



Jak to vidím já
po letech praxe...

JAN BLÁHA

**KLINIKA ANESTEZIOLOGIE, RESUSCITACE
A INTENZIVNÍ MEDICÍNY**



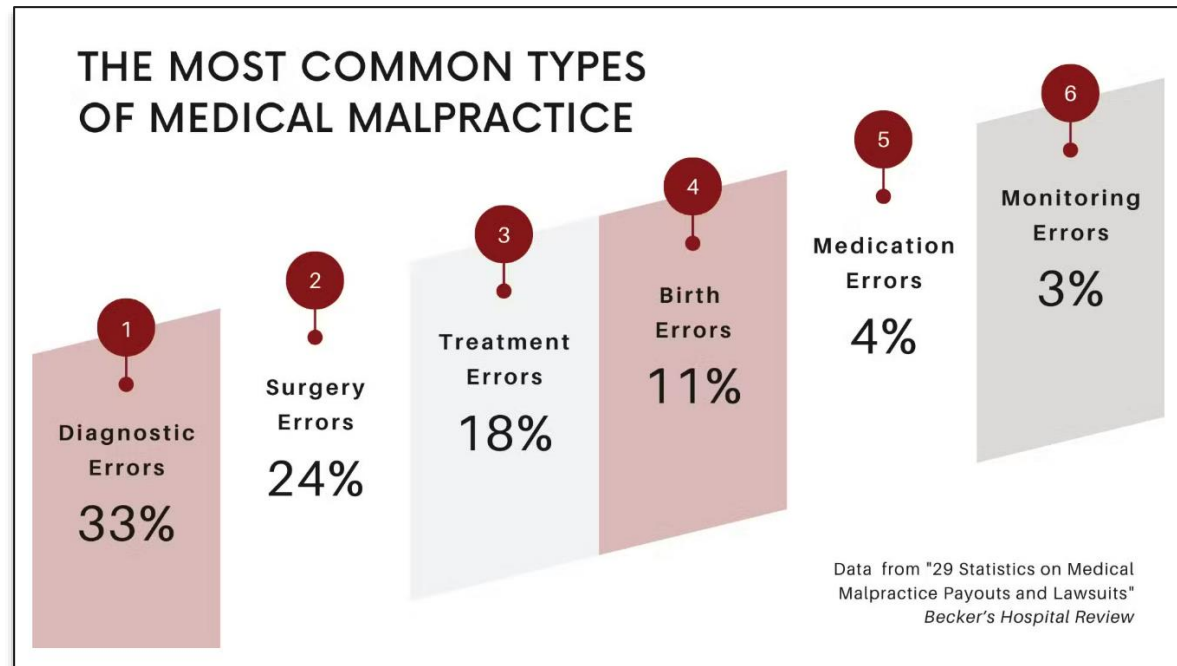
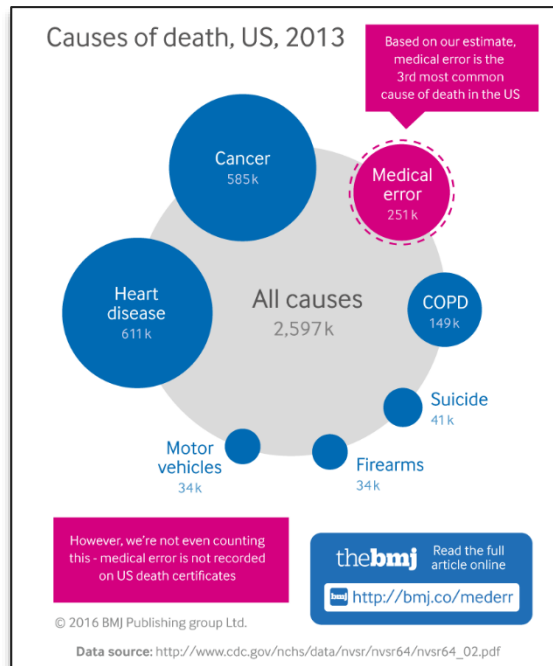
**1. LÉKAŘSKÁ
FAKULTA**
Univerzita Karlova



**VŠEOBECNÁ FAKULTNÍ
NEMOCNICE V PRAZE**

jan.blaha@vfn.cz

Chyby se děly, dějí a dít budou ...

