2025
WORK RELATED
Injuries Workshop

Who's Injury Is This? How Person-Centered Care Improves Outcomes

Chairperson: Karen Huyck, MD, PhD, MPH, FACOEM

Monday, March 24th, 2025

11:15-12:15pm

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Patient-Centered Care: Optimizing Function After Surgery

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Disclosures

I do not have anything to disclose.

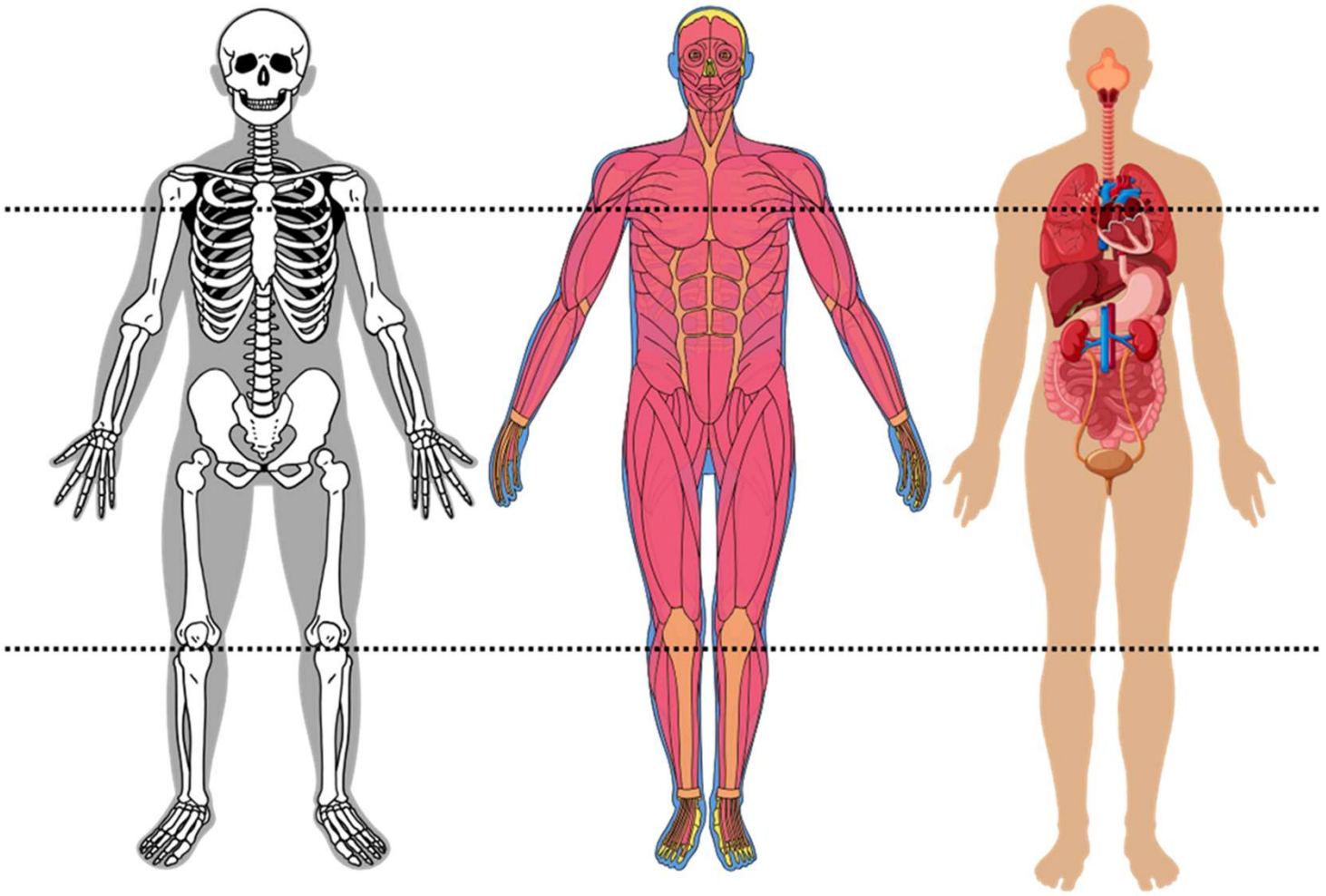
Agenda

- ❑ What is the Core?
- ❑ Why Abdominal Core Health Matters for Acutely Injured Patients
- ❑ Why We Need to be Holistic as Surgeons
- ❑ The Impact of Evidence-based Care
- ❑ How to Set Acutely Injured Patients Up for Long-term Success

