

Factors affecting initial trauma care in hospital

- Patient volume
- Time matters
 - Life-threatening injuries have to be ruled out/treated
- Teamwork
 - Multidisciplinary
 - Leadership
- Competence
 - Surgical skills
 - Tolerate stress

War Surgery Courses

- ✓ Compulsory for board certification in General Surgery in Norway from 2002
- ✓ Requires "experienced" surgeons



Practical sessions

- Primary survey
- Damage Control Surgery
 - Treatment of "real" injuries
 - Chest
 - Abdomen
- Communication and leadership
 - Patient physiology
 - Surgical options
 - Plans



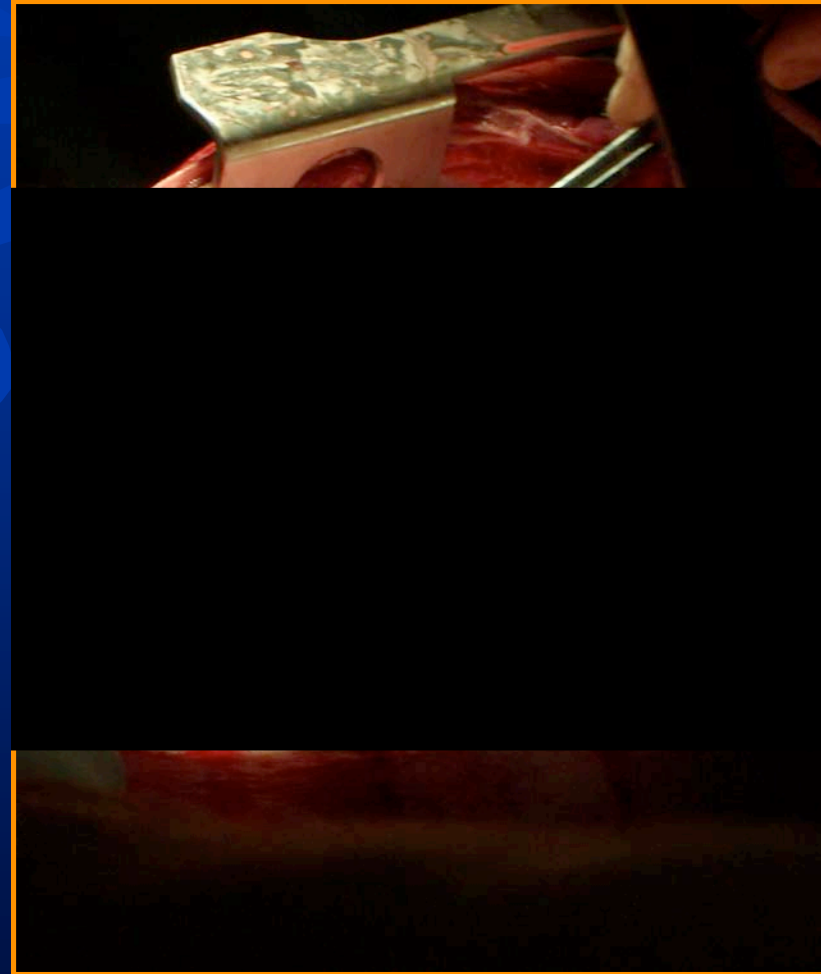
When the real situation is under control...

● Access

- Sternotomy
- Anterolateral thoracotomy
- Access to major vessels and abdominal organs

