

The first UK experience with Posthorax® vest - Prophylactic use results in reduced sternal wound complications following sternotomy.



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Deep Sternal Wound Complication DSWC

- Sternal instability
- Drainage
- ± Fever / Septic Shock

Increased mortality and morbidity

**Depression
Poor quality of life
Long term illness**

**DSWC
Implications**

>400% length of stay



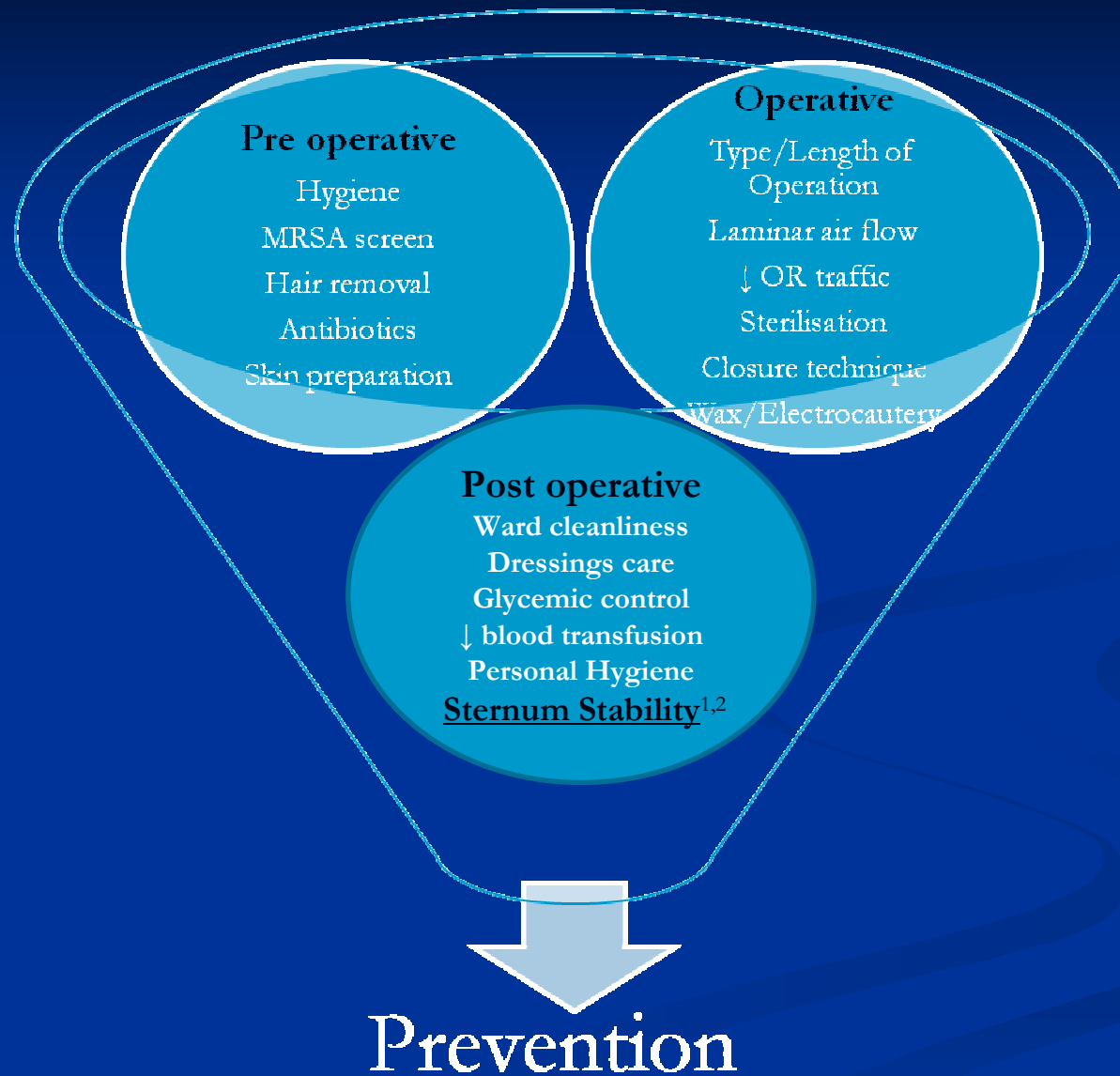
Longer occupancy of beds and repeated use of theatres



Loss of new admissions

**Abx, Vac Pump
HDU/ITU-RRT**

DSWC



1) J. Losanoff et al. Biomechanical comparison of median sternotomy closures Ann Thorac Surg 2004;77:203-209

2) Fynn-Thompson et. al. Methods for reduction of sternal wound infection Semin Thorac Cardiovasc Surg 2004 Spring;16(1):77-80

