		1.25 %	1.5 %	1.75 %	2%			
30-day readmission			1%	2%	3%						
Hospital Acquired Conditions					1%						
TOTAL			2%	3%	~5%		6%				

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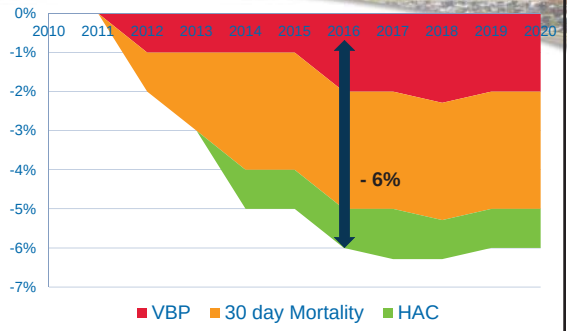
Hospital Medicare Payment At Risk



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Paradigm Shift

Current care	Future models
Fragmented care	Collaborative care
Discounted Fee for Service	Bundled payments
Volume based reimbursement	Value based reimbursement
Isolated patient files	Integrated electronic medical records
Focus on procedure	Focus on triple aim
Revenue driven	Outcomes driven

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Why Anesthesiologists?

- Uniquely qualified to lead the PSH
- No one knows the perioperative practice better
- Leaders in patient safety
- Medical knowledge that crosses all disciplines, focused on the impact of the surgery
- Best way to demonstrate the 'added value' we provide beyond surgical anesthesia

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Why Anesthesiologists?

- Several leadership roles
- Best positioned to facilitate
  - Evidence based standardization of practice
  - Achieving key health care metrics
- If we don't take the lead, someone else will
- The risks associated with "doing nothing" are too great

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PSH Principles

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PSH at UAB

UAB MEDICINE
Knowledge that will change your world

Vetter et al. BMC Anesthesiology 2013, 13:6
http://www.biomedcentral.com/1471-2253/13/6

BMC Anesthesiology

DEBATE Open Access

The Perioperative Surgical Home: how can it make the case so everyone wins?

Thomas R Vetter[1*], Lee A Goeddel[2], Arthur M Boudreaux[3], Thomas R Hunt III[4,5], Keith A Jones[6] and Jean-Francois Pittet[7]

"Perioperativist"

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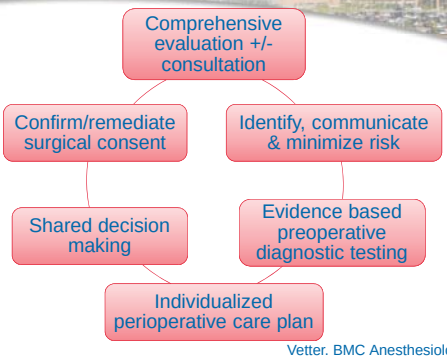
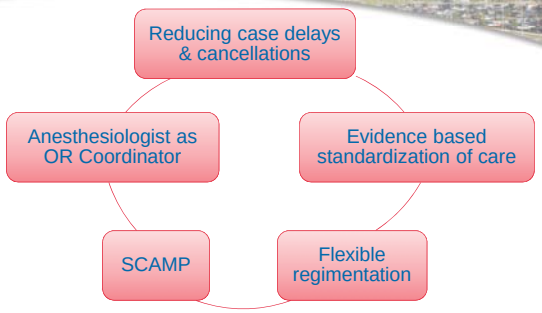
Preoperative Preparation



Vetter. BMC Anesthesiology 2013

Intraoperative Phase



Vetter. BMC Anesthesiology 2013

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Postoperative Care

Anesthesiologist-Intensivist as perioperative physician

Discharge Planning

Acute Pain Service

Vetter. BMC Anesthesiology 2013

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UC Health's Journey

UC HEALTH

Davis • Irvine • Los Angeles • San Diego • San Francisco

	Phase I • Standardized UC Health Wide Preoperative Approach	Phase II • Joint Replacement Surgical Home	Phase III • Urological Surgical Home
Locations	System-wide	3 campuses	2 campuses
Stage	Preoperative	All Stages	All Stages
Clinical Focus	ALL Elective	Elective Orthopedics	Elective Urological

Source: Adapted from CHQI Quality Enterprise Risk Management Proposal, "Looking into the Future: A UC Wide Innovative Preoperative Assessment and Surgical Home."

UC Health's Process

UC HEALTH

Davis • Irvine • Los Angeles • San Diego • San Francisco

Phase I
UC Wide Steering Committee

- Focused on standardizing preoperative care
- Regular conference calls

Phase II
Individual Campus Leadership Group - Joint Surgical Hospital -

- Leadership group with reps from 6 teams
- Meets weekly; trained in Lean Six Sigma

Team Members	
Anesthesiologists	Resp Therapy
Surgeons	PT/OT
Nurse managers	Discharge planning
Hospitalists	Quality/safety reps
Pain Management	Data analysts
Pharmacy	Social work

Team A: Pre-operative | **Team B: Intra-operative** | **Team C: Post-operative**

Team D: Post-discharge | **Team E: Quality Assurance** | **Team F: Research**

Source: Adapted from CHQI Quality Enterprise Risk Management Proposal, "Looking into the Future: A UC Wide Innovative Preoperative Assessment and Surgical Home."