The Core

DIAPHRAGM

KNEES



The Center of Everything

BREATHING

BENDING

STANDING

SITTING

POSTURE

URINARY FUNCTION

TWISTING

BALANCE

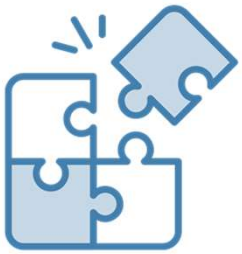
DIGESTION

SPINAL SUPPORT

PELVIC STABILIZATION

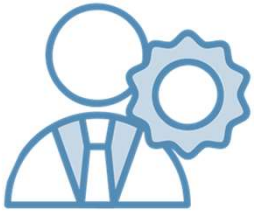
LIFTING

Holistic Care as a Hernia Surgeon



Setting goals that fit individual patients' lives

Including patients in decision making



Keeping interventions minimally invasive

Using Evidence-based medicine

Building specialized interdisciplinary care teams

Treating the entire core

Evidence-based Care Starts with Data

Comprehensive data collection

+

Vast professional network

=

BETTER PATIENT CARE

ACHQC℠
ABDOMINAL CORE HEALTH QUALITY COLLABORATIVE

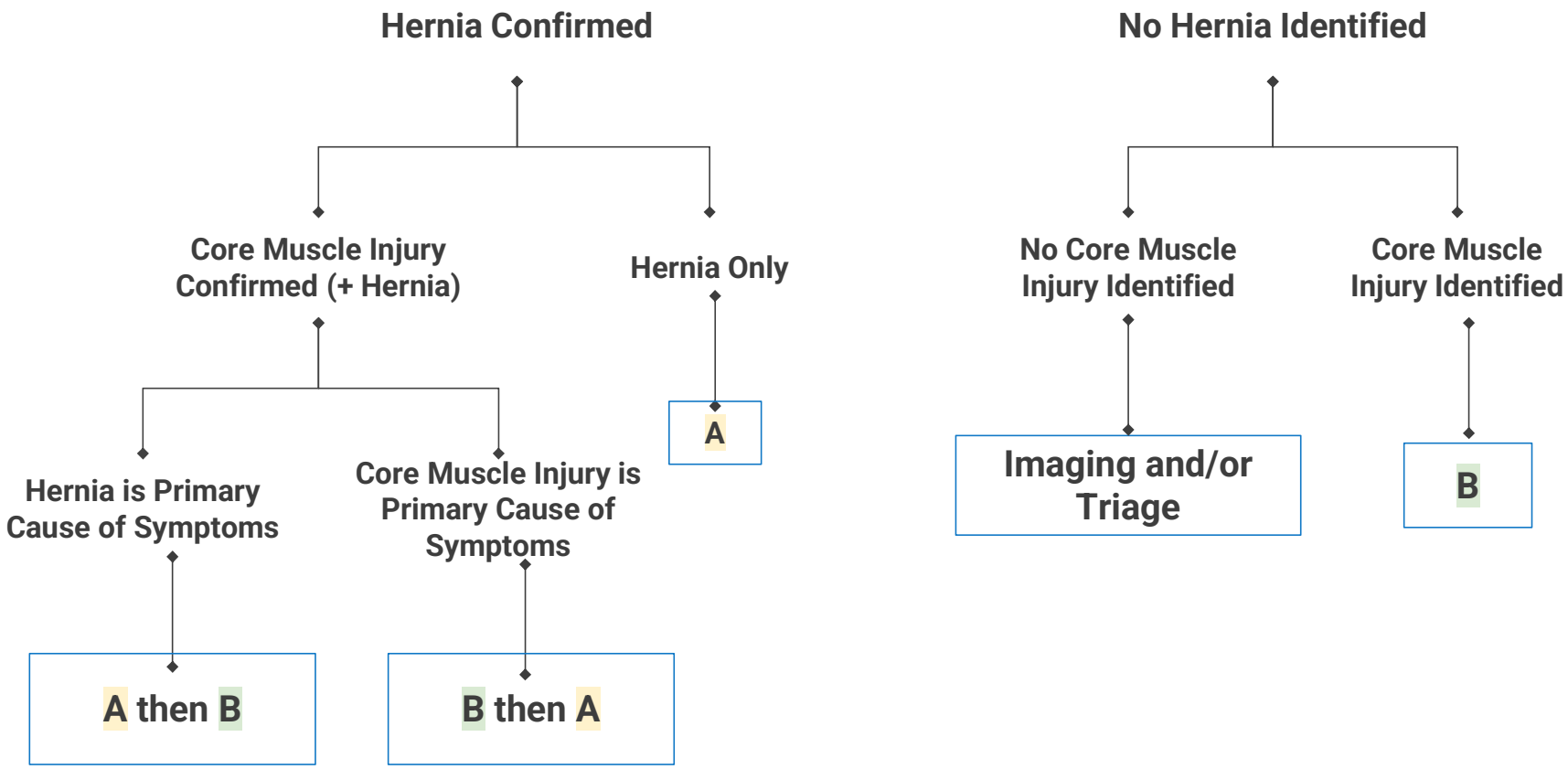
Assessing Acutely Injured Patients

1.
Assess for Hernia

2.
Screen for Core Muscle Injury

3.
Craft a Treatment Plan

Crafting a Treatment Plan



A: Surgery

B: Physical Therapy or Strength Coaching

Habilitation (Prehab and Rehab)