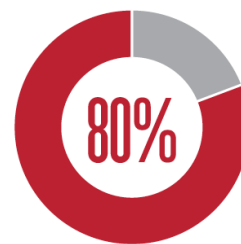
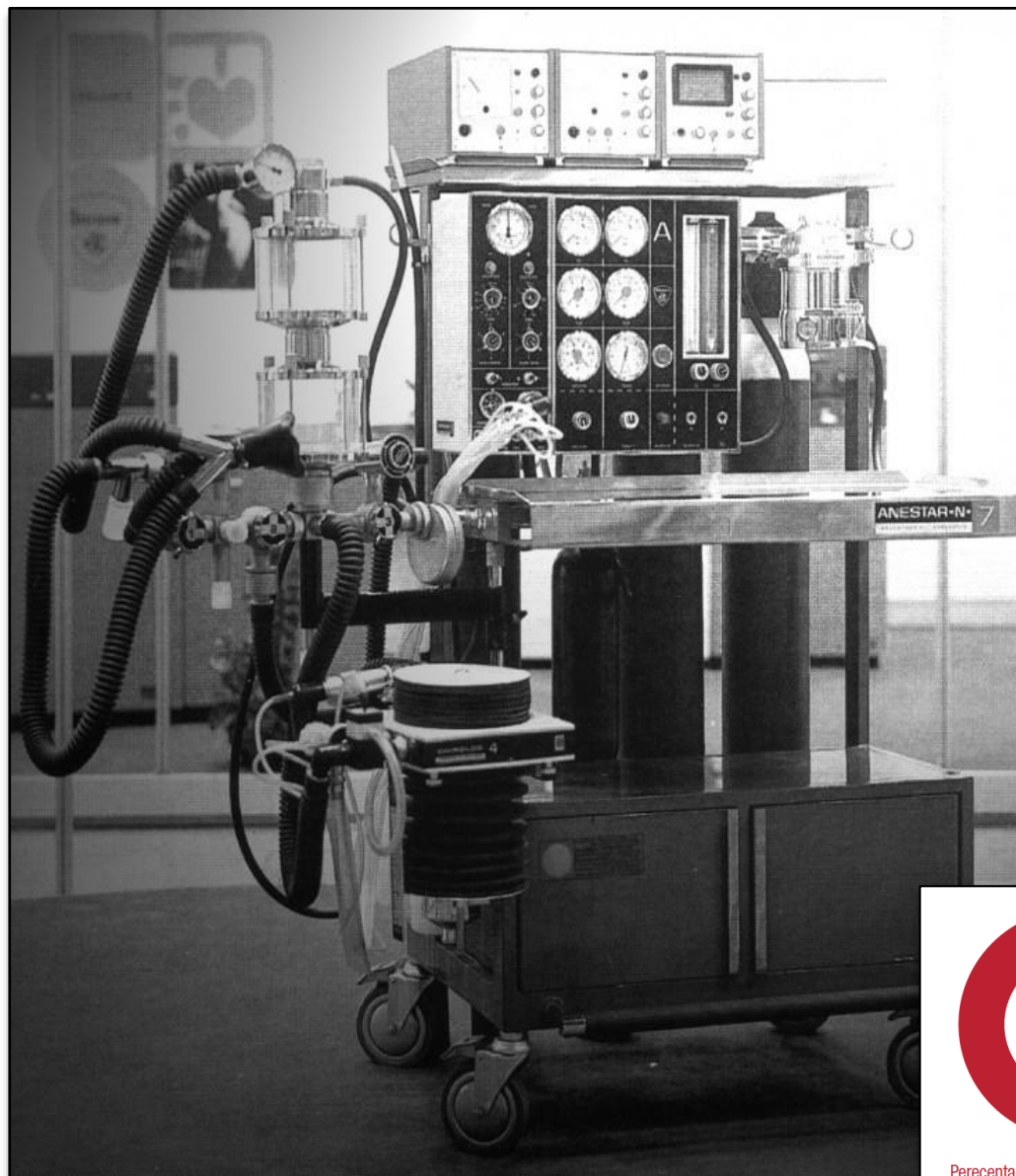




TO
ZVLÁDNEŠ ...

Table 2: Risk factors for errors during anaesthesia^[26]

Inadequate total experience	77
Inadequate familiarity with equipment/device	45
Poor communication with team	27
Haste	26
Inattention/carelessness	26
Over-reliance on equipment	24
Over-dependency on other personnel	24
Failure to perform normal check	22
Lack of experience	22
Insufficient supervision	18
Unfamiliar environment or colleagues	18
Visual field restricted	17
Mental and physical factors	16
Inadequate familiarity with surgery	14
Distraction	13
Poor labelling of controls, drug	12
Supervision-related factors	12
Situation precluded normal precautions	10
Inadequate familiarity with the anaesthetic technique	10
Teaching activity underway	09
Apprehension	08
Emergency case	06
Demanding or difficult case	06
Boredom	05
Nature of activity related	05
Insufficient preparation	03
Slow procedure	03
Others	03
Total	481



Percentage of serious medical errors due to miscommunication between health professionals during transfers of care.



Table 2: Risk factors for errors during anaesthesia^[26]

Inadequate total experience	77
Inadequate familiarity with equipment/device	45
Poor communication with team	27
Haste	26
Inattention/carelessness	26
Fatigue	24
Excessive dependency on other personnel	24
Failure to perform normal check	22
Training or experience	22
Lack of enough supervision	18
Environment or colleagues	18
Visual field restricted	17
Mental and physical factors	16
Inadequate familiarity with surgery	14
Distraction	13
Poor labelling of controls, drug	12
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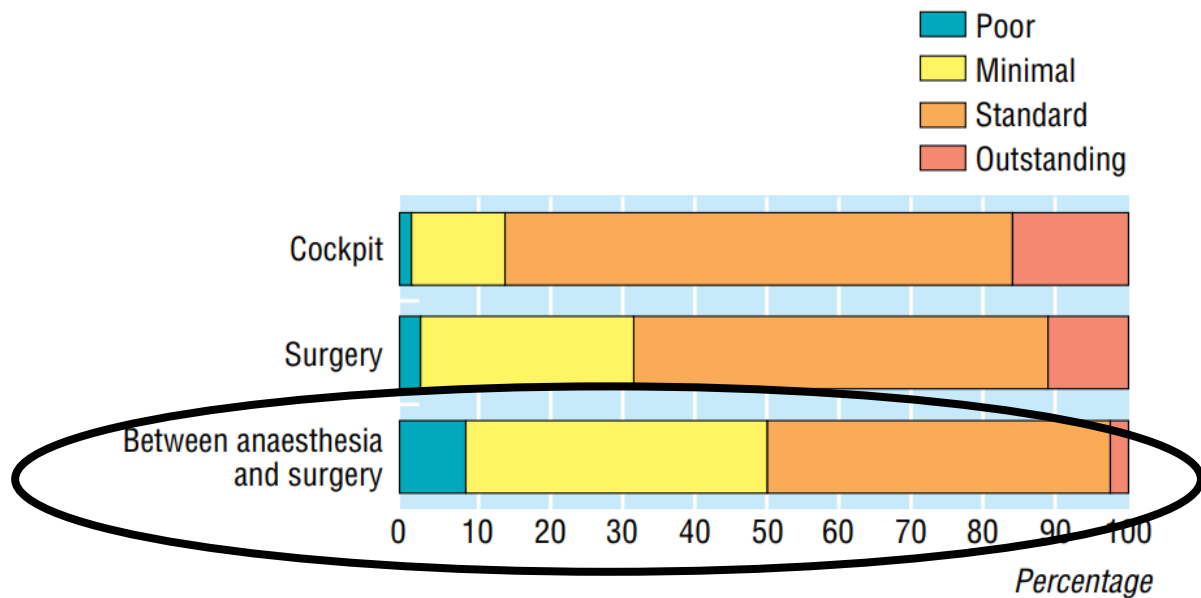