Joint Replacement Surgical Home

Decision to operate	• Minimal pre procedure planning
Preop	• Variable preoperative assessment, testing and management
Intraop	• Provider choice anesthesia • Lack of standardized protocols
Post op	• Surgeon managed post op care • Few protocols
Post discharge	• Variable support often leading to ER

Average LOS
Total Knee- 3-4 days
Total Hips- 4 days

UC Irvine Health
School of Medicine

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Joint Replacement Surgical Home

Decision to operate	• Shared decision making • Patient education and expectation management • Discharge planning (exp date of discharge)
Preop	• Early Anesthesia intervention, preop risk assessment • Tailored optimization (Hb, statin, beta blocker, VTE) • Patient education and expectation management • Preoperative therapy prescriptions
Intra op	• Standardized protocols for tailored anesthesia care • Standardized protocols for equipment and nursing • Infection prevention strategies • Optimize fluid management therapy • Multimodal analgesia

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Joint Replacement Surgical Home

Post op	• Targeted recovery plan • Early ambulation PT/OT • Multimodal analgesia • Early removal of drains and catheter • Nutrition management • Early intervention for deviation from recovery goals
Post discharge	• Personal recovery pathway • Early remote follow up (telephone or telemedicine) • Home health, wound management • Physical activity/PT

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Quality Metrics

Mortality	In-house mortality	0.0%
NSQIP Major Complications	Overall major complications	4.4%
	• Blood loss requiring transfusion • Stroke • Urinary Tract Infection	3.3% 0.5% 0.5%
SCIP Measure Compliance	Prophylactic antibiotic timing Timely discontinuation of antibiotics VTE prophylaxis Temperature management Periop beta blocker therapy Timely removal of foley	99.5% 100% 100% 100% 100% 100%

www.ahaphysicianforum.org/webinar/2013/perioperative-home/index.shtml 37

Quality Metrics

Metrics	Result	Benchmarks
Length of stay	2.7 days (avg)	Pathway 3 days
Unplanned 30 day readmission	0.5%	<4.4% (NSQIP)
Case cancellation rate	0.5%	<1.5% (Institutional)
On-time first case starts	90.9%	> 85% (Institutional)

Metric	Result	Benchmarks
Hospital rating	99%ile (Press-Ganey database)	>98%ile (CHAPS)
Physician rating	99%ile (Press-Ganey database)	92-95%ile (CHAPS)
Pain management	96%ile (Press-Ganey database)	>92%ile (CHAPS)

www.ahaphysicianforum.org/webinar/2013/perioperative-home/index.shtml 38

Mayo Clinic Total Joint Regional Anesthesia Clinical Pathway

Preop
- Preoperative patient education program
- Comprehensive medical evaluation/optimization
- Management of preoperative pain/fear/anxiety

Intraop
- Comprehensive multimodal analgesia regimen
- Peripheral nerve block/catheters
- PACU algorithms for post operative pain

Postop
- Standardized pain assessment scores
- Multidisciplinary Acute Pain Service
- Clinical protocols for postop pain management
- Early & accelerated rehabilitation program

Duncan C, et al. Reg Anesth Pain Med 2013; 38:533-8 39

Mayo Clinic Total Knee Arthroplasty Clinical Pathway

Experience of Care
- Lower pain scores x 48 hours (4 vs. 7)
- Improved patient satisfaction (Mayo survey)

Health of a population
- Decreased hospital LOS (3.8 vs. 4.4 days)
- Less urinary catheterization (57% vs. 80%)
- More bed-to-chair transfer on DOS (14% vs. 0%)

Per Capita Cost
- Lower hospital costs, higher physician professional costs & lower total direct medical costs
- Mean patient savings $956 per surgical episode

Duncan C, et al. Reg Anesth Pain Med 2013; 38:533-8 40

Cost Savings of PSH

- Reduces variability of cost
  - Variability in preop assessment, labs, consults
  - intra-op variability- implants, instruments, drugs
  - Post op length of stay
- Reduced preoperative testing
- Preoperative optimization reduces LOS
- Intraoperative efficiency
- Decreases potentially avoidable complications
- Decreases rework, including readmissions
- Standardization of Physician Preference Items decreases costs

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Getting Paid in the PSH Model

- Recognizes the value of patient centered management
- Pays for coordination of care among services
- Supports use of HIT for quality improvement
- Recognizes the value of non-face-to-face care
- Allows physicians to share savings from reduced LOS, decreased complications
- Allows incentives for achieving quality metrics

