

Improving quality of life in the OR: fostering teamwork, ergonomics, and well- being for better outcomes

Roxanna Zakeri MBBS MA PhD FRCS

Consultant Upper GI, Bariatric & General Surgeon, Portsmouth Hospitals University NHS Trust

Honorary Associate Professor, University College London

Young IFSO European Chapter Representative

Associate Surgical Specialty Lead for Bariatric Surgery, Royal College of Surgeons of England



Disclosures



Society affiliations:

IFSO-EC Executive Council

Young IFSO European Chapter Representative

Chair of Young IFSO-EC Taskforce

Royal College of Surgeons of England Associate Surgical Specialty Lead for Bariatric Surgery

Research grants:

National Institute for Health Research (NIHR)

Royal College of Surgeons of England

Rosetrees Trust

Educational grants:

W.L. Gore

Boston Scientific



Think of the OR as a
human performance
environment



Technical and interpersonal challenges

Physical and mental endurance



Burnout



Major medical errors reported by surgeons are strongly correlated with degree of burnout and lower mental QoL



The human cost

 **IFSO**
XXIX IFSO
World Congress

1-4 September 2026
Toronto, Canada

Editorials

Medical error: the second victim

BMJ 2000 ; 320 doi: <https://doi.org/10.1136/bmj.320.7237.726> (Published 18 March 2000)

Cite this as: *BMJ* 2000;320:726

thebmj

Article

Related content

Metrics

Responses

The doctor who makes the mistake needs help too

Albert W Wu (awu@jhsph.edu), associate professor

Author affiliations ▼

School of Hygiene and Public Health and School of Medicine, Johns Hopkins University, Baltimore, MD 21205, USA



Burnout in Metabolic Bariatric Surgeons

Obesity Surgery
https://doi.org/10.1007/s11695-026-08604-6



IFSO
XXIX IFSO
World Congress

RESEARCH

Beyond the Operating Room: Determinants of Burnout and Resilience among Metabolic Bariatric Surgeons Worldwide

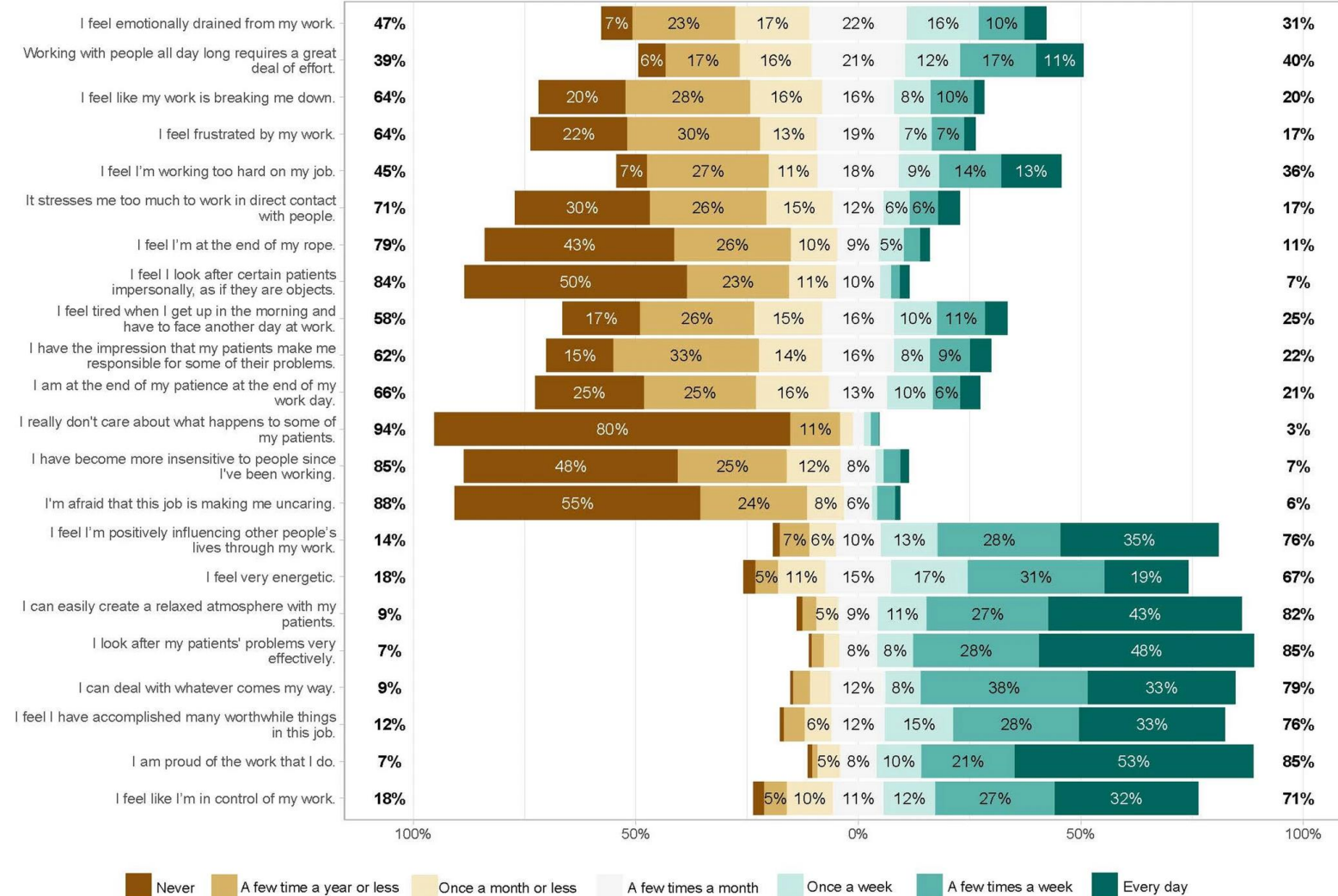
Shahab Shahabi Shahmiri¹ · Daniel Moritz Felsenreich² · Daniel Gero³ · Elena Ruiz-Úcar⁴ · Roxanna Zakeri⁵ · Tamer Abdelbaki⁶ · AmirHossein Davarpanah Jazi¹ · Kimia Jazi⁷ · Kimia Vakili⁷ · Zhiong Dong⁸ · Anna Carolina Batista Dantas⁹ · Mostafa Elsayed Nagy¹⁰ · Wah Yang⁸ · Sonja Chiappetta¹¹ · Mohammad Kermansaravi¹