Fig 2 Trained observers' ratings of teamwork in aviation, surgery, and between surgery and anaesthesia

J Bryan Sexton et al. BMJ. 2000 Mar 18; 320(7237): 745–749

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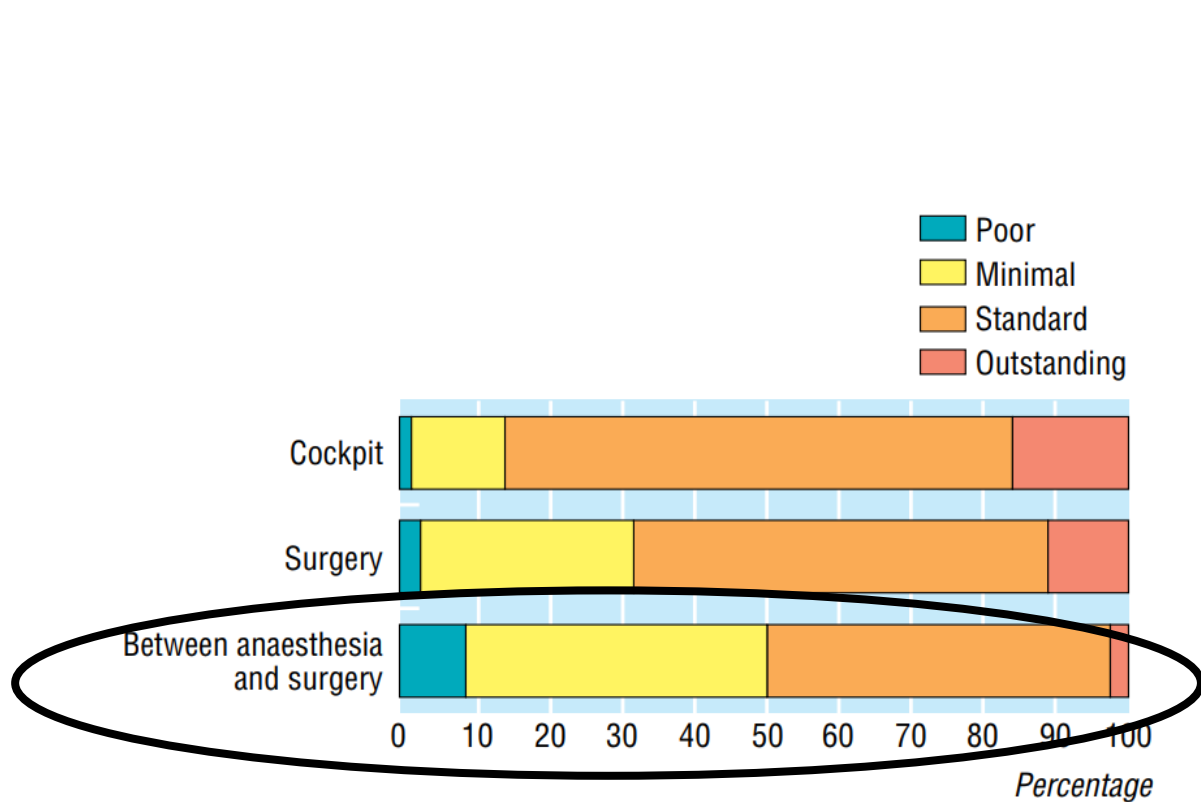


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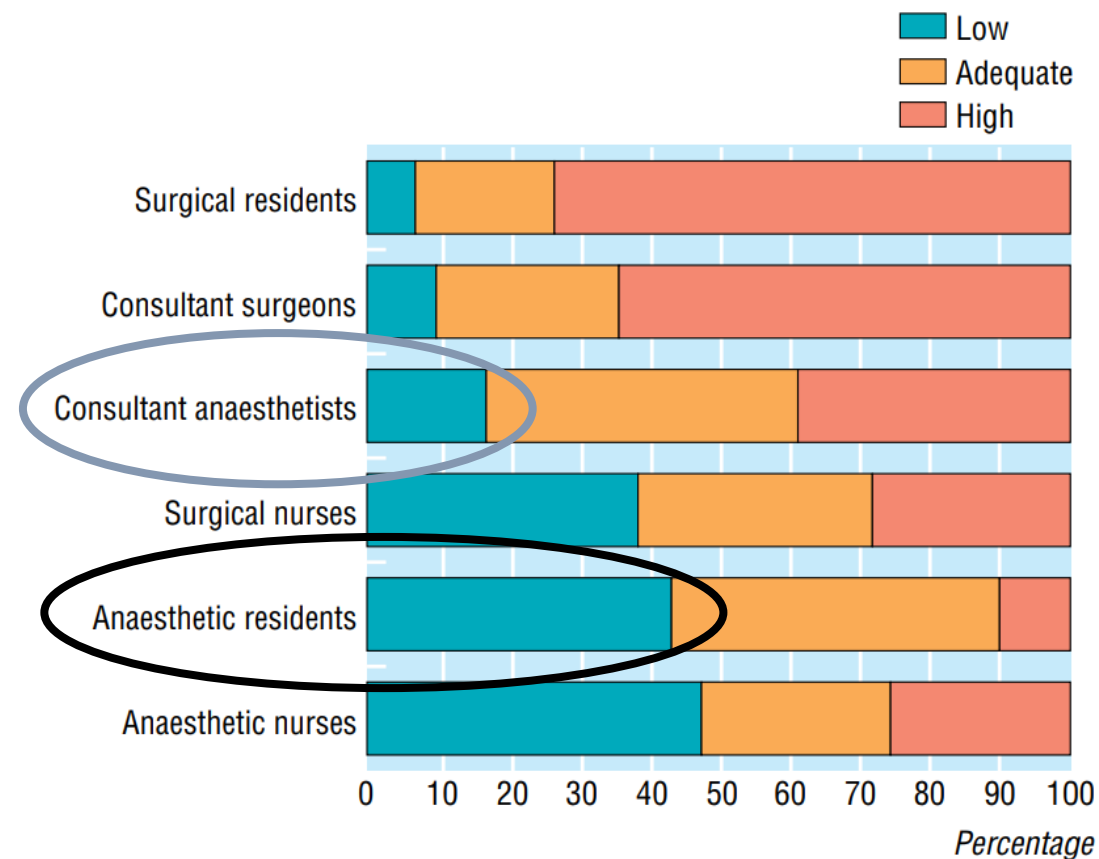


