

Kirurgia muutuste tuules

Airi Tark

Üldkirurg

Ida-Tallinna Keskhaigla

04.04.2025

- ▶ 1. Spetsialiseerumise ja alaspetsialiseerumise suurenemine
- ▶ 2. Tehnoloogia integreerimine



Kirurgilise tehnika areng



- ▶ 3. Suurem rõhk suhtlemisele ja patsiendikesksele hooldusele
- ▶ 4. Avalik tähelepanu ja meedia mõju
- ▶ 5. Töö ja eraelu tasakaalu ning vaimse tervise teadlikkuse suurenemine

RAVIVEAD? › Surmaga lõppenud tüsistuste uurimiseks algatati kriminaalmenetlus ⁽³⁾



Kurnatus, perspektiivitus, toksilisus – ausalt noorte arstide väljakutsetest

Seekordses Tervisepooltunni episoodis on teemaks noored arstid ja nende väljakutsed Eesti meditsiinisüsteemis. Stuudios on kaks külalist - dr Kristo Erikson (KE), Regionaalhaigla juhatuse liige ja ülemarst ning Priit Tohver (PT), kestliku arengu teenistuse juht. Vestlust juhib Stina Eilsen (SE).

Kui ilukirurgia on välimuse rikkunud,
siis kes hüvitab moraalse kahju?

Läbipõlemine

- ▶ 41% kirurgidest vastas läbipõlemise kriteeriumidele. Praktikandid olid rohkem mõjutatud kui kirurgid (46% vs 36%, $p = 0,012$).
- ▶ Üle kahe kolmandiku (69%) üldkirurgidest kogeb läbipõlemist ja viiendikul on suur oht tõsise läbipõlemise (22%) tekkeks.

> [J Am Coll Surg](#). 2023 Jan 1;236(1):253–265. doi: 10.1097/XCS.0000000000000402. Epub 2022 Dec 15.

Trends in Surgeon Burnout in the US and Canada: Systematic Review and Meta-Regression Analysis

James C Etheridge ¹, Devon Evans ², Lily Zhao ³, Nourah Ibrahim ², Elizabeth C Wick ⁴, Julie A Freischlag ⁵, Michelle R Brownstein ⁶

Prevalence and associated factors for burnout among attending general surgeons: a national cross-sectional survey

[Suleyman Utku Celik](#), [Alperen Aslan](#), [Eylul Coskun](#), [Beyza Nur Coban](#), [Zeynep Haner](#), [Selin Kart](#), [Mahmoud N. I. Skaik](#), [Merve Didem Kocer](#), [Bahar Busra Ozkan](#) & [Cihangir Akyol](#) 

[BMC Health Services Research](#) **21**, Article number: 39 (2021) | [Cite this article](#)

DISCIPLINARY CARE

& Optimal Care

- ▶ 6. Vaba liikumine era- ja haiglasüsteemis
- ▶ 7. Suurem koostöö mitte kirurgiliste erialadega
- ▶ 8. Kirurgide mitmekesisus



Millised omadused on kirurgile vajalikud?

- ▶ Tugev närvisüsteem
- ▶ Kiire otsustamisvõime
- ▶ Kannatlikkus ja meeskonnaga arvestamine
- ▶ Hea suhtlemisoskus/empaatia



