OPERACE, KTERÁ SE BEZPEČNĚ ZAHOJÍ !?!

Z. ŠERCLOVÁ, O. RYSKA, M.KOUDELKA

NEMOCNICE HOŘOVICE

Psychologický
Fyzický
inzult

Adaptační
Pro + Protizánětlivá
odpověď

Quality Assessment in High-Acuity Surgery

Volume and Mortality Are Not Enough

Charles M. Vollmer, Jr, MD; Wande Pratt, BA; Tsafrir Vanounou, MD, MBA; Shishir K. Maithel, MD; Mark P. Callery, MD

Arch Surg. 2007;142:371-380

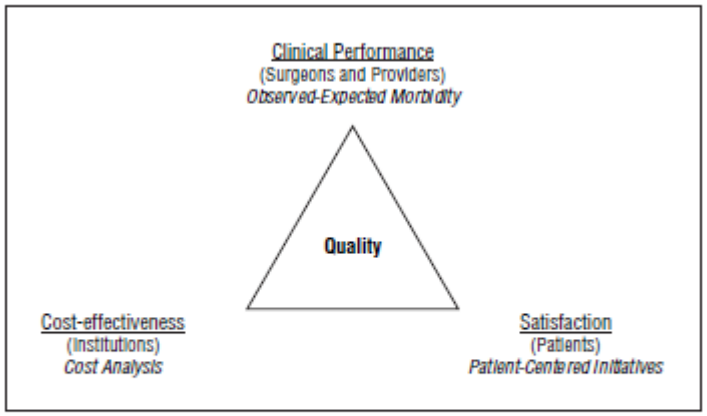


Figure 3. The Quality Triangle provides a new definition of quality that reflects the partnerships and objectives of health care professionals, institutions, and patients. Each vertex represents the components of quality (underlined), potential stakeholders (in parentheses), and the proposed metrics for assessment (italicized).

Table 1. Definitions of Outcomes Used for Traditional Surgical Quality Assessment

Outcome	Definition
Postoperative complications*	
Minor (Clavien I–II)	Complications requiring pharmacologic treatment, including hyperalimentation, antibiotic agents, and blood transfusions
Major (Clavien III–V)	Complications requiring surgical, endoscopic, or radiologic intervention; complications resulting in organ dysfunction or death
Mortality	Death during the initial hospitalization or within 30 d of hospital discharge or death due to any surgical complication at any time
Hospitalization duration	Days from the initial operation to hospital discharge
Intensive care unit transfer	Treatment in an intensive care setting on or after postoperative day 1, excluding admissions to the intensive care unit directly from the operating room
Blood transfusion	Administration of packed red blood cells postoperatively, excluding blood products received during the initial operation
Patient discharge disposition	Hospital discharge to 1 of 3 options after the initial operation: to home, to home with arrangements for visiting nurse assistance, or to a rehabilitation facility
Hospital readmission	Readmission for management of postoperative complications within 30 d of hospital discharge
Repeated operation	Surgical exploration during initial hospitalization or within 30 d of hospital discharge
Total hospital costs	Costs from the initial operation to hospital discharge plus any costs incurred during hospital readmissions within 30 d postoperatively

*Severity of complications was graded according to the Clavien complication scheme.[21]