Fig 1 Rating of teamwork with consultant surgeons

**S kým a jak komunikuje
chirurg konzultant**

Mladí by neměli zpochybňovat rozhodnutí učiněná zkušenými

Responses to questions on dealing with stress and teamwork according to discipline and position. Values are percentages

Item description	Anaesthetic			Surgical			Intensive care		
	Nurse (n=162)	Resident (n=60)	Consultant (n=104)	Nurse (n=175)	Resident (n=52)	Consultant (n=167)	Registered nurse (n=109)	Consultant or fellow (n=31)	Pilots (n=7558)
Junior team members should not question the decisions made by senior team members									
Agree	13	15	16	14	21	24	2	3	2
Neutral	17	13	10	17	21	21	4	3	1
Disagree	70	70	84	69	58	55	94	94	97

J Bryan Sexton et al. BMJ. 2000 Mar 18; 320(7237): 745–749

Mental Workload in the Operating Room

NASA-Task Load Index (NASA TLX) (n=30)

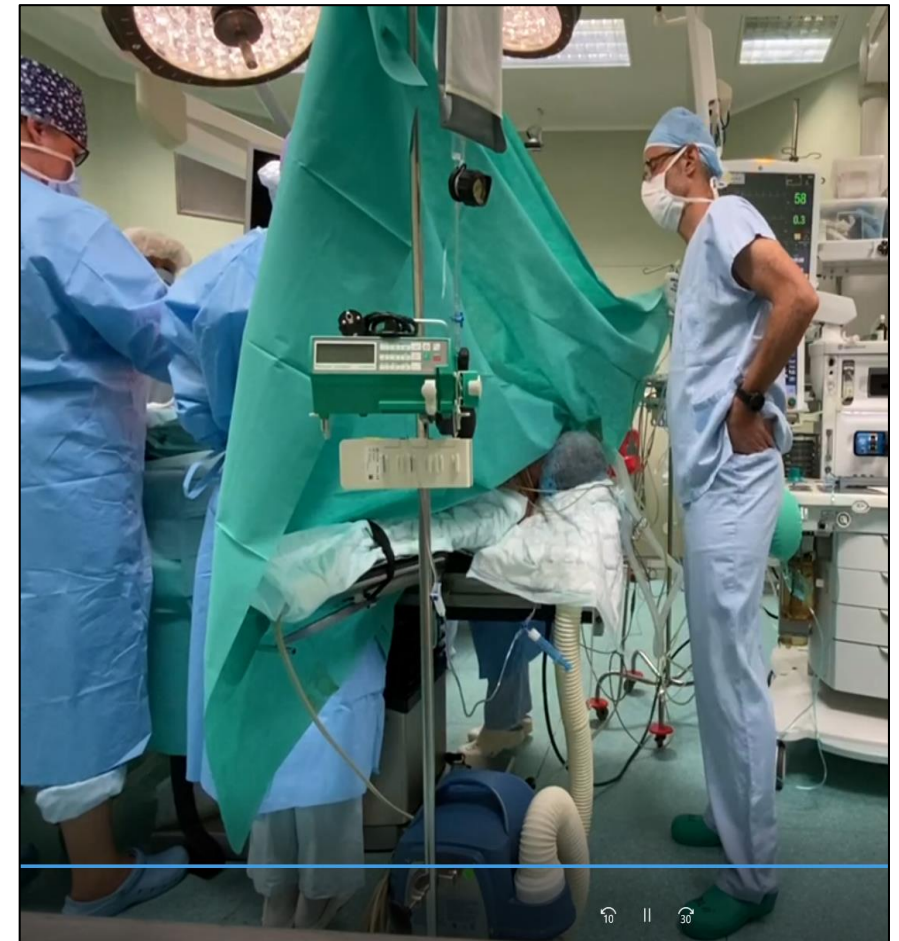
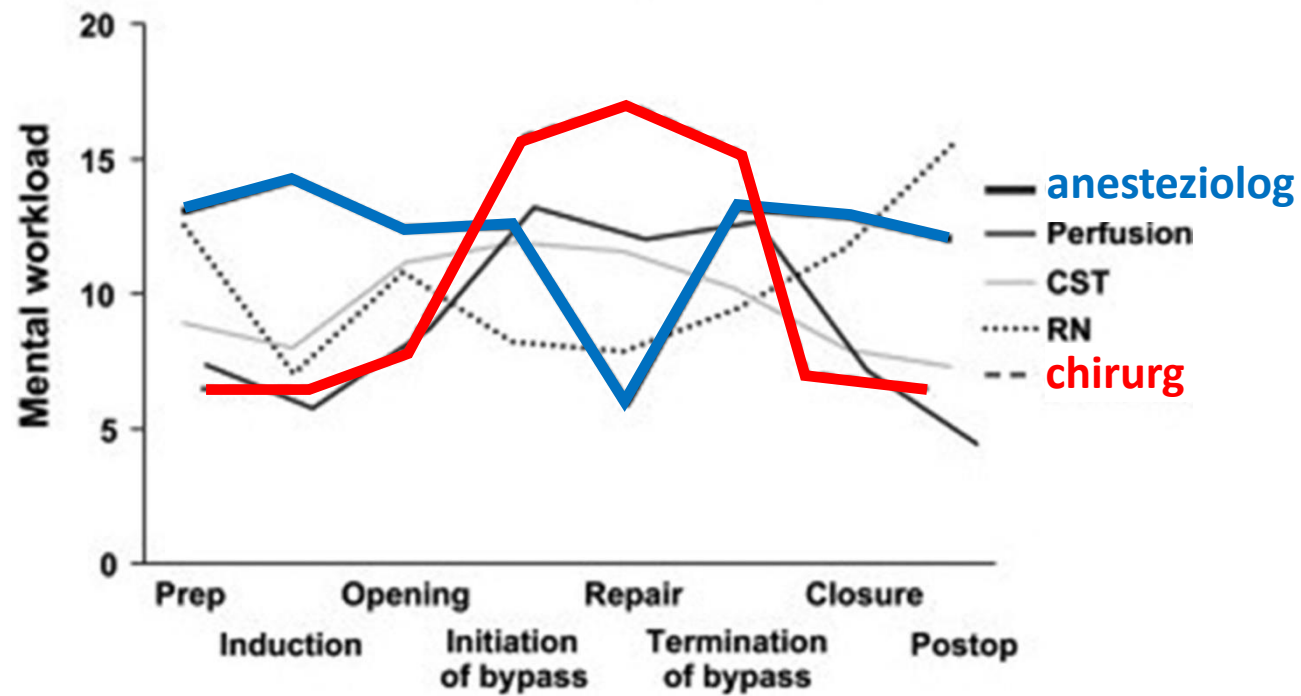


