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CJR

Comprehensive Care for Joint Replacement Model

The Patient Journey Series: Strategies for Utilizing Clinical Risk Stratification to Achieve Better Outcomes for CJR Beneficiaries

Comprehensive Care for Joint Replacement Model

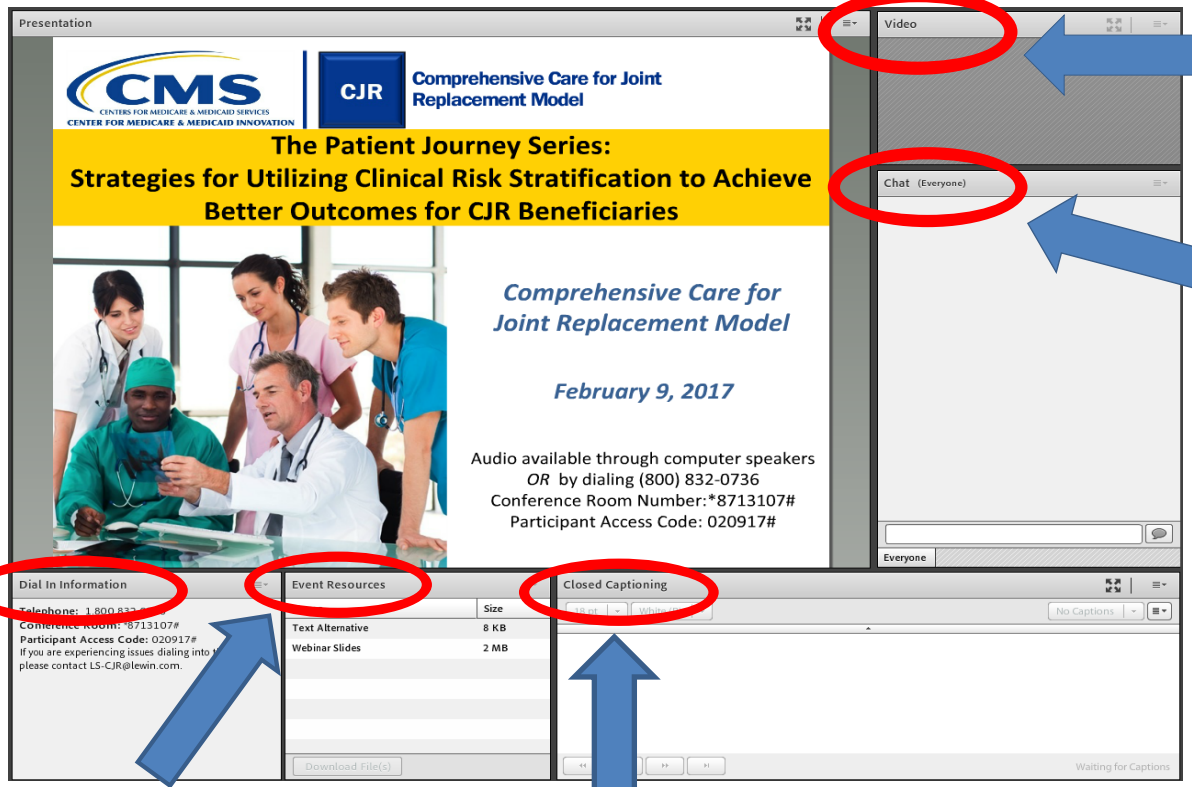
February 9, 2017

Audio available through computer speakers
OR by dialing (800) 832-0736
Conference Room Number:*8713107#
Participant Access Code: 020917#

Webinar Agenda

- Welcome
- Announcements & Logistics
- Presentations:
  - Atlantic Health System
  - Duke University Health System
- Discussion
- Updates & Next Steps

Introduction to Adobe Connect



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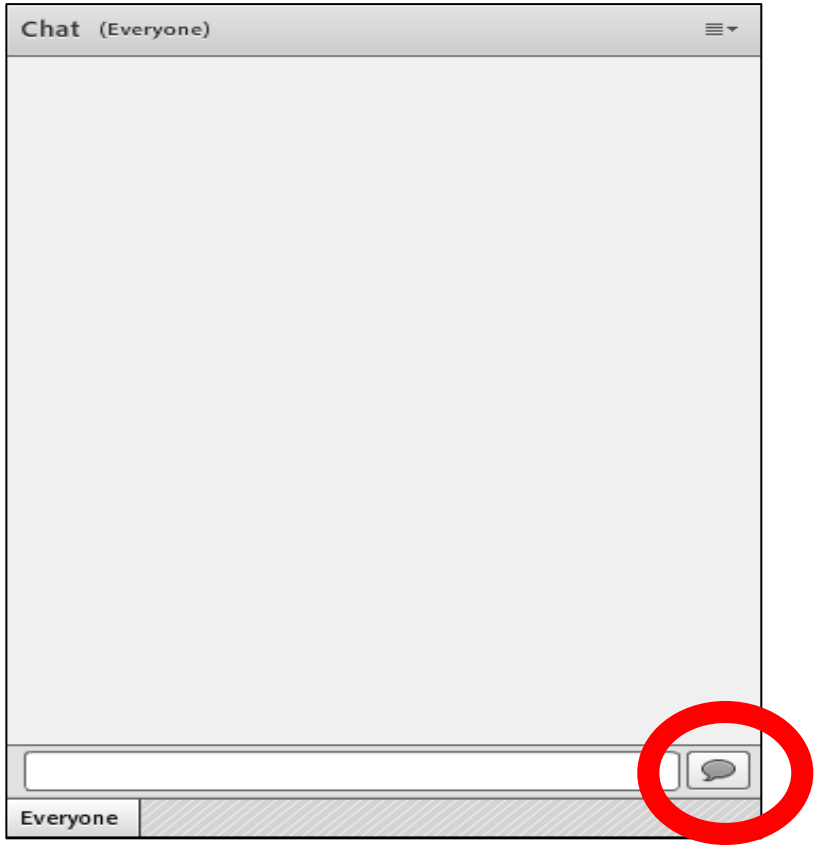
Introduction to Adobe Connect (Cont.)



- Use the Chat pod to submit any questions or comments
- Please use “@” if your question/comment is directed to a specific presenter
- Submit your question/comment by clicking the chat bubble icon

Poll Question 1

Did you attend Part 2 of the Patient Journey Series, "Strategies for Engaging CJR Beneficiaries and Their Families Throughout the Episode"? [select one option]

- Yes
- No, but my colleague(s) did
- No, no one from my organization attended
- I don't remember

Reminders:

- To answer the poll, select the answer that best represents your hospital in the Poll pod.
- You do **not** need to click anything after selecting your answer to record your response.

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CJR

Comprehensive Care for Joint Replacement Model

Atlantic Health System Presentation

Steven A. Maser, MD
Medical Director of Orthopedic Surgery

Mina Le Fevre, RN, MS, ONC
Orthopedic Central Navigator

Atlantic
Health System

Atlantic Health System Comprehensive Care for Joint Replacement Model

Utilizing Clinical Risk Stratification to Achieve Better Outcomes for CJR Beneficiaries

Steven A. Maser, MD
Jim Smith, MBA
Mina Le Fevre, RN, MS, ONC
Lauren Johnson

ATLANTIC HEALTH SYSTEM

Atlantic Health System

Atlantic Health System, headquartered in Morristown, New Jersey and one of the leading non-profit health care systems in the state, is creating a *Trusted Network of Caring™*. Our promise to our communities is that anyone who enters our system will receive the right care, at the right quality, at the right time, at the right place and at the right cost.