● Treatment

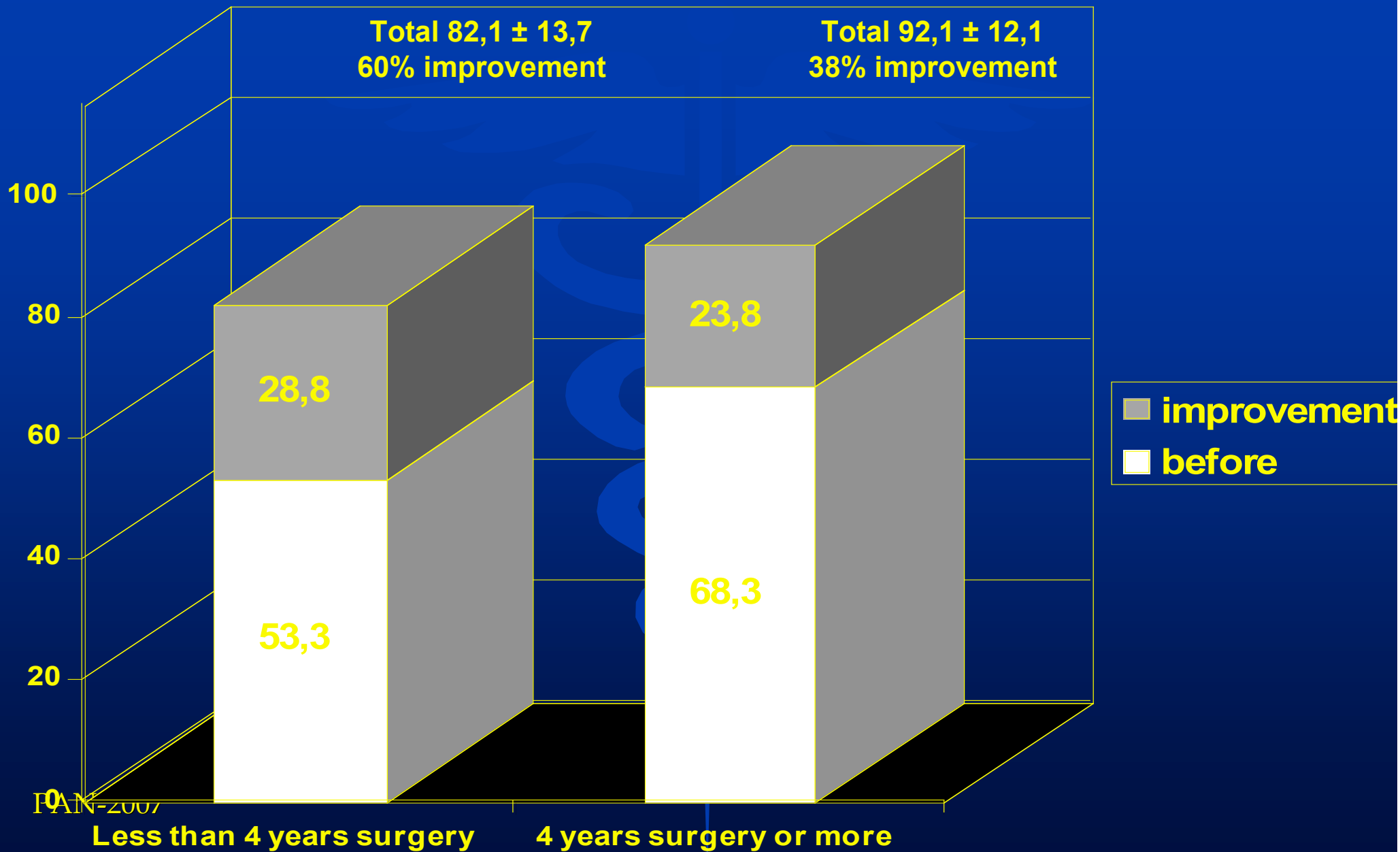
- Packing of liver injury....
- Suturing on a beating heart
- Debridement/amputation

