Enhanced Recovery After Surgery (ERAS)

Prof. Medhat Shalabi

MB BCH, MSc., DA (UK), MD, FRCA, CCST (UK)

An invasion of armies can be resisted, but not an idea whose time has come.

Victor Hugo

French Poet

(1802-1885)

Enhanced Recovery After Surgery

Enhanced Recovery After Surgery (ERAS) protocols are combinations of evidence based, peri-operative strategies which work synergistically to markedly improve the quality and speed of recovery after surgery.

Enhanced Recovery After Surgery

- ERAS was developed by H. Kehlet from Denmark in colonic surgery which has gradually gained world-wide acceptance.

- ERAS was originally described in open surgery but its advantages definitely extended to laparoscopic surgery and many other types of surgery.

Enhanced Recovery After Surgery

Healthcare Challenges

- Growing and ageing population
- Pressure for better results
- Diminishing Funding

- ***Better care for less cost .***

What is behind Healthcare Expenditure?

- Postop morbidity → +++ LOS , Cost

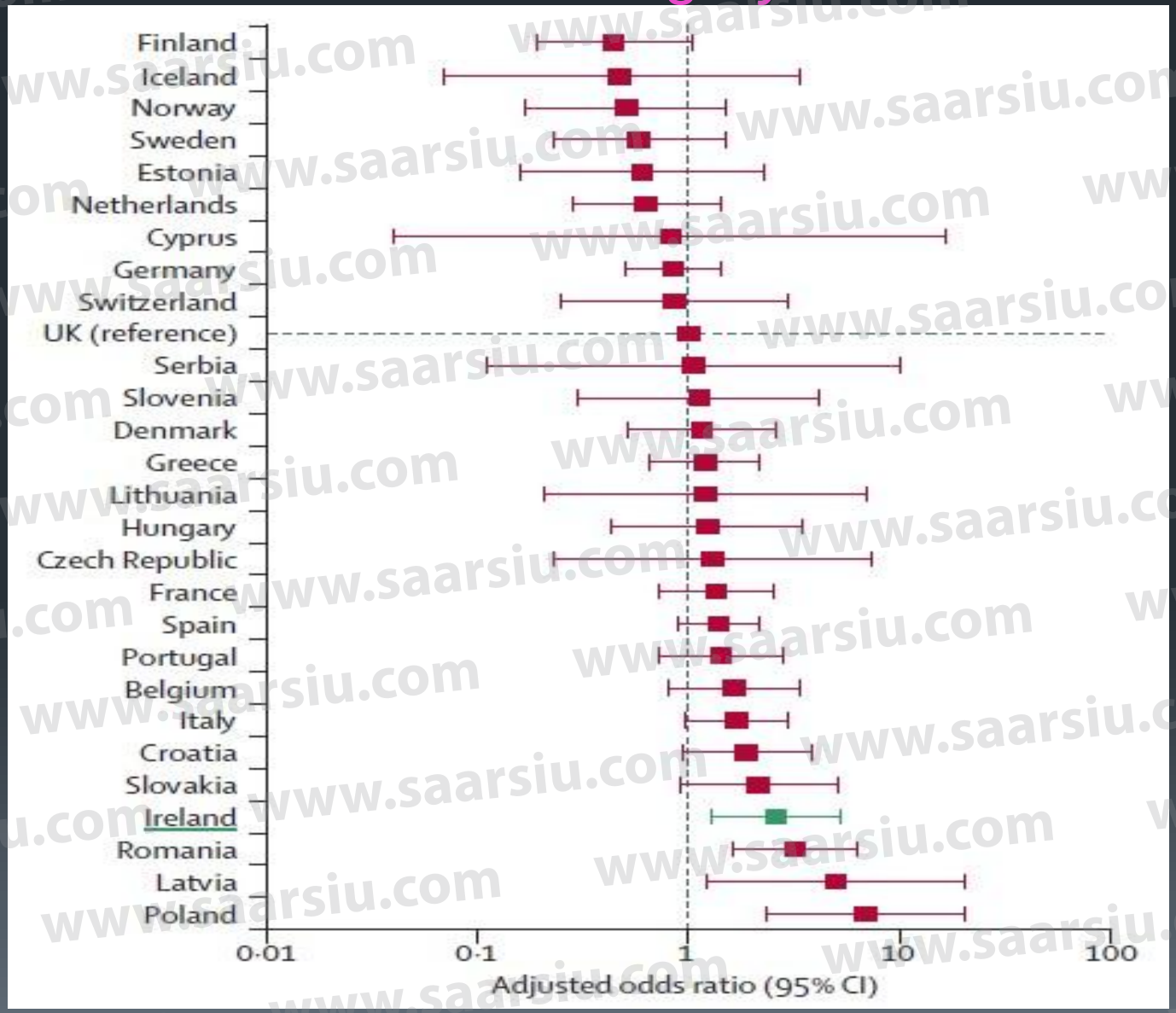
457 Events (N = 2,250)	1 Post-op event	2 Post-op events	3+ Post-op events
Hospital LoS	2.6 days	5.2 days	11.0 days
Excess Costs	$6,358	$12,802	$42,790
		2x $	**7x $**

Hersey Medical Center, PA, USA – NSQIP database (2007- 2009)