Low to moderate burnout overall

High emotional exhaustion and depersonalisation if:

- Older surgeon age
- Sleeping problems
- Low physical activity
- Longer surgical shifts

Strong personal accomplishment and purpose



Teamwork improves patient outcomes

Composition
of team leadership and membership

Communicating well

1. Using structure
2. In a culture of psychological safety with flattened hierarchy



Team diversity

In leadership:

Original Investigation

Surgeon Sex and Long-Term Postoperative Outcomes Among Patients Undergoing Common Surgeries

Christopher J. D. Wallis, MD, PhD^{1,2,3}; Angela Jerath, MD, MSc⁴; Khatereh Aminoltejari, MD, MSc¹; et al

[» Author Affiliations](#) | [Article Information](#)

[CiteThis](#) [Permissions](#) [Metrics](#) [Comments](#)

JAMA Surg

Published Online: August 30, 2023

2023;158;(11):1185-1194.

doi:10.1001/jamasurg.2023.3744

Better patient outcomes
F vs. M surgeons

Large national study of 1,165,711 patients across 25 common operations

	 Female Surgeon		 Male Surgeon
 90-day adverse outcome	12.5%	vs.	13.9%
 1-year adverse outcome	20.7%	vs.	25.0%
 90-day mortality	0.5%	vs.	0.8%
 1-year mortality	1.6%	vs.	2.4%



Team diversity

In team composition:

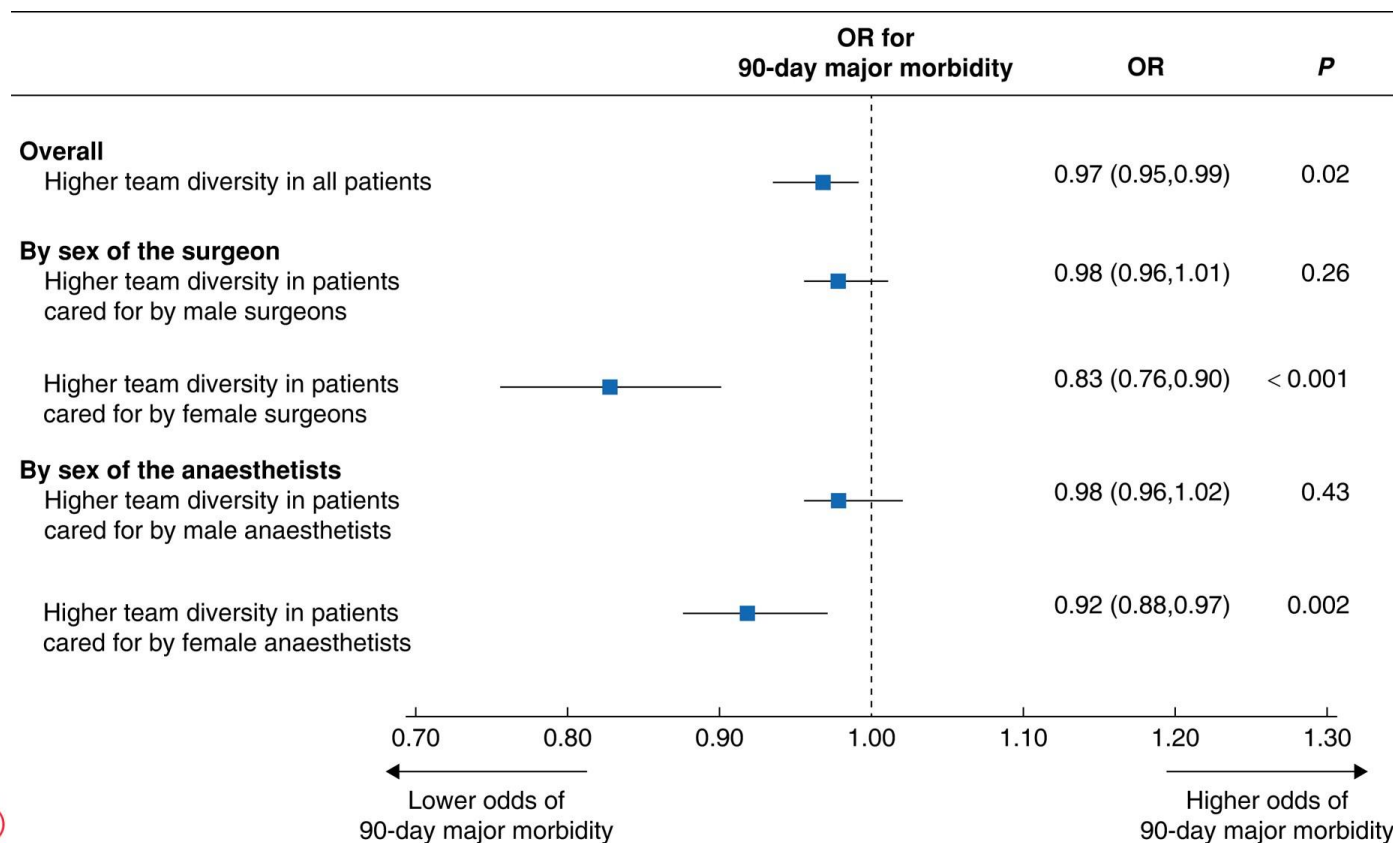
JOURNAL ARTICLE

Association between anaesthesia–surgery team sex diversity and major morbidity

[Julie Hallet](#) , [Rinku Sutradhar](#), [Alana Flexman](#), [Daniel I McIsaac](#), [François M Carrier](#), [Alexis F Turgeon](#), [Colin McCartney](#), [Wing C Chan](#), [Natalie Coburn](#), [Antoine Eskander](#) ... [Show more](#)

BJS, Volume 111, Issue 5, May 2024, znae097, <https://doi.org/10.1093/bjs/znae097>

Published: 15 May 2024 [Article history](#) ▼




XXIX IFSO
World Congress

1-4 September 2026
Toronto, Canada

Centres with **>35% female** anaesthesia-surgery teams

→ 3% lower odds 90-d major morbidity



Communicating with structure

Surgical Safety Checklist

World Health Organization | Patient Safety

Before induction of anaesthesia
(with at least nurse and anaesthetist)

- Has the patient confirmed his/her identity, site, procedure, and consent?
☐ Yes
- Is the site marked?
☐ Yes
☐ Not applicable
- Is the anaesthesia machine and medication check complete?
☐ Yes
- Is the pulse oximeter on the patient and functioning?
☐ Yes
- Does the patient have a:
Known allergy?
☐ No
☐ Yes
Difficult airway or aspiration risk?
☐ No
☐ Yes, and equipment/assistance available
Risk of >500ml blood loss (7ml/kg in children)?
☐ No
☐ Yes

Before skin incision
(with nurse, anaesthetist and surgeon)

- Confirm all team members have introduced themselves by name and role.
- Confirm the patient's name, procedure, and where the incision will be made.
- Has antibiotic prophylaxis been given within the last 60 minutes?
☐ Yes
☐ Not applicable
- Anticipated Critical Events**
To Surgeon:
☐ What are the critical or non-routine steps?
☐ How long will the case take?
☐ What is the anticipated blood loss?
To Anaesthetist:
☐ Are there any patient-specific concerns?
To Nursing Team:
☐ Has sterility (drapes, equipment) been confirmed?
☐ Are there equipment concerns?
Is essential information shared?
☐ Yes
☐ Not applicable

Before patient leaves operating room
(with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:

- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:

- ☐ What are the key concerns for recovery and management of this patient?