PHYSICAL THERAPY

Address imbalances safely and consistently

Achieve and maintain better health

STRENGTH COACHING

Tailored Surgical Approach

Laparoscopic/ Robotic

BMI >33, some large or complicated hernias

Open Preperitoneal

BMI<33

Anterior

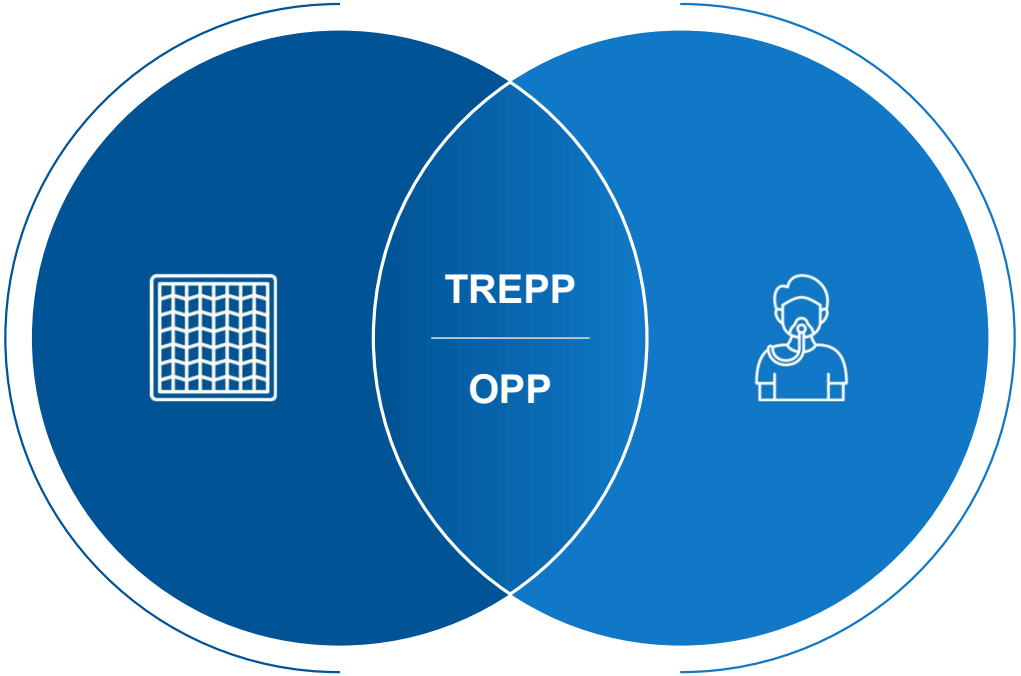
prior pelvic surgery (prostate, posterior hernia)