Morristown Medical Center

- 1080 CJR Cases/Year
- 40 CJR Surgeons

Overlook Medical Center

- 254 CJR Cases/Year
- 19 CJR Surgeons

Chilton Medical Center

- 106 CJR Cases/Year
- 21 CJR Surgeons

Newton Medical Center

- 112 CJR Cases/Year
- 4 CJR Surgeons

Hackettstown Medical Center

- Not in MSA

Goryeb Children's Hospital

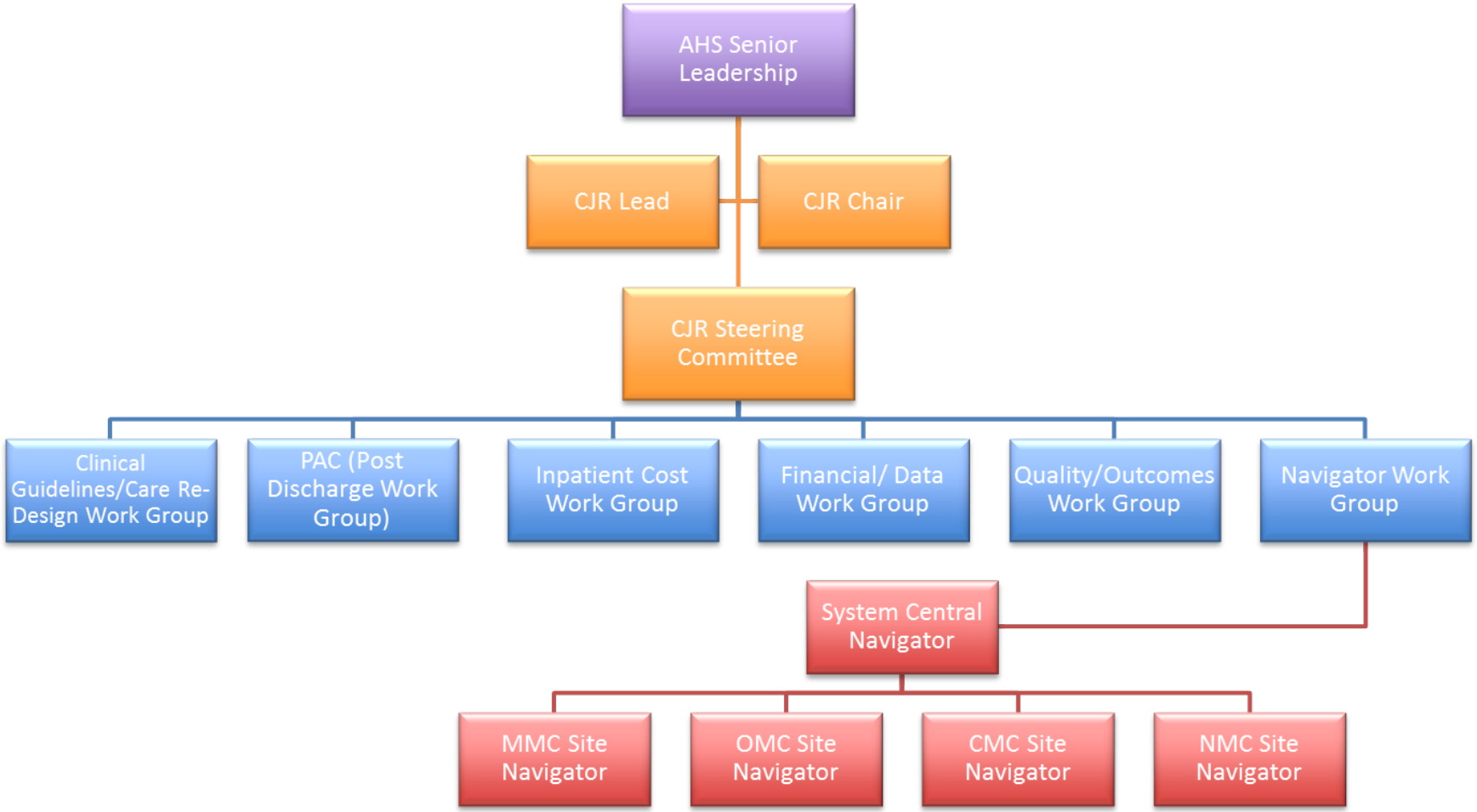
- Children's Hospital

Atlantic Health System additionally includes Atlantic Rehabilitation, Atlantic Home Care and Hospice, more than 600 community-based health care providers who are affiliated with us through Atlantic Medical Group. We are also part of Atlantic Accountable Care Organization, one of the largest ACOs in the nation, and are a member of AllSpire Health Partners.

Only **2 of the 84** CJR surgeons completing **less than 3%** of the CJR cases are employed physicians, the remainder are independent physicians

ATLANTIC HEALTH SYSTEM

CJR Steering Committee



ATLANTIC HEALTH SYSTEM

Care Navigation Work Group and Atlantic Health System CJR Goals

Central Navigator (1)

- Follows High Risk Patients across health system
- Develops/Maintains relationships with Post Acute Network especially with LOS
- Tracks/Evaluates patient trends

Site Navigators (4)

- Follow Low Risk Patients at specific site
- Support Central Navigator
- Develops and provides educational material to patients

Year 1 Goals

Increase discharge disposition to home

Decrease LOS for patients going to post-acute care facility (SNF or IRF)

Risk Assessment and Prediction Tool (RAPT)

Clin Orthop Relat Res (2015) 473:597–601
DOI 10.1007/s11999-014-3851-z

Clinical Orthopaedics and Related Research®
A Publication of The Association of Bone and Joint Surgeons®

SYMPOSIUM: 2014 HIP SOCIETY PROCEEDINGS

Does the Risk Assessment and Prediction Tool Predict Discharge Disposition After Joint Replacement?

Viktor J. Hansen MD, Kirill Gromov MD, PhD,
Lauren M. Lebrun MHA, Harry E. Rubash MD,
Henrik Malchau MD, PhD, Andrew A. Freiberg MD

- Developed by Dr. Leonie Oldmeadow at the Alfred Hospital in Victoria in 2001 to predict the discharge destination of patients undergoing elective hip and knee arthroplasty surgery
- Predictions based on objective factors provide confidence in decision making regarding discharge for patients and staff

	Value	Score
1. What is your age group?	50-65 years 66-75 years >75 years	=2 =1 =0
2. Gender?	Male Female	=2 =1
3. How far on average can you walk? (a block is 200 metres)	Two blocks or more (+/-rest) 1-2 blocks (+/-rest) Housebound (most of time)	=2 =1 =0
4. Which gait aid do you use? (more often than not)	None Single-point stick Crutches/frame	=2 =1 =0
5. Do you use community supports? (home help, meals on wheels, district nursing)	None or one per week Two or more per week	=1 =0
6. Will you live with someone who can care for you after your operation?	Yes No	=3 =0
	Your score (out of 12)	

Key: Destination at discharge from acute care predicted by score.

Scores <6 — extended inpatient rehabilitation

Score 6-9 — additional intervention to discharge directly home (e.g. *Rehabilitation in the Home*)

Score >9 — directly home.

Patient's preference	Prediction Score	Agreed destination
.....	.....	.....
Patient Signature:		Date: ...../...../.....

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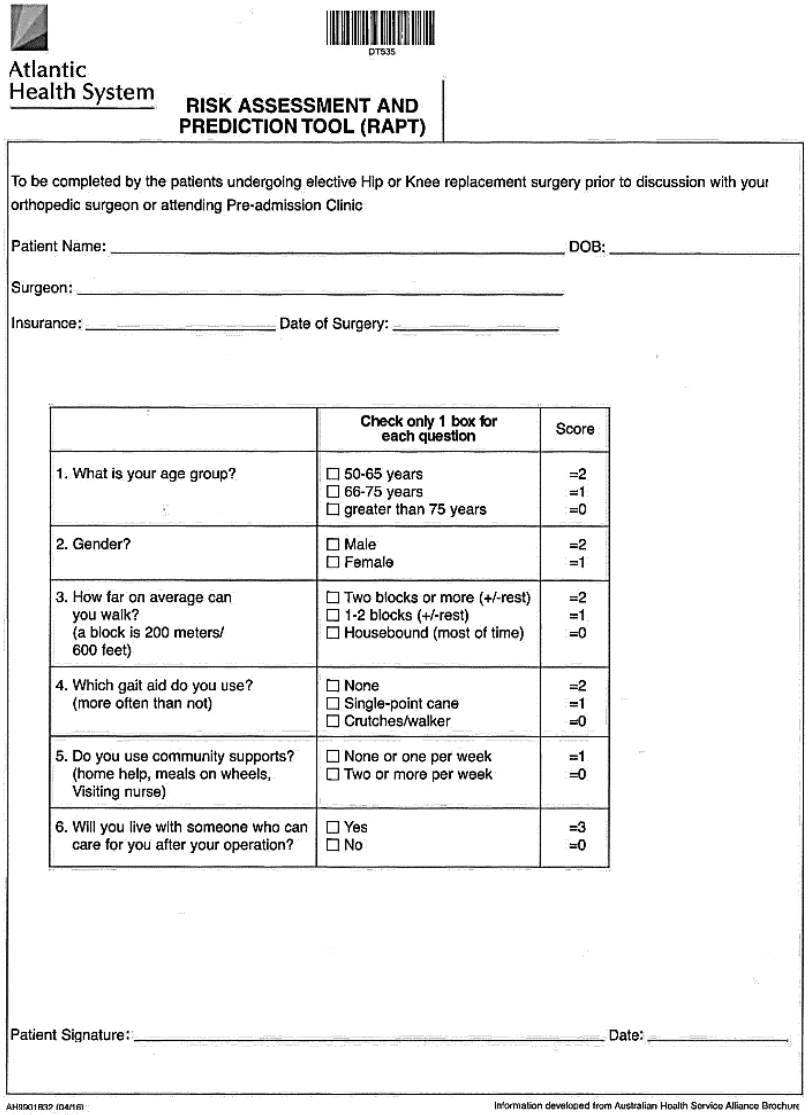
Risk Assessment and Prediction Tool (RAPT) Continued



Atlantic Health System

DT535

RISK ASSESSMENT AND PREDICTION TOOL (RAPT)

To be completed by the patients undergoing elective Hip or Knee replacement surgery prior to discussion with your orthopedic surgeon or attending Pre-admission Clinic

Patient Name: _____ DOB: _____

Surgeon: _____

Insurance: _____ Date of Surgery: _____

	Check only 1 box for each question	Score
1. What is your age group?	☐ 50-65 years ☐ 66-75 years ☐ greater than 75 years	=2 =1 =0
2. Gender?	☐ Male ☐ Female	=2 =1
3. How far on average can you walk? (a block is 200 meters/ 600 feet)	☐ Two blocks or more (+/-rest) ☐ 1-2 blocks (+/-rest) ☐ Housebound (most of time)	=2 =1 =0
4. Which gait aid do you use? (more often than not)	☐ None ☐ Single-point cane ☐ Crutches/walker	=2 =1 =0
5. Do you use community supports? (home help, meals on wheels, Visiting nurse)	☐ None or one per week ☐ Two or more per week	=1 =0
6. Will you live with someone who can care for you after your operation?	☐ Yes ☐ No	=3 =0

Patient Signature: _____ Date: _____

AH8901832 (04/16)

