



**SIP**

Societal Impact of Pain

**2017**

**Structured Cooperation  
between Health Care  
Systems tackling the  
societal impact of pain!**

Pain as a quality indicator for  
healthcare systems

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# Disclosure Statement of conflict of interest in the context of the subject of this presentation



**Within the past 12 months, I or my spouse/partner have had following financial interest/arrangement(s) or affiliation(s)**

- |  |                   |
|--|-------------------|
| • <b>Support for travel</b>                      | <b>Grünenthal</b> |
| • <b>Honoraria for lectures</b>                  | <b>Grünenthal</b> |
| • <b>Honoraria for advisory board activities</b> | <b>None</b>       |
| • <b>Participation in clinical trials</b>        | <b>None</b>       |
| • <b>Research funding</b>                        | <b>None</b>       |
| • <b>Financial shares and options</b>            | <b>None</b>       |

# Post-operative pain is an important issue that affects a large number of patients across Europe

Estimated **234**

**million**

major surgical procedures are undertaken worldwide<sup>1</sup>



It is estimated that over 6,500 inpatient surgical procedures were performed per 100,000 population in Europe in 2009<sup>2</sup>

<sup>1</sup> Weiser TG et al. Lancet. 2008;372:139–44; <sup>2</sup> European Hospital and Healthcare Federation (HOPE). Hospitals in Europe Healthcare Data. 2012

# Predictors of pain and use of pain medications following primary Total Hip Arthroplasty (THA): 5,707 THAs at 2-years and 3,289 THAs at 5-years