- ▶ „I want my son to become a neurosurgeon and my daughter to marry one“



Õppekava a kood Õppekava		Immatrikuleeritute arv aastal ...											Kokku	Vastavast soost immatrikuleeritute % õppekaval aastal...											Kokku vastaval perioodil
		Sugu	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
131977	Kardiokirurgia	Naised	1	1									2	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%
		Mehed								2			2	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%		50%
132357	Vaskulaarkirurgia	Naised						1				1	2	0%	0%	0%	0%	0%	50%	0%	0%	0%	50%	40%	
		Mehed						1			1	1	3	0%	0%	0%	0%	0%	50%	0%	0%	100%	50%	60%	
2682	Neurokirurgia	Naised	1					2			1		4	50%	0%	0%	0%	0%	100%	0%	0%	50%	0%	36%	
		Mehed	1		2	1				1	1	1	7	50%	0%	100%	100%	0%	0%	0%	100%	50%	100%	64%	
2684	Suu- ja näo- lõualuukirurgia	Naised	1		1								2	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	40%	
		Mehed					1	1			1		3	0%	0%	0%	0%	100%	100%	0%	0%	100%	0%	60%	
2687	Ortopeedia	Naised	3		2	2	2	1	1	1	3		15	60%	0%	40%	50%	50%	25%	20%	25%	50%	0%	32%	
		Mehed	2	5	3	2	2	3	4	3	3	5	32	40%	100%	60%	50%	50%	75%	80%	75%	50%	100%	68%	
2698	Üldkirurgia	Naised		2	3	3	3	4	2	3	1	2	23	0%	40%	60%	50%	60%	67%	50%	60%	25%	40%	45%	
		Mehed	6	3	2	3	2	2	2	2	3	3	28	100%	60%	40%	50%	40%	33%	50%	40%	75%	60%	55%	
2699	Plastika ja rekonstruktiivki	Naised		2									2	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	33%	
		Mehed					1	1				2	4	0%	0%	0%	0%	100%	100%	0%	0%	0%	100%	67%	
3141	Lastekirurgia	Naised	1	1		1	1	2		1	1	2	10	100%	100%	0%	100%	100%	100%	0%	100%	100%	100%	83%	
		Mehed			1				1				2	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	17%	
3239	Uroloogia	Naised	1		1	1	1				2	1	7	25%	0%	50%	100%	100%	0%	0%	0%	100%	50%	41%	
		Mehed	3	3	1				1	1		1	10	75%	100%	50%	0%	0%	0%	100%	100%	0%	50%	59%	
3360	Torakaalkirurgia	Naised											0												
		Mehed											0												
Kokku vastavate erialadele		Naised	8	6	7	7	7	10	3	5	8	6	67	40%	35%	44%	54%	54%	56%	27%	36%	47%	32%	42%	
immatrikuleerituid		Mehed	12	11	9	6	6	8	8	9	9	13	91	60%	65%	56%	46%	46%	44%	73%	64%	53%	68%	58%	

Meta-Analysis
Comparison of Postoperative Outcomes Among Patients Treated by Male Versus Female Surgeons
A Systematic Review and Meta-analysis

Saka, Natsumi MD, MSc, PhD^{*,†}; Yamamoto, Norio MD^{†,‡}; Watanabe, Jun MD, PhD^{†,§,||}; Wallis, Christoph MD, PhD^{¶,#,**}; Jerath, Angela MSc, MD, BSc^{††}; Someko, Hidehiro MD^{†,‡‡}; Hayashi, Minoru MD^{†,§§}; Kamiya, Kyosuke MD^{†,|||}; Ariie, Takashi MSc, PhD^{†,¶¶}; Kuno, Toshiki MD, PhD^{###}; Kato, Hirotaka PhD^{***}; Mohamud, Hodan BSc[¶]; Chang, Ashton MD^{††}; Satkunasivam, Raj MD, MS^{†††,‡‡‡,§§§}; Tsugawa, Yusuke MD, MPH, PhD^{||||,¶¶¶}

Annals of Surgery 280(6):p 945-953, December 2024.

	Anticipated absolute effects				
Outcomes	Risk with male surgeons [*]	Risk with female surgeons (95% CI) [†]	Relative effect (95% CI)	No. participants (studies)	Certainty of the evidence [‡]
Mortality	10 per 1000	9 per 1000 (9–10)	OR 0.93 (0.88–0.97)	5,390,762 (8 studies)	Moderate [§]
Readmission	66 per 1000	78 per 1000 (55 –109)	OR 1.20 (0.83–1.74)	1,179,107 (3 studies)	Very low
Complication	94 per 1000	89 per 1000 (84–95)	OR 0.94 (0.88–1.01)	1,306,128 (8 studies)	Very Low ^{¶¶}

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

Christopher J D Wallis, Angela Jerath , Khatereh Aminoltejari , Kirusanthi Kaneshwaran , Arghavan Salles , Natalie Coburn , Frances C Wright , Lesley Gotlib Conn , Zachary Klaassen , Amy N Luckenbaugh , Sanjana Ranganathan , Carlos Riveros , Colin McCartney , Kathleen Armstrong , Barbara Bass , Allan S Detsky , Raj Satkunasivam

JAMA Surg

2023 Nov 1;158(11):1185-1194. doi: 10.1001/jamasurg.2023.3744.

	Outcome within 90 Days			Outcome within 1 Year		
Outcome	Male Surgeon	Female Surgeon	P-value	Male Surgeon	Female Surgeon	P-value
Cohort sample size	1,014,657	151,054		1,014,657	151,054	
Composite Endpoint	146,857 (14.5%)	19,048 (12.6%)	<.0001	261,590 (25.8%)	29,549 (19.6%)	<.0001
Death	22,203 (2.2%)	1,540 (1.0%)	<.0001	46,590 (4.6%)	3,399 (2.3%)	<.0001
Re-admission	84,305 (8.3%)	9,948 (6.6%)	<.0001	199,342 (19.6%)	21,033 (13.9%)	<.0001
Complications	66,737 (6.6%)	10,273 (6.8%)	0.001	80,570 (7.9%)	11,739 (7.8%)	0.02

Table 2. Postoperative patient outcomes assessing the relationship between surgeon and patient sex concordance.