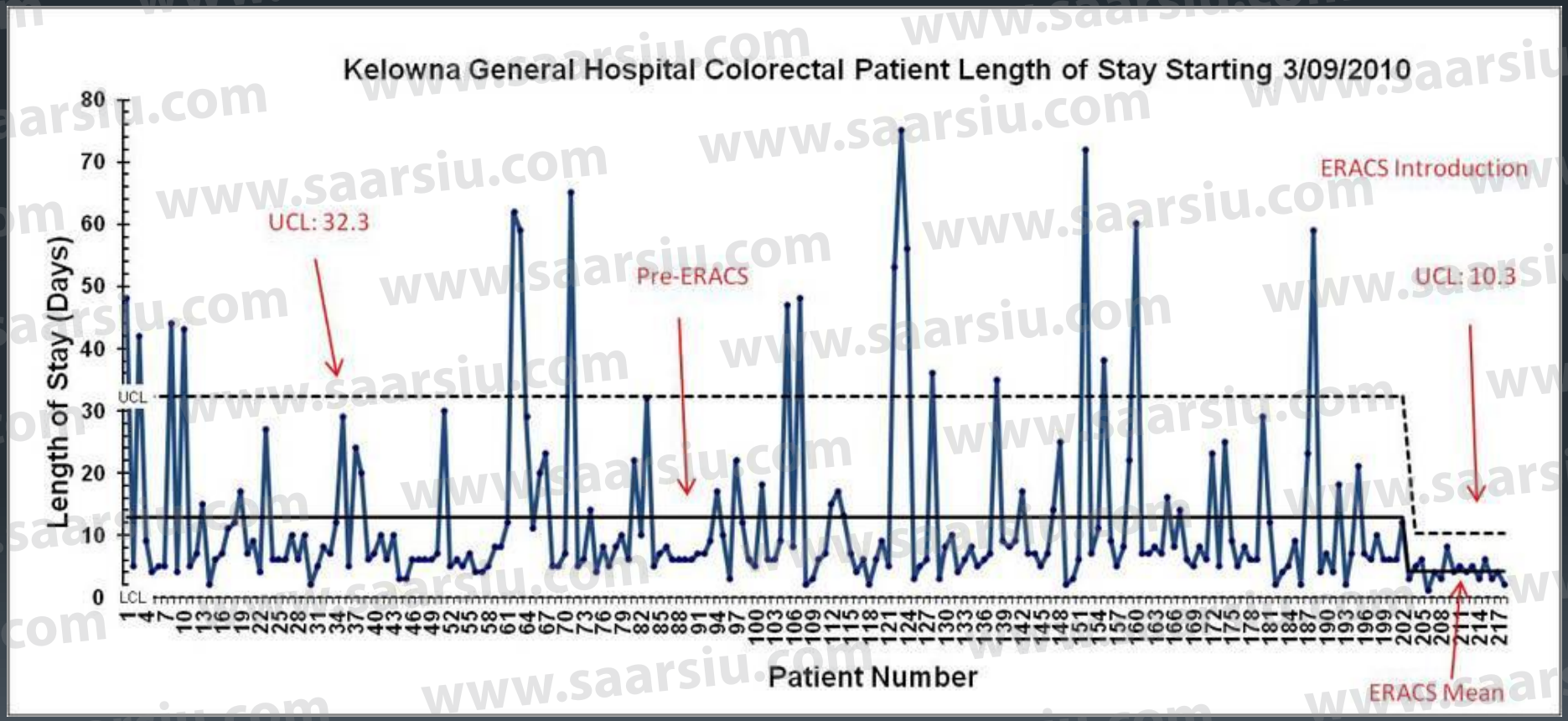
Boltz et al. Am J Qual. 2012; 5:383-90

Variations between Countries

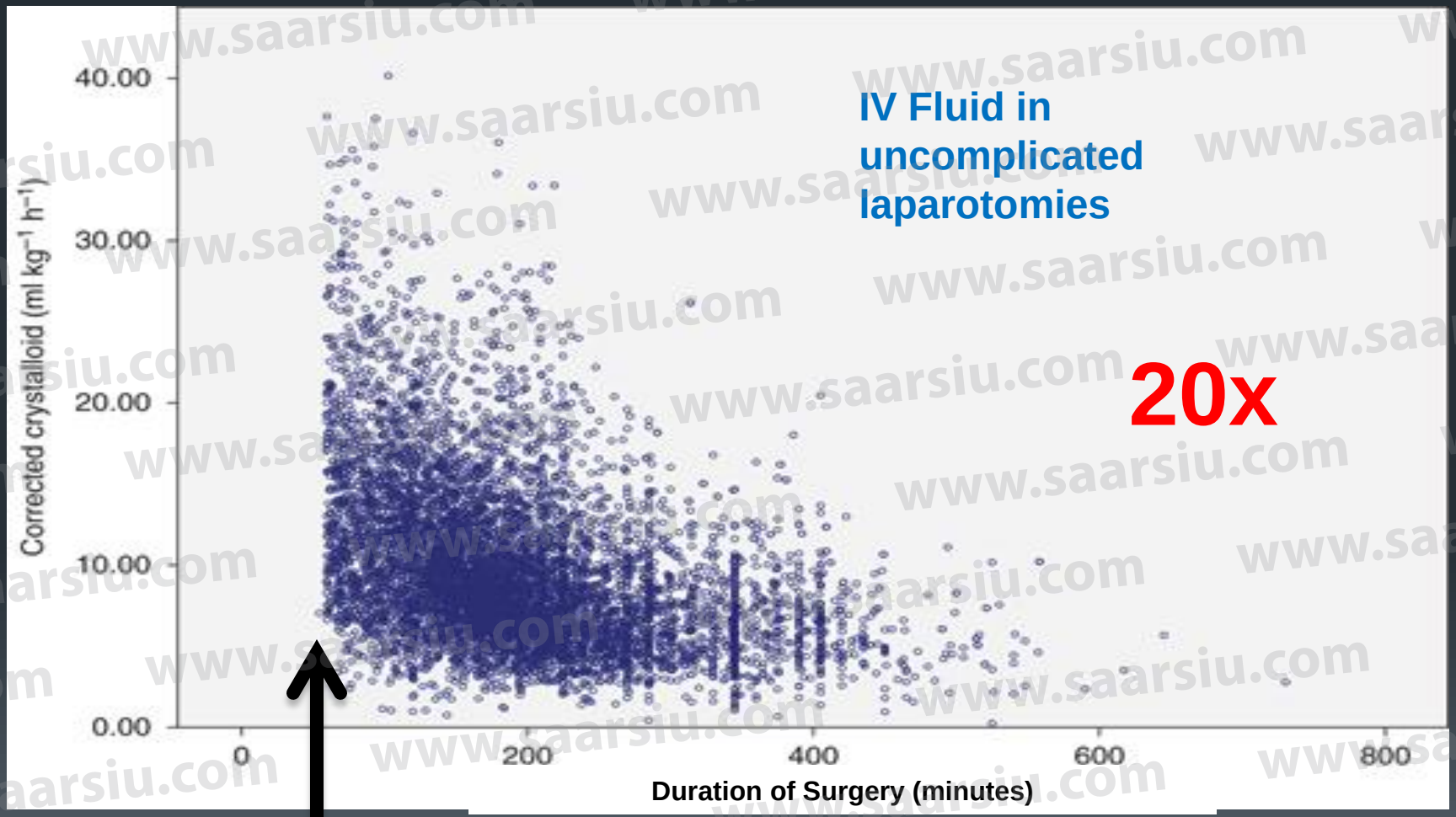
Risk of Death after Surgery



ERAS Reduce Variations Outcomes in a Single Hospital



Variability by Anesthetists



Cases lasting 1 hour = 2 → 40 mL/kg/h

Lilot, M., et al. "Variability in practice and factors predictive of total crystalloid administration during abdominal surgery: retrospective two-centre analysis." British journal of anaesthesia 114.5 (2015): 767-776.

Variation in Care

Acceptable?

> 18 years ago……

Hospital stay of 2 days after open sigmoidectomy with a multimodal rehabilitation programme

Kehlet, H., and T. Mogensen. "Hospital stay of 2 days after open sigmoidectomy with a multimodal rehabilitation programme." British Journal of Surgery 86.2 (1999): 227-230.

March 31, 2015

THE WALL STREET JOURNAL.