Jasvinder A Singh\*<sup>1,2,3,4</sup> and David Lewallen<sup>2</sup>

*BMC Musculoskeletal Disorders* 2010, **11**:90

**Table 2: Multivariable\* Predictors of Moderate-severe Pain**

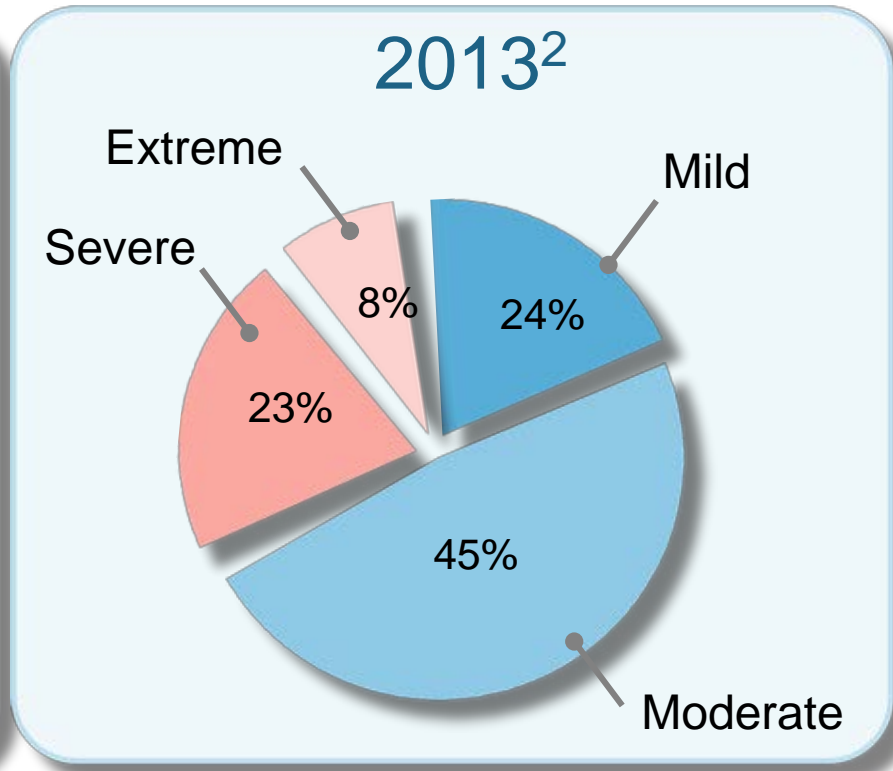
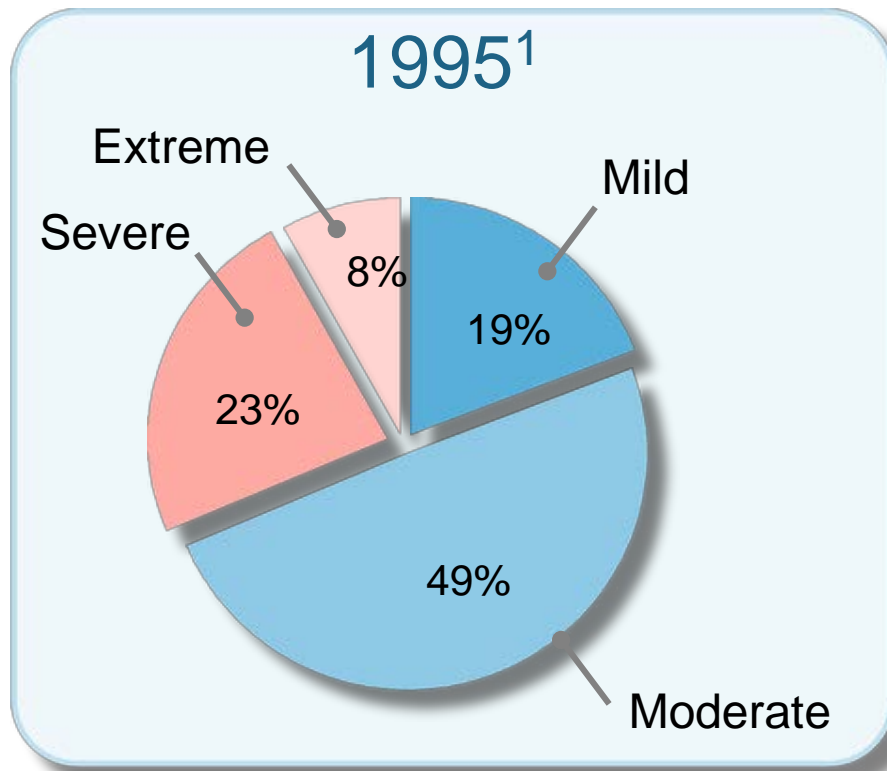
	Multivariable-adjusted 2-year			Multivariable-adjusted 5-year		
	Odds Ratio	(95% Confidence Interval)	p-value	Odds Ratio	(95% Confidence Interval)	p-value
<b>Female Gender (Ref, Male)</b>	1.1	(0.9, 1.4)	0.30	1.2	(0.9, 1.5)	0.18
<b>Age (Ref, ≤ 60 yrs)</b>						
>60-70 yrs	0.7	(0.6, 1.0)	0.06	0.8	(0.6, 1.1)	0.17
>70-80 yrs	1.1	(0.8, 1.6)	0.45	0.8	(0.6, 1.2)	0.32
>80 yrs	1.5	(1.0, 2.3)	0.07	0.6	(0.3, 1.1)	0.11
<b>BMI (Ref, &lt;25 kg/m<sup>2</sup>)</b>						
25-29.9	1.0	(0.7, 1.3)	1.00	<b>1.5</b>	<b>(1.1, 2.1)</b>	<b>0.02</b>
30-34.9	1.3	(1.0, 1.8)	0.07	<b>1.8</b>	<b>(1.2, 2.6)</b>	<b>&lt;0.01</b>
35-39.9	<b>1.8</b>	<b>(1.2, 2.6)</b>	<b>&lt;0.01</b>	<b>1.9</b>	<b>(1.2, 3.1)</b>	<b>0.01</b>
≥ 40	<b>1.7</b>	<b>(1.0, 2.9)</b>	<b>0.04</b>	<b>3.1</b>	<b>(1.7, 5.7)</b>	<b>&lt;0.01</b>
<b>Deyo-Charlson index (5-point change)</b>	1.0	(0.8, 1.3)	0.98	0.9	(0.7, 1.3)	0.75
Anxiety (Ref, no)	0.9	(0.5, 1.4)	0.58	1.1	(0.6, 2.1)	0.76
Depression (Ref, no)	<b>2.1</b>	<b>(1.4, 3.0)</b>	<b>&lt;0.01</b>	1.3	(0.8, 2.2)	0.30



\*Adjusted for ASA score, distance from the medical center, income and the operative diagnosis, in addition to the above variables  
 Regression: n/N = 409/5,154 at 2-yr FU; n/N = 318/2,929 at 5-yr FU; **Numbers in Bold indicate significant Odds ratios and p-values**

# Postoperative Pain Continues to Be Undertreated

Despite nearly decades of progress in pain research, patients reported severe-to-extreme postoperative pain in 2013 remains 31% as it was in 1995