Preventabilní riziko

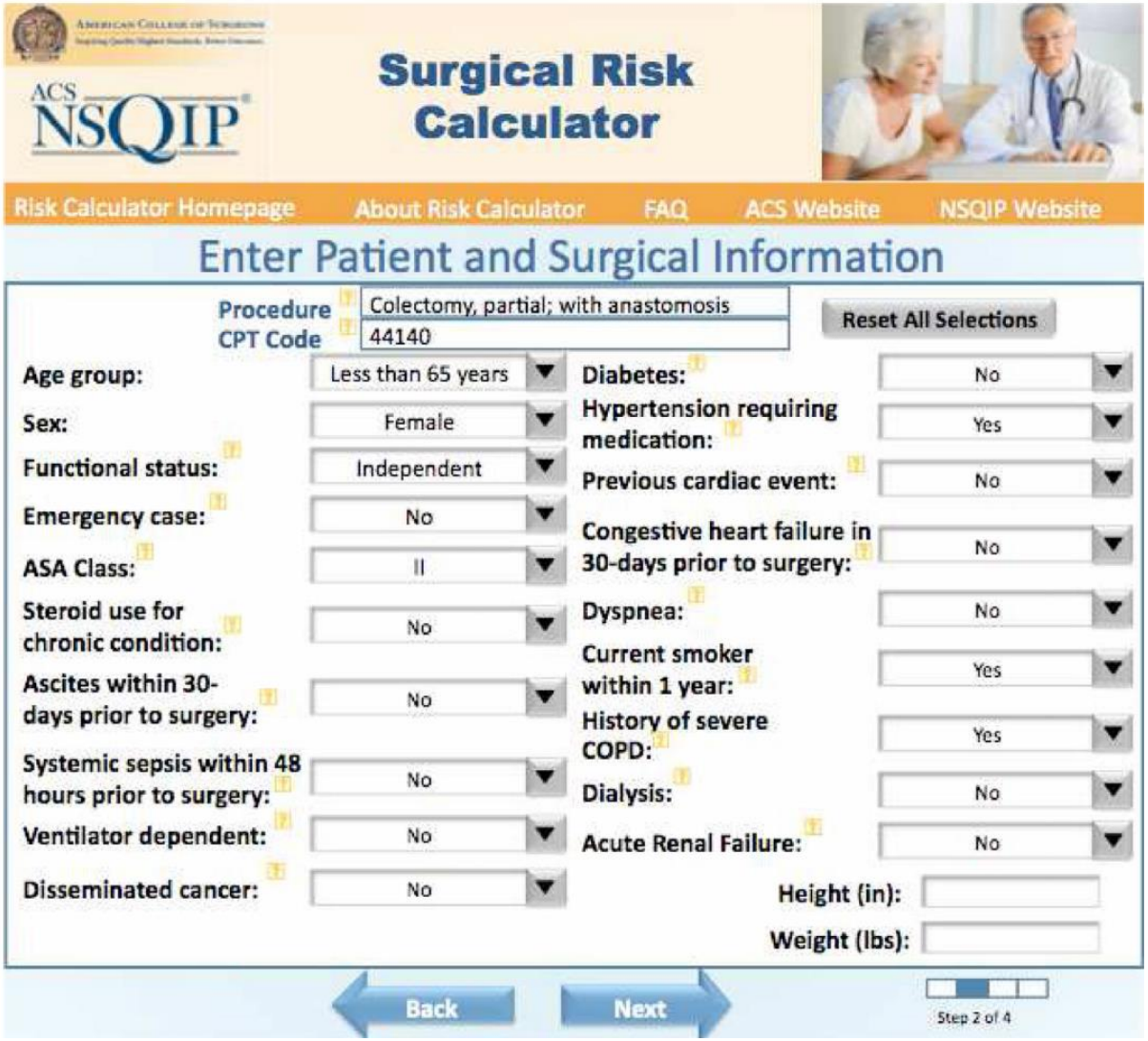
PACIENT

Informace

Průvodce perioperačním obdobím

Preconditioning- výživa, fyzioterapie, orgánová optimalizace

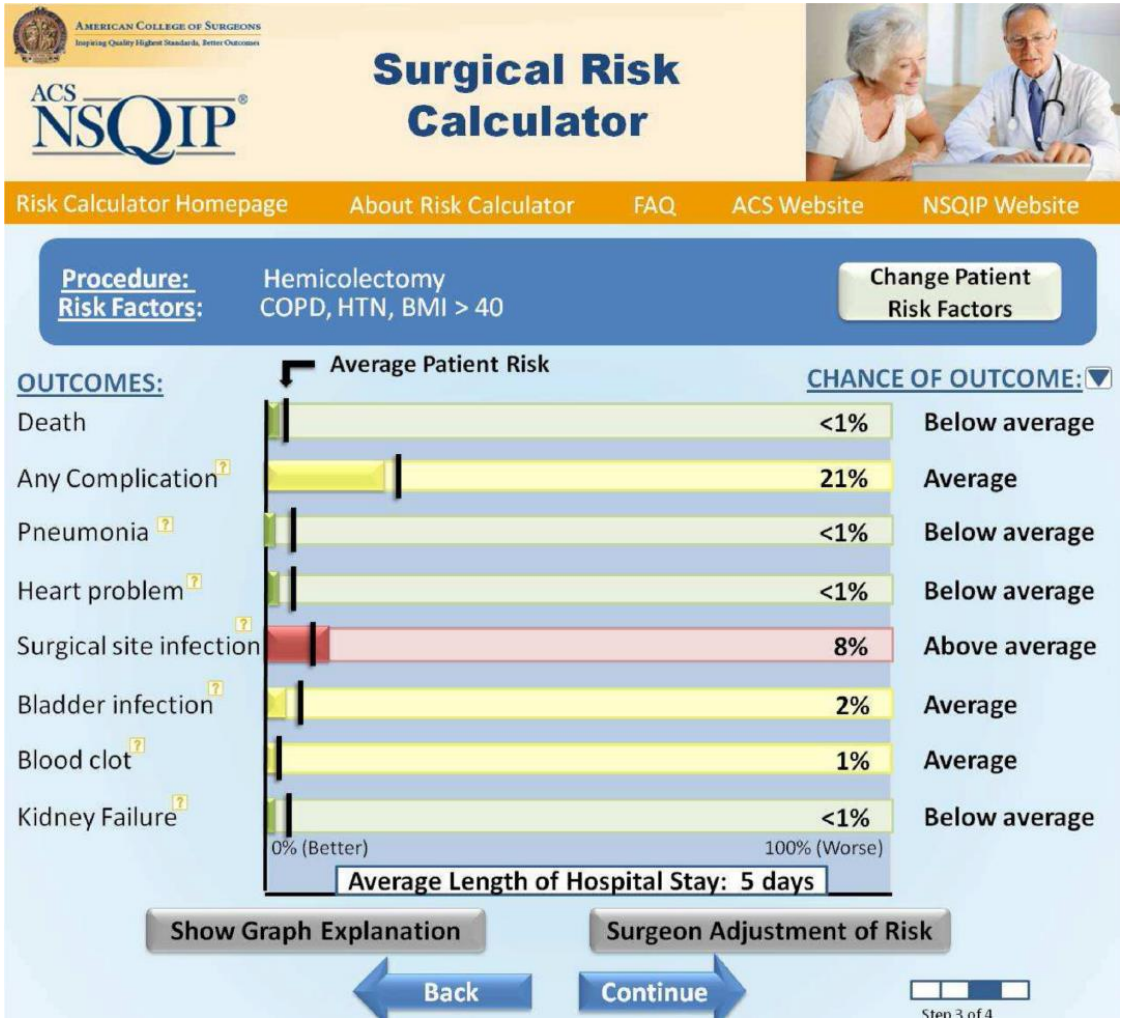
Angažovanost



J Am Coll Surg. 2013 November ; 217(5): 833–842.e3. doi:10.1016/j.jamcollsurg.2013.07.385.

Development and Evaluation of the Universal ACS NSQIP Surgical Risk Calculator: A Decision Aide and Informed Consent Tool for Patients and Surgeons

Karl Y Bilimoria, MD, MS, FACS[1,2], Yaoming Liu, PhD[1], Jennifer L Paruch, MD[1], Lynn Zhou, PhD[1], Thomas E Kmiecik, PhD[2], Clifford Y Ko, MD, MS, MSHS, FACS[1,3], and Mark E Cohen, PhD[1]



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OPERACE

Délka operace a odchylka

Míra poškození tkání- závažnost

Elektivní- Akutní- Superakutní operace

? Přístup?

AKUTNÍ OPERACE

Table 2 Time of day, seniority of medical staff, and 30 day mortality. *Time of anaesthetic induction

Time of day*	*n*	Consultant anaesthetist present (%)	Consultant surgeon present (%)	30 day mortality (%)
08:00–17:59	1044	75.2	80.8	14.2
18:00–23:59	442	54.8	67.7	17.8
00:00–07:59	152	40.8	61.8	20.3

British Journal of Anaesthesia **109** (3): 368–75 (2012)
Advance Access publication 22 June 2012 · doi:10.1093/bja/aes165

BJA

Variations in mortality after emergency laparotomy: the first report of the UK Emergency Laparotomy Network

D. I. Saunders[1], D. Murray[2*], A. C. Pichel[3], S. Varley[3], C. J. Peden[4], on behalf of the members of the UK Emergency Laparotomy Network