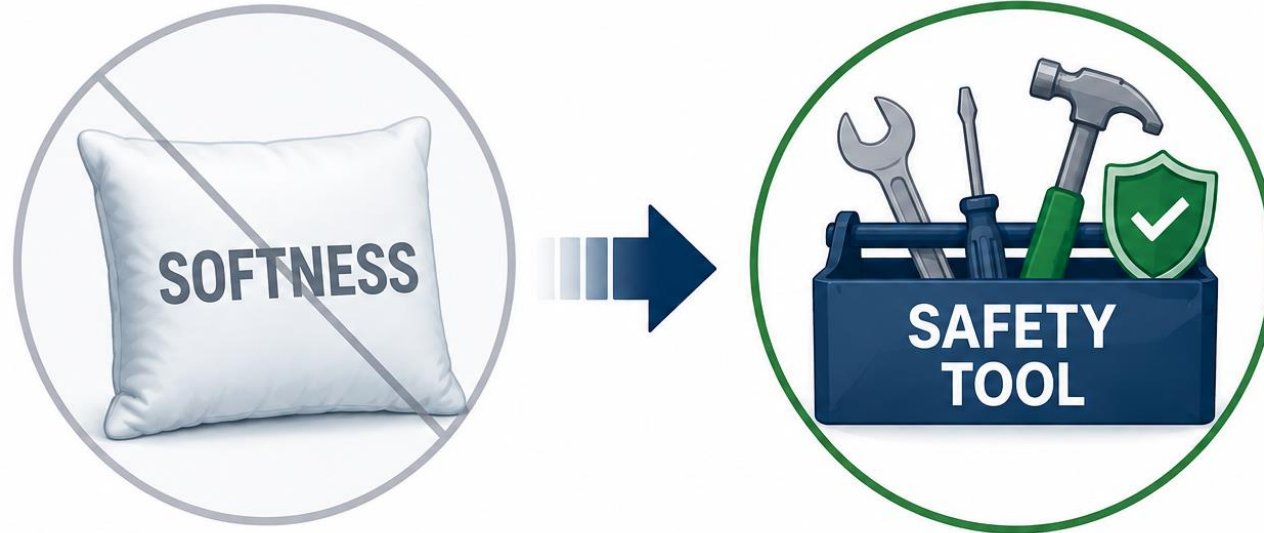
Complications ↓ from 11% to 7%

Mortality ↓ from 1.5% to 0.8%

Largely through communication and reliability, not new technology



Psychological safety



Not about being nice or avoiding tough conversations.

An essential tool that enables speaking up, learning, and preventing harm.