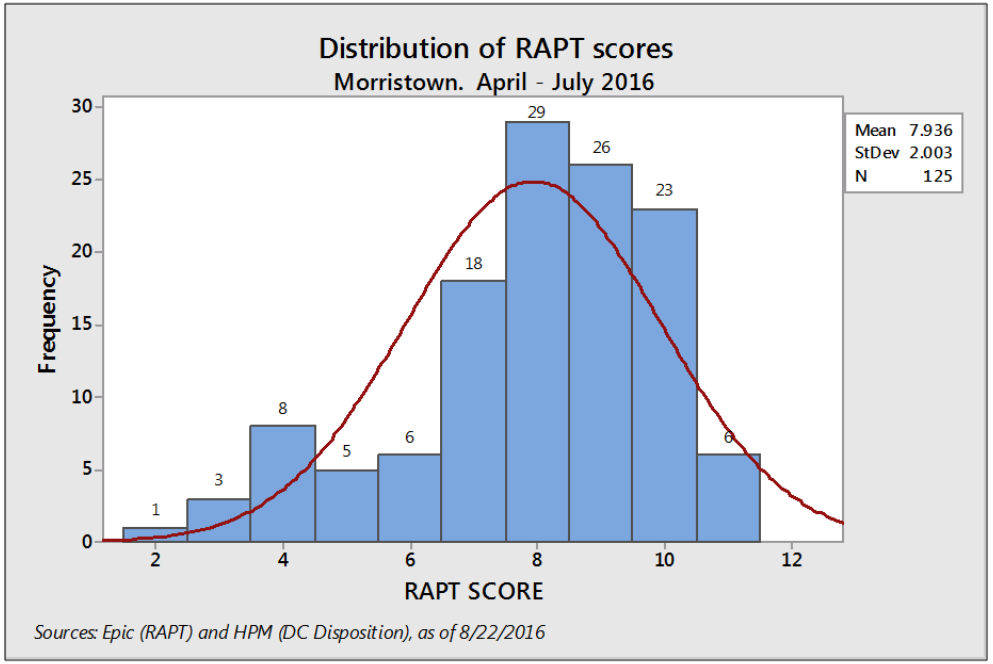
Information developed from Australian Health Service Alliance Brochure

Measures Risk factors that can interfere with discharge to home

- Age group
- Gender
- How far on average can patient ambulate
- Gait aid used
- Community supports utilization (i.e. Home Help, Meals on Wheels)
- Caregiver after surgery

Initial Stratification of CJR Patients with RAPT Tool

Score <6	Score 6-9	Score >9
• Increased likelihood of discharge to PAC • High Risk tracked by Central Navigator	• Intervention to discharge directly home • High Risk tracked by Central Navigator	• Increased likelihood discharge directly home • Low Risk tracked by Site Navigator



Average RAPT score = 7.9; median = 8.0
Range 2-11
23 (18.4%) with RAPT ≤ 6

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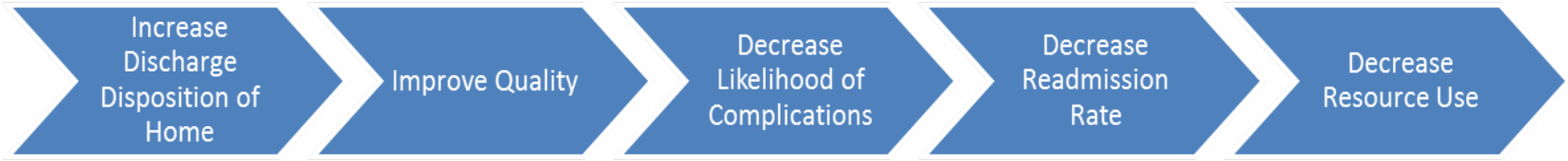
Why is Discharge Disposition to Home for Elective Patients Important?



CJR 90-day Readmission Rate for episode dates: 2012, 2013, 2014, 4/1/16-9/30/16

	All Ellective Episodes (4067 episodes)			Elective Episodes with 2 or fewer "chronic conditions" (3391 episodes)		
Row Labels	Total Readmission Rate	Discharge to Home Readmission Rate	Discharge to Facility Readmission Rate	Total Readmission Rate	Discharge to Home Readmission Rate	Discharge to Facility Readmission Rate
DRG 469 w/o fracture	15.7%	0.0%	16.0%	5.3%	0.0%	5.9%
DRG 470 w/o fracture	7.6%	4.2%	9.8%	5.2%	3.6%	6.5%
Grand Total	**7.7%**	**4.2%**	**12.1%**	**5.2%**	**3.6%**	**6.5%**

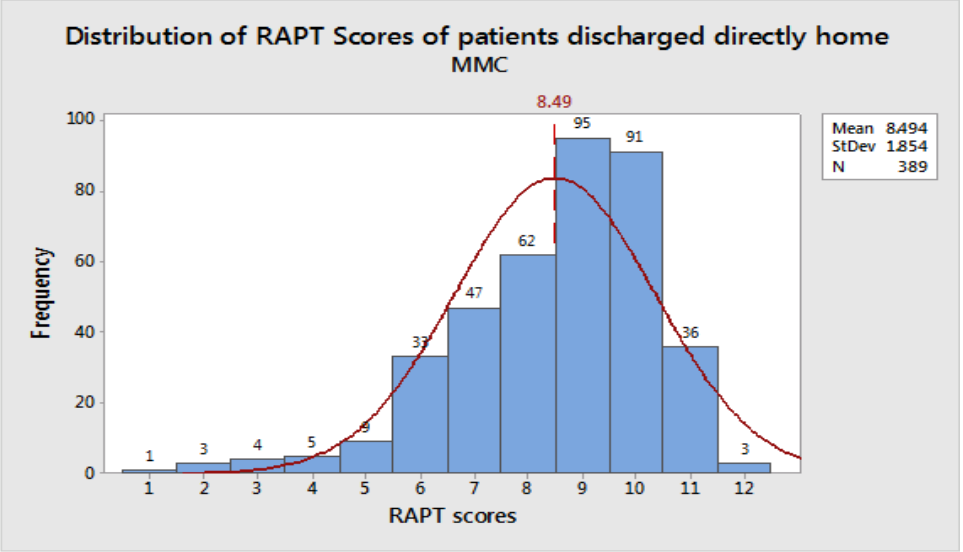
ATLANTIC HEALTH SYSTEM

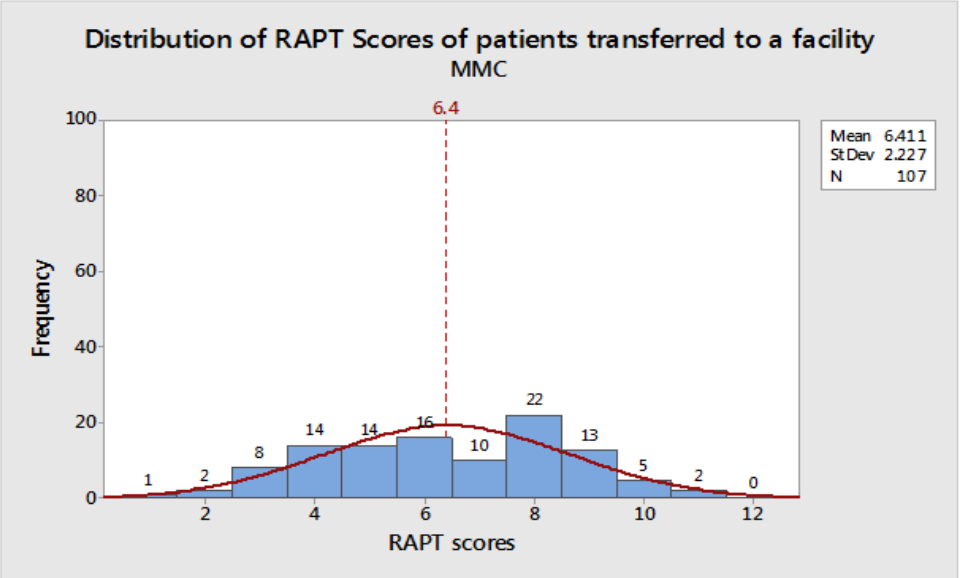
Changes in High vs Low Risk Stratification

High Risk
- Tracked by Central Navigator
- RAPT Score <=6
- Patient Discharged to PAC