Characteristics	Concordant surgeon and patient		Discordant surgeon and patient		Total	p Value
	Male surgeon with male patient	Female surgeon with female patient	Male surgeon with female patient	Female surgeon with male patient		
30-day mortality	11 764 (5.8%)	1539 (4.0%)	10 632 (4.6%)	1313 (5.5%)	25 248 (5.1%)	<0.001
90-day mortality	18 621 (9.2%)	2679 (7.0%)	17 886 (7.8%)	2127 (9.0%)	41 313 (8.3%)	<0.001
30-days complication	19 907 (9.8%)	2990 (7.8%)	18 235 (7.9%)	2473 (10.4%)	43 605 (8.8%)	<0.001
90-days complication	31 085 (15.3%)	4909 (12.7%)	29 573 (12.9%)	3826 (16.2%)	69 393 (14.0%)	<0.001
30-days readmission	32 071 (15.8%)	5160 (13.4%)	31 811 (13.8%)	3920 (16.6%)	72 962 (14.7%)	<0.001
90-days readmission	52 608 (25.9%)	8986 (23.3%)	54 474 (23.7%)	54 474 (23.7%)	123 681 (24.7%)	<0.001



RESEARCH ARTICLE | [Open Access](#) |

Association of surgeon–patient sex concordance with postoperative outcomes following complex cancer surgery

Muhammad Muntazir Mehdi Khan MBBS, Muhammad M. Munir MD, Selamawit Woldeesenbet MS, PhD, Yutaka Endo MD, PhD, Karol Rawicz-Pruszyński MD, Erryk Katayama BA ... [See all authors](#) ▾

First published: 22 November 2023 | <https://doi.org/10.1002/jso.27527> | Citations: 1

Table 3. Generalized Estimating Equations for Different Outcomes Among Male and Female Surgeons

Group	All operations ^a			Elective surgery ^b			Acute care surgery ^c		
	No. (%)	OR (95% CI)	P value	No. (%)	OR (95% CI)	P value	No. (%)	OR (95% CI)	P value
Surgical complications ^d									
Female surgeon	1258 (3.3)	1 [Reference]	NA	680 (2.7)	1 [Reference]	NA	578 (4.6)	1 [Reference]	NA
Male surgeon	4876 (4.3)	1.29 (1.19-1.40)	<.001	2650 (3.7)	1.39 (1.25-1.54)	<.001	2226 (5.6)	1.17 (1.04-1.32)	.01
Bile duct injury ^d									
Female surgeon	94 (0.2)	1 [Reference]	NA	54 (0.2)	1 [Reference]	NA	40 (0.3)	1 [Reference]	NA
Male surgeon	438 (0.4)	1.56 (1.21-2.00)	<.001	254 (0.3)	1.69 (1.22-2.34)	.001	184 (0.5)	1.37 (0.93-2.00)	.11
Total complication rate ^e									
Female surgeon	3401 (9.0)	1 [Reference]	NA	1924 (7.6)	1 [Reference]	NA	1477 (11.7)	1 [Reference]	NA
Male surgeon	11 527 (10.2)	1.12 (1.06-1.19)	<.001	6190 (8.5)	1.14 (1.06-1.22)	<.001	5337 (13.3)	1.11 (1.02-1.20)	.02
Conversion to open surgery ^d									
Female surgeon	4129 (10.9)	1 [Reference]	NA	1777 (7.1)	1 [Reference]	NA	2352 (18.6)	1 [Reference]	NA
Male surgeon	13 873 (12.3)	1.13 (0.91-1.41)	.28	5246 (7.2)	1.03 (0.69-1.55)	.87	8627 (21.5)	1.22 (1.04-1.43)	.02
Length of stay >3 d ^f									
Female surgeon	3527 (9.3)	1 [Reference]	NA	1106 (4.4)	1 [Reference]	NA	2421 (19.1)	1 [Reference]	NA
Male surgeon	12 882 (11.4)	1.21 (1.11-1.31)	<.001	3918 (5.4)	1.28 (1.14-1.45)	<.001	8964 (22.4)	1.16 (1.06-1.27)	.001
30-d Mortality ^d									
Female surgeon	36 (0.1)	1 [Reference]	NA	8 (0.03)	1 [Reference]	NA	28 (0.2)	1 [Reference]	NA
Male surgeon	157 (0.1)	1.21 (0.78-1.86)	.40	30 (0.04)	1.23 (0.56-2.70)	.60	127 (0.3)	1.19 (0.74-1.92)	.48