Speak up without fear



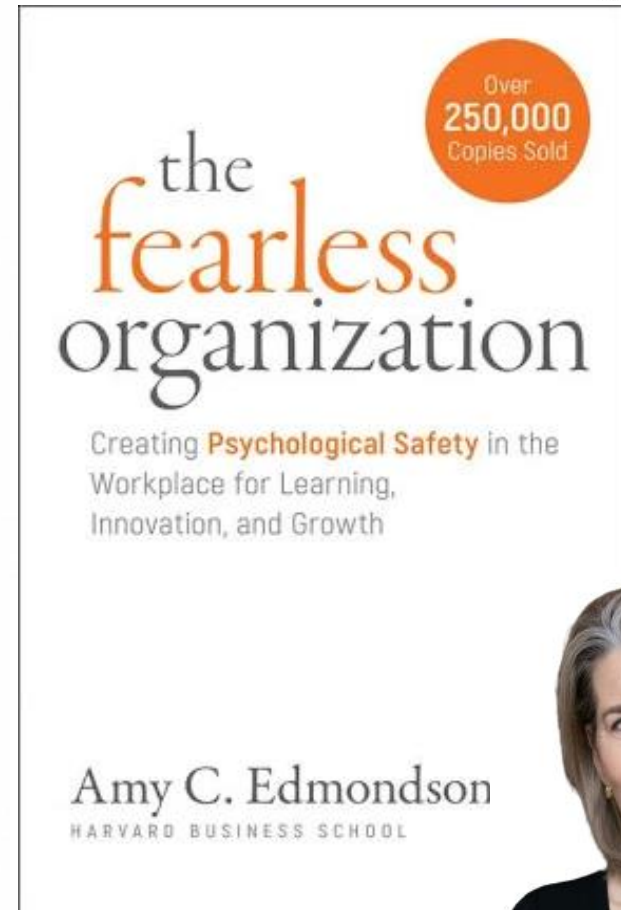
Learn from mistakes



Work together better



Keep patients and teams safe

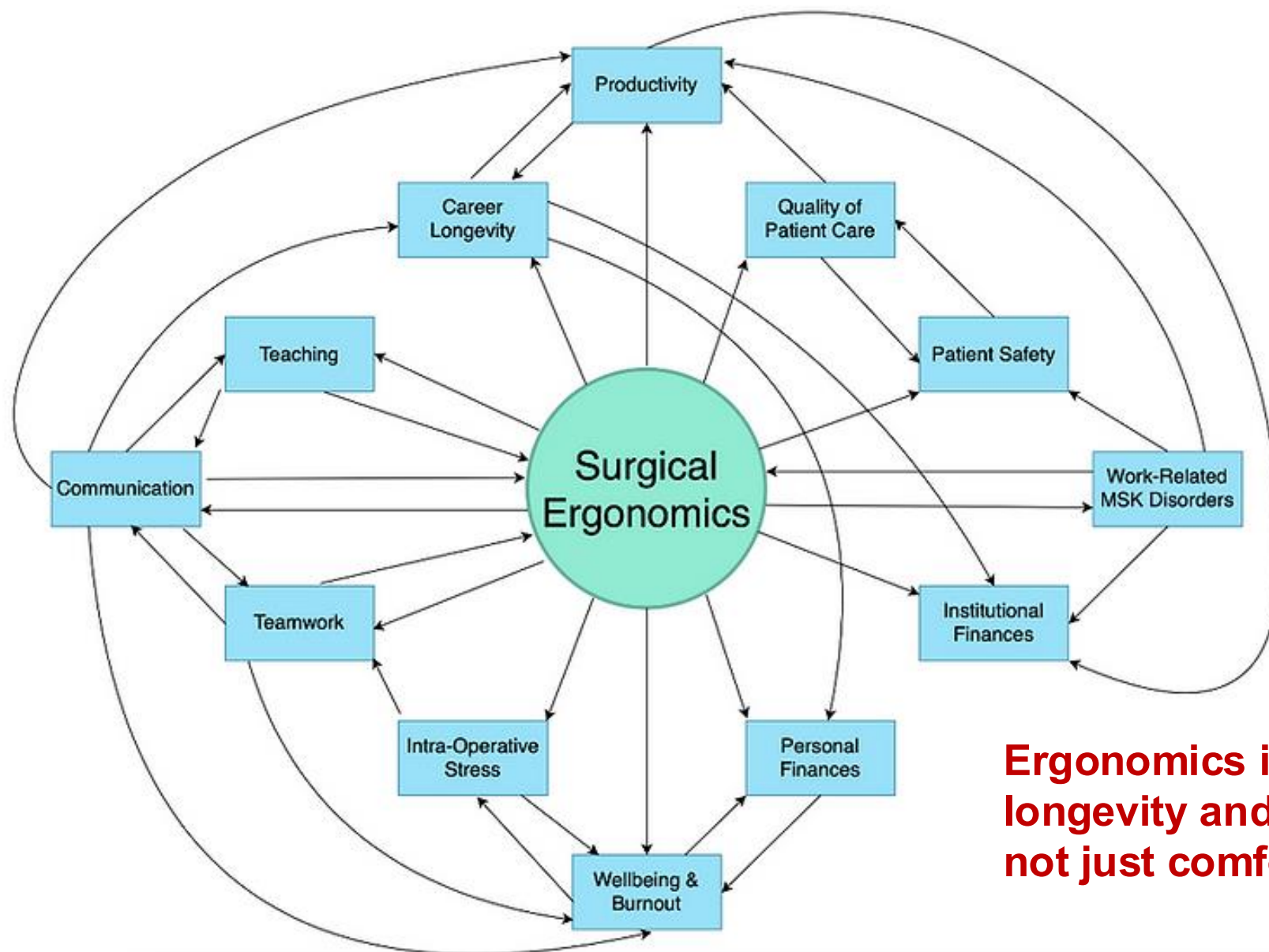


Psychological safety facilitates innovation

METHODS:

- 16 cardiac OR teams
- New surgical technology | Interviews, observation & surveys
- Leadership, psychological safety & team learning
- **Psychological safety** enabled **speaking up**
- Deliberate **signalling** and **team coaching** to speak up
 - Downplayed OR team's perceived risk of speaking up
- Leaders who **flattened hierarchy** improved team learning
- Better team learning predicted **successful innovation**