Shouldice

BMI<25 healthy, fit, young, female, desire to avoid mesh

Open Preperitoneal Inguinal Hernia Repair

Posterior Mesh
TAPP, TEP, eTEP, eTAP

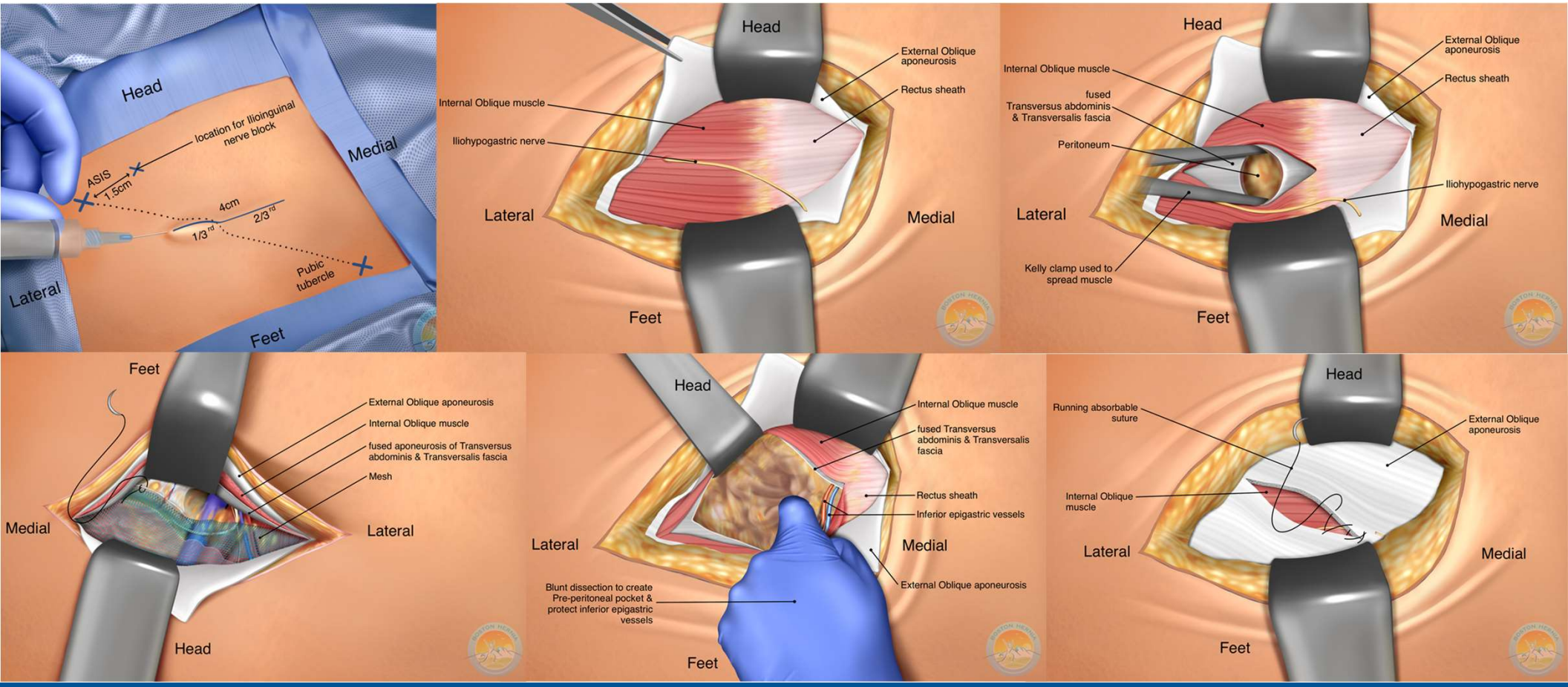


Local Anesthesia
Lichtenstein

MOPP, TIPP use combination of anterior and posterior approach

*Shouldice non-mesh hernia repair has excellent results and is ideal when mesh use is not favorable.

Open Preperitoneal (OPP) Inguinal Hernia Repair



Hernia
https://doi.org/10.1007/s10029-023-02852-6

ORIGINAL ARTICLE

Improved patient-reported outcomes after open preperitoneal inguinal hernia repair compared to anterior Lichtenstein repair: 10-year ACHQC analysis

Divyansh Agarwal[1] · Tina Bharani[2] · Nora Fullington[3,4] · Lauren Ott[3,4] · Molly Olson[6] · Benjamin Poulose[7] · Jeremy Warren[8] · Michael Reinhorn[3,4,5]

Received: 19 April 2023 / Accepted: 19 July 2023

Results Improvement was seen after TREPP/OPP in EuraHS QoL score at 30 days (OR 0.558 [0.408, 0.761]; $p=0.001$), and the difference persisted at 1 year (OR 0.588 [0.346, 0.994]; $p=0.047$). Patient-reported opioid use at 30-day follow-up was significantly lower in the TREPP/OPP cohort (OR 0.31 [0.20, 0.48]; $p<0.001$). 30-day frequency of surgical-site occurrences was significantly higher in the Lichtenstein repair cohort (OR 0.22 [0.06–0.61]; $p=0.007$). There were no statistically significant differences in hernia recurrence risk at 1 year, or rates of postoperative bleeding, peripheral nerve injury, DVTs, or UTIs.

Abdominal Core Health Quality Collaborative (ACHQC) registry, we compared open anterior mesh with open posterior mesh repairs.

Methods We performed a propensity score matched analysis of patients undergoing open IHR between 2012 and 2022 in the ACHQC. After 1:1 optimal matching, both the TREPP/OPP and Lichtenstein cohorts were balanced with 451 participants in each group. Outcomes included patient-reported quality of life (QoL), hernia recurrence, and postoperative opioid use.

Results Improvement was seen after TREPP/OPP in EuraHS QoL score at 30 days (OR 0.558 [0.408, 0.761]; $p=0.001$), and the difference persisted at 1 year (OR 0.588 [0.346, 0.994]; $p=0.047$). Patient-reported opioid use at 30-day follow-up was significantly lower in the TREPP/OPP cohort (OR 0.31 [0.20, 0.48]; $p<0.001$). 30-day frequency of surgical-site occurrences was significantly higher in the Lichtenstein repair cohort (OR 0.22 [0.06–0.61]; $p=0.007$). There were no statistically significant differences in hernia recurrence risk at 1 year, or rates of postoperative bleeding, peripheral nerve injury, DVTs, or UTIs.