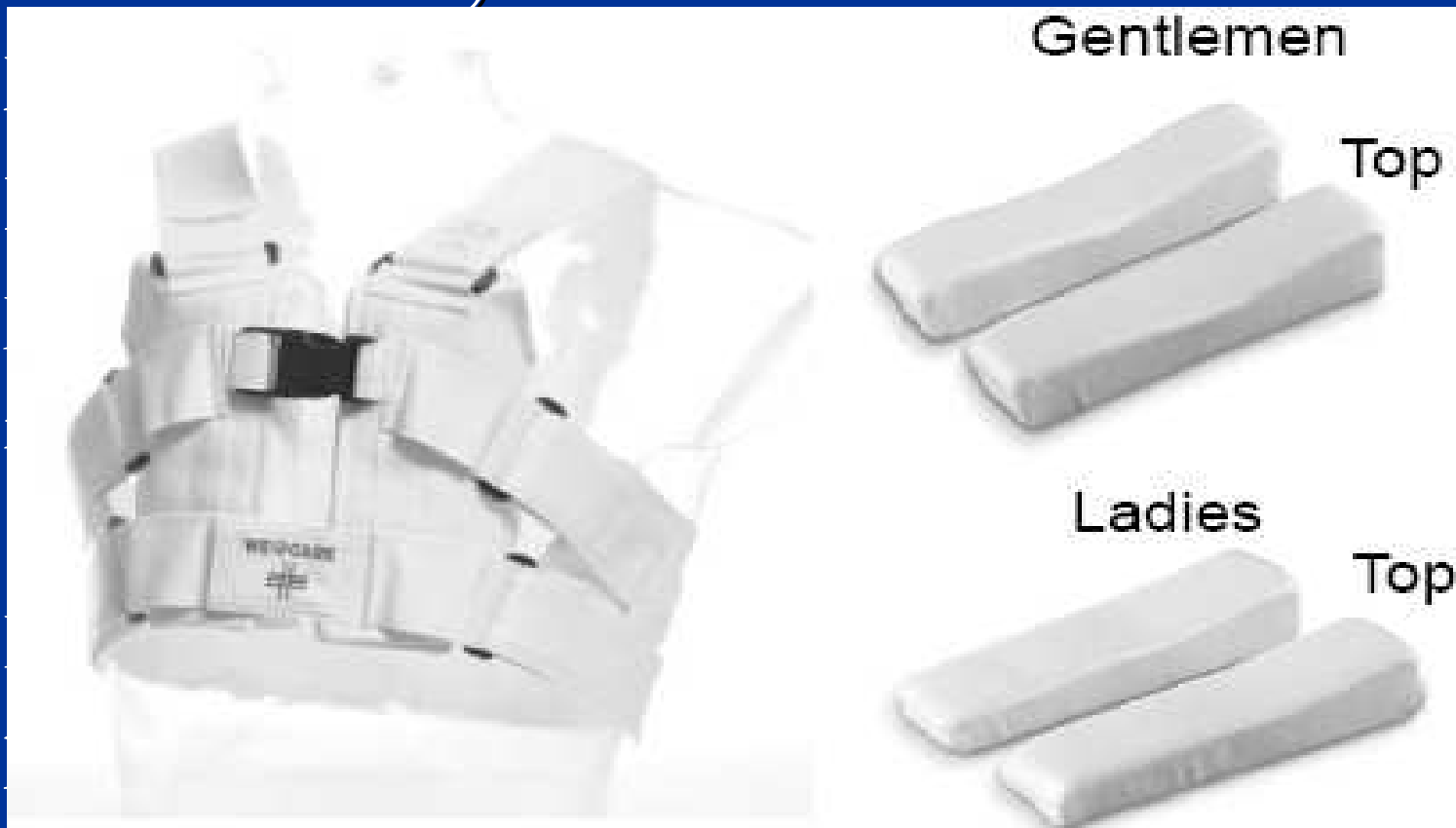
POSTHORAX[®]