Figure 4: Mental workload in the cardiac surgery operating room varies across the cardiac surgery procedure for individual providers depending on task complexity and responsibilities. CRNA indicates certified registered nurse anesthetist; CST, certified surgical technologist; NASA, National Aeronautics and Space Administration; Postop, postoperative; Prep, surgical preparation; RN, registered nurse; and TLX, Task Load Index. Reprinted from Wadhera et al²⁶³ with permission from Elsevier. Copyright © 2010, The American Association for Thoracic Surgery.

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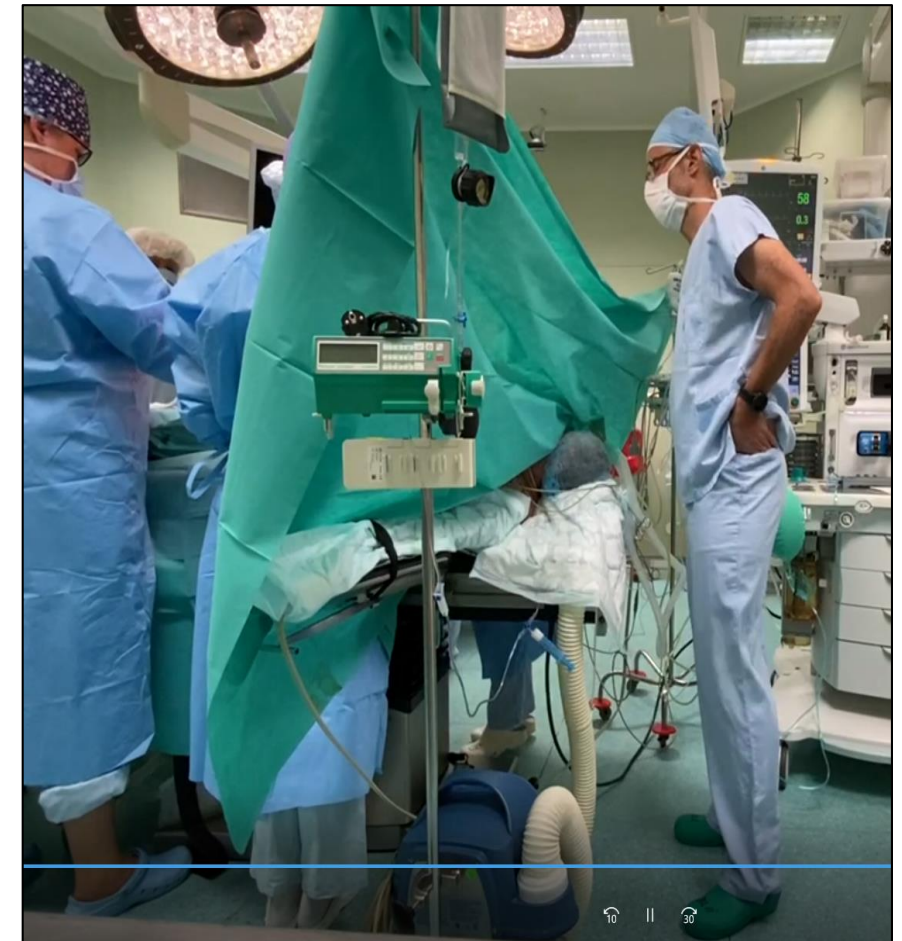
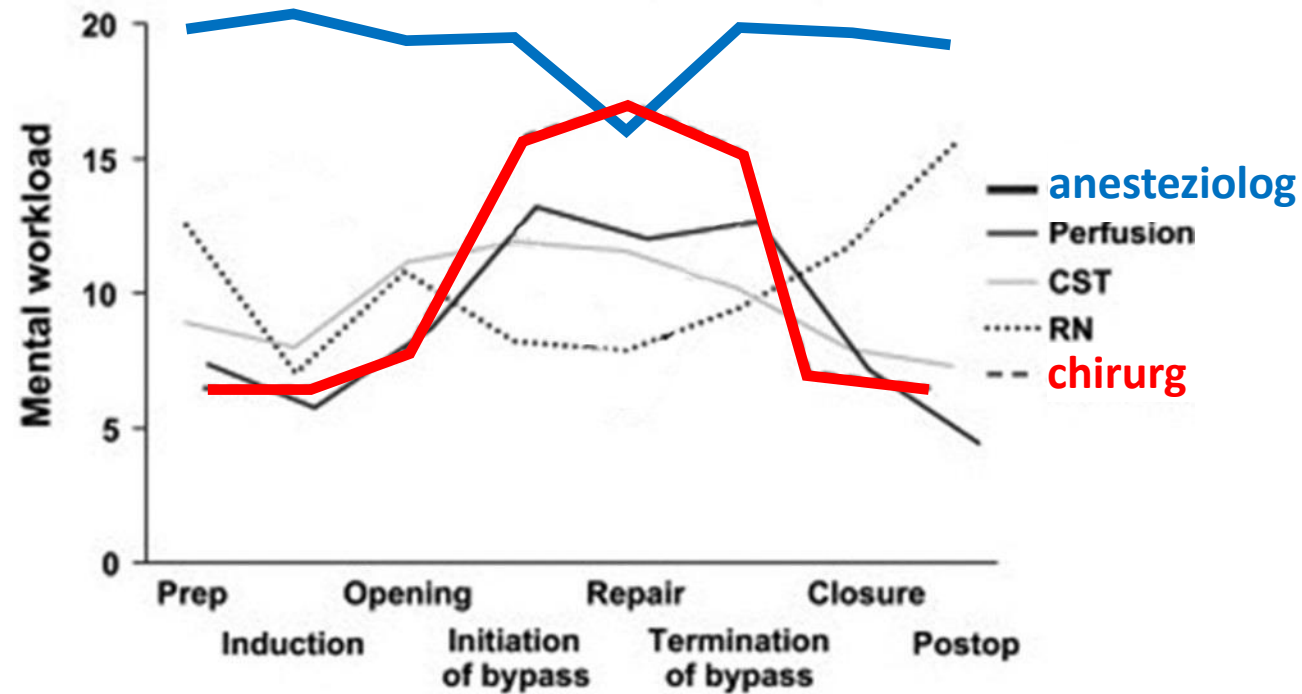