Conclusion Our analysis demonstrates a benefit of posterior mesh placement (TREPP/OPP) over anterior mesh placement (Lichtenstein) in open inguinal hernia repair in patient-reported QoL and reduced opioid use.

Keywords Lichtenstein · Inguinal hernia · TREPP/OPP · Quality-of-life · Preperitoneal repair

Decreased Opioid Use

Fewer Complications

Less Postop Pain

Hernia (2023) 27:93–104
https://doi.org/10.1007/s10029-022-02680-0

ORIGINAL ARTICLE

Posterior mesh inguinal hernia repairs: a propensity score matched analysis of laparoscopic and robotic versus open approaches

M. Reinhorn[1,2] · N. Fullington[1,2] · D. Agarwal[3] · M. A. Olson[4] · L. Ott[1,2] · A. Canavan[1,2] · B. Pate[1] · M. Hubertus[1] · A. Urquiza[1] · B. Poulose[5] · J. Warren[6]

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Abstract

Results Improvement was seen after TREPP/OPP as compared to MIS IHR in EuraHS at 30 days (Median(IQR) 7.0 (2.0–16.64) vs 10 (2.0–24.0); OR 0.69 [0.55–0.85]; $p=0.001$) and 6 months (1.0 (0.0–4.0) vs 2.0 (0.0–4.0); OR 0.63 [0.46–85]; $p=0.002$), patient-reported opioid use at 30-day follow-up (18% vs 45% OR 0.26 [0.19–0.35]; $p<0.001$), and rates of surgical site occurrences (0.8% vs 4.9% OR 0.16 [0.06–0.35]; $p<0.001$). There were no differences in EuraHS scores and recurrences at 1 year.

Hernia repairs were performed via minimally invasive surgery (MIS) which includes laparoscopic and robotic transabdominal preperitoneal (TAPP), laparoscopic totally extraperitoneal (TEP), or open transrectus preperitoneal/open preperitoneal (TREPP/OPP) approaches. Propensity score matching (PSM) utilizing nearest neighbor matching accounted for differences in baseline characteristics and possible confounding variables between groups. We matched 816 patients in the MIS cohort with 816 patients in the TREPP/OPP group. Outcomes included patient reported quality of life, hernia recurrence, and postoperative opioid use.

Results Improvement was seen after TREPP/OPP as compared to MIS IHR in EuraHS at 30 days (Median(IQR) 7.0 (2.0–16.64) vs 10 (2.0–24.0); OR 0.69 [0.55–0.85]; $p=0.001$) and 6 months (1.0 (0.0–4.0) vs 2.0 (0.0–4.0); OR 0.63 [0.46–85]; $p=0.002$), patient-reported opioid use at 30-day follow-up (18% vs 45% OR 0.26 [0.19–0.35]; $p<0.001$), and rates of surgical site occurrences (0.8% vs 4.9% OR 0.16 [0.06–0.35]; $p<0.001$). There were no differences in EuraHS scores and recurrences at 1 year.

Conclusions This study demonstrates a potential benefit of open posterior mesh placement over MIS repair in short-term quality of life and seroma formation with equivalent rates of hernia recurrence. Further study is needed to better understand these differences and determine the reproducibility of these findings outside of high-volume specialty centers.

Keywords TREPP · Open preperitoneal inguinal hernia repair · OPP · Posterior mesh inguinal hernia repair · MIS inguinal hernia repair

Decreased Opioid Use

Fewer Complications

Less Postop Pain

Long-Term Success - Conclusions

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Patient-Centered Care: Optimizing Function After Surgery

Michael Reinhorn, MD, MBA, FACS

Thank you!

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The Whole Person Brain: Integrating Neuroscience and Psychology in Healing Work-Related Catastrophic Injuries

Dr Ken Larsen

Clinical Psychologist

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Disclosures

Please list any financial disclosures here or indicate you have none to disclose.

I have none to disclose

The Brain as a Whole System

The Brain as a Dynamic, Integrated System

- The brain is not a collection of isolated parts but a dynamic system interacting with the body and environment.
- **Effects of Catastrophic Injuries on the Brain:**
  - **Pain Pathways:** Chronic pain reshapes neural networks.
  - **Emotional Brain:** Trauma hyperactivates the limbic system (amygdala, hippocampus).
  - **Cognitive Brain:** Frontal lobe functions are compromised under recovery strain.