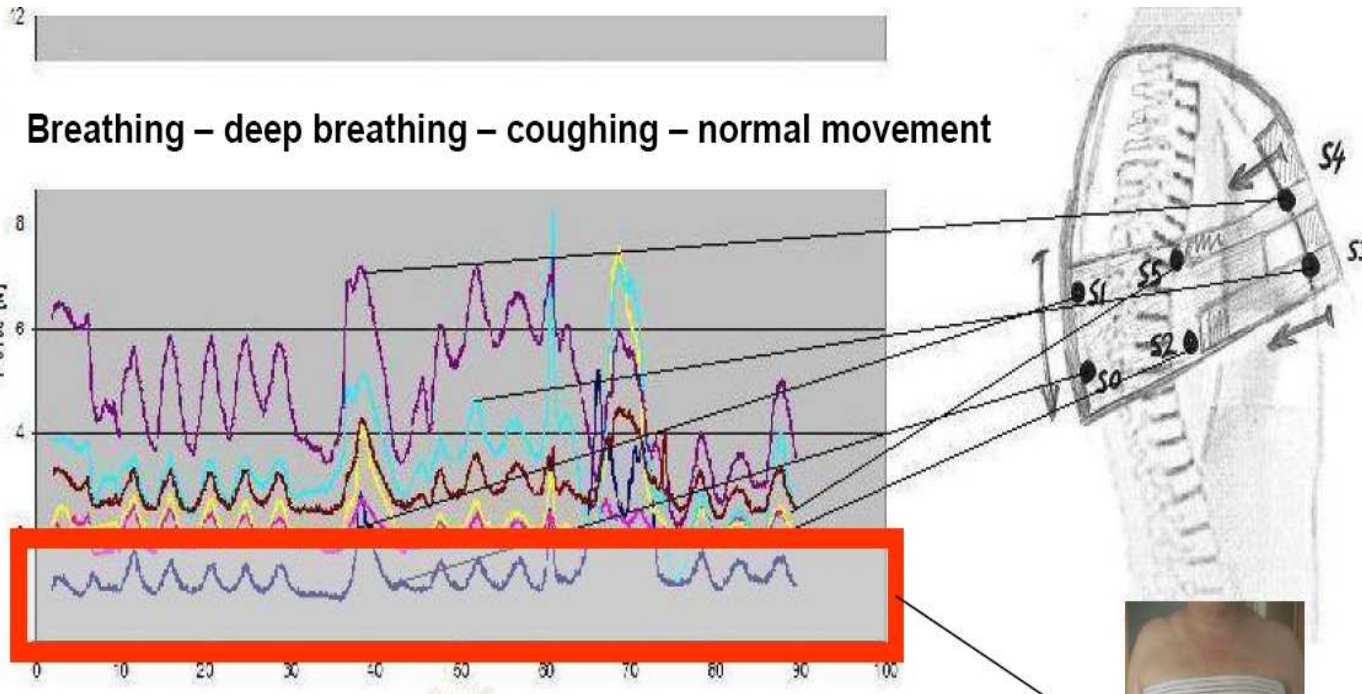
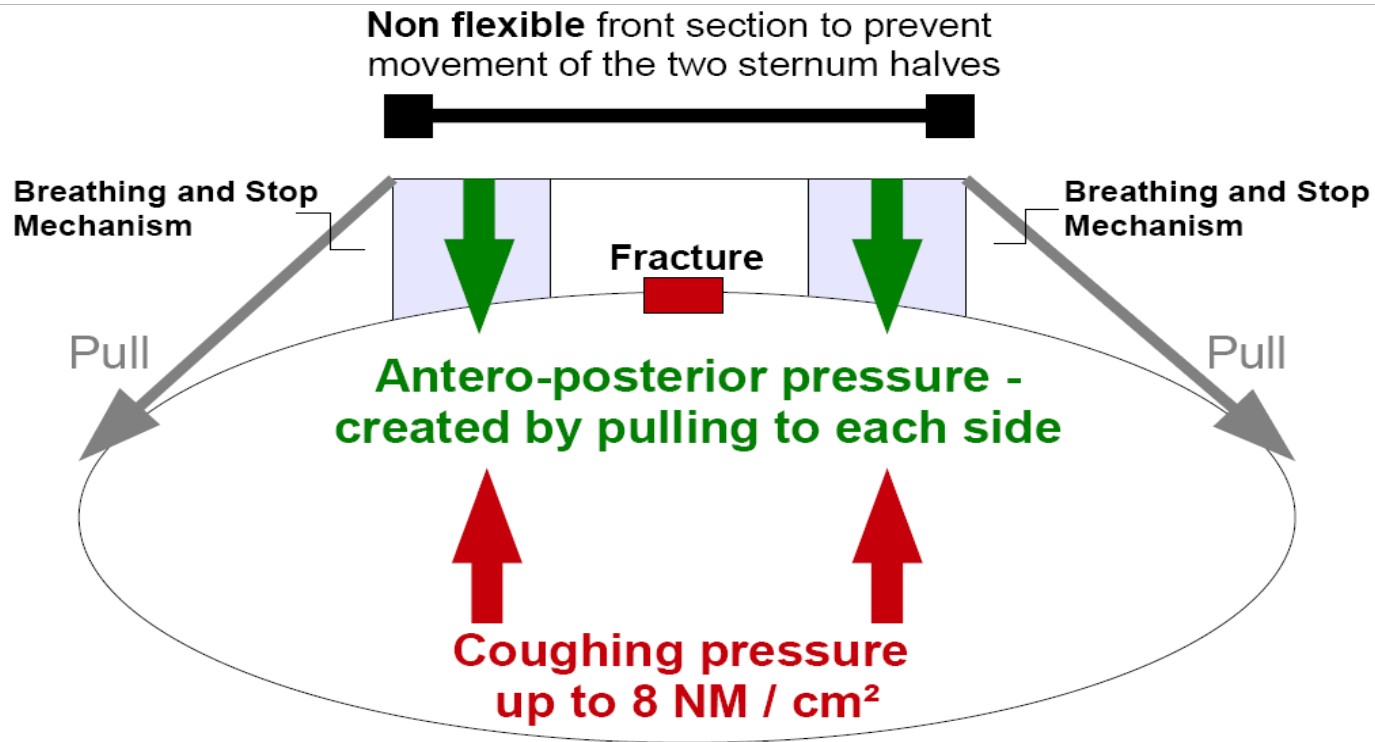


- The Posthorax Vest is a **post-operative jacket** for patients who have undergone heart surgery via sternotomy
- Provides support for the chest without restricting breathing

Function of Posthorax®

- Anteroposterior stabilization of the sternum (2 front cushions)