ASA White Paper 2013

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Requirements for Success

- Strong support from Leadership
- Alignment with Institutional goals
- Buy-in from group members
- Multidisciplinary team based approach
- Standardization of care protocols
- Accountability for follow through
- Continuous outcomes measurement and tracking
- Continuous process improvement

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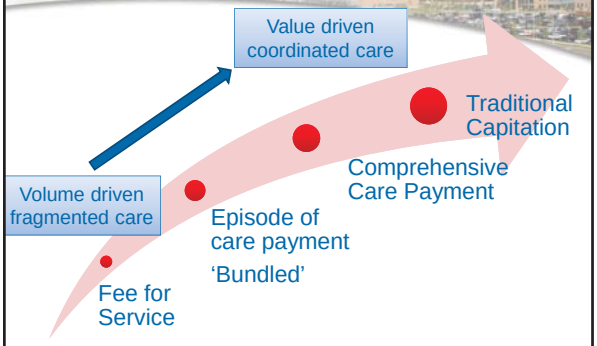
Future Models of Payment



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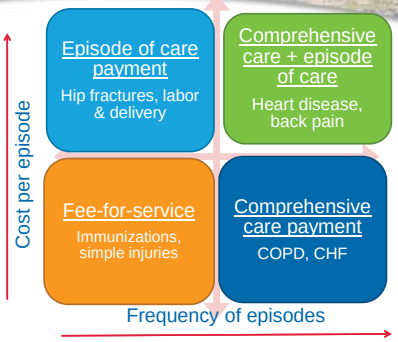
Which payment model is best?



Miller HD. Health Affairs 2009

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Examples of Bundled Payments

Geisinger Health System's Proven Care

- Bundled payment for all non-emergent CABG including
  - preoperative evaluation
  - all hospital & professional fees
  - management of complications/readmissions within 90 days
- Lowered hospital costs by 5%
- Lowered LOS by 0.5 day
- Reduced complications by 21%
- Avoided readmissions by 44%

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Medicare Acute Care Episode (ACE) Demonstration

- Flat fee to cover hospital and physician services for cardiac and ortho care in five hospitals

Orthopedic
Hip replacement
Knee replacement
LE joint replacement

Cardiac
CABG
Valve Replacement
Pacemaker insertion
AICD implantation
Coronary angioplasty

Shared Savings with hospitals, providers and patients

1. Hillcrest Medical Ctr, Tulsa OK
2. Baptist Health System, San Antonio
3. Oklahoma Heart Hospital
4. Lovelace Health, Albuquerque
5. St. Joseph Hospital, Denver

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Bundled Payment for Care Improvement (BPCI) Initiative

- From CMS, started Jan 2013
- Four payment models
  - Model 1- Retrospective Acute Care Hospital Stay
  - Model 2- Model 1 + Post Acute Care
  - Model 3- Retrospective Post Acute Care Only
  - Model 4- Prospective Acute Care Hospital Stay
- Encourages hospitals to engage in clinical redesign and care coordination

Mechanic R. NEJM 2012.

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ASA's Role in PSH

- ASA Committee on Future Models of Anesthesia Practice
- White Paper – July 2013

Perioperative Surgical Home Brief
ASA Committee on Future Models of Anesthesia Practice 7/15/13

American Society of Anesthesiologists
Perioperative Surgical Home Brief

http://www.periopsurghome.info/images/PSH_Whitepaper.pdf

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PSH Literature

The Perioperative Surgical Home (PSH)

A Comprehensive Literature Review for the American Society of Anesthesiologists

by

Bita Kash, PhD, MBA, FACHE
Kayla Cline, MS
Terri Menser, MBA
Yichen Zhang, MS, MA

Submitted to the American Society of Anesthesiologists (ASA)
August 30, 2013

ASA Contact:
Thomas R. Miller, PhD, MBA
Director of Health Policy Research, ASA

PSH Webinar

American Hospital Association's PHYSICIAN LEADERSHIP FORUM

American Society of Anesthesiologists

- www.ahaphysicianforum.org/webinar/2013/perioperative-home/index.shtml

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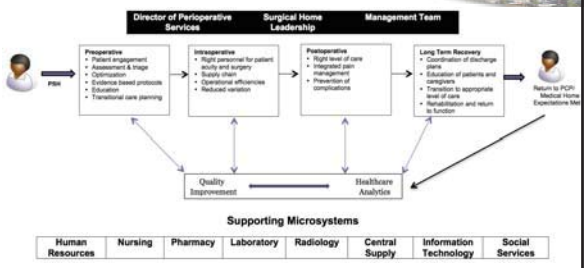
PERIOPERATIVE SURGICAL HOME



www.periopsurghome.info

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Conclusions

- Patient centered, physician-led multidisciplinary & team based system of coordinated care
- Triple aim of better health, better health care and reduced costs
- Expanded role of Anesthesiologist in PSH
- No outcome = No income
- "It wasn't raining when Noah built the arc"
- "The best way to predict the future is to create it" - Drucker PF.

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