Medium Risk
- Tracked by Site Navigator
- RAPT Score 7-9

Low Risk
- Tracked by Site Navigator
- RAPT >9





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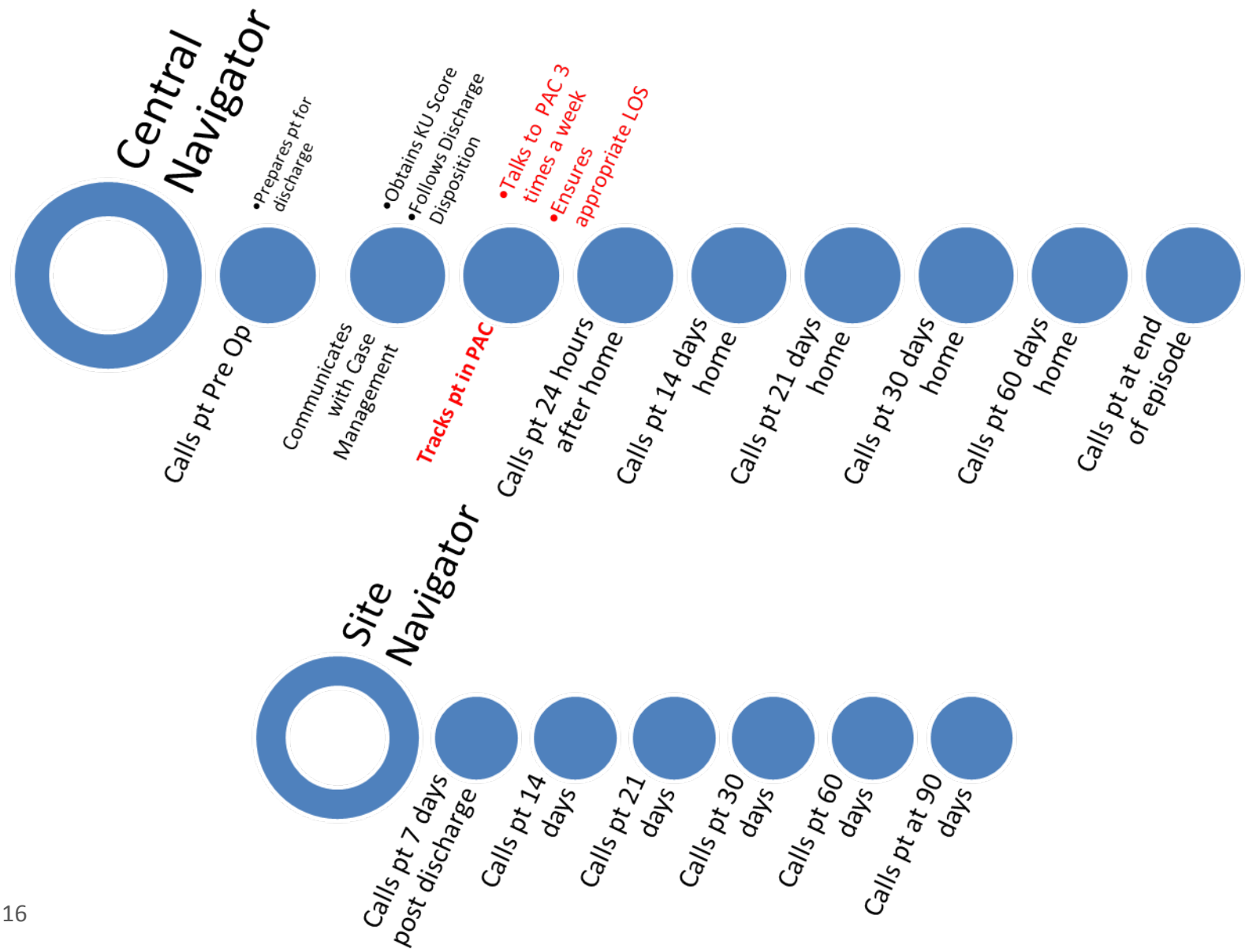
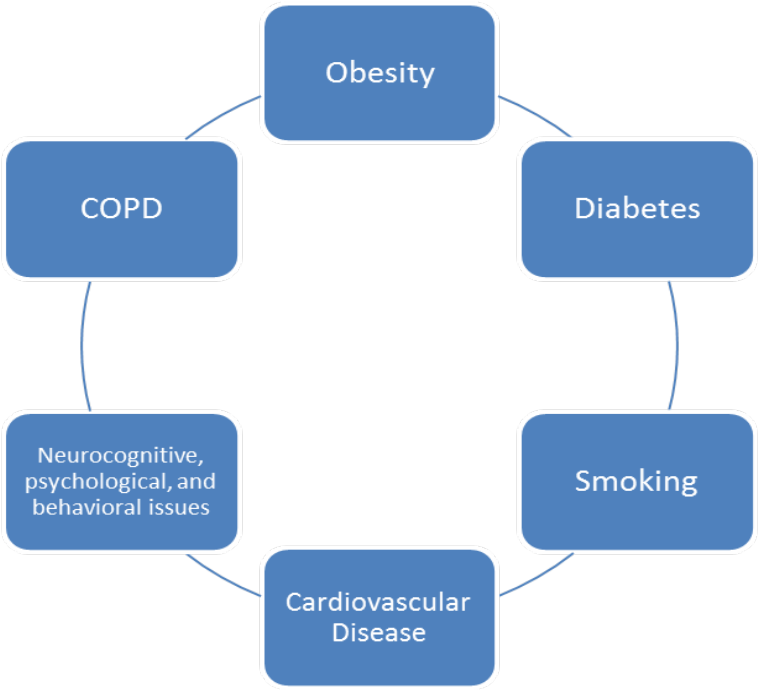
Care Navigation Work Group



RAPT Limitations

1. **Does not account for Risk factors such as*:**



2. **Currently a manual paper collection process**:**

*Currently evaluating a tool for readmissions that will look at these risk factors

** In beta development with a software company to streamline our Care Navigation Process

RAPT- Summary and Conclusion

- Recommended use at MD office
  - MD's incentivized through gainsharing to use tool to identify and address discharge issues or concerns with patients
  - MD submissions of RAPT increased 87% from April to December
- Identifies intermediate-risk patients (RAPT 7-10) and could be used to implement targeted interventions to facilitate discharge home in this group of patients
  - Ex: No caregiver

Year 1 Goals and Successes

Increase discharge disposition to home	Decrease LOS for patients going to post-acute care facility
117% increase in patients going home	52% decrease in LOS

ATLANTIC HEALTH SYSTEM

Questions?

Thank you for listening!

Steven A. Maser, MD
Jim Smith, MBA
Mina Le Fevre, RN, MS, ONC
Lauren Johnson

Questions

- Use the Chat pod to submit any questions
- Please use “@” if question is directed to a specific presenter

Poll Question 2

What type of risk stratification does your hospital use? [select one option]

- RAPT
- Homegrown tool
- Proprietary tool purchased from vendor
- I don't know

Reminders:

- To answer the poll, select the answer that best represents your hospital in the Poll pod.
- You do **not** need to click anything after selecting your answer to record your response.

Comprehensive Care for Joint Replacement Model

Duke University Health System Presentation

Joyce Kight, R.N., MSN
David E. Attarian, MD, FACS, FAOA
Solomon Aronson MD, MBA, FACC, FCCP, FAHA, FASE

Risk Stratification

Duke University Hospital

- Located in Durham, NC
- 957 licensed beds
- Main campus (3 million square feet):
  - Duke North Inpatient Bed Tower
  - Duke Cancer Center
  - Duke Medicine Pavilion
  - Duke Hospital Based Clinics
  - Eye Center
  - Children's Health Center
- Off Campus
  - Ambulatory Surgery Center
  - Adult Bone Marrow Transplant
  - 25 primary and specialty care clinics

DukeHealth

Duke Regional Hospital

- Located in Durham, NC
- 369 licensed beds including
  - 18-bed level II Special Care Nursery
  - 23-bed Psychiatry Unit
  - Duke Rehabilitation Institute
- Davis Ambulatory Surgical Center
- Health Services Center
- Watts School of Nursing

DukeHealth

FY2016 Statistics Duke Health System

Key Statistics	DUH	DRH
Adult Inpatient Discharges	41,562	15,792
Average Daily Census	809	234
Emergency Department Visits	74,914	63,222
Ambulatory Visits	1,119,151	123,234
OR Cases	39,781	13,799
Staff	7,690	1,696
Credentialed Physicians	1,690	738
GME (Graduate Medical Education) Learners	981	Shared with DUH

Speakers

David E. Attarian, MD, FACS, FAOA

Chief Medical Officer, Duke Private Diagnostic Clinic

Professor and Executive Vice Chair, Orthopaedic Surgery

Medical Director, Duke University Hospital Based Clinics

Solomon Aronson MD, MBA, FACC, FCCP, FAHA, FASE

Professor, Duke University School of Medicine
Executive Vice Chair, Dept. of Anesthesiology, Duke University Health System
Vice Chair and Director Business Development, Duke Private Diagnostic Clinic
Board of Managers, Duke Connective Care

DukeHealth

History of Risk Assessment Stratification and Optimization at Duke Health System

- Blood Conservation Center 2005
- Transforming Our Future and Care Redesign started January 2013
- In 2014 as part of a 16 week care redesign process, Orthopaedic physicians, nurses and clinical staff members evaluated how to improve outcomes and standardize care for knee and hip replacement patients across Duke University Health System.
- Throughout the design phase, the work team identified best practices and developed a "playbook" that, once implemented, positions them to continue providing quality care at a lower cost. The Transforming Our Future care redesign work also reduce care variations, simplify order sets, and reduce implant costs for this patient population.

CJR - Risk Stratification Guidelines for Elective Primary Total Knee, Hip, Ankle Replacements

Duke Health System (Exclusion Criteria for elective surgery)

- BMI > 40 , or < 18.5
- Smokers not actively engaged with smoking cessation program
- HgA1C > 7.5%
- Albumin < 3
- Anemia - Hgb < 11
- Thrombocytopenia- platelets < 50k
- ESRD on Hemodialysis
- Coronary stenting with or without AMI within the past 9 months
- Stroke or TIA within previous 9 months
- Any active infections; any open wounds on lower extremity posted for surgery
- Uncontrolled hypo-hyper thyroid/ hyperparathyroidism
- COPD on oxygen
- Chronic high dose narcotic use (>60 MSO4 equiv/d or addiction)

Preoperative Risk

Preoperative Risk

FIXED | **MODIFIABLE**

INATE
Age
Gender
Genetics

ACQUIRED
Anemia
Diabetes
Chronic pain
Heart disease

LIFESTYLE
Alcohol
Smoking
Nutrition
Activity

DukeHealth

POET for Peri-Operative Enhancement Team, is currently targeting patients with diabetes, anemia, malnourishment, complex pain syndromes and poor exercise tolerance was launched at Duke in 2012.