**Ergonomics is career
longevity and performance,
not just comfort.**



One size does not fit all

Smaller-handed surgeons experience significantly greater difficulty, discomfort & fatigue with MIS instruments

- **73%** of surgeons with glove size <6.5 report problems

Women are disproportionately affected

- Median glove size **6.0 in women vs 7.5 in men**
- Commercially available instruments traditionally tailored to male anthropometry
- **77%** of female surgeons report instrument-related Musculoskeletal (MSK) issues



ERGONOMIC CONSIDERATIONS for Laparoscopic Surgeons

SCREEN ANGLE & DISTANCE

- Position screens at eye level or slightly below
- 50–70 cm viewing distance
- Reduces neck and eye strain



STACK HEIGHT

- Keep frequently used equipment between waist and shoulder height
- Minimizes reaching and bending



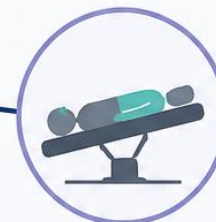
TABLE HEIGHT

- Set table at or just below elbow height
- Allows relaxed shoulders and neutral posture
- Adjust for surgeon height and procedure



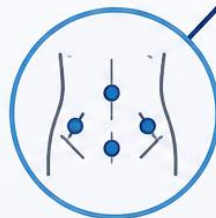
TABLE POSITION (LATERAL TILT)

- Lateral tilt (10–15°) helps bring anatomy closer
- Reduces shoulder abduction and strain



PORT POSITION

- Plan port placement to align with natural hand paths
- Avoid extreme reach or crossing
- Consider individual surgeon preferences



USE OF ASSISTANTS

- Thoughtful teamwork improves exposure and reduces physical load
- Clear communication and role assignment



POWERED INSTRUMENTS

- Reduce hand force and tissue resistance
- May decrease fatigue and improve precision
- Consider weight, balance and handpiece design



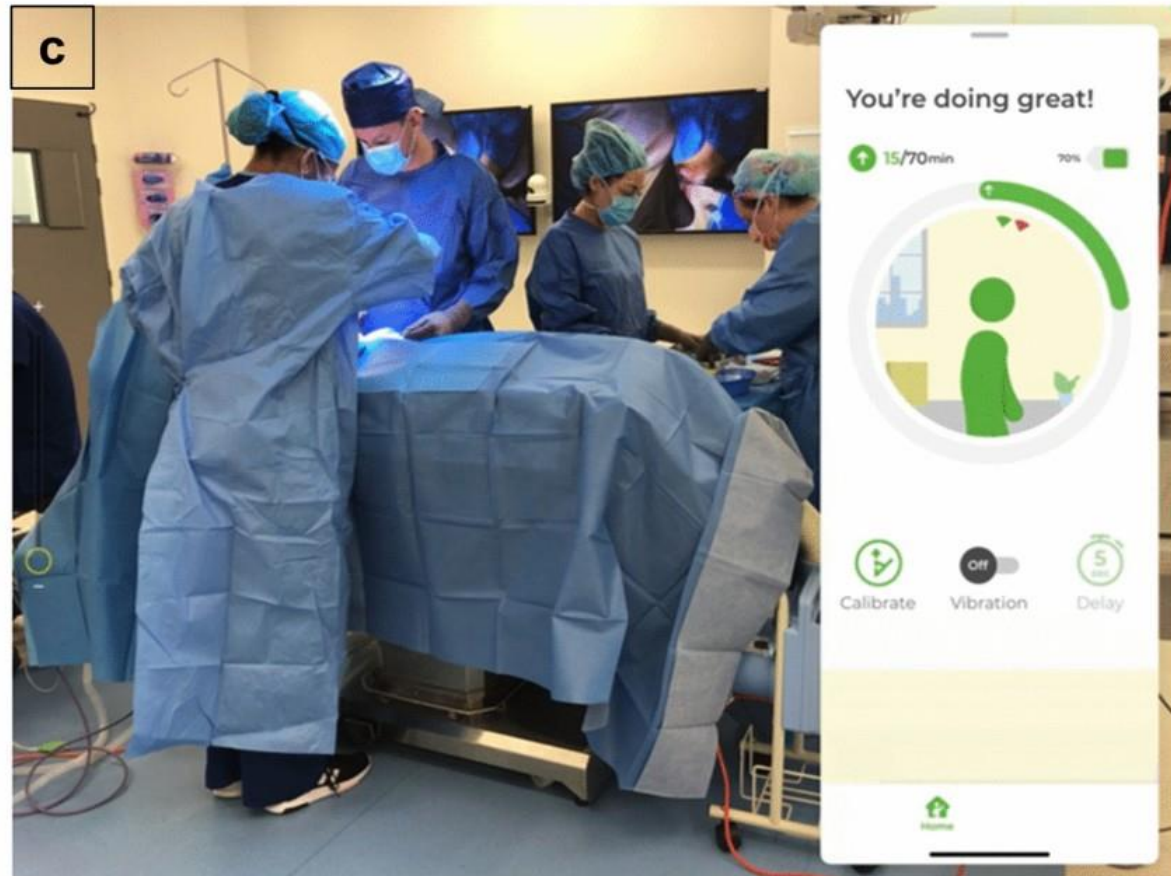
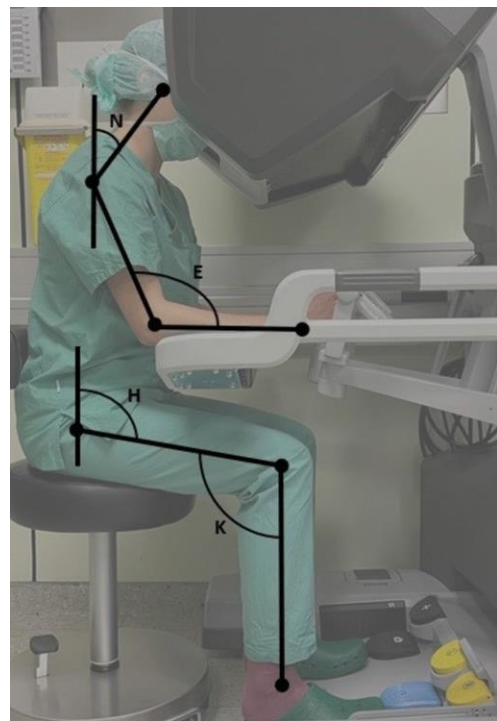
OPTIMAL SURGEON ERGONOMICS