Key Insight: Healing addresses cascading effects on pain regulation, emotional processing, and engagement with the world.

Introducing the Whole Person Brain Model

Core Principles of the Whole Person Brain

1. **Neuroplasticity:** The brain's capacity to heal and adapt.
2. **The Brain-Body Connection:** Restoring balance through the autonomic nervous system.
3. **The Role of Emotional Memory:** Addressing trauma's impact on emotional memory storage and retrieval.
4. **Integrating the Psyche:** Reconciling fragmented parts of the self for holistic healing.

Neuroplasticity: The Brain's Capacity for Healing

- **Neuroplasticity:** The brain can reorganize neural pathways after injury.
- **Interventions:**
  - **Somatic therapies:** Physical therapy recalibrates sensory-motor networks.
  - **Psychological therapies:** EMDR and mindfulness reduce fear-based patterns.
- **Research:** Chronic pain conditions (e.g., CRPS) demonstrate the brain's adaptability with targeted therapies.

The Brain-Body Connection

- **Key Mechanisms:** Autonomic nervous system, vagus nerve pathways.
- **Impact of Catastrophic Injuries:** Fight-or-flight responses disrupt balance.
- **Restorative Practices:**
  - Polyvagal theory-informed techniques (breathing exercises, safe touch).
  - Psychoeducation to empower patients to understand and manage symptoms.

The Role of Emotional Memory

- Trauma encodes memories in the limbic system, reinforcing cycles of fear and hypervigilance.
- **Therapeutic Approaches:**
  - Eidetic Memory Reprocessing (EMR): Facilitates memory consolidation and emotional integration.
  - Imaginal work (guided imagery, dream analysis): Leverages the brain's creative capacity for healing.

Integrating the Psyche

- Trauma fragments the self, creating dissociation and emotional defensiveness.
- **Psychological Integration Techniques:**
  - **Shadow Work:** Confronting and integrating painful, hidden aspects of the self.
  - **Archetypal Approaches:** Using universal symbols (e.g., Yggdrasil, phoenix) to inspire resilience and transformation.

The Future of Recovery: Interdisciplinary Collaboration

Embracing the Whole Person Brain Model

- **Physicians:** Ensure pain management supports psychological recovery.
- **Therapists:** Use neuroscience-informed techniques to guide emotional healing.
- **Case Managers and Judges:** Advocate for holistic care plans honoring patients' dignity and humanity.
- **Key Insight:** Collaboration fosters comprehensive, patient-centered recovery.

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2025 WORK RELATED Injuries Workshop

Total Worker Health®: An integrated, holistic approach to worker safety, health, and well-being

Laura Punnett, ScD

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Disclosures

I have no financial interests to disclose.

What is "Total Worker Health?"

"Policies, programs, and practices that integrate **protection from** work-related safety and health **hazards**

…. with **promotion** of injury and illness **prevention efforts** to advance **worker well-being**."