POET has grown in scope and scale with support from other institutional key stakeholders, including general surgery, orthopedic surgery, gynecologic surgery, CT surgery, neurosurgery, neurology, hematology, endocrinology, gerontology, hospital medicine, hospital pharmacy and hospital administration.

The **POET** philosophy is to **transition from teams of well-intended independent experts to a well coordinated team of experts** to meet the challenges of population health and to contribute to better individual's health in the perioperative ecosystem

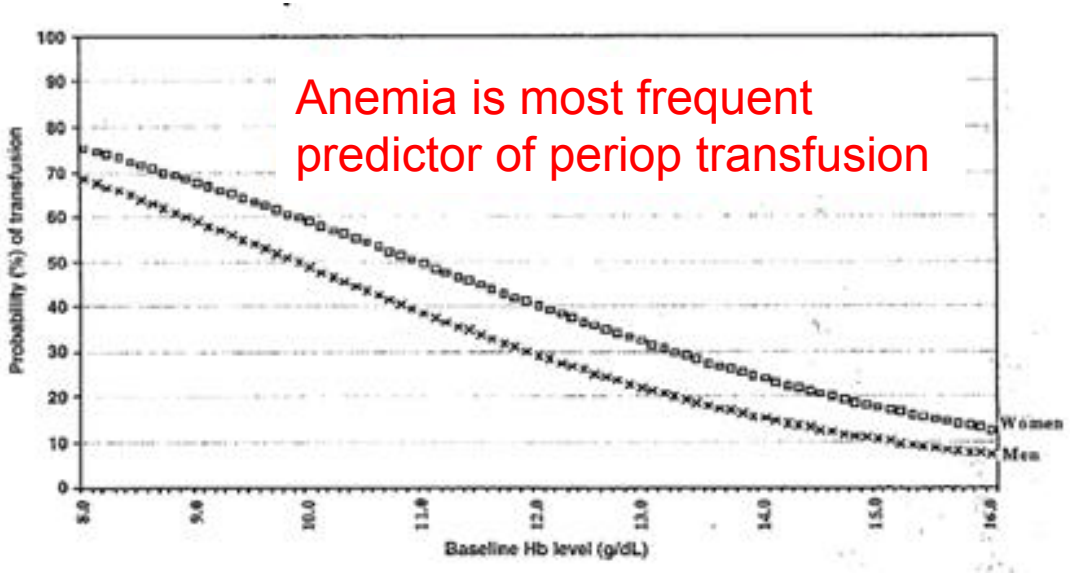
POET FORMULA

- Generative discussion
- Vision
- Content expertise
- Project management
- Business plan
- Business model
- Implementation Strategy
- Operations / Execution
- Maestro / IT integration
- Tactical organization
- Data mart
- Best practice research
- Process / Quality education

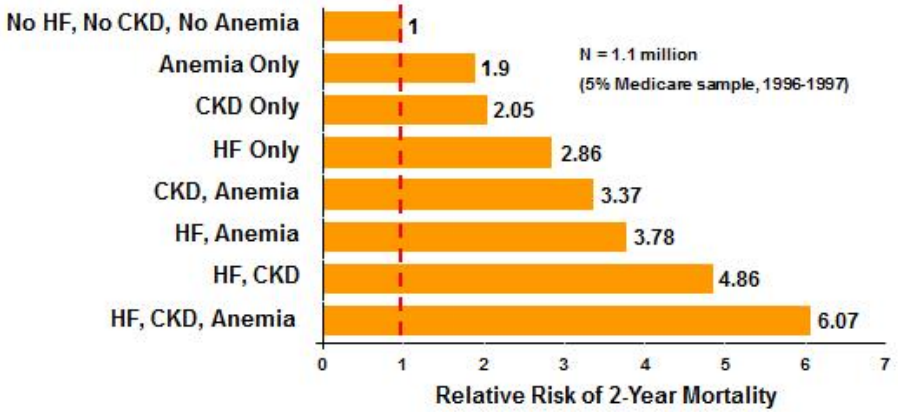
POET - *Perioperative Enhancement Team*

Perioperative Risk Evaluation and Optimization (PREOp) programs at Duke

- **Anemia** - preoperative anemia clinic
- **Poor glycemic control** – preoperative diabetes clinic
- **Malnourishment** – preoperative nutrition optimization clinic.
- **Complex pain syndromes** - periop chronic pain management center
- **Elderly**, **frail**– periop optimization of senior health clinic
- **Anticoagulation management clinic**
- **Obesity** - weight reduction regimen/counseling
- **Smoking** - cessation regimen/counseling
- **Fitness**– preop functional readiness / prehab clinic – *under development*
- **Mental health disorders** – Mental health perioperative redesign – *under development*