Enhance performance

 Reduce fatigue

 Improve patient care





Impact of Intraoperative Ergonomic Microbreaks on Surgeons' Well-Being and Performance: A Systematic Review

Gabriel Heierli ¹, Fabian Grass ¹, Luís C Pereira ², Jean Pellegrini ³, David Fuks ¹, Dieter Hahnloser ¹, Martin Hübner ¹

- 10 RCTs, 284 subjects
- Improved ≥ 1 outcome (6/10 RCTs)
 - Pain/discomfort
 - Mental focus
 - Fatigue
 - Accuracy
- No increase in operative duration

Microbreak options:

Pause 20 sec every 20 min
Stretching

Diaphragmatic breathing
Active movements e.g.
rotational and isometric muscle
activation

Ipswich Microbreak Technique
(30 sec series of 3 cervical rotations, 3 chin
tucks, and 3 sternum elevations)



OR-Stretch™ Intraoperative Stretches

OR-Stretch was designed by Ergonomists, OT/PTs and Surgeons to counteract the effects of intraoperative strains on the surgeons and surgical teams without lengthening surgical duration and can be performed without breaking scrub

[Start Stretching](#)

orstretch.mayoclinic.org

XXIX IFSO World Congress

1-4 September 2026
Toronto, Canada



Stand tall.
Inhale/ exhale.



Shrug shoulders,
then back and down.



Push hands away following
with shoulders. Pinch blades
together as hands return.



Flip hands and
repeat push
away.



Face ceiling; inhale
and exhale. Tuck
chin to chest;
inhale and exhale.



Right foot forward; turn head
right. Follow with shoulders;
side bend left.



Left foot forward; turn head
left. Follow with shoulders;
side bend right.



Clench gluteal muscles.
Arch low back.



Clench gluteal
muscles.
Abdominal crunch.



Inhale/exhale.



SURGICAL ERGONOMICS
SPEAKING • COACHING • CONSULTING

2026 AWS ANNUAL CONFERENCE

SEPTEMBER 25 & 26, 2026 | WASHINGTON, DC

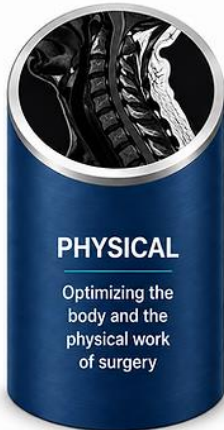
ERGONOMICS LAB | SATURDAY, SEPTEMBER 26

Design matters. Our bodies matter. Our careers matter.
LET'S BUILD A SURGICAL ENVIRONMENT THAT WORKS FOR ALL OF US.