Patients Bounce Back Faster From Surgery With Hospitals' New Protocol

Clear liquids and pain meds before surgery, less IV fluid during and fewer narcotics afterward

Most Popular Videos

1. Disney Cuts Ties to YouTube Superstar PewDiePie

2. SpaceX Blasts Off

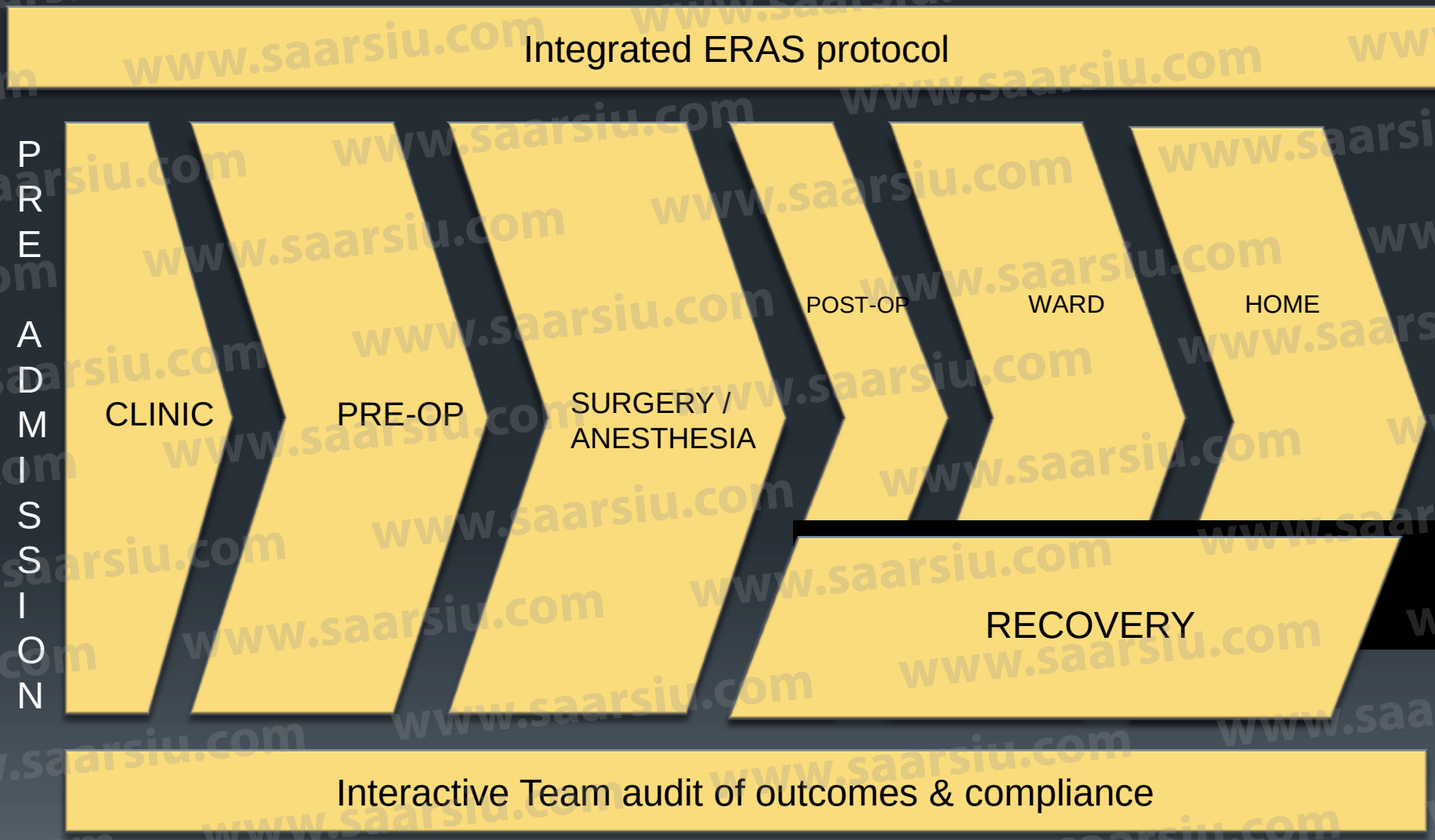
15 + years adoption of new knowledge…

Acceptable?

What is ERAS?

- Enhanced Recovery After Surgery
- Multimodal Evidence Based
- Perioperative Care
- TEAM WORK