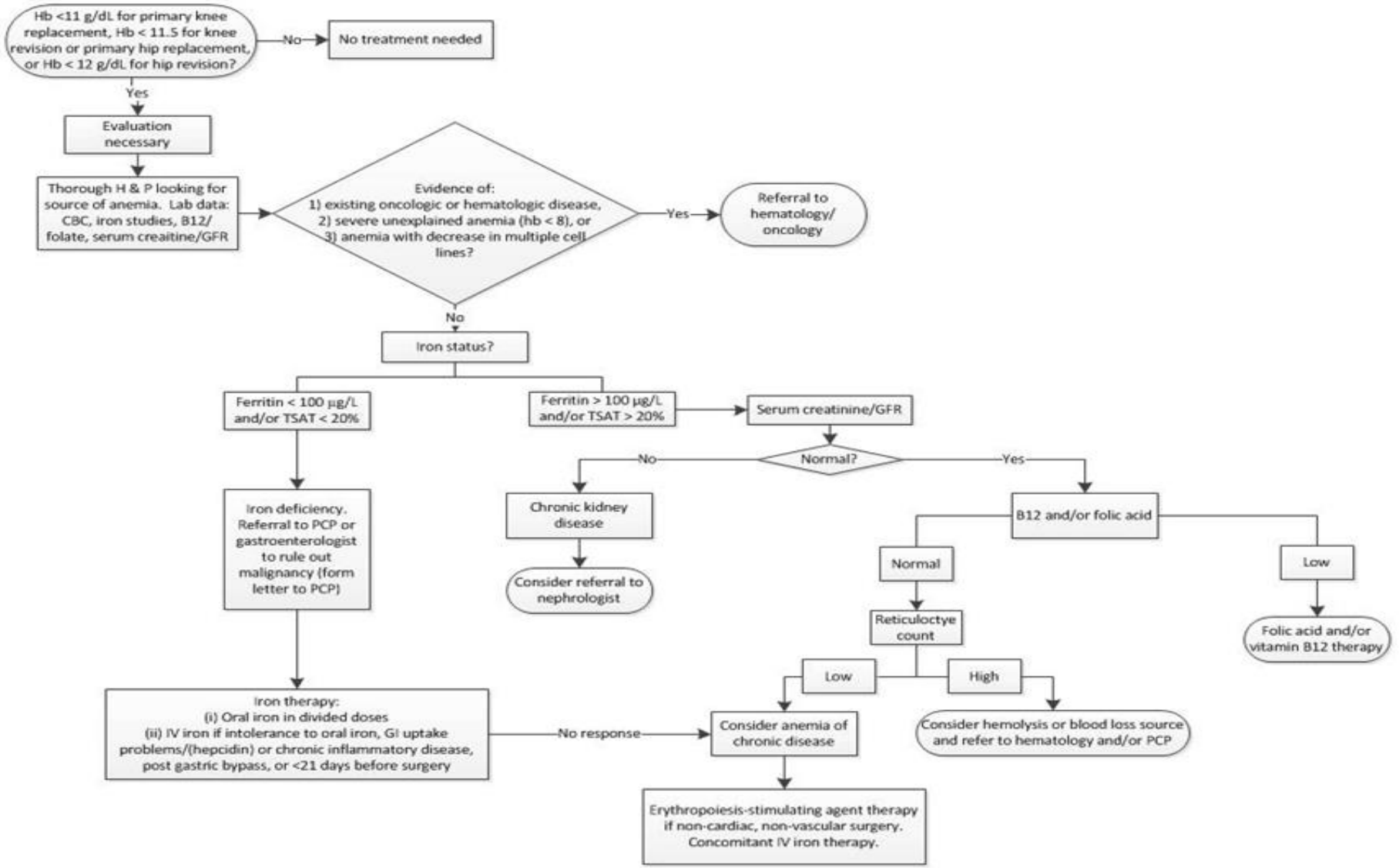


Anemia predicts Transfusion



Anemia a Multiplier of Mortality

Preop Anemia Treatment Algorithm



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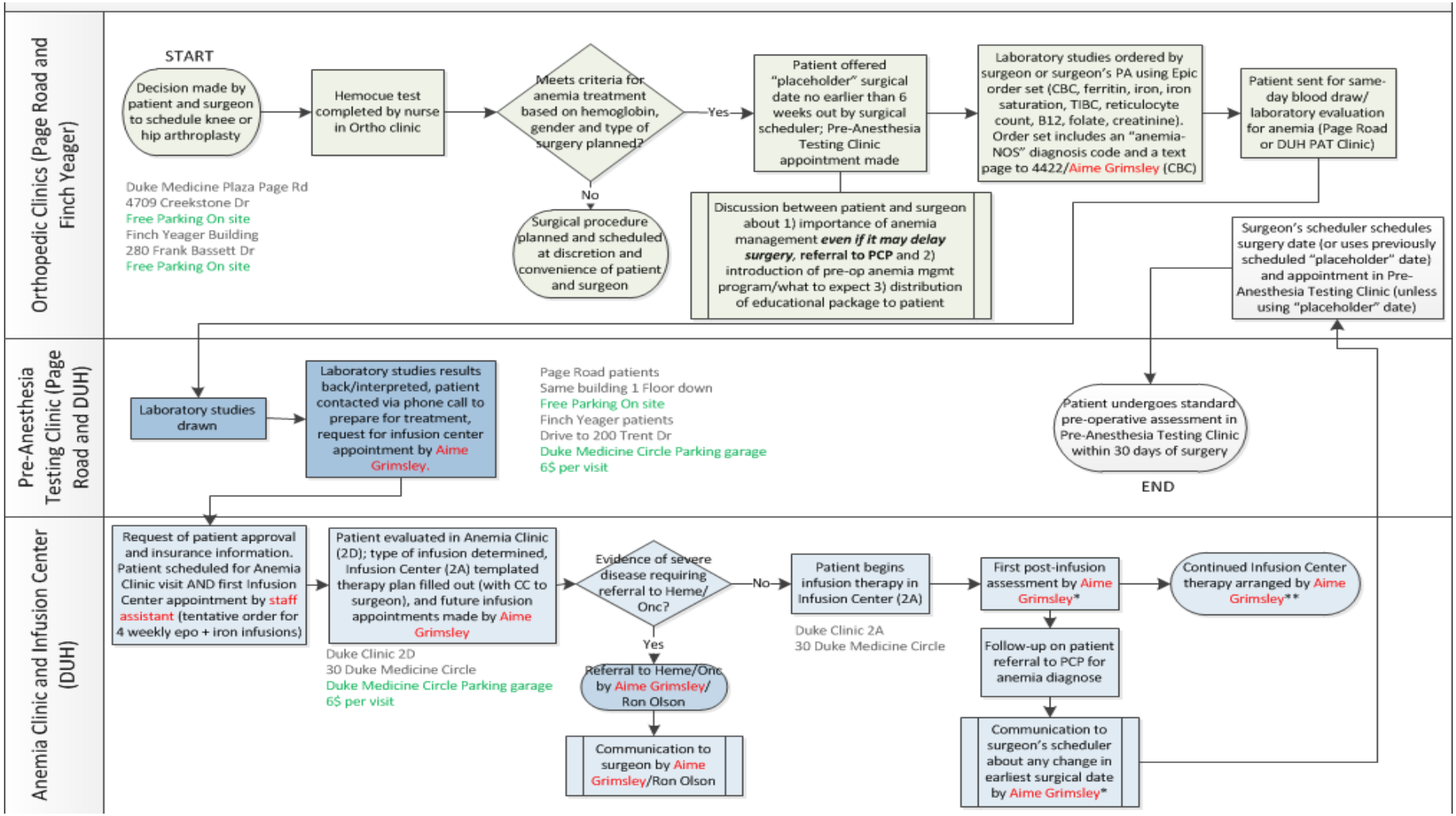
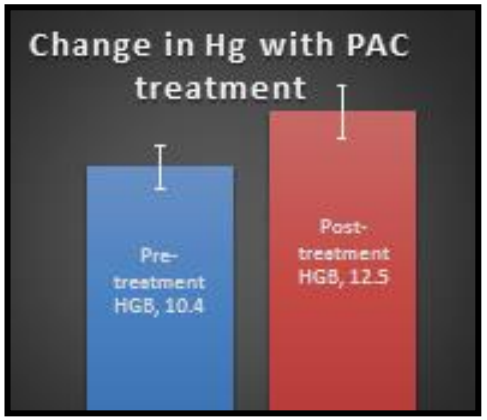
Workflow Mapping



DukeHealth

Anemia Clinic Outcomes

Characteristics	Pre-op Anemia Clinic	Control		
Age	64.5 ± 8.9	61 ± 11	p =	0.33
Sex				
Male	7.14%	33.33%		
Female	92.86%	66.67%		
Preop Hemoglobin*	10.9 ± 0.87	10.3 ± 1.0	p =	0.13
Procedure				
Primary Hip	14.29%	33.33%		
Primary Knee	57.14%	23.81%		
Revision Hip	14.29%	23.81%		
Revision Knee	14.29%	19.05%		
EBL	283 ± 374	364 ± 265	p =	0.49
Percent Receiving TXA	78.57%	33.33%	p =	0.009
Percent Transfused	14.29%	66.67%	p =	0.002



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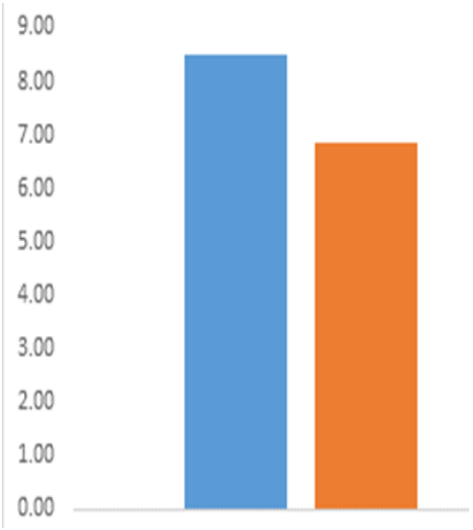
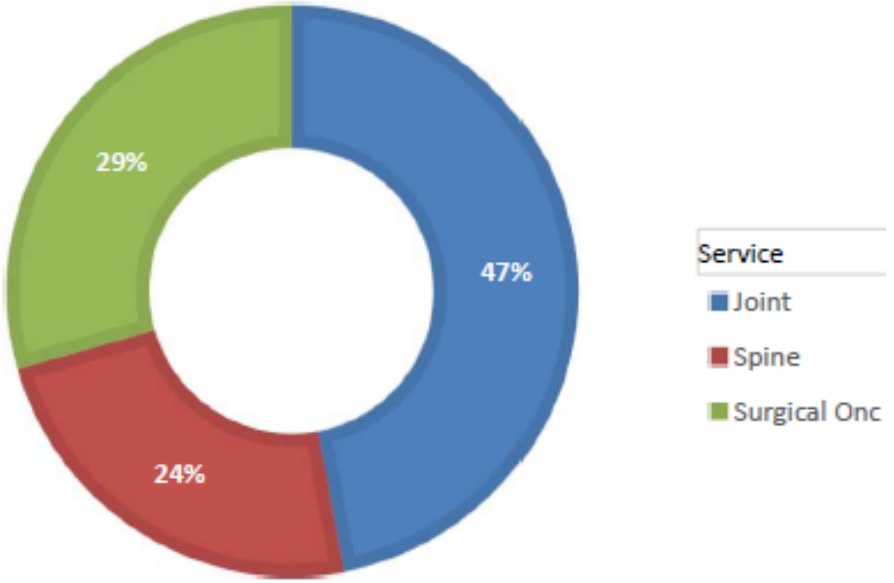
Differences in A1c



Joint

Clarity needed



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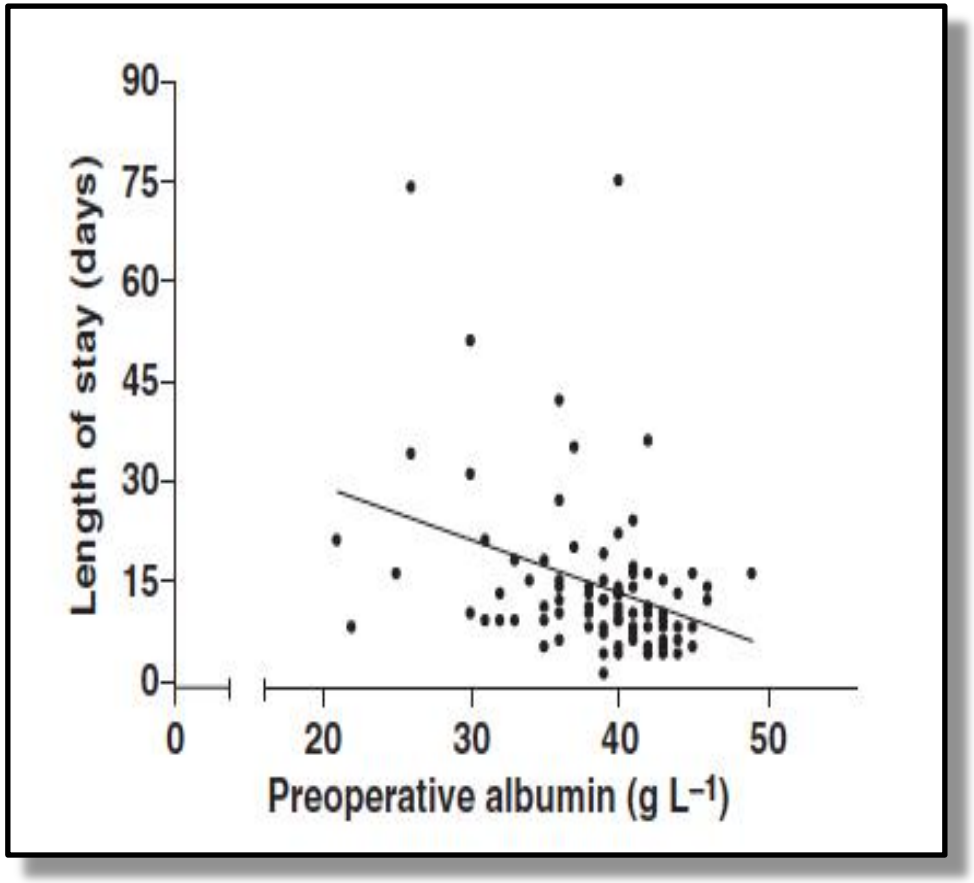
Poor nutritional status predicts outcome