NIOSH, 2015
www.cdc.gov/niosh/twh

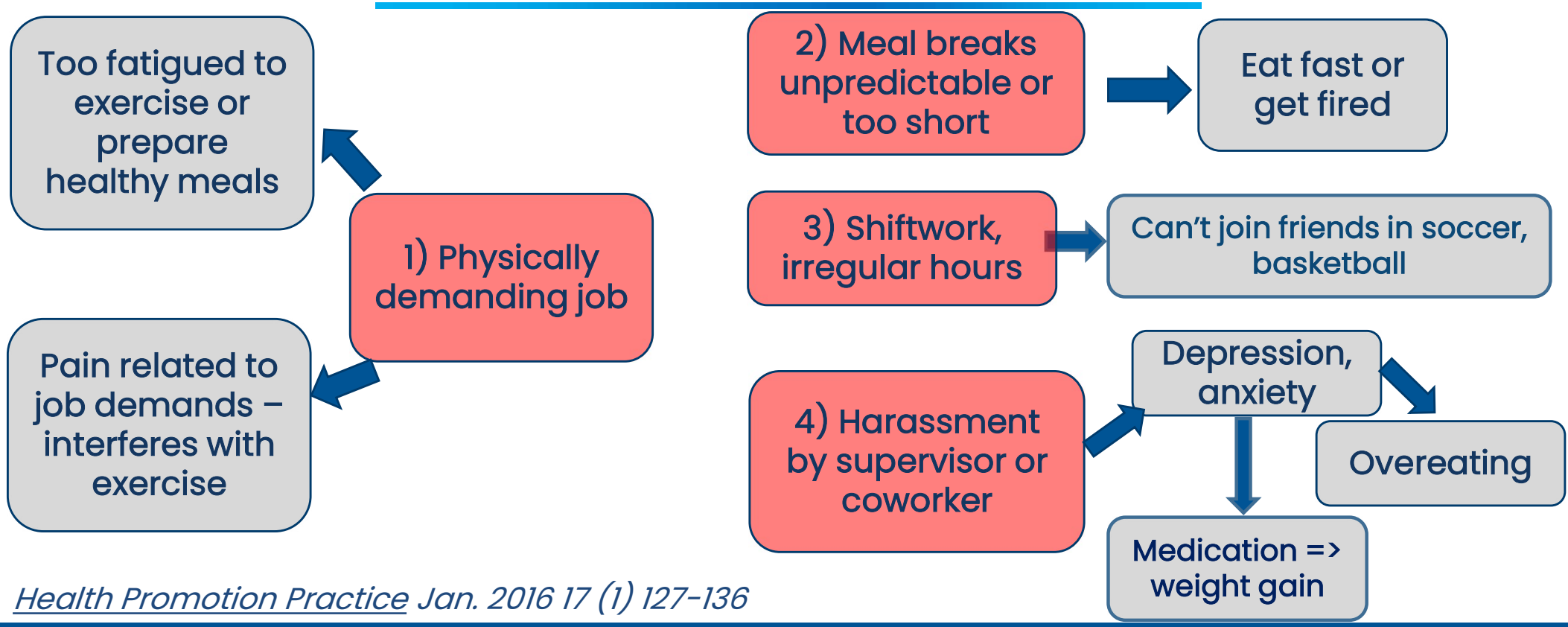
In practice, this means…

Recognize the influence of the work environment on health outcomes not usually considered work-related.

Identify how conditions of work may support and/or interfere with efforts to improve worker outcomes.

- Individual level: Injury rehabilitation progress
- Organizational level: Return-to-Work program

Ex. #1: Low-Wage Workers, Exercise & Eating Habits



Health Promotion Practice Jan. 2016 17 (1) 127-136

Ex. #2: Correctional Officers

Life expectancy 58 yrs
(vs. 79 yrs for all US male workers)

80% overweight or HBP

- Facility gyms open to them after shift ends
- CO's often held over for OT (staffing shortages): bring extra food for extra shift

[Cherniack 2016; Henning 2017; Namazi 2019; El Ghaziri 2020]

How can we learn what obstacles and facilitators are experienced by others?

Employees in lowest status jobs are often the most affected.

Their experiences may not be obvious to us:

- Shift work, mandatory overtime
- Employer monitoring of activity and location
- Little or no "say" about how to manage health needs at work
- Financial stress: Benefits? Two jobs to feed a family?

Use a broad lens to assess potential obstacles to safety, health, wellbeing

- What aspects of working life make it easy or difficult to be healthy?
- What helps you be successful here? What gets in the way? (culture/climate)

Ask individuals about their own jobs

Conduct focus groups in the workplace

Why a participatory approach?

Workers' health self-efficacy →

…to change behaviors

…to change conditions

…to make decisions

…to support co-workers

…to sustain the program

Knowledge from workers' experience →

…to uncover root causes of physical, social, mental stress

…to uncover root causes of unhealthy behaviors

…to contextualize solutions

[Henning et al., 2009; 2017]

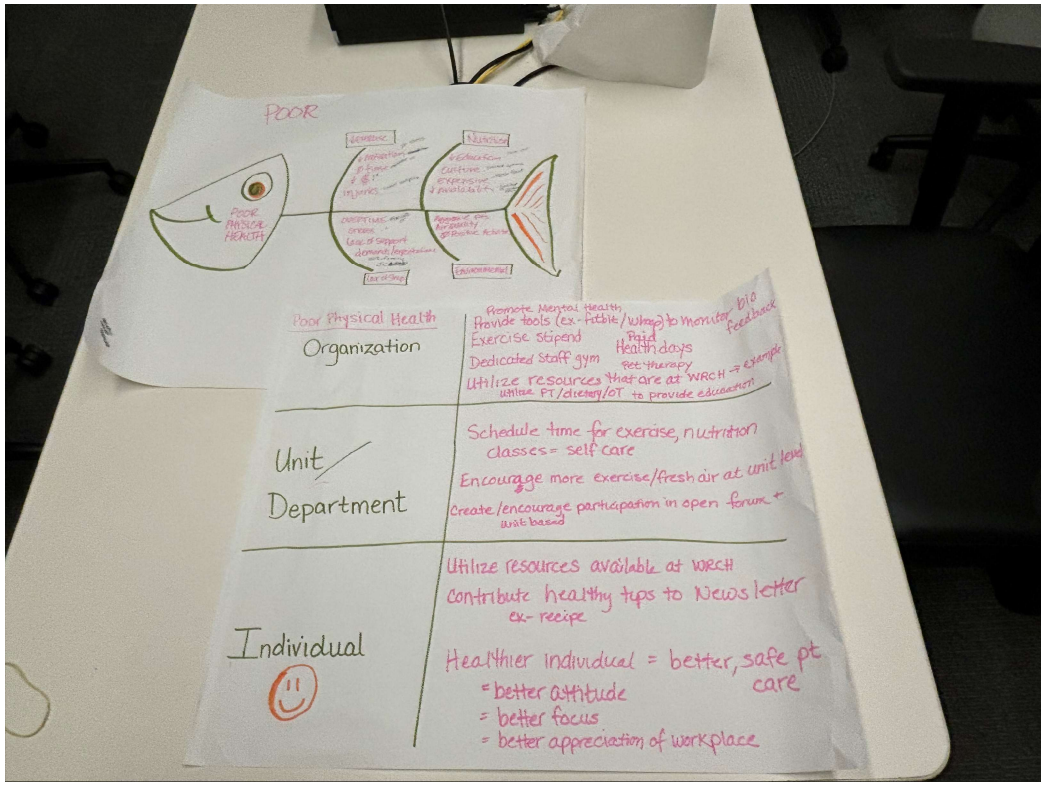
CPH-NEW Healthy Workplace Participatory Program