Function of Posthorax®

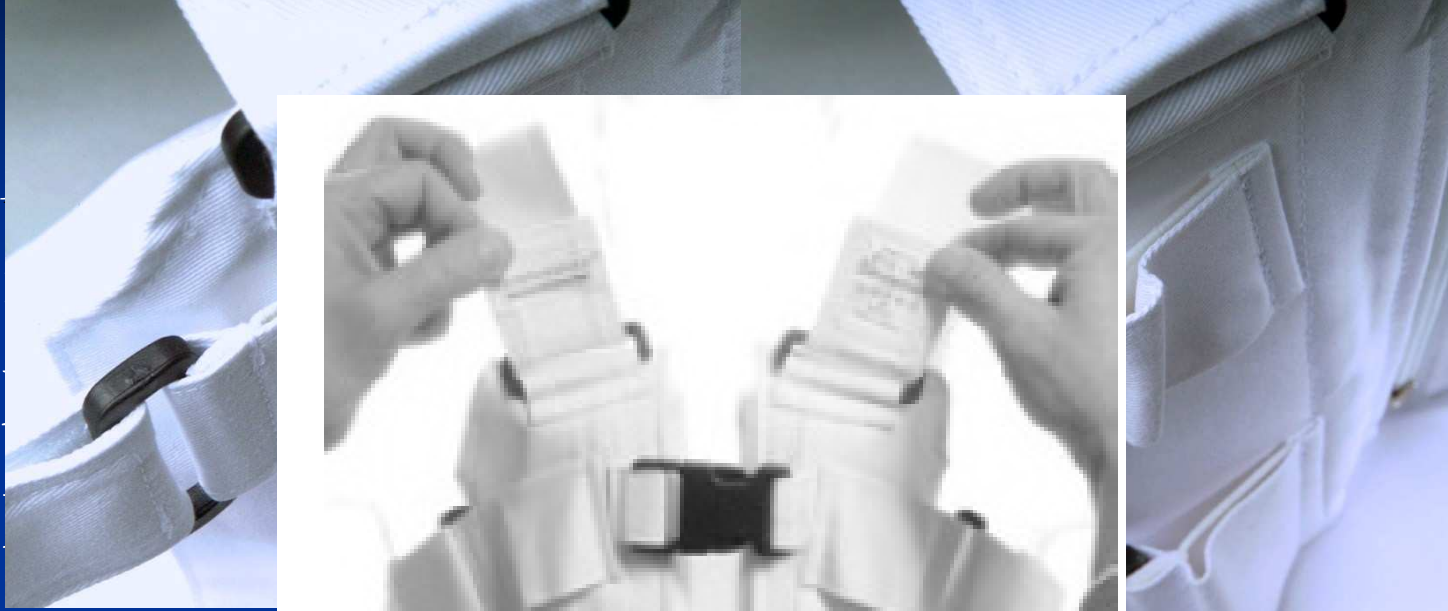
- Anteroposterior stabilazation of the sternum (2 front cushions)
- Different sizes
- Ergonomical fit for males and females



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Function of Posthorax®



- -
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 - Lateral s
mechanic
stops ov
 - Individual sizing at the shoulder straps to prevent vertical malposition
- stop
breathing but
x
- 1 (2

Selection process/ Data collection

- Pre operative decision (clinic or in hospital)
- Documentation in the notes (suitability, reason, size)
- Application by trained staff
- Ideally, application immediately after extubation
- Recommended use for up to 6 weeks
- 1st year Prospective collection
- 2nd year Retrospective collection

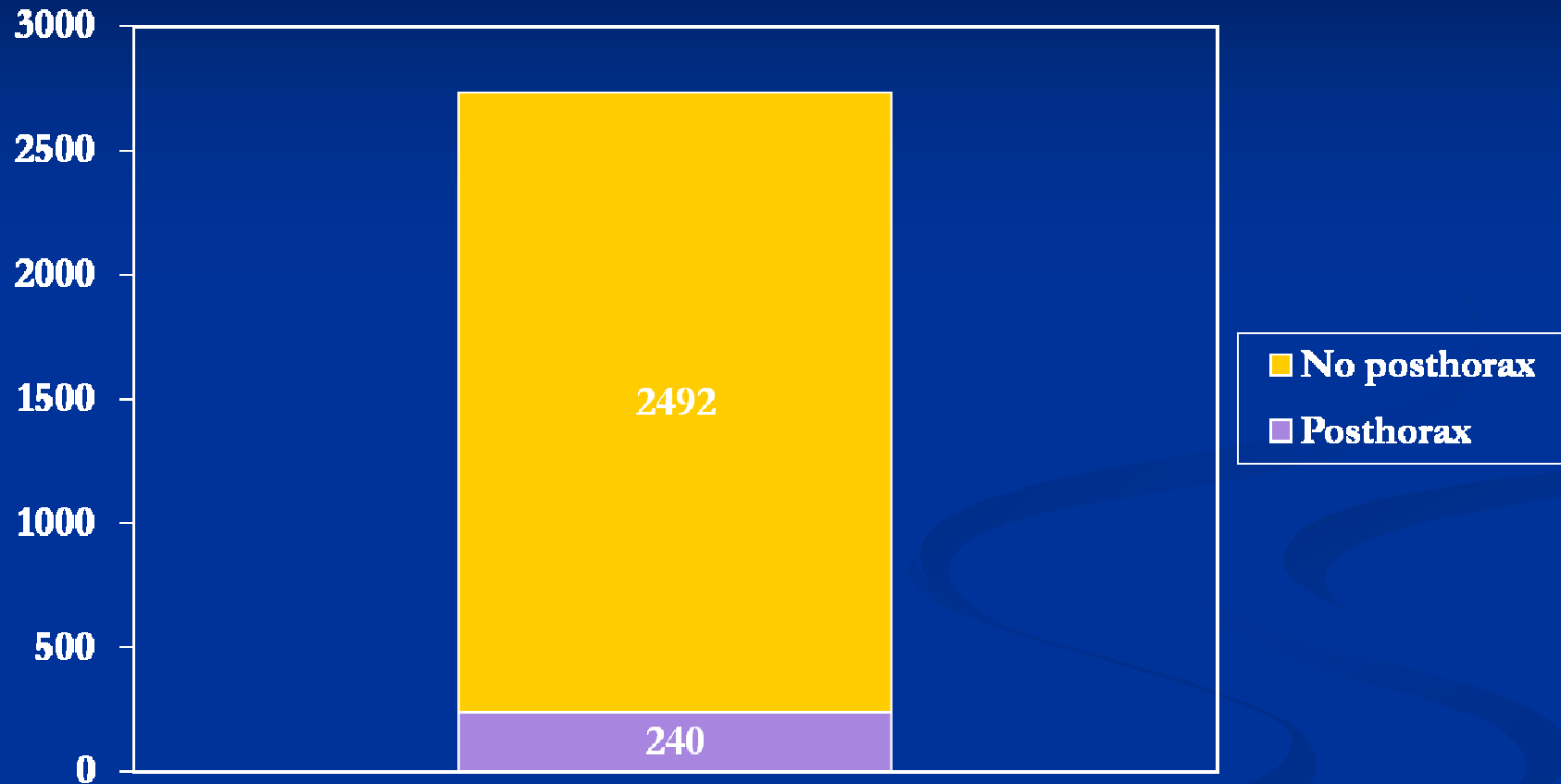
Indications (prophylactic use)