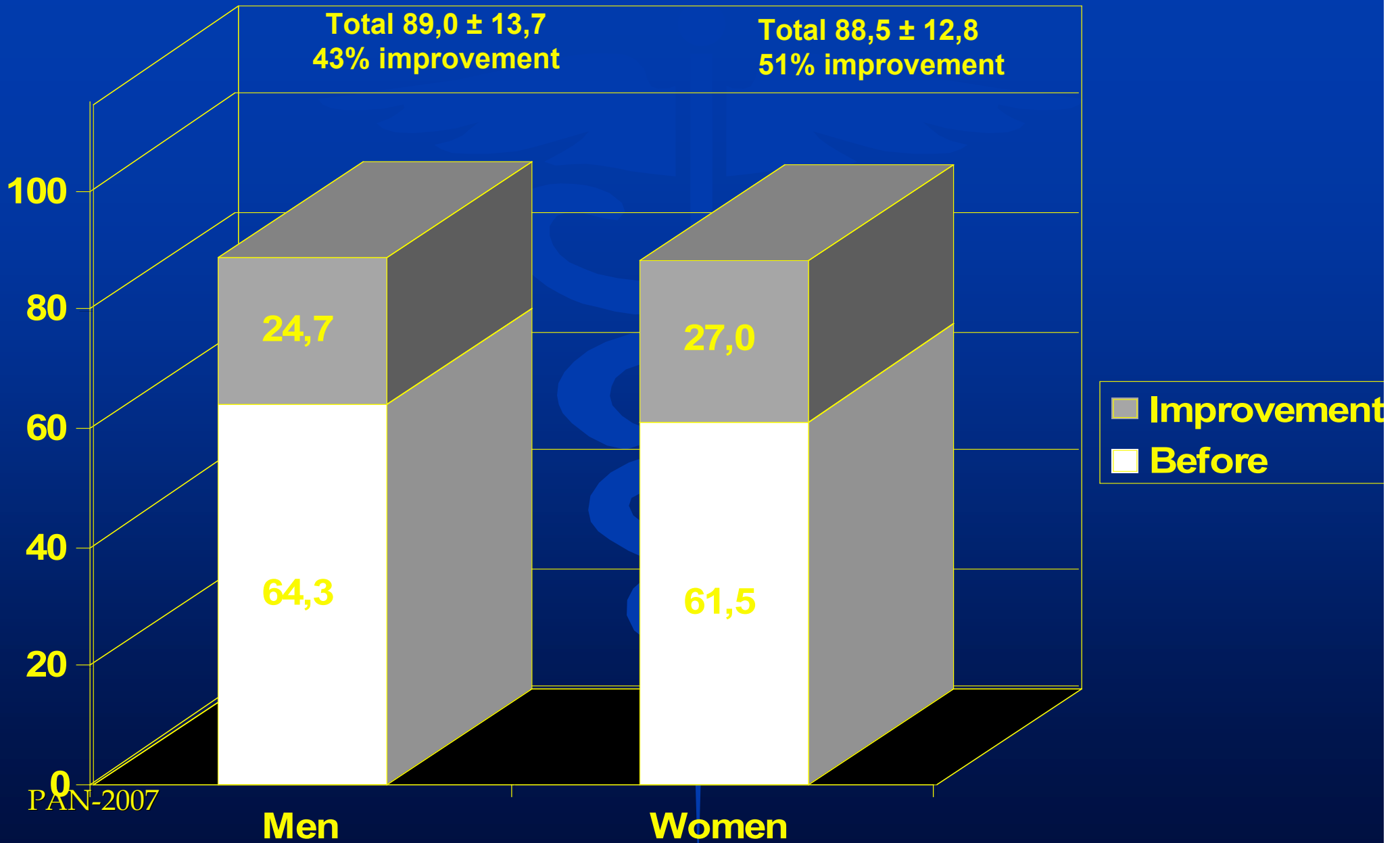


Evaluation of effect of education

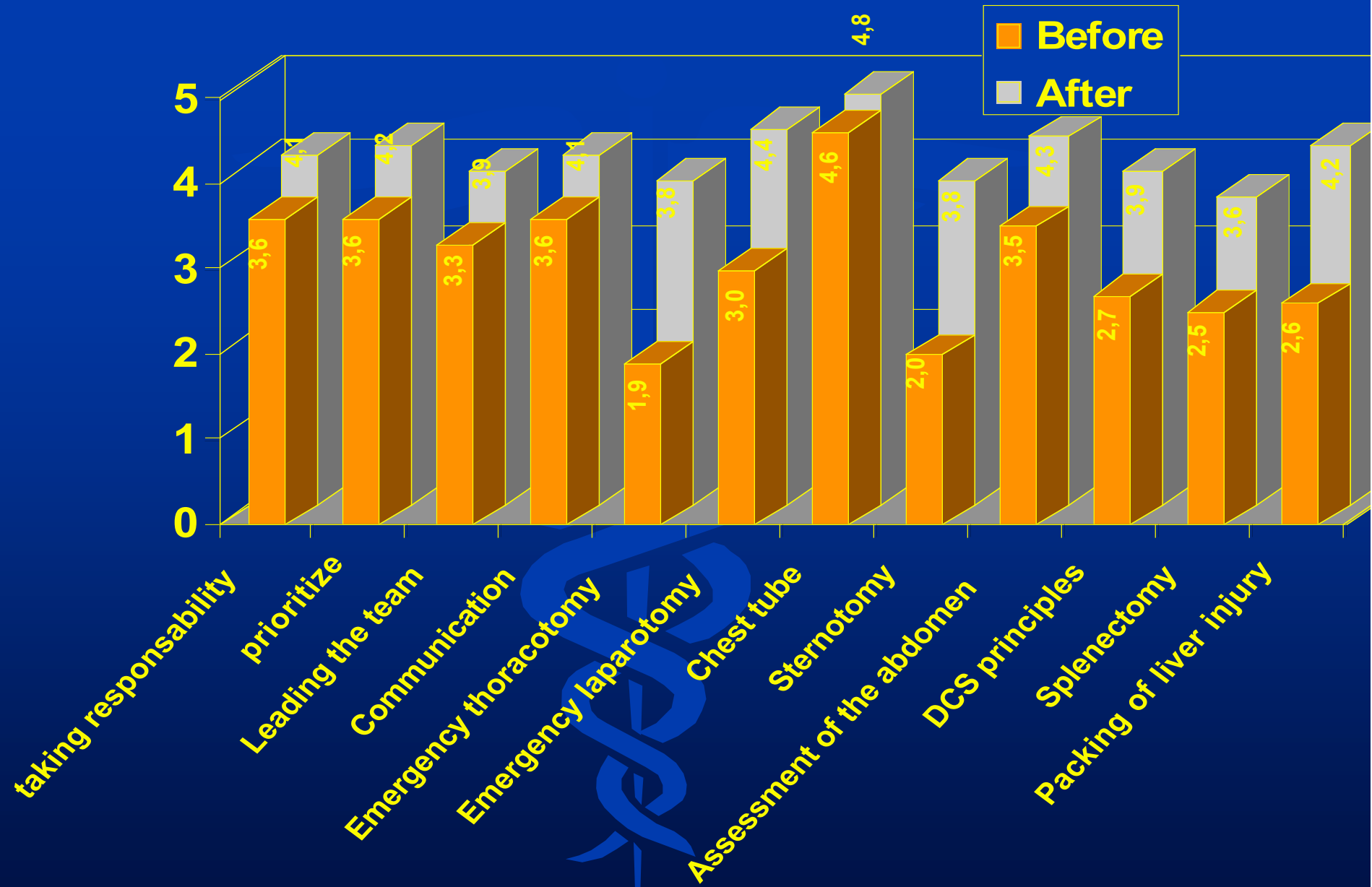
- Compulsory for board certification in General Surgery from 2002
- "Standardized" instruction
- Self assessment before/after the course
 - Scale 1-5 - degree of self-confidence in 23 different situations/procedures
 - Maximum score 115
 - "Do you feel more competent after the course?"
- 128 (of 144) surgeons with varying experience