ERAS Philosophy: The Patient's Journey



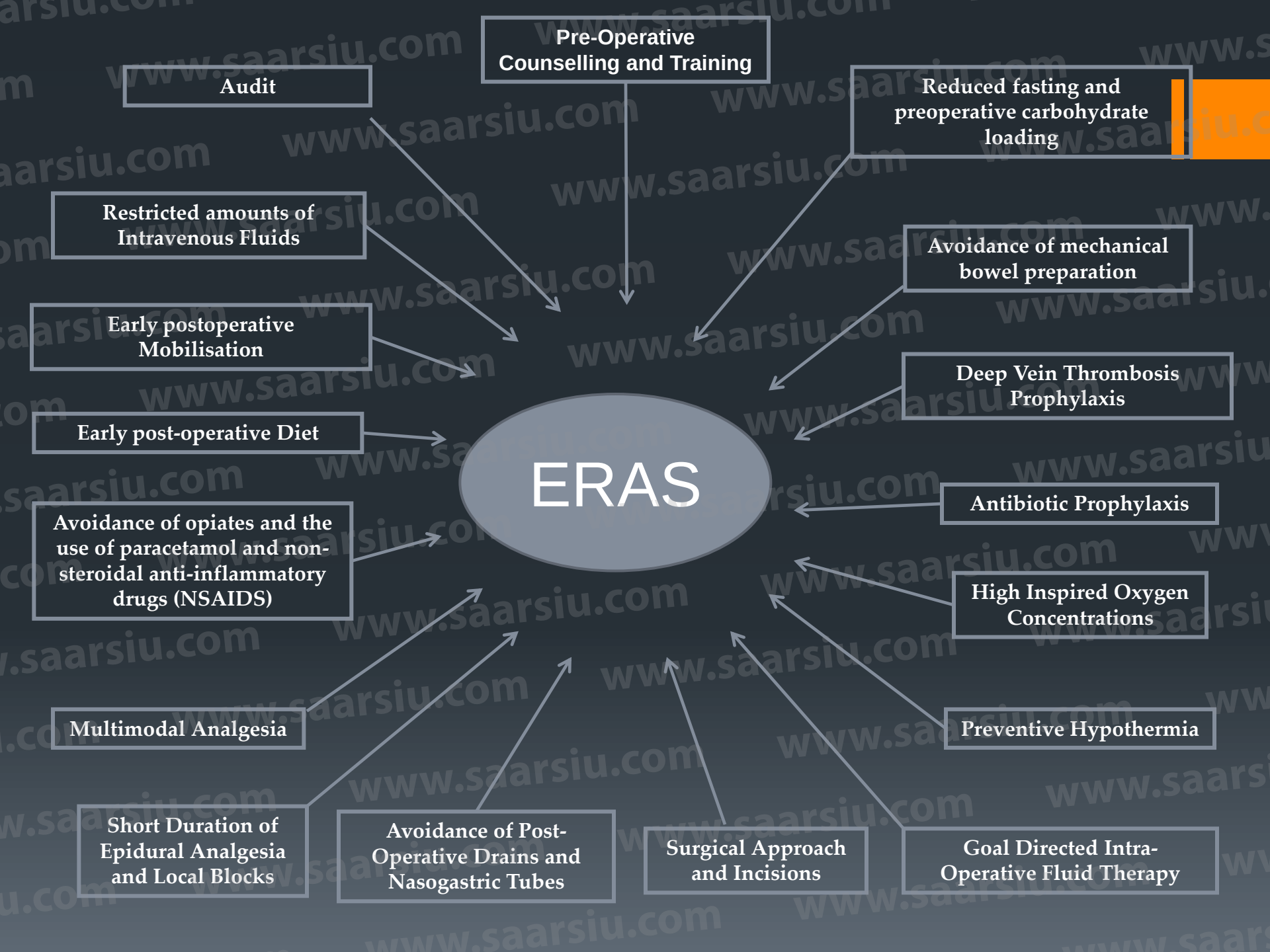
ERAS Team Approach

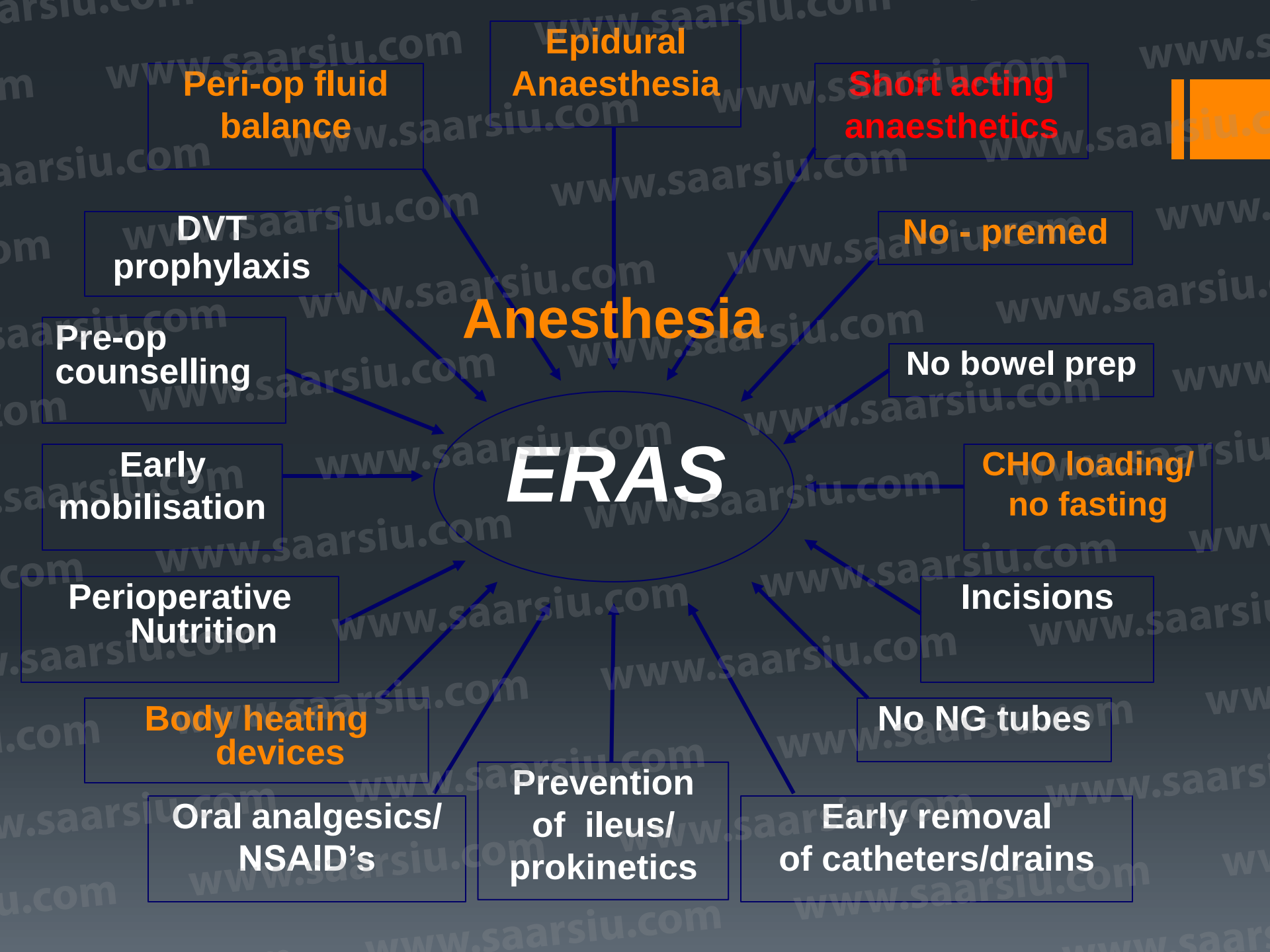
- Surgeon
- Anesthestist
- HDU specialist
- Ward nurses
- Anesthesia nurses
- Physiotherapist
- Dietitian