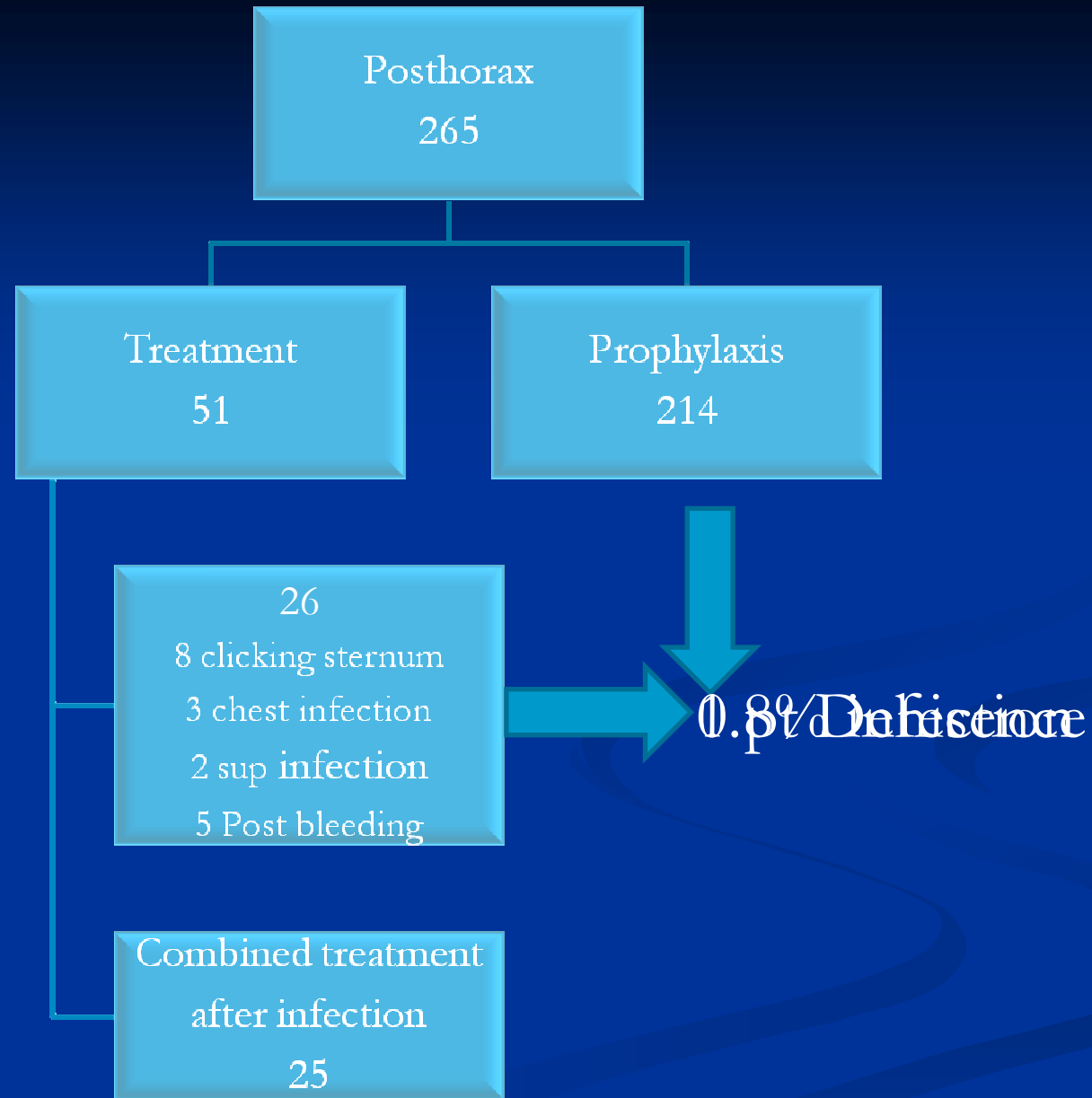
- High BMI (>30)
- Diabetes
- Steroids
- Reduced Lung Function
- Re operation
- Severe osteoporosis (Intraoperative finding)

