Guidelines Development:  
How it aids (& abets)  
Enhanced Recovery After Surgery

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disclosures:  
ahrq iscr  
eras® cardiac
1. what is eras
   background and rationale

2. guidelines
   development and controversies

3. guidelines \(\rightarrow\) eras
   implementation framework
1. what is ERAS?

[Graph showing baseline surgery rehabilitation and new baseline]
success comes from a thousand little things done well, rarely from a silver bullet...

-l.r.w lee

ERAS

- preoperative
  - education, coordination, optimization
  - practice parameters (NPO, preemptive medication/fluid)
- intraoperative
  - goal directed anesthetic
  - practice parameters (fluids, PONV, analgesia)
- postoperative
  - protocols & "pathways"
  - practice parameters (ambulation, feeding, analgesia)
the good, the bad & the ugly of guidelines
### definitions

<table>
<thead>
<tr>
<th>Practice Standards</th>
<th>Consensus Guidelines</th>
<th>Advisory Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex. standard anesthetic monitors</td>
<td>ex. management of the difficult airway</td>
<td>ex. elements of pre-anesthesia evaluation</td>
</tr>
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</table>

### consensus guidelines

- ...systematically developed recommendations that assist the practitioner and patient in making decisions about health care... may be adopted, modified, or rejected according to clinical needs and constraints and are not intended to replace local institutional policies.

- American Society of Anesthesiologists

### consensus guidelines

- establish consensus experts in the field of study
- centrally located conclusions
- recruitment issues

- consolidated brief report summarizes the data
describes the interventions

- institutionally supported organized by society/institution mission-centered
evidence-based primary literature
recommendation strength evidence is graded
documented time-stamped
transparent itemized delineation
consensus guidelines

Find the Experts
Distill the Evidence
State It & Grade It

Find the Experts

P population
I intervention
C comparison
O outcome

Distill the Evidence

23,620
Pubmed results: "Enhanced Recovery"

1,551
"Enhanced Recovery" + "randomized"

171
"Enhanced Recovery" + "randomized" + "colorectal"
2b.

The good, the bad & the ugly of guidelines
restrictive fluid therapy
CHO administration
epidural use
oxygen administration

Restrictive versus Liberal Fluid Therapy for Major Abdominal Surgery

Network meta-analysis of the effect of preoperative carbohydrate loading on recovery after elective surgery

M. A. Amer, M. D. Smith, G. P. Herbst, I. D. Plank and J. L. McCall

<table>
<thead>
<tr>
<th>Meta-analysis</th>
<th>SMQ</th>
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<tbody>
<tr>
<td>High-dose carbohydrate versus no carbohydrate</td>
<td>+ 0.5</td>
<td>-0.5</td>
</tr>
<tr>
<td>Metabolic load versus placebo</td>
<td>+ 0.5</td>
<td>-0.5</td>
</tr>
<tr>
<td>Glucose load versus no load</td>
<td>+ 0.5</td>
<td>-0.5</td>
</tr>
<tr>
<td>Glucose load versus saline</td>
<td>+ 0.5</td>
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CHO administration

ERAS® Society Guidelines → 21 separate recommendations

AHRQ ISCR Guidelines/Reviews → 12 separate recommendations

Service Lines with CHO evidence → 1
the good, the bad & the ugly of guidelines
3.

guidelines → ERAS
create the team

Institutional (Administrative Buy-In)

Unit (Local Front Line Buy-In)

Service Line (Multidisciplinary)

Pathways Committee

ERAS

Clinical Communities

Unit CUSP

establish the goals
determine the interventions

assess current practice

Consolidated Framework for Implementation Research
- Inner Setting
- Outer Setting
- Characteristics of the Intervention
- Implementation Process
- Characteristics of the Individuals

assess current practice
implement the program

- Knowledge-to-Action Framework
  - Knowledge Creation
  - Action Cycle
- Multidisciplinary Team
  - Anesthesiologists, surgeons, intensivists, nursing

PATHWAY IMPLEMENTATION

Comprehensive Unit based Safety Program (CUSP)
1. Educate staff on science of safety
2. Identify defects
3. Identify executive champion
4. Quarterly quality/safety project
5. Implement teamwork tools

Evidence-Based Practice Guidelines
1. Summarize the evidence
2. Identify local barriers to adoption
3. Phased implementation strategy
4. Ensure all patients are educated
5. Measure performance

PERIO OPERATIVE PATHWAY DEVELOPMENT

Technical Component
Adaptive Component

PATHWAY IMPLEMENTATION
audit the program

Kossiakoff et al. 2011.

maintain the program
10/31/2019

**maintain the program**

Overcoming barriers to implementation of the ERAS-cardiac program

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Intervention</th>
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<tr>
<td>Lack of evidence in literature</td>
<td>ERAS guidelines for cardiac surgery are not well established</td>
<td>Evidence-based guidelines for individual patients were developed.</td>
</tr>
<tr>
<td>Provider resistance</td>
<td>Surgeons, anesthesiologists, and nurses were initially resistant.</td>
<td>Training sessions and workshops were held for provider education.</td>
</tr>
<tr>
<td>Personal</td>
<td>The program required full commitment from all team members.</td>
<td>The program was implemented with full team commitment.</td>
</tr>
<tr>
<td>Improvement and education of staff</td>
<td>Staff education was focused on ERAS principles.</td>
<td>Ongoing education and recent updates on ERAS were provided.</td>
</tr>
</tbody>
</table>

improve the program

1. eras is...
2. guidelines are...
3. guidelines → ERAS
Thanks.