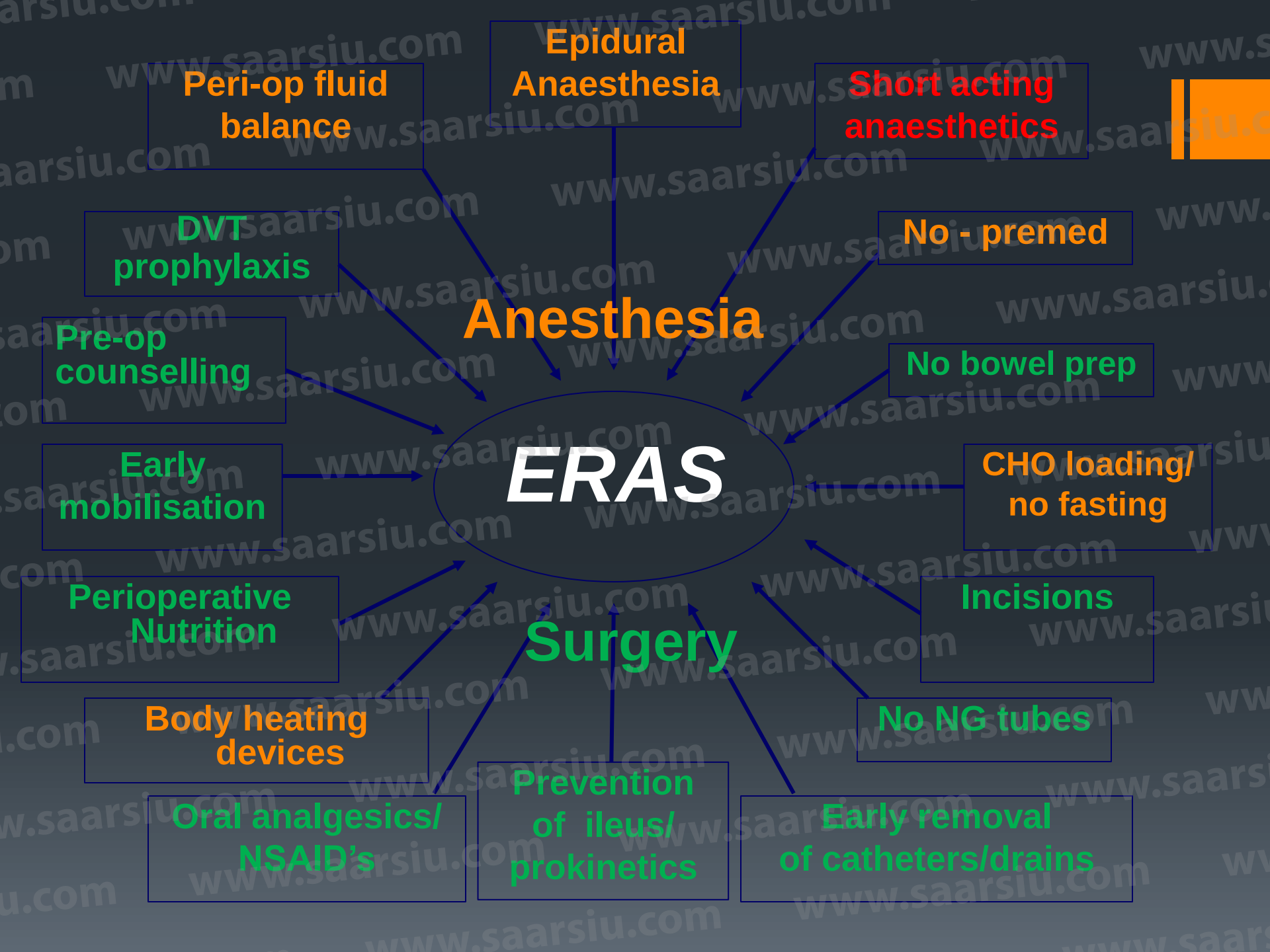
- Management

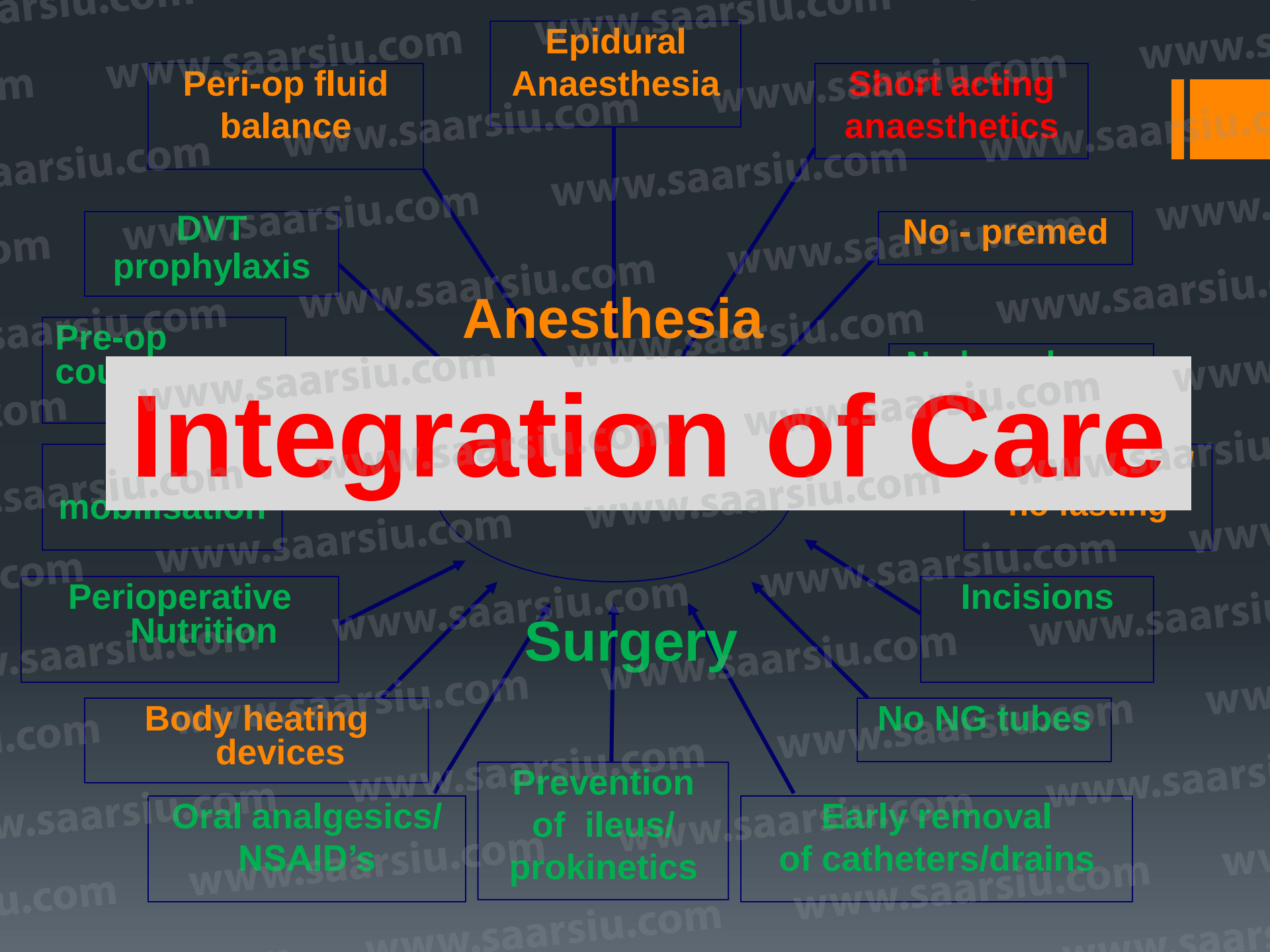
Team work:

- Training
- Implementing
- Planning
- Auditing
- Updating
- Reporting
- Research


Pre-Operative Counselling and Training
Audit
Reduced fasting and preoperative carbohydrate loading
Restricted amounts of Intravenous Fluids
Avoidance of mechanical bowel preparation
Early postoperative Mobilisation
Deep Vein Thrombosis Prophylaxis
Early post-operative Diet
ERAS
Antibiotic Prophylaxis
Avoidance of opiates and the use of paracetamol and non-steroidal anti-inflammatory drugs (NSAIDS)
High Inspired Oxygen Concentrations
Multimodal Analgesia
Preventive Hypothermia
Short Duration of Epidural Analgesia and Local Blocks
Avoidance of Post-Operative Drains and Nasogastric Tubes
Surgical Approach and Incisions
Goal Directed Intra-Operative Fluid Therapy