Gaarder et al., Injury 2005

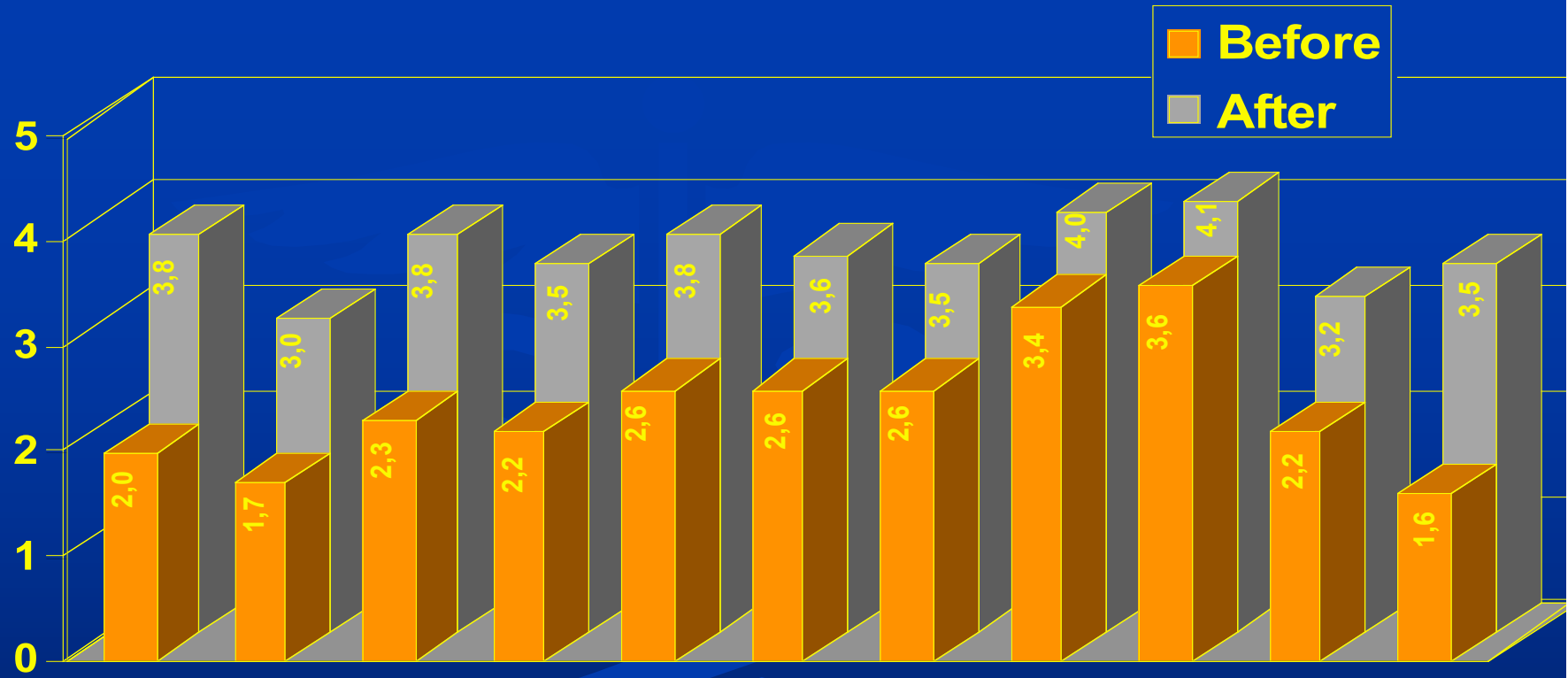




PAN-2007



Pringle maneuver
Other treatment of liver injury
Access large vessels
Treatment vascular injury
Access aorta
Pelvic injury
Renal injury
Colorectal injury
Small bowel injury
Diaphragmatic injury
Suture beating heart



Conclusion

- Training damage control procedures improve competence and self confidence in the surgeons
- Such competence must be maintained actively! However, this course is only offered once!