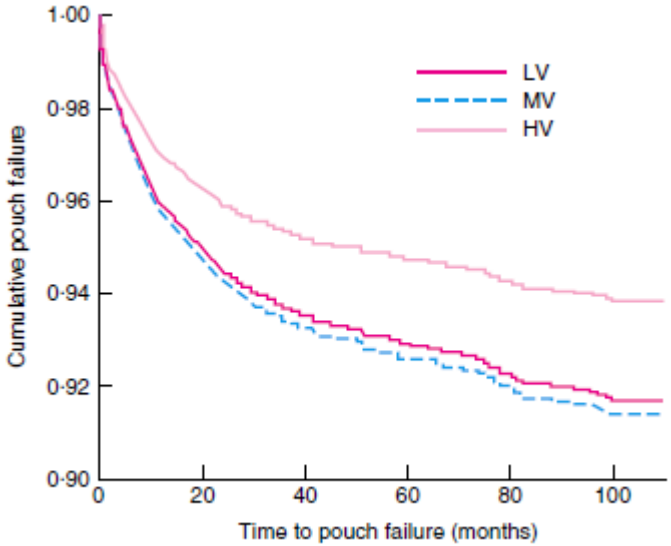
IPAA A ZKUŠENOST

Kennedy, ED. DCR 2006 (Kanada)

High volume surgeons
- Signifikantně méně reoperací
- Signifikantně méně selhání IPAA

Volume analysis of outcome following restorative proctocolectomy

E. M. Burns[1], A. Bottle[2], P. Aylin[2], S. K. Clark[3], P. P. Tekkis[1], A. Darzi[1], R. J. Nicholls[1] and O. Faiz[1]



Volume category	No. of procedures	No. of procedures per year	No. of patients	No. of providers
Institutional*				
Low volume	1–39	0·1–3·3	1964 of 5771 (34·0)	117 trusts
Medium volume	40–100	3·3–8·3	1916 of 5771 (33·2)	28 trusts
High volume	≥101	≥8·4	1891 of 5771 (32·8)	9 trusts
ExtLV	1–12	0–1	294 of 5771 (5·1)	47 trusts
ExtMV	13–143	2–11	3948 of 5771 (68·4)	101 trusts
ExtHV	≥144	≥12	1529 of 5771 (26·5)	6 trusts
Surgeon†				
Low volume	1–10	0·1–1·3	1331 of 3878 (34·3)	397 surgeons
Medium volume	11–28	1·4–3·5	1329 of 3878 (34·3)	78 surgeons
High volume	≥29	≥3·6	1218 of 3878 (31·4)	24 surgeons

British Journal of Surgery 2011; **98**: 408–417

RIZIKA LEAKŮ

Table 3. Risk Factors for Anastomotic Leak

Patient factors	Malnutrition, steroids, tobacco and alcohol use, leukocytosis, cardiovascular disease, ASA score, diverticulitis
Operative factors	Low anastomosis, operative time >2 hours, bowel obstruction, blood supply to anastomosis, perioperative blood transfusion, intraoperative septic conditions
Factors associated with leak after low anastomosis	Male, obesity

ASA, American Society of Anesthesiologists.