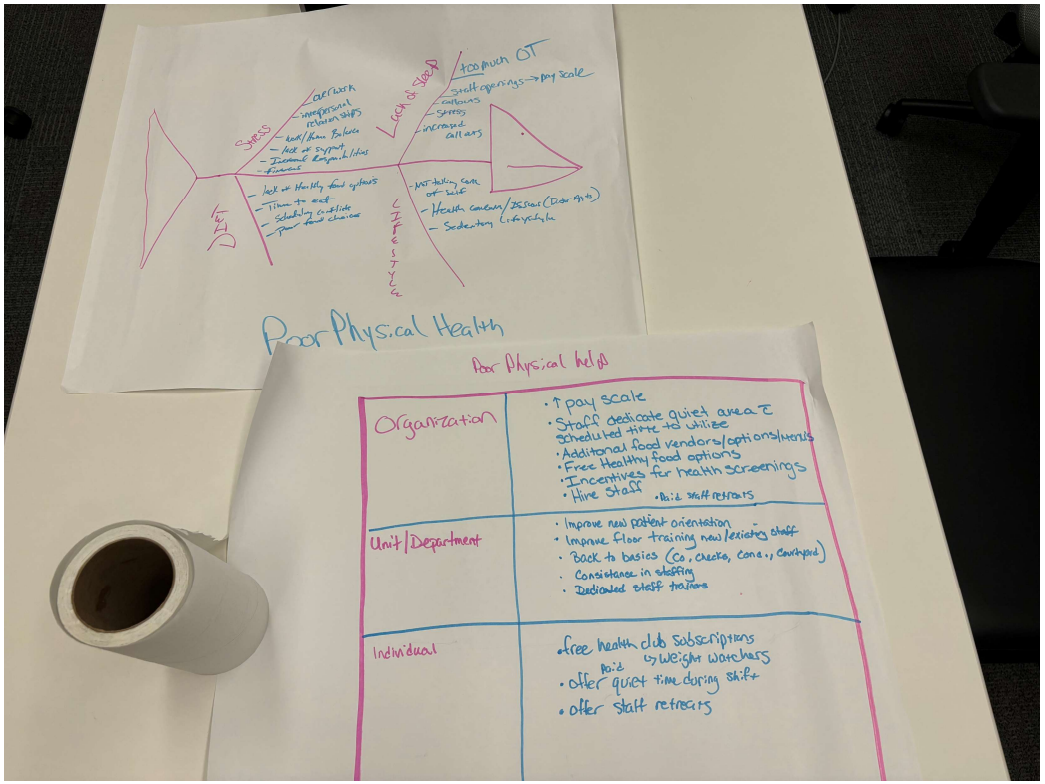
- **Identify root causes** of H&S problems
- **Engage** employees in helping to set priorities and develop solutions
- Improve H&S **communication** & collaboration between employers and employees
- Make a **business case** for H&S interventions.
- Establish a H&S **continuous improvement** process

www.uml.edu/cphnewtoolkit

Front-line staff plan interventions at 3 levels:

- **Organization**
- **Unit/department**
- **Individual**





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Thank you!

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www.uml.edu/cph-new

University of Connecticut CPH-NEW website:

https://health.uconn.edu/occupational-environmental/academics-and-research/cph-new/

Healthy Workplace Participatory Program:

www.uml.edu/cphnewtoolkit

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