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Preoperative Briefing in the Operating Room

Shared Cognition, Teamwork, and Patient Safety

Yael Einav, PhD; Daniel Gopher, PhD; Itzik Kara, RN, BSN, MHA; Orna Ben-Yosef, RN, BSN; Margaret Lawn, RN; Neri Laufer, MD; Meir Liebergall, MD; and Yoel Donchin, MD

Contemporary preoperative team briefings conducted to improve patient safety focus mainly on supplying identification details regarding the patient and the surgical procedure. Drawing on cognitive theory principles, in this study a briefing protocol was developed that presents a broader perspective model of the patient and the planned procedure. In addition to customary identification details and drug sensitivities, the new briefing also includes review of significant background information, needed equipment, planned surgery stages, and so forth. The briefing content was developed following 130 continuous, nonstructured observations conducted in gynecologic and orthopedic operating rooms. The briefing form was designed as a large poster hung in a visible position on the operating room wall. The poster guides the team members (ie, nurses, surgeons, and anesthesiologists) in their conduct. Briefing is conducted orally, and no written records are required. The number of nonroutine events (ie, situations that, if not corrected, might lead to patient harm) observed in the 130 surgeries conducted without briefing was compared with the number of events in 102 surgeries in which briefing was conducted. There was a 25% reduction in the number of nonroutine events when briefing was conducted and a significant increase in the number of surgeries in which no nonroutine event was observed. Team members evaluated the briefing as most valuable for their own work, the teamwork, and patient safety. Following the study, the new briefing format was accepted and adopted for routine use. Team briefings designed to supply a broader-perspective surgery model may be an easy-to-apply tool to reduce the number of nonroutine events during surgery and increase patient safety.

CHEST 2010; 137(2):443-449

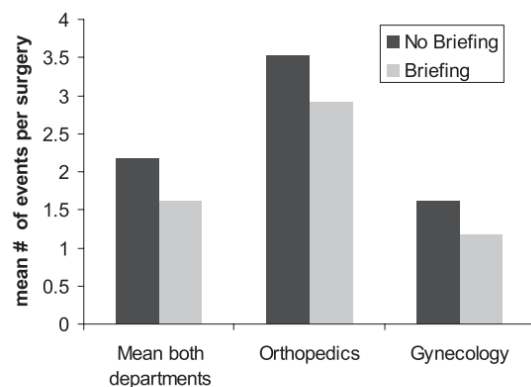


FIGURE 3. Mean number of nonroutine events per surgery.

Table 1—Nonroutine Events

Category of Nonroutine Event	Examples
1. Information	Missing hemoglobin value prior to surgery Wrong radiograph on screen
2. Lack of situation awareness (knowing what is happening during surgery)	The anesthesiologist begins to wake the patient up while the surgeon declares that they are actually in the middle of the procedure rather than at the end
3. Equipment improperly assembled or not prepared on time	The diameter of the laparoscope is too big The laparoscopic screen is not properly connected
4. Problems with teamwork	Patient moved to recovery without the anesthesiologist who is busy completing paperwork The surgeon requests an additional instrument, but there is no response from the circulating nurse The nurse tilts the table at the end of surgery without coordinating with the anesthesiologist
5. Compliance with procedures	Surgeons begin skin closure before the nurses finish their count
6. Lack of operational knowledge	Nurse does not know how to operate the fluid regulator
7. Equipment failure	Drill does not work