Epidural Anaesthesia
Peri-op fluid balance
Short acting anaesthetics
DVT prophylaxis
No - premed
Anesthesia
Pre-op counselling
No bowel prep
Early mobilisation
ERAS
CHO loading/ no fasting
Perioperative Nutrition
Incisions
Body heating devices
No NG tubes
Oral analgesics/ NSAID's
Prevention of ileus/ prokinetics
Early removal of catheters/drains


Epidural Anaesthesia
Peri-op fluid balance
Short acting anaesthetics
DVT prophylaxis
No - premed
Anesthesia
Pre-op counselling
No bowel prep
Early mobilisation
ERAS
CHO loading/ no fasting
Perioperative Nutrition
Incisions
Surgery
Body heating devices
No NG tubes
Oral analgesics/ NSAID's
Prevention of ileus/ prokinetics
Early removal of catheters/drains



Integration of Care

Colorectal Meta Analysis 2014 ERAS: Reduce complications by 40%

Greco et W J Su7rg 2014: 38: 1531

Nonsurgical Complications Reduced by 60%

Greco et W J Su7rg 2014: 38: 1531

Cost Savings

ERAS & Cost Savings

New Zealand – $4,500

- 4,000€ / patient in the first 50 patients. Study visits & full time included

Switzerland - $1,650

- 1,500 € / patient per first 50 patients. Training & full time nurse included

Canada - %$2,985

- 2985 $/ patient (colorectal surgery)
- 2,200 € / patient (esophageal surgery)

Roulin et al, BJS 2013, Sammour NZJS 2010, Lee BJS 2013, Lee Ann Surg 2014

2.4-5.1 Return on Investment

An economic evaluation of the Enhanced Recovery After Surgery (ERAS) multisite implementation program for colorectal surgery in Alberta

Nguyen X. Thanh, MD, PhD, Anderson W. Chuck, PhD, MPH, Tracy Wasylak, MSc, Jeannette Lawrence, BScN, MBA, Peter Faris, PhD, Olle Ljungqvist, MD, PhD, Gregg Nelson, MD, PhD, and Leah M. Gramlich, MD

Author information ► Article notes ► Copyright and License information ►

Abstract

Go to:

Background

In February 2013, Alberta Health Services established an Enhanced Recovery After Surgery (ERAS) implementation program for adopting the ERAS Society colorectal guidelines into 6 sites (initial phase) that perform more than 75% of all colorectal surgeries in the province. We conducted an economic evaluation of this initiative to not only determine its cost-effectiveness, but also to inform strategy for the spread and scale of ERAS to other surgical protocols and sites.

Methods

We assessed the impact of ERAS on patients' health services utilization (HSU; length of stay [LOS], readmissions, emergency department visits, general practitioner and specialist visits) within 30 days of discharge by comparing pre- and post-ERAS groups using multilevel negative binomial regressions. We estimated the net health care costs/savings and the return on investment (ROI) associated with those impacts for post-ERAS patients using a decision analytic modelling technique.

Results

We included 331 pre- and 1295 post-ERAS patients in our analyses. ERAS was associated with a reduction in all HSU outcomes except visits to specialists. However, only the reduction in primary LOS was significant. The net health system savings were estimated at $2 290 000 (range $1 191 000–$3 391 000), or $1768 (range $920–$2619) per patient. The probability for the program to be cost-saving was 73%–83%. In terms of ROI, every $1 invested in ERAS would bring $3.8 (range $2.4–$5.1) in return.

Conclusion

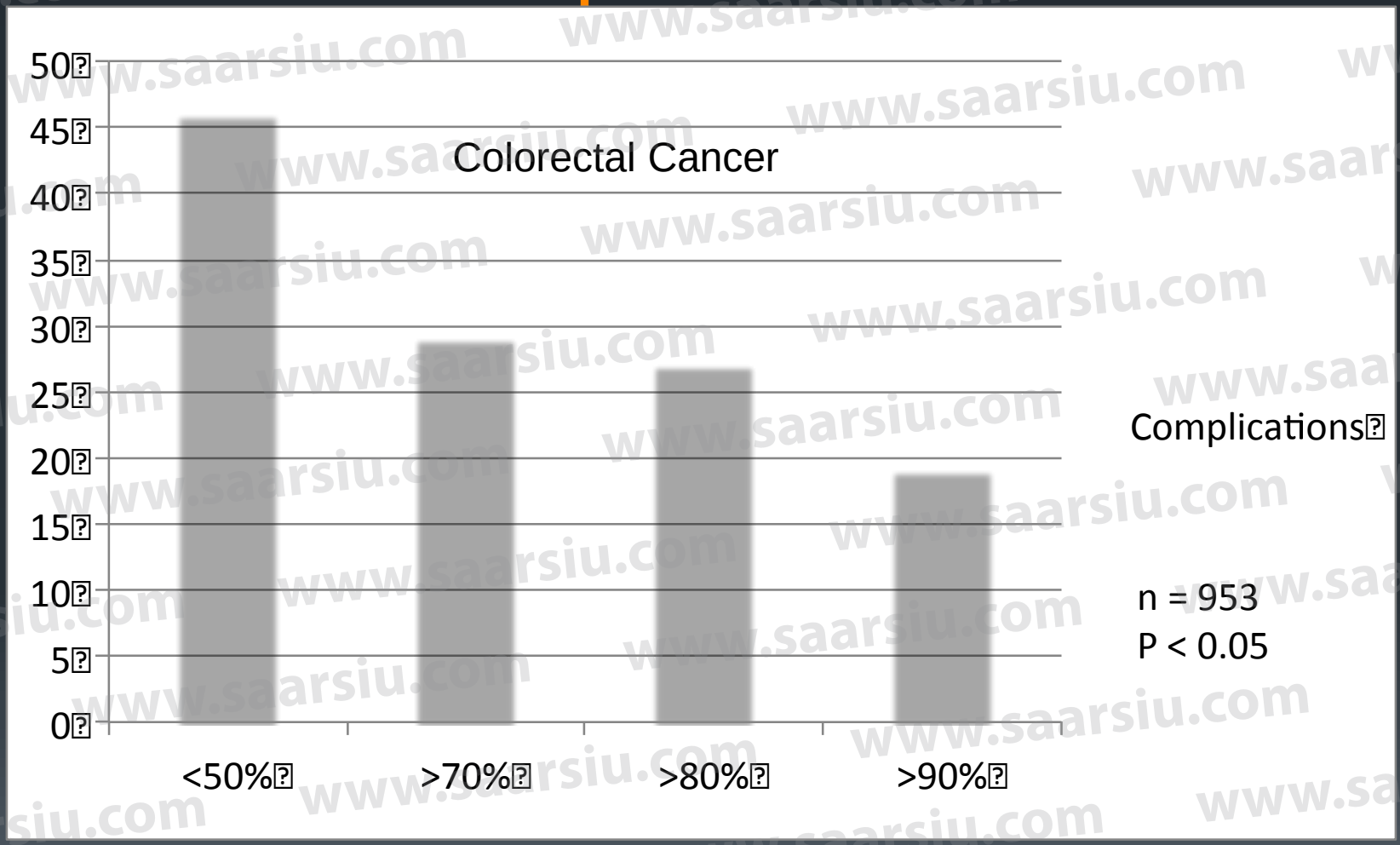
The initial phase of ERAS implementation for colorectal surgery in Alberta is cost-saving. The total savings has the potential to be more substantial when ERAS is spread for other surgical protocols and across additional sites.