Indications (therapeutic use)

- Clicky sternum
- Severe Cough/ chest infection
- Superficial infection
- Delirium/agitation
- DSWC (on Vac Pump or post rewiring)

Posthorax vs Non Posthorax





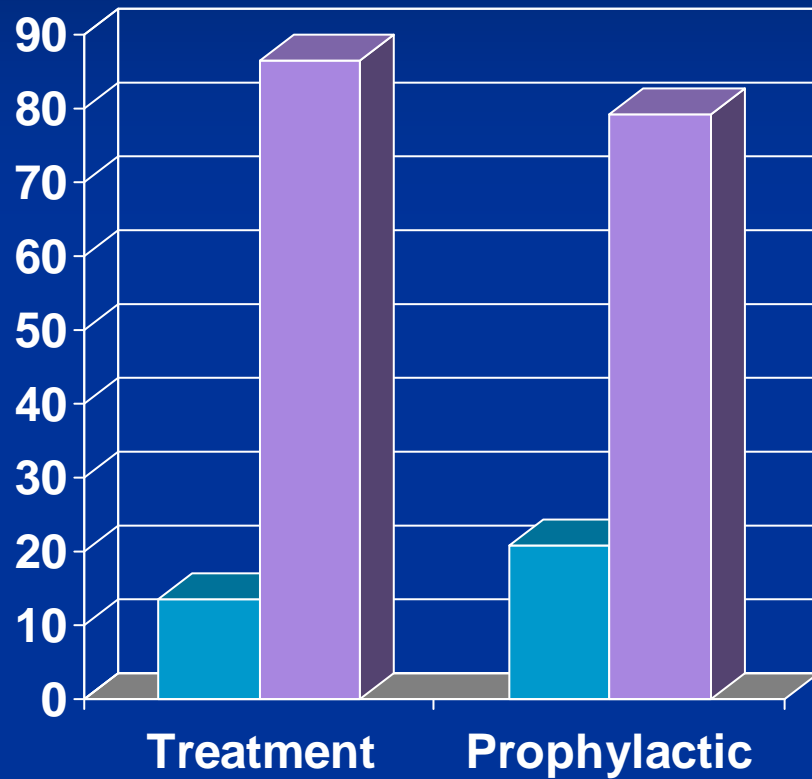
Risk Factors

	Non Posthorax group	Posthorax group	P value
Age	69.3±11.7	69.2±11.4	p=ns
BMI	27.8±4.9	31.3±5.9	p<0.001
COPD	12%	17.3%	p=0.03
Diabetes	19.4%	25.6%	p=0.05
Previous operation	11.5%	16.3%	p=0.07
Logistic EuroSCORE	8.6%	8.1%	p=ns
X clamp time	68.4±32.2	67.7±32.9	p=ns
CPB time	105.1±46.3	101.2±42	p=ns
Urgency	38.8%	32.2%	p=ns