T Peter Kingham MD, H Leon Pachter

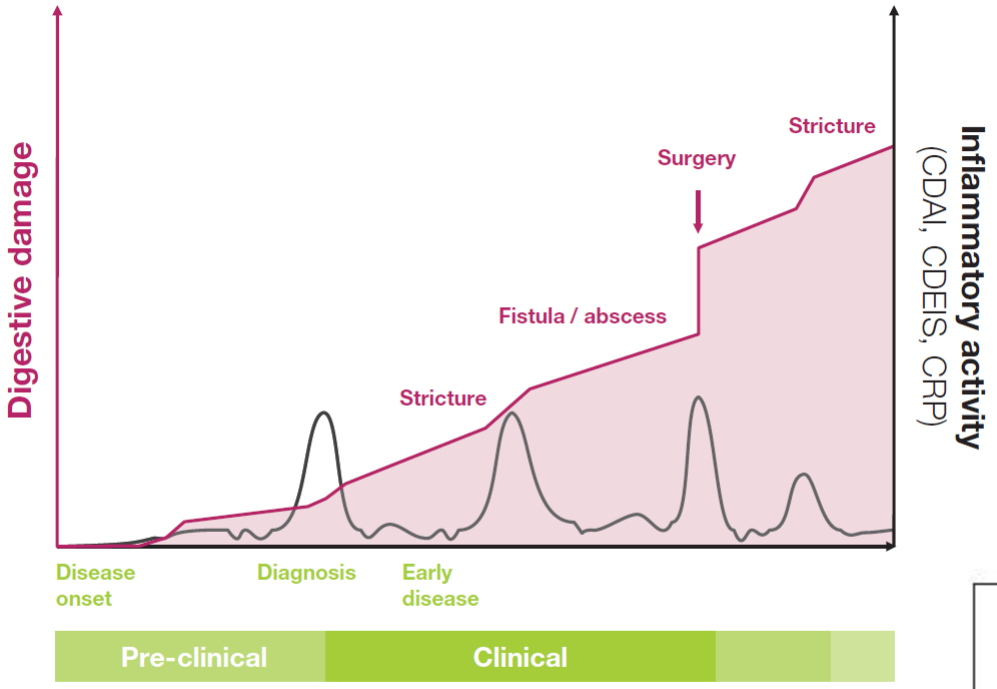
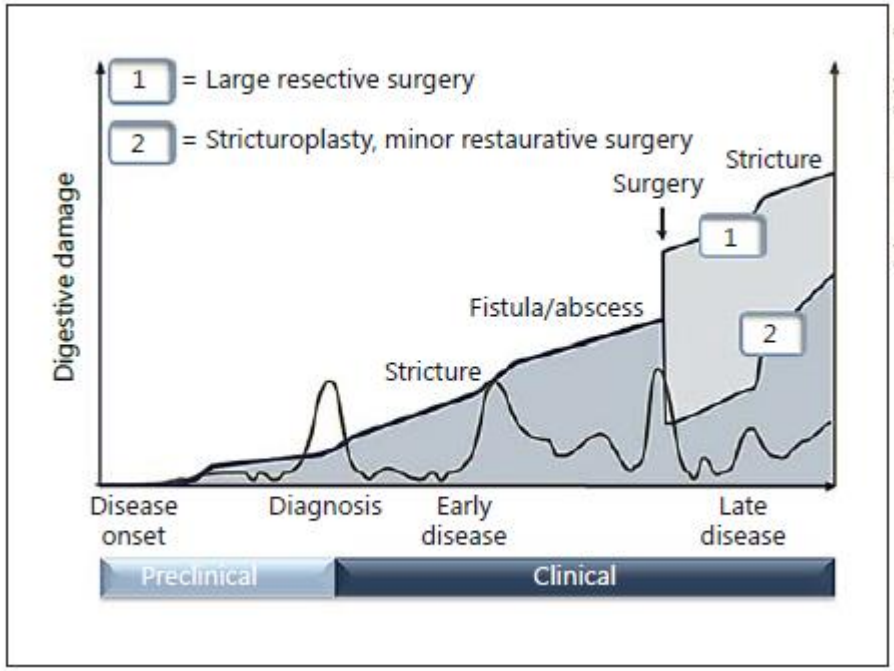


Figure 2 The Lémann score: progression of digestive damage inflammatory activity in a theoretical patient with Crohn's dise Reproduced from Pariente et al. (2011)[42] with permission.

Early top down Accelerated step-up



Top-Down or Step-Up Treatment in Crohn's Disease?

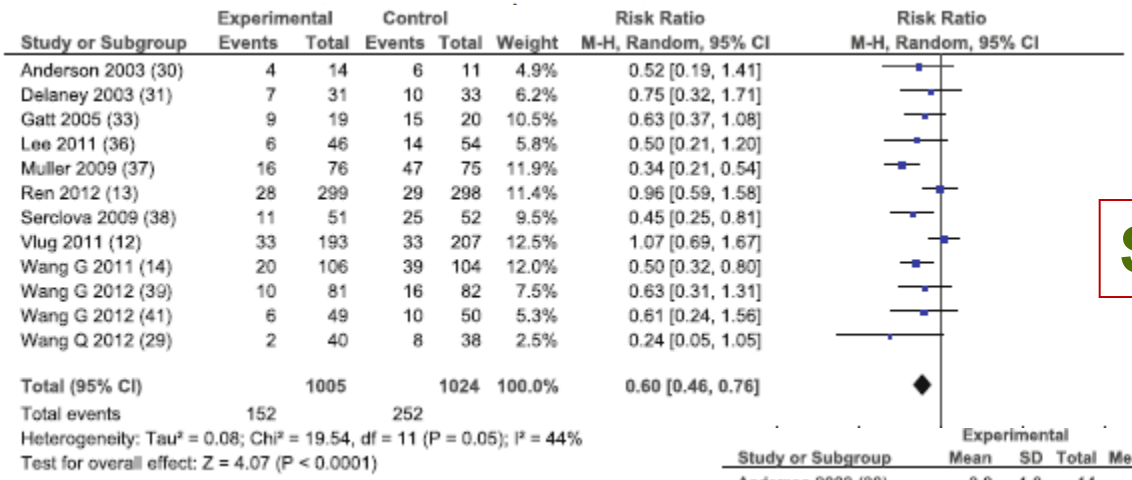
Gerhard Rogler[a, b]