Thanh, Nguyen X., et al. "An economic evaluation of the Enhanced Recovery After Surgery (ERAS) multisite implementation program for colorectal surgery in Alberta." Canadian Journal of Surgery 59.6 (2016): 415.

Great Results!

Why not everyone use it?

ERAS Compliance: Complications



Compliance with ERAS protocol elements
Single center study, consecutive patients

Gustafsson et al, Arch Surg, 2011

Healthcare Challenges and ERAS

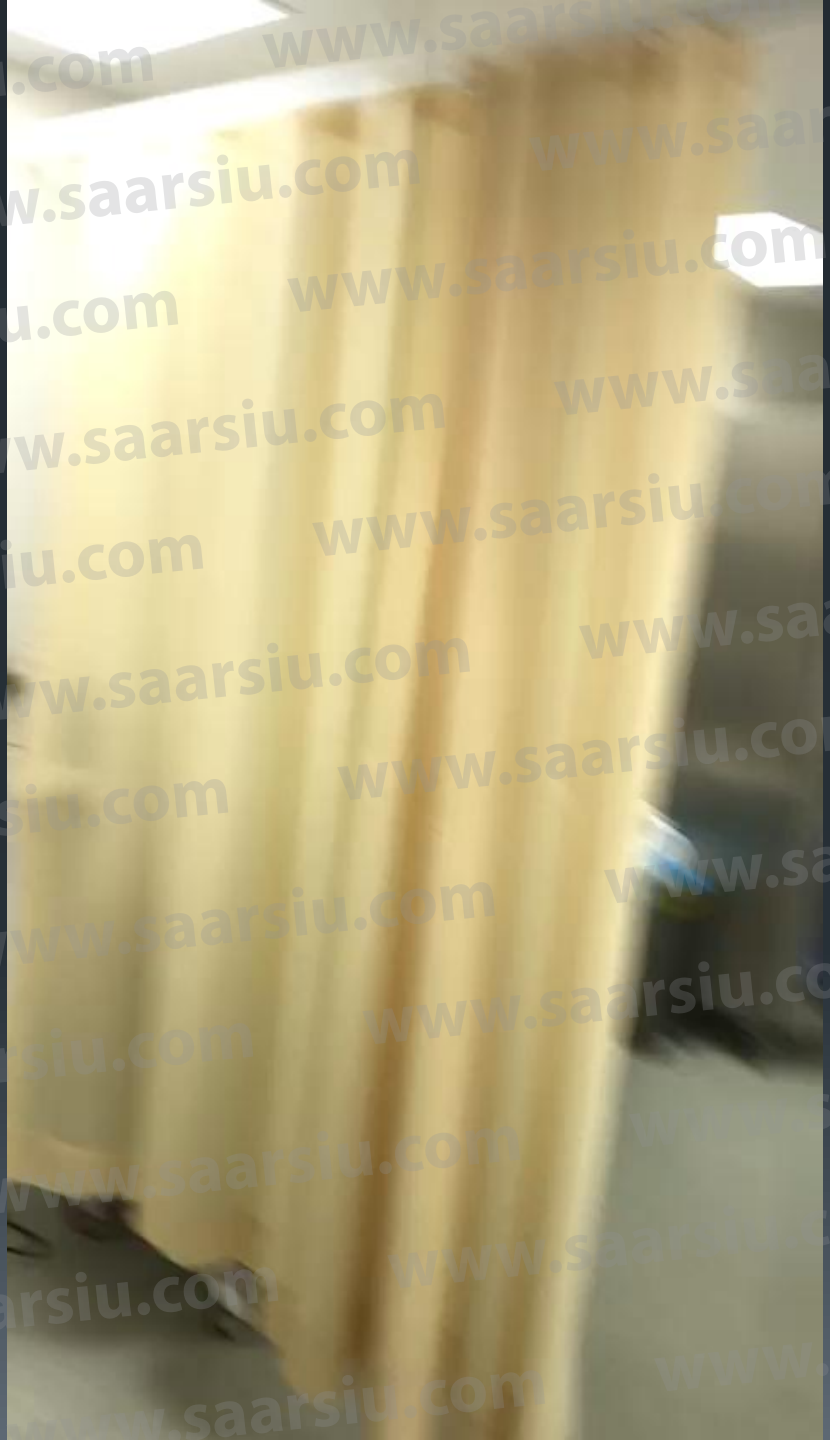
- Growing and ageing population
- Pressure for better results
- Diminishing funding

- Better care
- Save Costs
- Implement in 8-10 months.

- Better care for less cost .

- ✓Practice is changing all the time
- ✓**Systemic implementation in teams**
- ✓Best practice is not in use
- ✓**Continuous Interactive audit**
- ✓Perioperative care is co[illegible]plex and important
- ✓**Multi profe[illegible]tidisciplinary approach**
- ✓ER[illegible]s outcomes
- ✓Winner: Patients, Staff, Payers
- ✓**Fast growing international network**

Mission: Make Change Routine



UNITED ARAB EMIRATES

ERAS® Society

"The immediate challenge to improving the quality of surgical care is not discovering new knowledge, but rather how to integrate what we already know into practice". [Urbach DR, Baxter NN. BMJ 2005]

Home | Events | ERAS Care System | Resources | ERAS Guidelines | News | Members | Support | About us..

Home > News

Report from the First Pan Arab & Middle East Conference For Enhanced Recovery After Surgery

21 March 2015

The **First Pan Arab & Middle East Conference For Enhanced Recovery After Surgery (ERAS) (www.eras-middleeast.com)** was held in JW Marriott Marques Hotel in Dubai, United Arab Emirates (UAE) with very remarkable success.

The conference was held under the presidency of Dr. Medhat Shalabi. Approximately 280 delegates from all over the Arab countries and the Middle East attended the two days conference. The key note speaker was Professor Henrik Kehlet from Denmark. Together with a very highly selected group of internationally well renowned speakers in the field of ERAS, they presented along the 2 days a very solid, updated, and applicable scientific program. The content of the lectures and the highly professional discussions were praised by all delegates.

The conference was supported by the ERAS Society, and it's chairman, Professor Olle Ljungqvist, who was present as one of the distinguished guest speakers. The agenda of the conference also involved a round table discussion about the future collaboration in the region between the ERAS Society and the Pan Arab Middle East Society (PAME ERAS Society) that is to be started in the region under the leadership of Dr. Medhat Shalabi with the support of an elite group of prominent healthcare leaders from the whole region.