XXIX IFSO
World Congress

1-4 September 2026
Toronto, Canada



PHYSICAL

Optimizing the
body and the
physical work
of surgery



COGNITIVE

Enhancing focus,
decision making,
and mental
performance



SYSTEMS

Designing better
processes,
teams, and
work environments

2026 Annual Symposium



Friday, November 6, 2026



10:00 AM – 5:00 PM Eastern Standard Time



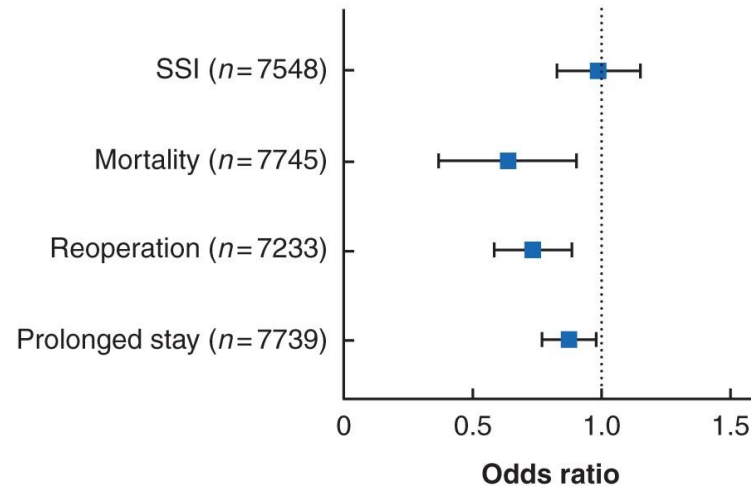
Virtual via Zoom

TORONTO2026 The Future of Obesity Management:
From Weight Loss to Health Gain

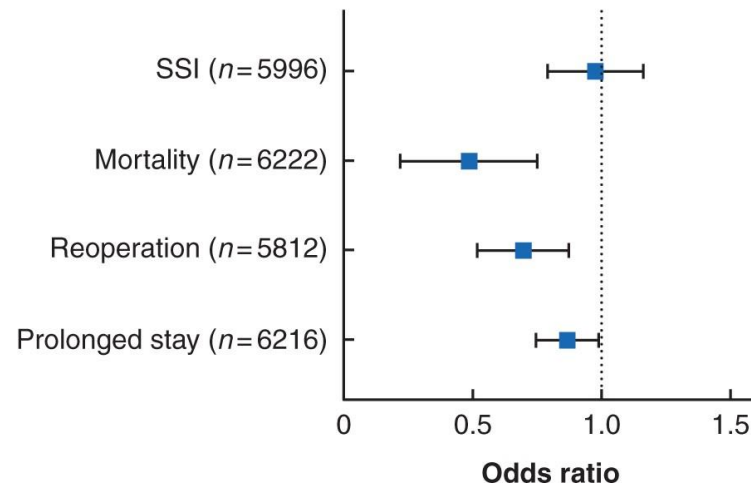


Structured intraoperative briefings

a Intention-to-treat analysis



b Per-protocol analysis



StOP? Protocol

STATUS of the operation
Next steps and proximal **OBJECTIVES**
Potential upcoming **PROBLEMS**
Encourage team members to voice their observations or to ask questions (?)

- At natural break points
- Increase team situational awareness
- Cohort study: 4 centres, 2015-18
- 9 months study period pre- and post-introduction
- N=7745 operations



The 60-second OR RESET

R — REASSESS

Where are we? What's next? What could go wrong?

E — ERGONOMICS

Posture • table • screen • pedals • instruments

S — SPEAK UP

Any concerns? Anyone seeing something I'm not?

E — EXHALE

Release • stretch • refocus

T — TEAM

Everyone OK to continue?

60 seconds. At a natural operative transition points. No equipment. No cost.



Improving quality of life in the OR

Better communication → safer teams

Better psychological safety → stronger learning cultures

Better ergonomics → healthier surgeons

Better working lives → longer, more fulfilling surgical careers



XXX IFSO WORLD CONGRESS

"Advancing Multimodal Obesity Care"

24-27 August 2027

ifso2027.org



IFSO
PARIS 2027

See you in

PARIS





**34th EUROPEAN
CONGRESS
ON OBESITY**
www.eco2027.org

34TH EASO & 15TH IFSO-EC JOINT CONGRESS

18-21 May 2027 – Munich, Germany



**15th IFSO EUROPEAN
CHAPTER
CONGRESS**
www.ifso-ec2027.com

**FOLLOW US ON OUR
SOCIAL MEDIA CHANNELS!**



@ifso_ec



IFSO European Chapter
Group



IFSO European
Chapter



@ifso_ec