PERIOPERAČNÍ PÉČE

Enhanced Recovery Program in Colorectal Surgery: A Meta-analysis of Randomized Controlled Trials

Published online: 25 December 2013

Massimiliano Greco · Giovanni Capretti ·



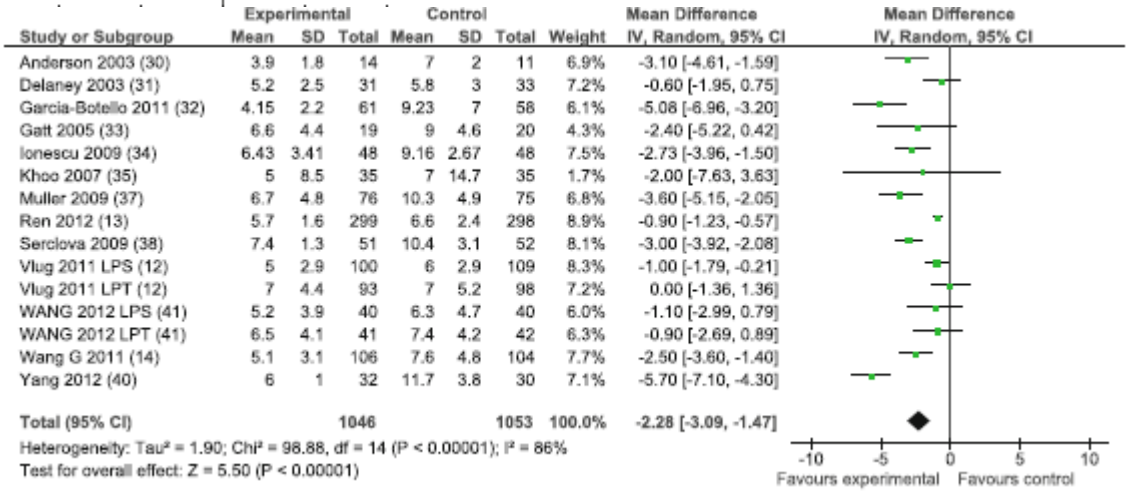
Study or Subgroup	Experimental Events	Experimental Total	Control Events	Control Total	Weight	Risk Ratio M-H, Random, 95% CI
Anderson 2003 (30)	4	14	6	11	4.9%	0.52 [0.19, 1.41]
Delaney 2003 (31)	7	31	10	33	6.2%	0.75 [0.32, 1.71]
Gatt 2005 (33)	9	19	15	20	10.5%	0.63 [0.37, 1.08]
Lee 2011 (36)	6	46	14	54	5.8%	0.50 [0.21, 1.20]
Muller 2009 (37)	16	76	47	75	11.9%	0.34 [0.21, 0.54]
Ren 2012 (13)	28	299	29	298	11.4%	0.96 [0.59, 1.58]
Serclova 2009 (38)	11	51	25	52	9.5%	0.45 [0.25, 0.81]
Vlug 2011 (12)	33	193	33	207	12.5%	1.07 [0.69, 1.67]
Wang G 2011 (14)	20	106	39	104	12.0%	0.50 [0.32, 0.80]
Wang G 2012 (39)	10	81	16	82	7.5%	0.63 [0.31, 1.31]
Wang G 2012 (41)	6	49	10	50	5.3%	0.61 [0.24, 1.56]
Wang Q 2012 (29)	2	40	8	38	2.5%	0.24 [0.05, 1.05]
Total (95% CI)		**1005**		**1024**	**100.0%**	**0.60 [0.46, 0.76]**
Total events	152		252			

Heterogeneity: Tau² = 0.08; Chi² = 19.54, df = 11 (P = 0.05); I² = 44%

Test for overall effect: Z = 4.07 (P < 0.0001)