Dr Medhat Shalabi, Prof Henrik Kehlet and Prof Olle Ljungqvist

TURKEY


TARK 2015
49. Ulusal Kongresi
DR. MEDHAT SHALABI
MB BCH, MSc., DA (UK), MD, FRCA, CCST (UK)
Consultant Anesthesiologist, Head of Anesthesiology & Intensive Care Department,
Alzahra Hospital, Dubai
YAŞAMSAL TEKNOLOJİ


ÖNEMLİ

QATAR


الجمعية السعودية للجراحة العامة
SAUDI GENERAL SURG SOCIETY


WELCOME TO
OUR SEMINAR
TEHRAN-IR
Imam H
Imam Khomeini Hospit
February, 1-3, 201
IRANIAN SOCIETY OF ANAESTHESOLOG
ERAS
SOCIETY

تحدثنا خلال الورقتين عن اتفاقية حقوق الطفل والبروتوكولات الاختيارية الملحقة بها، ومبادئ

النوع من الحلقات لكبار المسؤولين لتسهيل التطبيق على أرض الواقع.

إسدال الستار على مؤتمر التعافي السريع بعد الجراحة

مسقط - الرؤية

اختتم مؤتمر "التعافي السريع بعد الجراحة" الذي نظمته المديرية العامة للرعاية الطبية التخصصية بوزارة الصحة- وبالتعاون مع الجمعية العمانية للتخدير والعناية المركزة، تحت رعاية معالي وكيل وزارة الصحة للشؤون الصحية د.محمد بن سيف الحوسني في فندق مسقط هوليداي بالخوير، واستمر يومين.

حاضر في المؤتمر ٦ خبراء من خارج السلطنة، واستضاف ما يقارب الـ ١٧٠ من جميع التخصصات الطبية في الجراحة العامة، والجراحة التي تُعنى بعلاج البدانة، وجراحة المسالك البولية، وجراحة العظام...وغيرها، إضافة إلى التخدير والخدمات المساعدة مثل الصيدلة والرعاية النفسية والتمريض والعلاج الطبيعي والتغذية العلاجية.

هدف المؤتمر إلى تعريف الطاقم الطبي بمبادئ إرشادات التعافي السريع بعد الجراحة، وتسليط الضوء على الفوائد الطبية والاقتصادية من تطبيق وتفعيل هذه الإرشادات، كما تطرّق المؤتمر إلى مُناقشة تطبيق هذه الإرشادات في التخصصات المختلفة؛ مثل: التخدير وعلاج البدانة والسرطان والإرشادات المساندة؛ مثل: العلاج الطبيعي والعلاج التنفسي والتغذية العلاجية، إضافة إلى مناقشة سبل تفعيل إرشادات التعافي السريع بعد الجراحة في الممارسات الجراحية في السلطنة.

خَرَج المؤتمر بعدّة توصيات؛ أبرزها: تقييم تثقيف ومشورة الفرد قبل إجراء العملية الجراحية، واعتبار الفرد المصاب جزءا مهما من الطاقم الطبي، ومساهما فعالا في اتخاذ القرار، المحافظة على معدل السكر والضغط وتصحيح أية مضاعفات قبل إجراء العملية؛ مثل: سوء التغذية أو الأنيميا أو السمنة، وأثناء العملية الجراحية أن تجرى باستخدام مواد ساكنة أقل من المعتاد، وعدم الإطالة قدر المستطاع في العمليات الجراحية، وبعد العمليات الجراحية القيام بالتمارين الرياضية قدر المستطاع والتدرج لتناول الاطعمة قدر المستطاع للتعافي السريع.

فريق غيث التطوعي ينظم حملة للتبرع بالدم في ضيان الجهاور

Conference President Welcome Message

Folllowing the unprecedent , Well Deserved Success of the First Pan Middle East (PAME) Conference for ERAS which was held in Dubai February 2015 , it was decided to organize to the second PAME Conference for ERAS in Cairo 23 - 24 February 2017 .

The Same elite group of world leaders of ERAS encouraged by t heir very successful experience in the first conference welcomed the invitation to come to Cairo , they will be joined by some other world classexperts in the field .This will guarantee very strong Scientific program that will give all delegates the best possible orientation familiarization , and help them to understand ERAS fully and to implement this concept in their clinical practice and healthcare facilities.

Cairo has alots to offer as a venue of this milestone scientific and clinical event; extremely nice sunny weather in February , magnificent history , smell of authenticity , great culture , spirit of its ancient past , And great potential for more sucessful future . I have the pleasure and honor to invite all respected colleagues to come and join this world class elite group of experts in the field of ERAS .This will definitely make our congress a great success an memorable event .

Looking forward to welcome you all in Cairo.

CONFERENCE PRESIDENT

Dr. Medhat Shalaby

MB BCH , MSc. , DA (UK) , MD , FRCA , CCST(UK)

Consultant Anesthesiologist

Head of Anesthesiology & Intensive Care Department

Al Zahra Hospital , Dubai - UAE

Founder and President of the PAME ERAS Society , a formal Chapter of the international ERAS Society

Email : medhat.shalabi@azhd.ae

Telephone : + 971 - 551966166

PAME ERAS SOCIETY

Our Eminent Faculty Has the Honour to Include:

Prof.Henrik Kehlet

Founder of ERAS

Professor of Perioperative Therapy, Copenhagen University

Denmark

Prof. Olle Ljungqvist

Professor of Surgery

Orebro University Hospital chairman of the ERAS Society

Sweden

Prof.Jan Mulier

Consultant Anesthesiologist, Bariatric Anesthesiologist in St.Jan's Hospital, Brugge, Belgiurn President of the European Society of the peri _operative care of Obese patients.

Belguim

Prof. Bruno Dillemans

Consultant general, laparoscopic, and bariatric surgeon, chief of staff Department of general surgery. St'lans Hospital, Brugge

Belguim

Prof. Monty Mythen

Smiths Medical professor of Anesthesia and Critical Care at University College London

UK

Prof. Robert Martindale

Professor &Chief, Division of General Surgery Medical Director for Hospital Nutrition Services Oregon Health & Science University

USA

Pof. Nicholas Bruce Scott

Consultant Anesthesiologist, Head of Anesthesiology department, Hammad Medical Centre

Qatar

Prof.Dileep lobo

Professor of Gastrointestinal Surgery Deputy Head of Division Nottingham Digestive Diseases Cente University of Nottingham Queen...s ,edical Centre

UK


2
ENHANCED RECOVERY
SURGERY (ERAS) CONFERENCE


1.ERAS
KONGRESİ
"Uluslararası
3-5 Mayıs 2018
3-5 Mayıs 2018


1.ERAS
KONGRESİ
"Uluslararası Katkıyla"
ANKARA


The
journey
of a
thousand
miles
begins with a single step.
-Lao Tzu