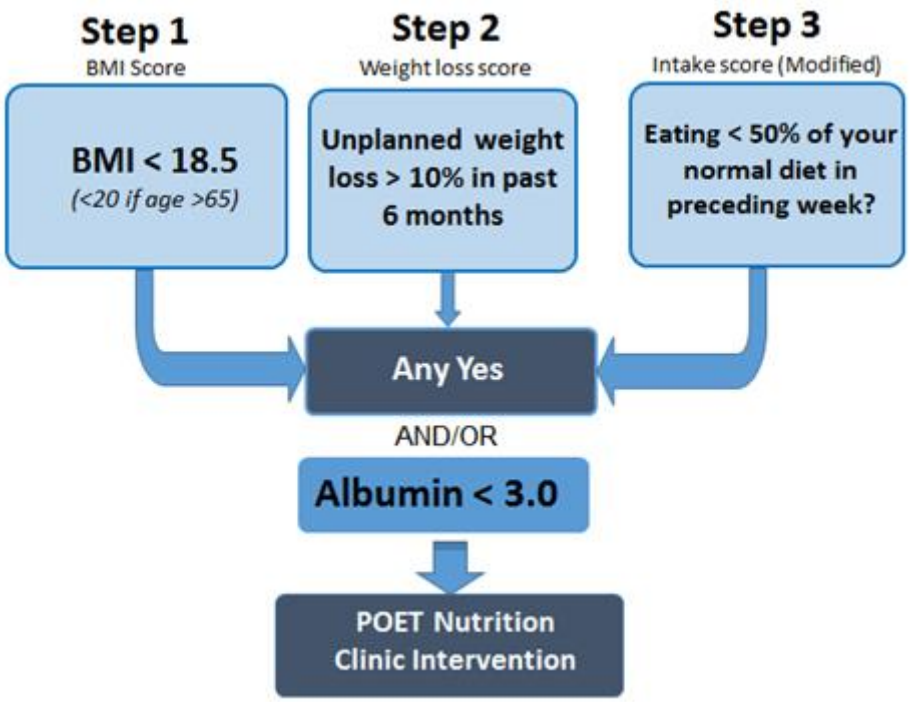


DukeHealth

J Parenter Enteral Nutr. 2013; 37:99S-105S
J Hum Nutr Diet 2010; 23:393–401

Nutrition workflow

- Screen for malnutrition with a modified malnutrition universal screening tool *(MUST)*
- If score >1 - referred to dietician
  - Nutrition history
  - 24 hour recall
  - Provide/explain food journal
  - Nutrition-focused physical assessment
  - Education as appropriate
  - Instructions for PO intake at home
  - Supplement/EN recommendation (if needed)



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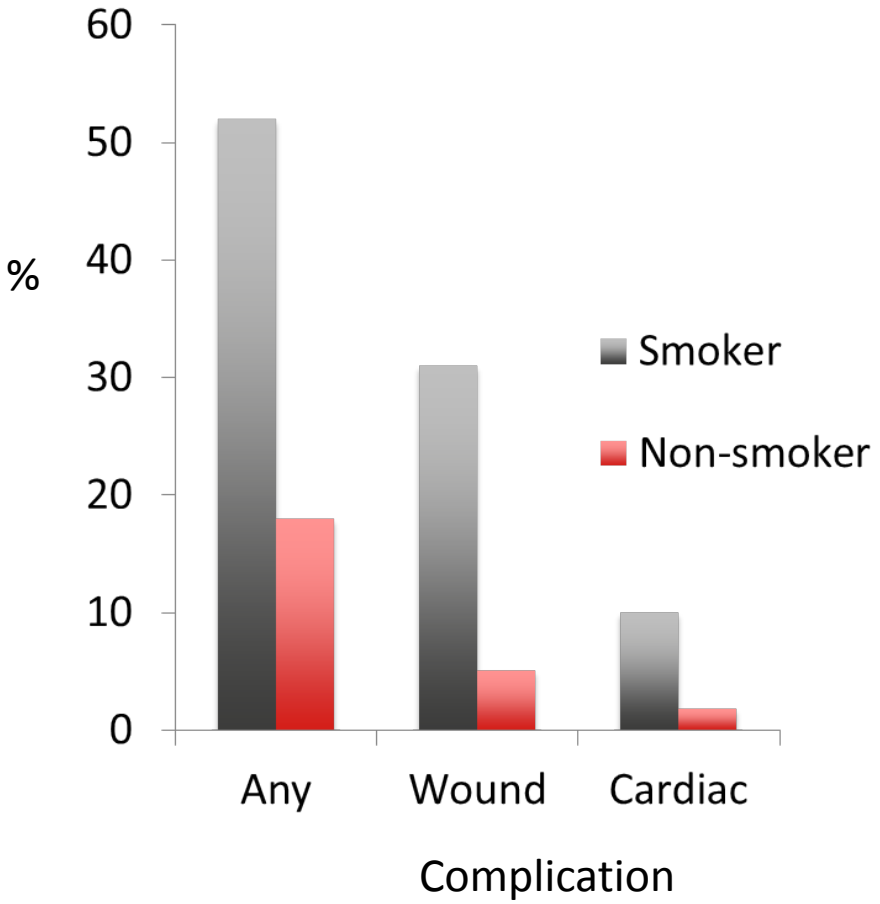
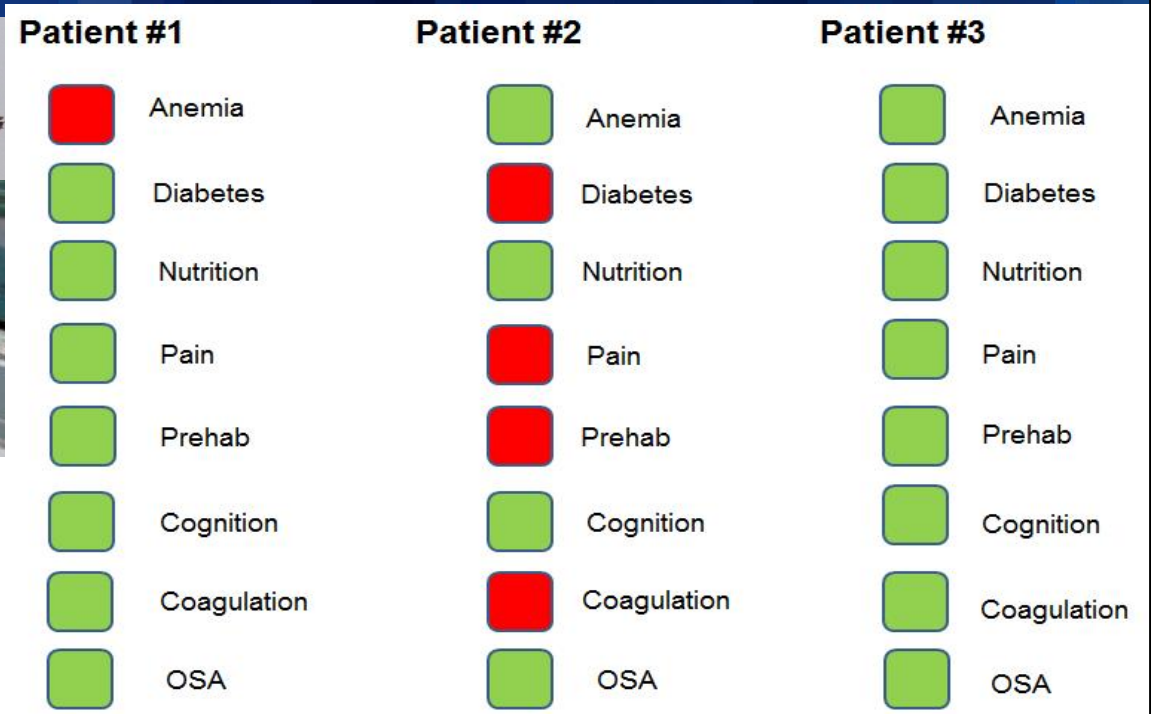
Smoking cessation improves surgical outcomes

- 120 arthroplasty pts (hip/knee)
- Randomized (6-8 wks before surgery)
- Intervention v control