Snižuje komplikace

Zkracuje délku hospitalizace



Study or Subgroup	Experimental Mean	Experimental SD	Experimental Total	Control Mean	Control SD	Control Total	Weight	Mean Difference IV, Random, 95% CI
Anderson 2003 (30)	3.9	1.8	14	7	2	11	6.9%	-3.10 [-4.61, -1.59]
Delaney 2003 (31)	5.2	2.5	31	5.8	3	33	7.2%	-0.60 [-1.95, 0.75]
Garcia-Botello 2011 (32)	4.15	2.2	61	9.23	7	58	6.1%	-5.08 [-6.96, -3.20]
Gatt 2005 (33)	6.6	4.4	19	9	4.6	20	4.3%	-2.40 [-5.22, 0.42]
Ionescu 2009 (34)	6.43	3.41	48	9.16	2.67	48	7.5%	-2.73 [-3.96, -1.50]
Khoo 2007 (35)	5	8.5	35	7	14.7	35	1.7%	-2.00 [-7.63, 3.63]
Muller 2009 (37)	6.7	4.8	76	10.3	4.9	75	6.8%	-3.60 [-5.15, -2.05]
Ren 2012 (13)	5.7	1.6	299	6.6	2.4	298	8.9%	-0.90 [-1.23, -0.57]
Serclova 2009 (38)	7.4	1.3	51	10.4	3.1	52	8.1%	-3.00 [-3.92, -2.08]
Vlug 2011 LPS (12)	5	2.9	100	6	2.9	109	8.3%	-1.00 [-1.79, -0.21]
Vlug 2011 LPT (12)	7	4.4	93	7	5.2	98	7.2%	0.00 [-1.36, 1.36]
WANG 2012 LPS (41)	5.2	3.9	40	6.3	4.7	40	6.0%	-1.10 [-2.99, 0.79]
WANG 2012 LPT (41)	6.5	4.1	41	7.4	4.2	42	6.3%	-0.90 [-2.69, 0.89]
Wang G 2011 (14)	5.1	3.1	106	7.6	4.8	104	7.7%	-2.50 [-3.60, -1.40]
Yang 2012 (40)	6	1	32	11.7	3.8	30	7.1%	-5.70 [-7.10, -4.30]
Total (95% CI)			**1046**			**1053**	**100.0%**	**-2.28 [-3.09, -1.47]**

Heterogeneity: Tau² = 1.90; Chi² = 98.88, df = 14 (P < 0.00001); I² = 86%

Test for overall effect: Z = 5.50 (P < 0.00001)

Understanding how colorectal units achieve short length of stay: an interview survey among representative hospitals in England

Ben E Byrne[1*], Anna Pinto[1], Paul Aylin[2], Alex Bottle[2], Omar D Faiz[3] and Charles A Vincent[4]

Byrne *et al. Patient Safety in Surgery* (2015) 9:2
DOI 10.1186/s13037-014-0050-5

Interview 10 britských nemocnic NNH s nejkratší hospitalizací po KR chirurgii

Všechny ERAS

Objem operací se nelišil, analgetické režimy různé

Sestry- protokoly časného zhoršení (časná detekce komplikací), přímý kontakt s konzultantem

Časté kontroly konzultantem

Akutní operační sál

PATIENT SAFETY IN SURGERY

SSI

Pooperační infekční komplikace
(Surgical Site Infection - SSI)
= 2. nejčastější nozokomiální nákaza

60 % preventabilní

Mangram AJ, Horan TC, Pearson ML, Silver LC, Jarvis WR. Guideline for prevention of surgical site infection, 1999. Infect Control Hosp Epidemiol 1999;20:250-78.

SSI PREVENCE

Protokol (balíček)

- **Adekvátní předoperační profylaxe**
- **Normotermie**
- **Adekvátní výměna rukavic**

Před…… Po implementaci

SSI 27.5% (95% CI, 21.6- 33.4) x 16.9% (95% CI, 10.3-23.5, P=.03).

Mortalita 9.2% (95% CI, 5.4-13) x 3.2% (95% CI, 0.1-6.3) (P=.04).

Pérez-Blanco V, García-Olmo D, Maseda-Garrido E, Nájera-Santos MC, García-Caballero J. Evaluation of a preventive surgical site infection bundle in colorectal surgery. Cir Esp. 2015 Jan 22.