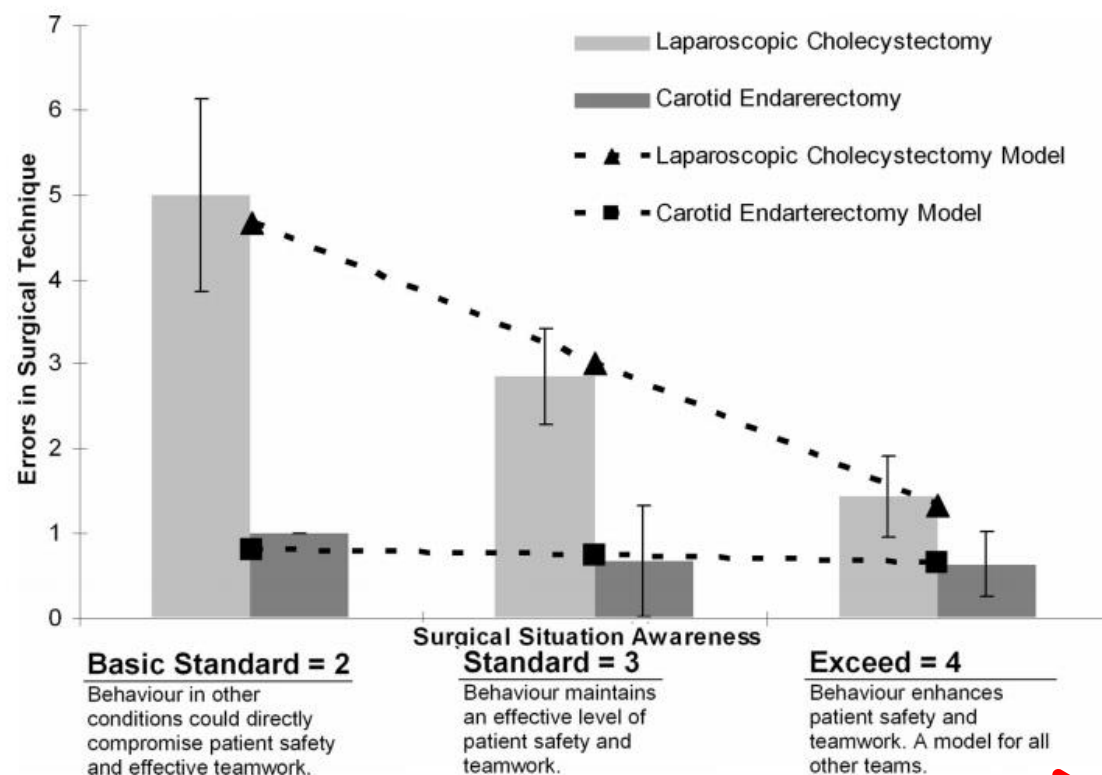
Teamwork and Error in the Operating Room

Analysis of Skills and Roles

K. Catchpole, PhD, A. Mishra, MRCS, A. Handa, FRCS, and P. McCulloch, FRCS

Catchpole et al

Annals of Surgery • Volume 247, Number 4, April 2008



Stoupající komplikovanost →

FIGURE 3. Effect of surgical situation awareness on errors in surgical technique. As surgical situation awareness increases, surgical errors decrease. Although still significant, the effect is considerably less marked in carotid endarterectomy.



FEBRUARY 9, 2018

Study spotlights risks in anesthesiology

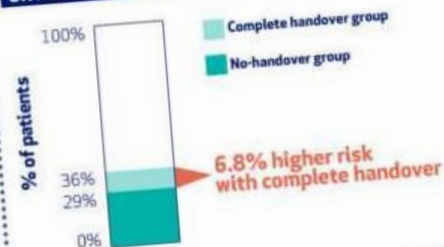
by Adela Talbot, University of Western Ontario

Handover of anesthesia care associated with adverse patient outcomes after surgery

Study looked at data for all adult patients in Ontario who had neurosurgery, cardiac, vascular, thoracic, abdominal, pelvic or urologic surgery between 2009 and 2015. Researchers compared patient outcomes in surgeries with no handover and those with a complete handover.

A complete handover is when the initial anesthesiologist hands over care to another anesthesiologist and does not return to the operating room.

RISK OF ALL-CAUSE DEATH, HOSPITAL READMISSION OR MAJOR COMPLICATION WITHIN 30 DAYS OF SURGERY



6.8% higher risk with complete handover

Researchers say national guidelines for anesthesia handover could potentially reduce risks.

Institute for Clinical Evaluative Sciences
ices.on.ca

LAWSON
RESEARCH INSTITUTE

Western

Most patients are totally unaware that the anesthesiologist who performs surgery might not be the same one who brings them out even if the handover between the two doctors has been linked to a series of negative outcomes, including an increased likelihood of death.

JAMA | Original Investigation

Association Between Handover of Anesthesia Care and Adverse Postoperative Outcomes Among Patients Undergoing Major Surgery

Philip M. Jones, MD, MSc; Richard A. Cherry, MD; Britney N. Allen, MSc; Krista M. Bray Jenkyn, PhD; Salimah Z. Shariff, PhD; Suzanne Flier, MD, MSc; Kelly N. Vogt, MD, MSc; Duminda N. Wijeyesundera, MD, PhD

IMPORTANCE Handing over the care of a patient from one anesthesiologist to another occurs during some surgeries and might increase the risk of adverse outcomes.

OBJECTIVE To assess whether complete handover of intraoperative anesthesia care is associated with higher likelihood of mortality or major complications compared with no handover of care.

DESIGN, SETTING, AND PARTICIPANTS A retrospective population-based cohort study (April 1, 2009–March 31, 2015) set in the Canadian province of Ontario) of adult patients aged 18 years and older undergoing major surgeries expected to last at least 2 hours and requiring a hospital stay of at least 1 night.

EXPOSURE Complete intraoperative handover of anesthesia care from one physician anesthesiologist to another compared with no handover of anesthesia care.

MAIN OUTCOMES AND MEASURES The primary outcome was a composite of all-cause death, hospital readmission, or major postoperative complications, all within 30 postoperative days. Secondary outcomes were the individual components of the primary outcome. Inverse probability of exposure weighting based on the propensity score was used to estimate adjusted exposure effects.