Mollor Lancet 2002 1114-7

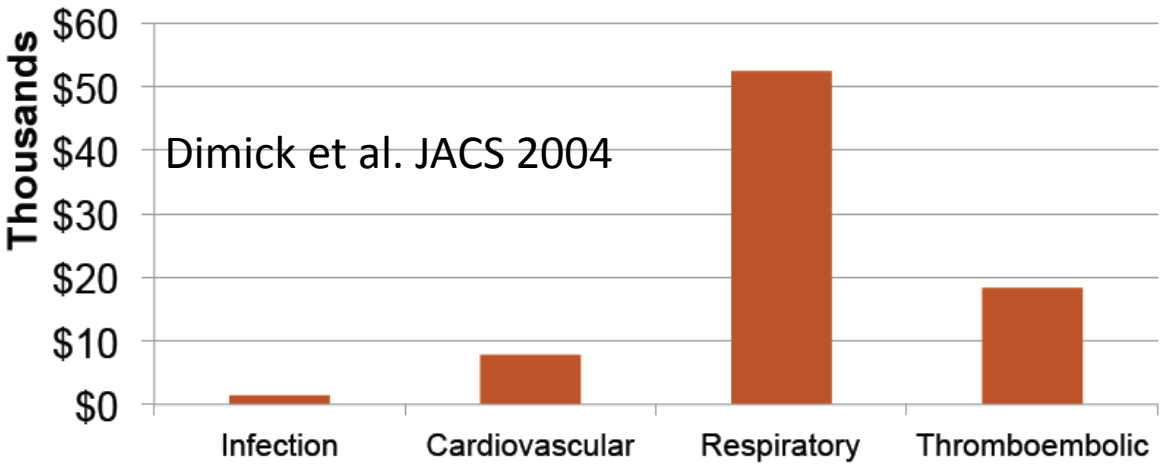


- ✓ **Anemia**
- ✓ **Poor Glycemic control**
- ✓ **Malnourishment**
- ✓ **Complex Pain**
- ✓ **Poor exercise tolerance**
- ✓ **Elderly, complex medical, frail**

High Cost of Complications

Acute Renal Failure	$28,359
Acute Respiratory Failure	$28,218
Blood Sugar Uncontrolled	$11,797
Cardiac Arrest	$15,079
DVT	$10,804
PE	$16,644
Pneumonia	$22,097
SSI	$27,631
Sepsis	$38,978
Unplanned Intubation	$21,025
Ventilator > 48 hours	$27,654

Average increase cost per surgical complication is $11,626



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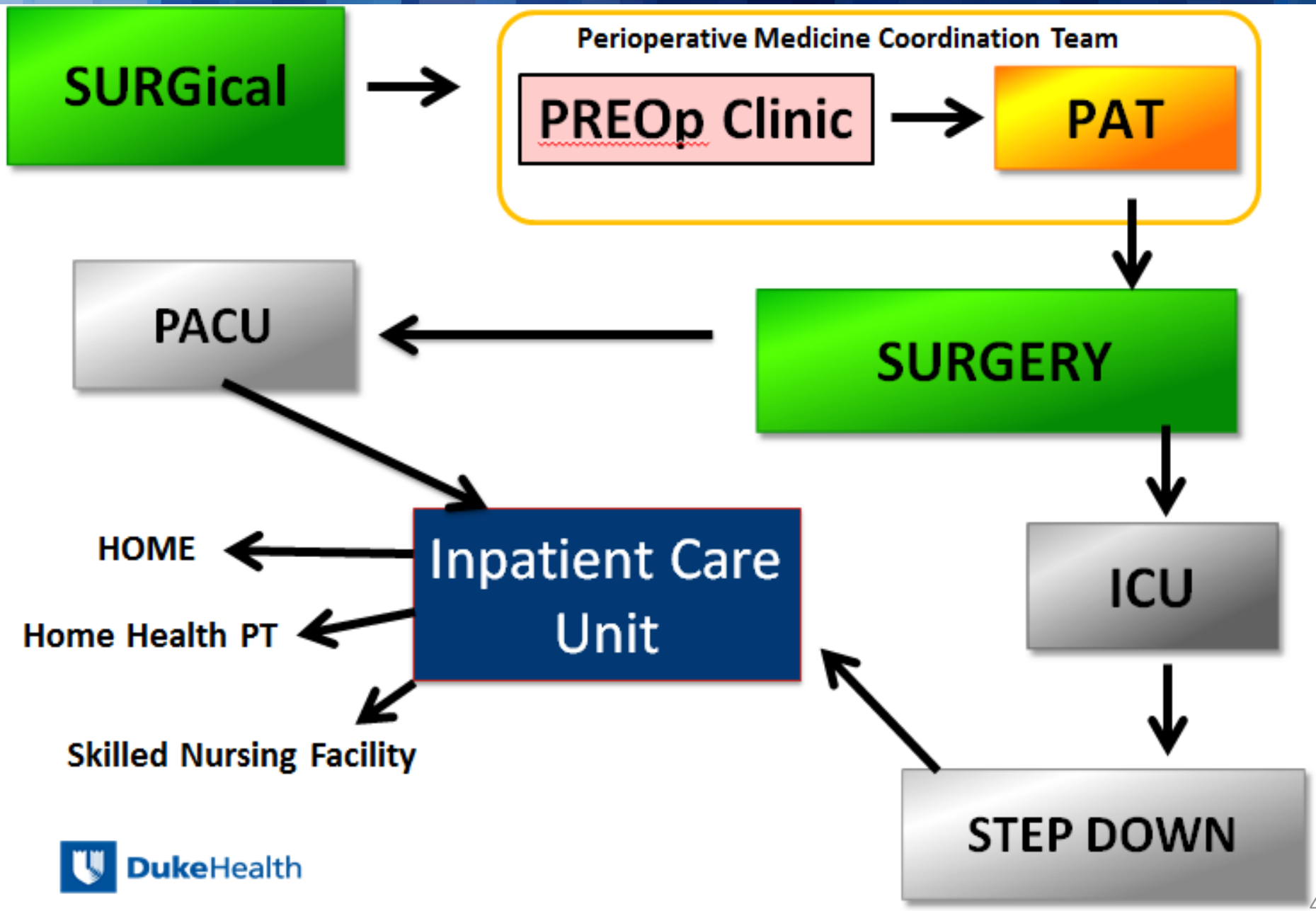
SURGical
Perioperative Medicine Coordination Team
PREOp Clinic
PAT
PACU
SURGERY
HOME
Inpatient Care Unit
ICU
Home Health PT
Skilled Nursing Facility
STEP DOWN

DukeHealth

Speakers (Cont.)

Thorsten M. Seyler, M.D. Ph.D.
Assistant Professor, Division of Adult Reconstruction
Department of Orthopaedic Surgery

CJR Program Managers:

Joyce A. Kight, R.N., MSN – Duke University Hospital

Deborah D. Vuolo, BSN, RN – Duke Regional Hospital

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RAPT tool – Dr. Seyler

	Value	Score
What is your age group	50-65 years 75. ears >75 years	=2 =1 =0
Gender	Male Female	=2 =1
How far on average can you walk?	Two blocks or more 1-2 blocks Household (most of the time)	=2 =1 =0
Which gait aid do you use, more often than not?	None Single-point (cane, walking stick) Walker	=2 =1 =0
Do you use community support (home nursing, home health aides, meals on wheels)	None or one per week Two or more per week	=1 =0
Will you live with someone who can care for you after your operation?	Yes No	=3 =0
	Score (out of 12)	

- Scores < 6 in patient rehabilitation at a skilled nursing facility (SNF)
- Scores 6-9 Home Health physical therapy
- Scores greater than 9 discharge directly home with outpatient PT, if a TKA

45

CJR Case Managers

- using the PROMIS surveys along with review of the clinical record and patient interview to assist and guide with discharge planning prior to surgery.

FY2016 Total Joint Statistics

Key Statistics	DUH	DRH
All Total Joint patients	1,020	1,105
CJR volume	574	589
Average LOS	2.72	2.74
Discharges to home	49.86%	7.81%
Discharges to SNF	30.66%	32.56%
Readmission rate	2.91%	4.16%

Discussion

- Use the Chat pod to submit any questions
- Please use “@” if question is directed to a specific presenter

Updates & Next Steps

Patient Engagement Affinity Group

Would you be interested in participating in an affinity group to discuss and share more about strategies to identify CJR patients, engage patients and their families throughout CJR episodes, and use risk stratification to achieve better outcomes for patients?

Care Coordination and Management Series

Registration Coming Soon for Part One of the Series:
Developing Community Partnerships
Thursday, March 9, 2017, 2:00-3:00 PM EST

Ensuring the most effective and appropriate care for patients throughout the entire CJR episode of care requires communication and collaboration with post-acute care providers and community supports and services. In the first webinar of the Care Coordination and Management Series, we will discuss strategies for building stronger community partnerships. Future webinars will focus on discharge planning and the effective use of care navigators and will occur in April and May 2017, respectively.

Continue Discussion on CJR Connect

- Join the Discussion!
  - Engage with your peers on CJR Connect by liking and commenting on their posts
- If you would like to ask a question of your peers or today's speakers:
  - Go to the Groups tab of CJR Connect
  - Click on the group "CJR All"
  - Post your question in the group
- To request a CJR Connect account, go to: https://app.innovation.cms.gov/CJRConnect/CommunityLogin and click "New User? Click Here."

New CJR Connect Chatter Group for Small Hospitals

- The CJR Learning System team has created a new CJR Connect Chatter group called "**Small Hospitals**." This Chatter group is for individuals who are interested in learning about and/or sharing CJR implementation strategies and challenges that are unique to small hospitals. If you are a CJR Connect user associated with a small hospital, you have already been placed into this group. To access the group's Chatter page:
  - Log on to CJR Connect
  - Go to the Groups tab
  - Click "Small Hospitals"
  - Post your question or comment in the group

New CJR Connect Chatter Group for Small Hospitals (Cont.)

- If you are interested in participating in this group, but do not have access to CJR Connect, please go to CJR Connect and click "New User" to request access. Then, follow these directions to gain access to the group:
  - Log on to CJR Connect
  - Go to the Groups tab
  - Click the "Ask to Join" button to the right of the group titled "**Small Hospitals**." Your group status will then change to "Requested"

- Once your request has been processed, you will receive an email notification of your access to the group

Next Steps

- Send any questions to CJRSupport@cms.hhs.gov
- *Please take a few minutes to respond to the Post-Event Survey*