Classification of Surgical Complications

Hodnoceny vždy následující systémy:
KVS / Respirační / CNS / GIT/ Renální / Ostatní (SSI)

TABLE 1. Classification of Surgical Complications

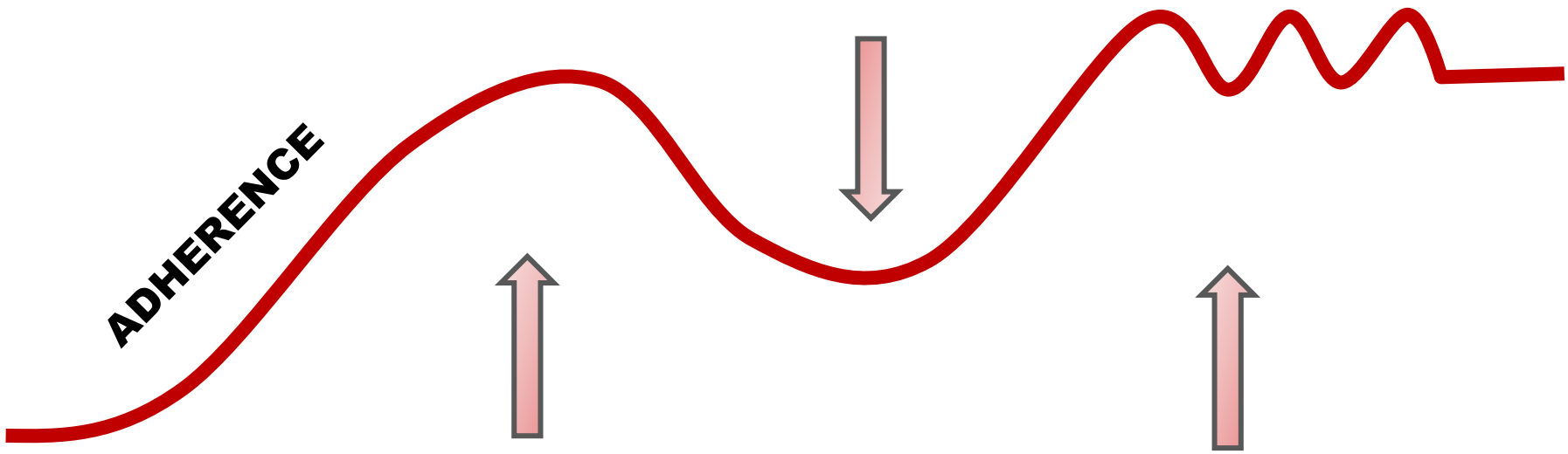
Grade	Definition
Grade I	Any deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic, and radiological interventions
	Allowed therapeutic regimens are: drugs as antiemetics, antipyretics, analgetics, diuretics, electrolytes, and physiotherapy. This grade also includes wound infections opened at the bedside
Grade II	Requiring pharmacological treatment with drugs other than such allowed for grade I complications
	Blood transfusions and total parenteral nutrition are also included
Grade III	Requiring surgical, endoscopic or radiological intervention
Grade IIIa	Intervention not under general anesthesia
Grade IIIb	Intervention under general anesthesia
Grade IV	Life-threatening complication (including CNS complications)* requiring IC/ICU management
Grade IVa	Single organ dysfunction (including dialysis)
Grade IVb	Multiorgan dysfunction
Grade V	Death of a patient
Suffix "d"	If the patient suffers from a complication at the time of discharge (see examples in Table 2), the suffix "d" (for "disability") is added to the respective grade of complication. This label indicates the need for a follow-up to fully evaluate the complication.

*Brain hemorrhage, ischemic stroke, subarrachnoidal bleeding, but excluding transient ischemic attacks.
CNS, central nervous system; IC, intermediate care; ICU, intensive care unit.

Dindo D, Demartines N, Clavien PA: Classification of Surgical Complications A New Proposal With Evaluation in a Cohort of 6336 Patients and Results of a Survey. Ann Surg 2004;240: 205–213

IMPLEMENTACE

ZAVEDENÁ PRAXE



AUDIT+AUDIT+AUDIT

Národní programy Evropě součást standardní péče- V ČR ?

? OPTIMÁLNÍ VÝSLEDEK?

- **Databáze chirurgických nemocných**
- **Monitorace výsledků a komplikací**
- **Balíčky pro správnou klinickou praxi + kontrola**
- **Angažmá státních složek a plátců**