RESULTS Of the 313 066 patients in the study, 16% (16 years); 49% of surgeries were performed on an elective basis; and the median duration of surgery was 124–255 minutes. A total of 5941 (1.9%) patients underwent a handover of anesthesia care. The percentage of patients undergoing surgery with a handover of anesthesia care progressively increased each year of the study, reaching 2.9% in 2015. In the unweighted sample, the primary outcome occurred in 4.4% of the complete handover group compared with 3.6% of the no handover group. The primary outcome was statistically significantly associated with complete handover (adjusted risk ratio [aRR], 1.2% [95% CI, 0.3% to 2.7%]; $P = .01$). Secondary outcomes were also statistically significantly associated with complete handover (aRR, 1.2% [95% CI, 0.3% to 2.7%]; $P = .01$).

CONCLUSIONS AND RELEVANCE Among adults undergoing major surgery, complete handover of intraoperative anesthesia care compared with no handover was associated with a higher risk of adverse postoperative outcomes. These findings may support limiting complete anesthesia handovers.

JAMA. 2018;319(2):143–153. doi:10.1001/jama.2017.20040



3% anestezií bylo „předáno“

závažné komplikace 3.6 vs. 8% !

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Study spotlights risk

by Adela Talbot, University of Western Ontario

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ices.on.ca

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RISK OF ALL-OR MAJOR COMPLICATIONS



Medication Error

The Swiss Cheese Model

Originator: Reason



"Near Miss"
Error that was intercepted

Latent Errors
(examples)

High Reliability Organizations
(HROs) deploy
"Independent Redundancies"

- Poor handwriting
- Incomplete information
- Unclear labeling
- High workload

The Washington Post
Democracy Dies in Darkness

Along in the operating room?



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JAMA. 2018;319(2):143-153. doi:10.1001/jama.2017.20040

**TEĎ JSEM
PŘIDAL ...**

**TEĎ NA KONCI ROZHODNĚ
PŘIDÁVAT NEBUDU !**

👉!💣💣🎯💀👉♦️!!!

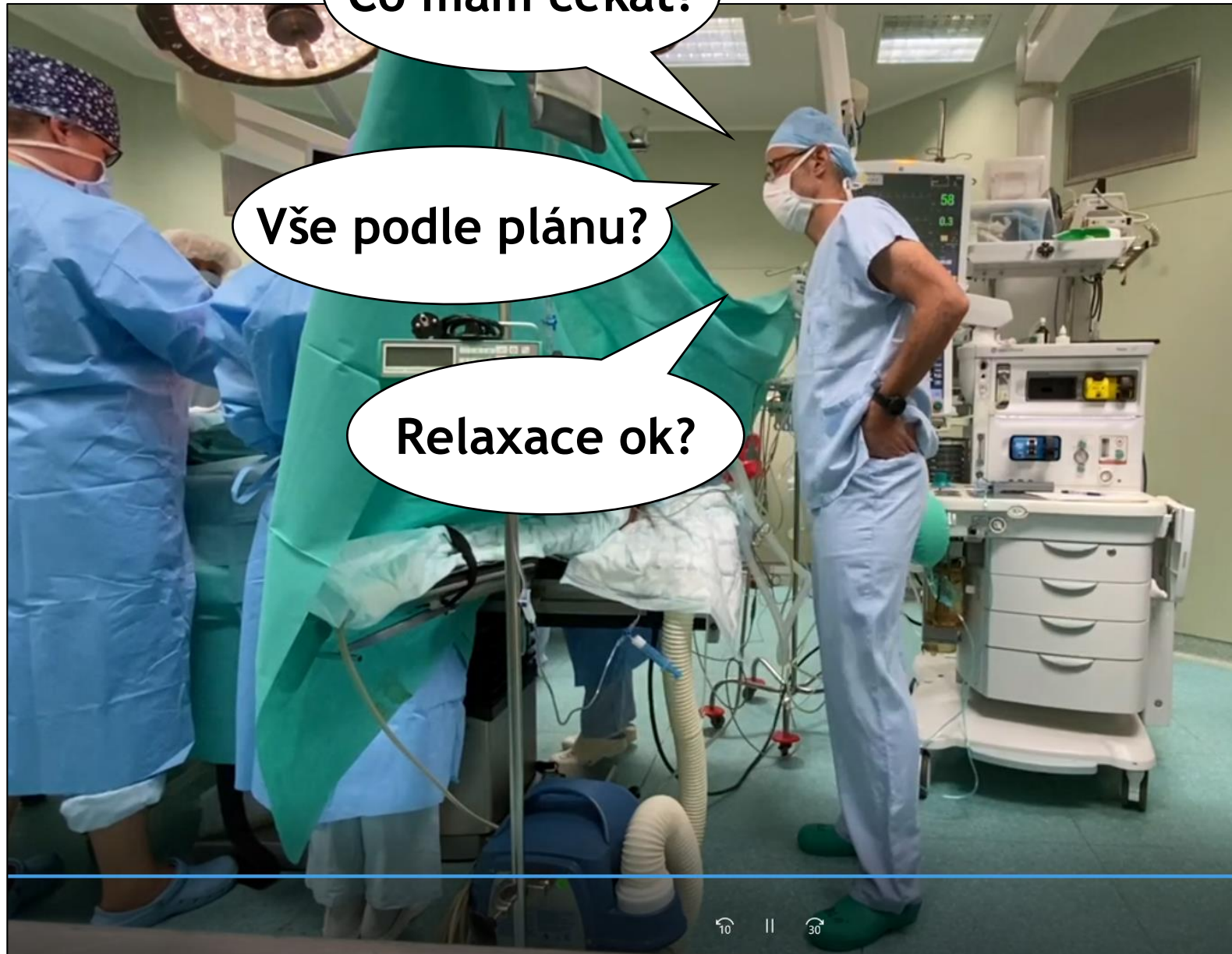
TLAČÍ !



Co mám čekat?

Vše podle plánu?

Relaxace ok?



IT'S ABOUT TIME

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