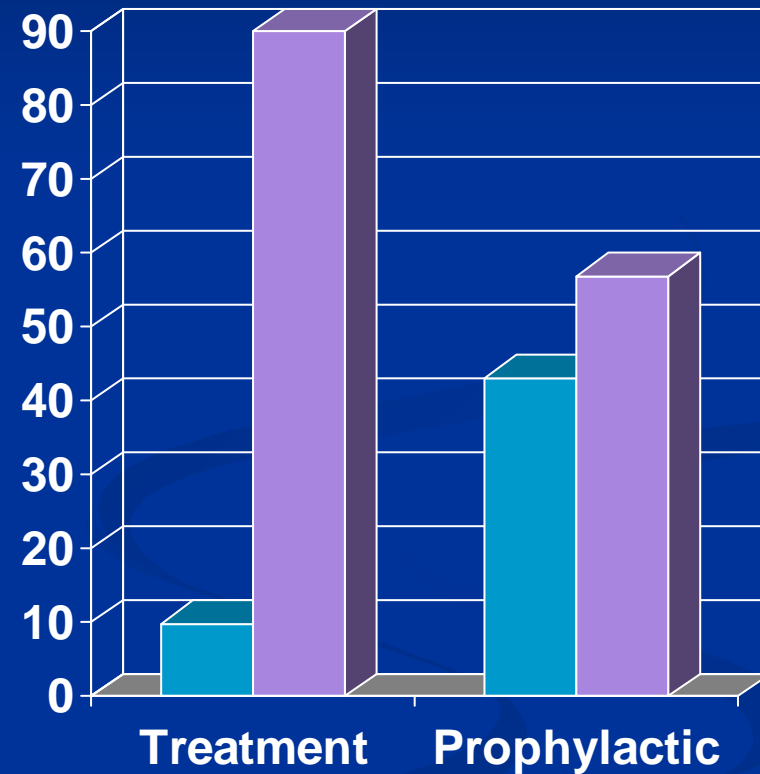
Time spent wearing jacket

Hospital

Follow up



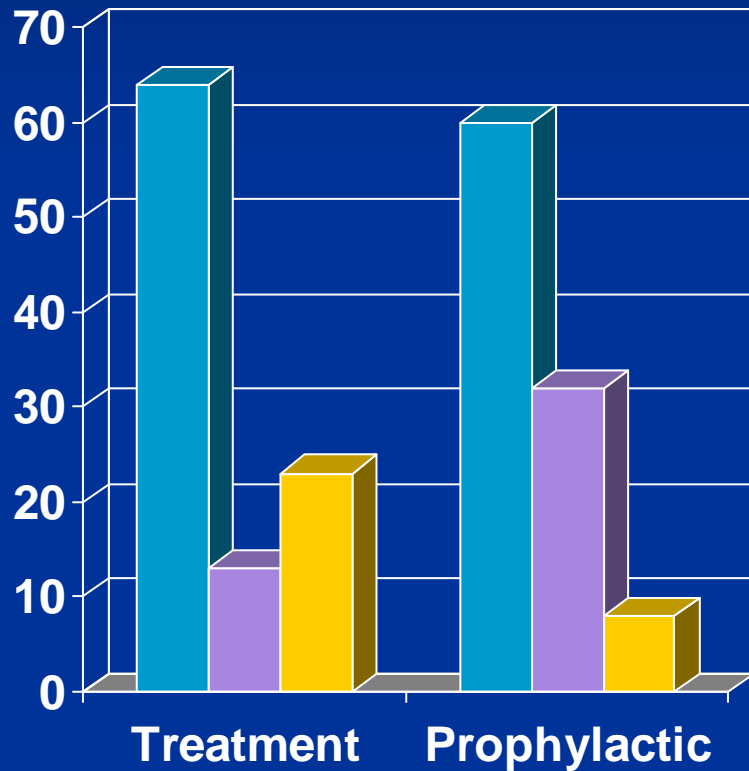
■ <20 hours ■ >20 hours



■ <20 hours ■ >20 hours

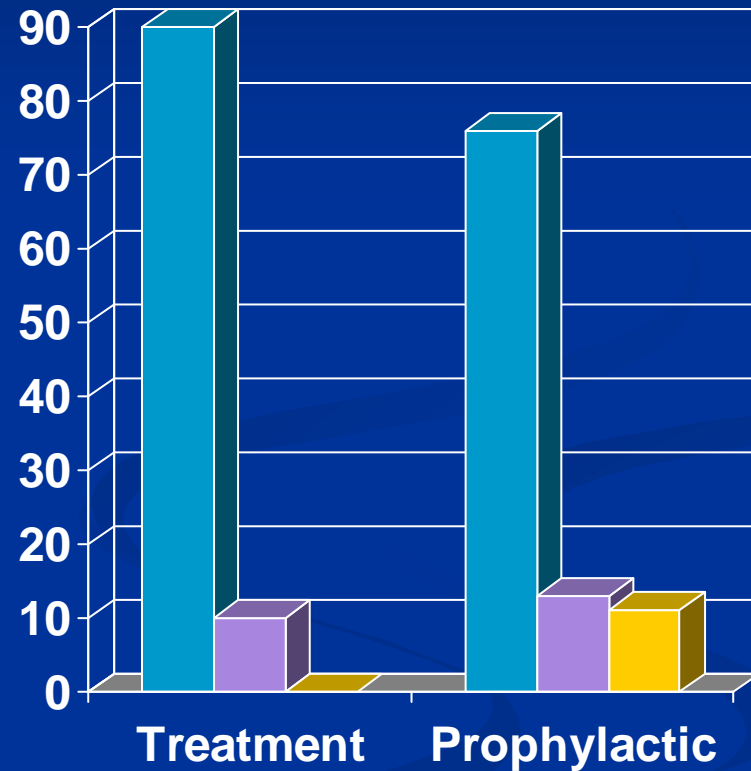
Patients pain with jacket fitted

Hospital



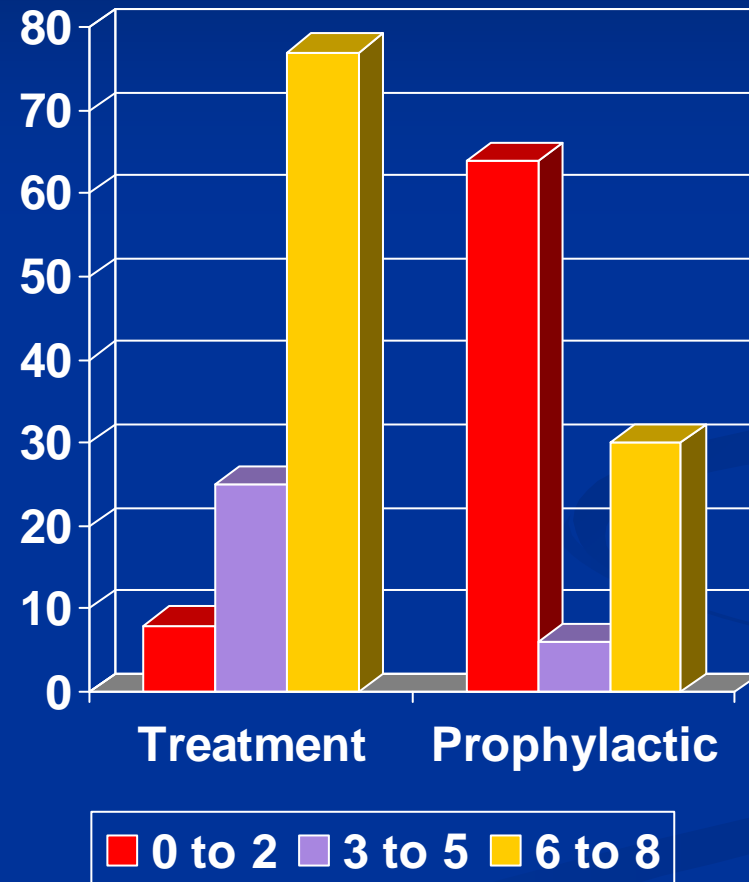