Original Investigation

August 30, 2023

Differences in Cholecystectomy Outcomes and Operating Time Between Male and Female Surgeons in Sweden

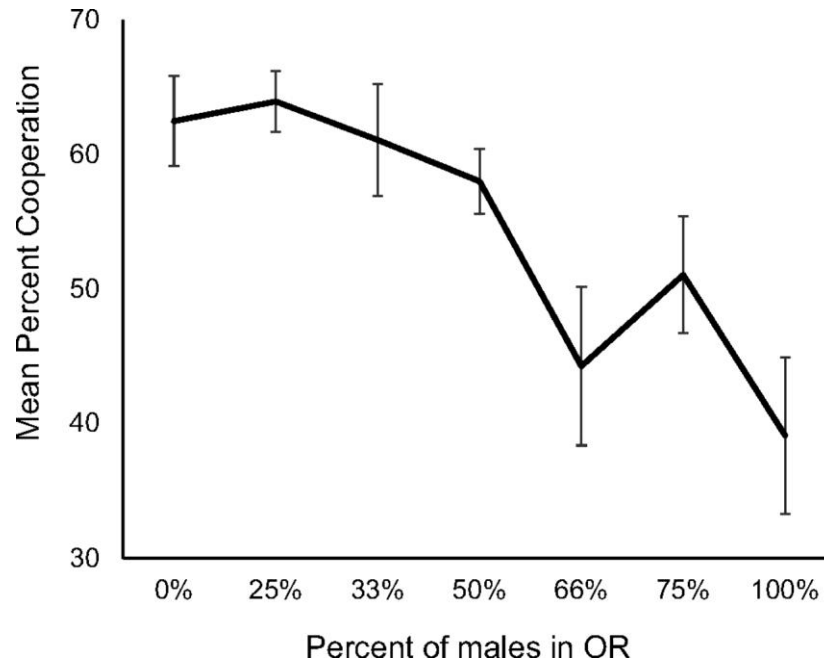
My Blohm, MD^{1,2,3}; Gabriel Sandblom, MD, PhD⁴; Lars Enochsson, MD, PhD^{5,6}; [et al](#)

» Author Affiliations | Article Information

- ▶ Oletatakse et naiskirurgid lähtuvad ravis enam ravijuhistest, arvestavad patsiendi individuaalsust ja on paremad suhtlejad / konsulteerijad.



Koostöö ja konflikt operatsioonitoas



RESEARCH ARTICLE | ANTHROPOLOGY |



Ethological observations of social behavior in the operating room

[Laura K. Jones](#) , [Bonnie Mowinski Jennings](#), [Melinda K. Higgins](#), and [Frans B. M. de Waal](#) [Authors Info & Affiliations](#)

Contributed by Frans B. M. de Waal, January 5, 2018 (sent for review September 26, 2017; reviewed by H. Russell Bernard and Polly W. Wiessner)

July 2, 2018 | 115 (29) 7575-7580 | <https://doi.org/10.1073/pnas.1716883115>

Kriitiline arv naisi operatsioonitoas

- ▶ Uuringus leiti, et haiglatel, mille meeskonnad koosnesid enam kui 35% naiskirurgidest ja anestezioloogidest, olid operatsioonijärgsed tulemused paremad.
- ▶ 90-päevase postoperatiivsete tüsistuste tõenäosus vähenes 3%

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](#)

British Journal of Surgery, Volume 111, Issue 5, May 2024, znae097,

- ▶ Tulemused viitavad sellele, et liigselt ühe sooline operatsioonitoa töökeskkond loob tingimused, mis soodustavad kommunikatsioonihäireid ja suurendavad patsiendiohutuse riske.
- ▶ Lisaks mõjutab see negatiivselt meeskonna moraali, psühholoogilist turvalisust ja meditsiinipersonali heaolu.

How gender shapes interprofessional teamwork in the operating room: a qualitative secondary analysis.

Etherington C ¹, Kitto S ², Burns JK ¹ , Adams TL ³, Birze A ⁴ , Britton M ⁵, Singh S ⁶, Boet S ^{1,2}  

Author information ▶

BMC Health Services Research, 19 Dec 2021, 21(1):1357

Kokkuvõte

- ▶ Kirurgide identiteet viimase kümne aasta jooksul arenenud, muutudes lihtsalt osavateks tegijateks spetsiifilisteks, multifunktsionaalseteks professionaalideks.
- ▶ Kirurgid tasakaalustavad tehnilisi oskusi empaatia, suhtlemise, juhtimise ja innovatsiooniga.
- ▶ Nad ei ole ainult kõrgelt spetsialiseerunud eksperdid, vaid ka patsiendihoolduse, vaimse tervise, mitmekesisuse ja tehnoloogia arendamise eestkõnelejad.