■ Improved ■ Same ■ Worse

Follow up

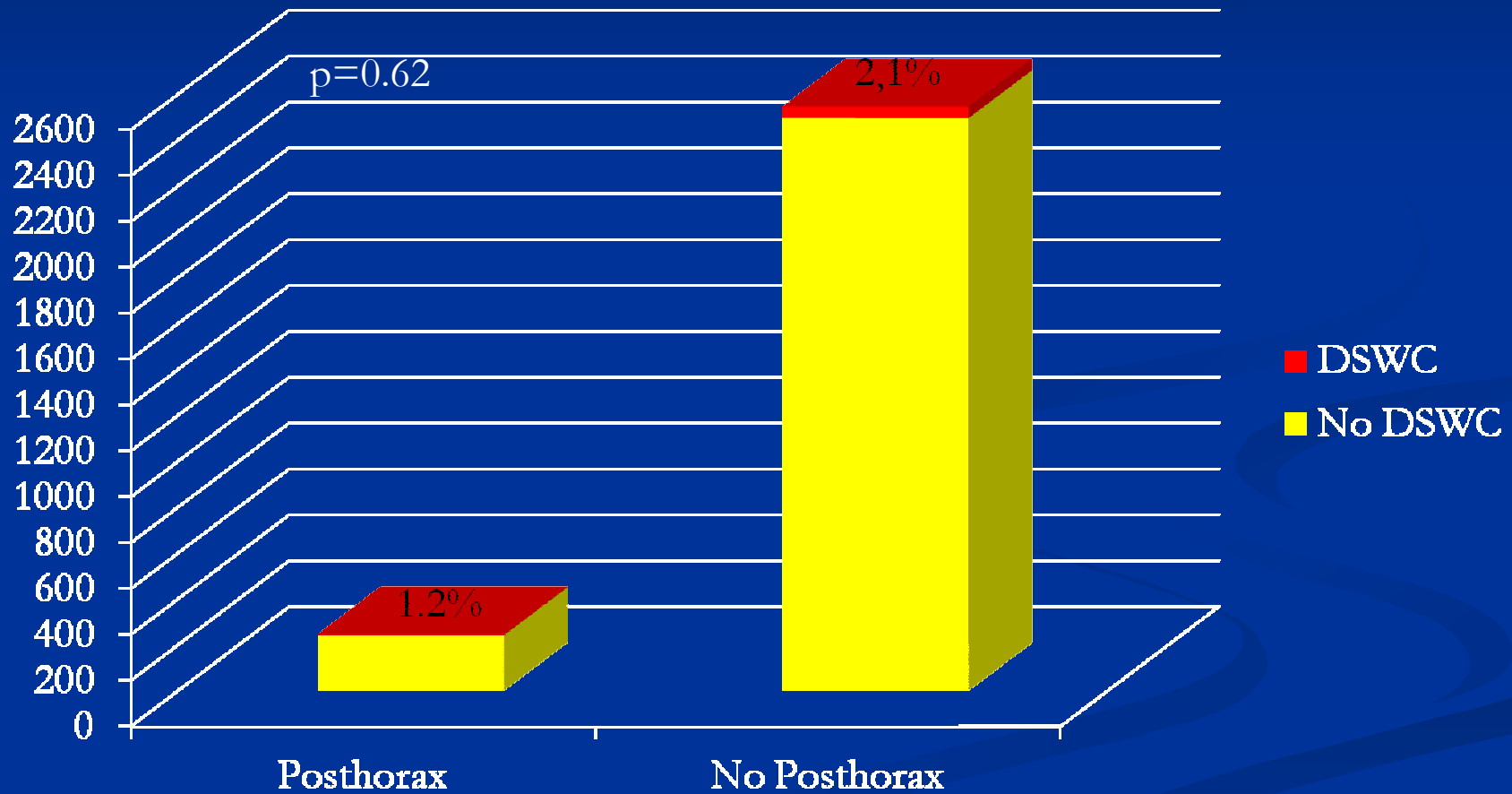


■ Improved ■ Same ■ Worse

Weeks wearing jacket



DSWC per Group



Conclusion

- Reduction of infection incidence
- Contributes to faster recovery
- Reassurance for the patient
- Cost effective