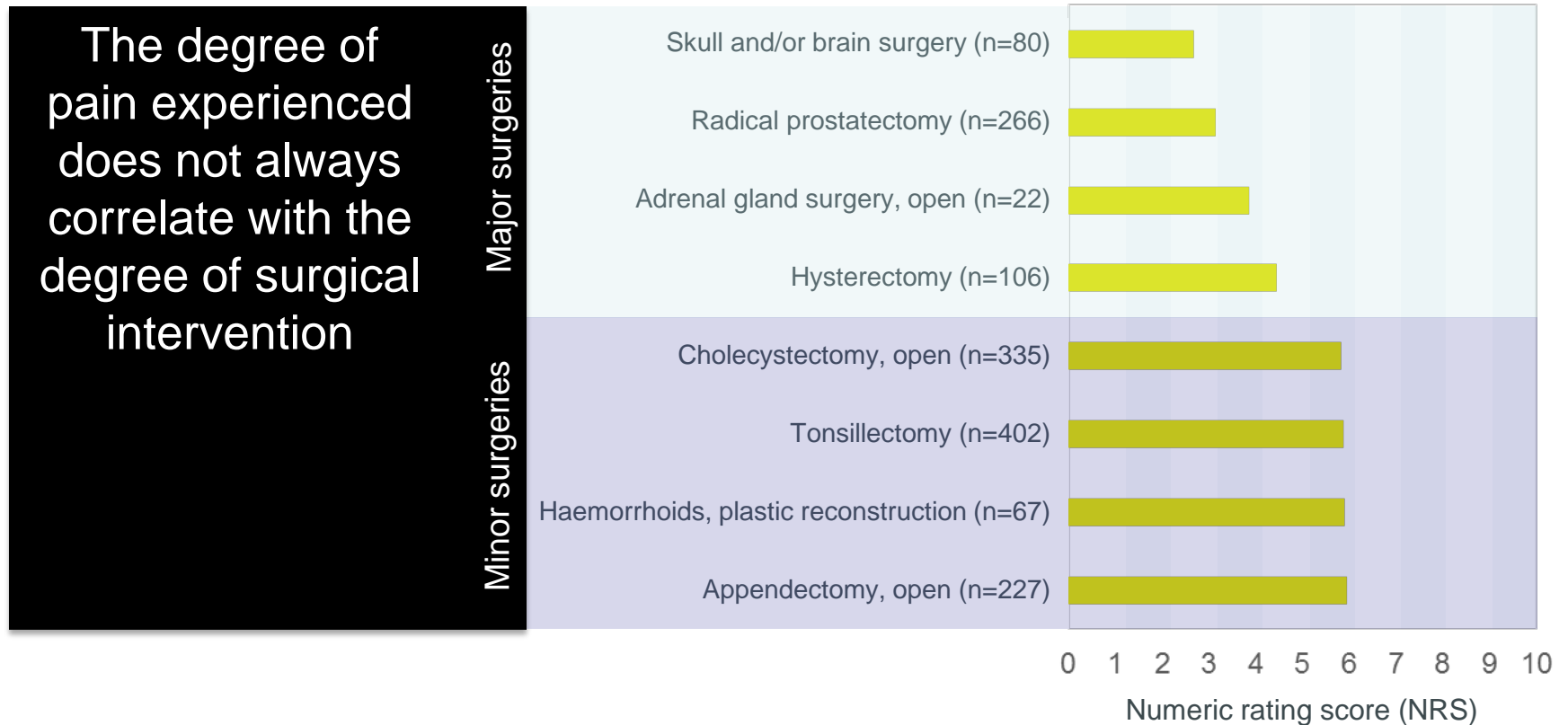


<sup>1</sup>Warfield CA, Kahn CH. *Anesthesiology*. 1995;83(5):1090-1094.

<sup>2</sup>Gan TJ, et al. *Curr Med Res Opin*. 2014;30:149-160.

# Pain is complex, subjective and unpredictable

Post-operative pain is difficult to predict, with large variation in patients' individual responses to medications and therapies used to treat post-operative pain



<sup>1</sup> Gerbershagen HJ et al. *Anesthesiology*. 2013; 118: 934–944

If we can improve post-operative pain management, we have the opportunity to:



- Lessen the burden and complications of POPM
- Improve clinical outcomes
- Enable earlier patient discharge
- Improve patient satisfaction with surgery

# Various factors contribute to effective post-operative pain management

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Effective team working and communication

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Simple, well-defined protocols

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Active involvement of the patient

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Routine tracking of clinical variables

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Healthcare systems and political awareness



# Good multidisciplinary communication is important for the provision of effective post-operative pain management

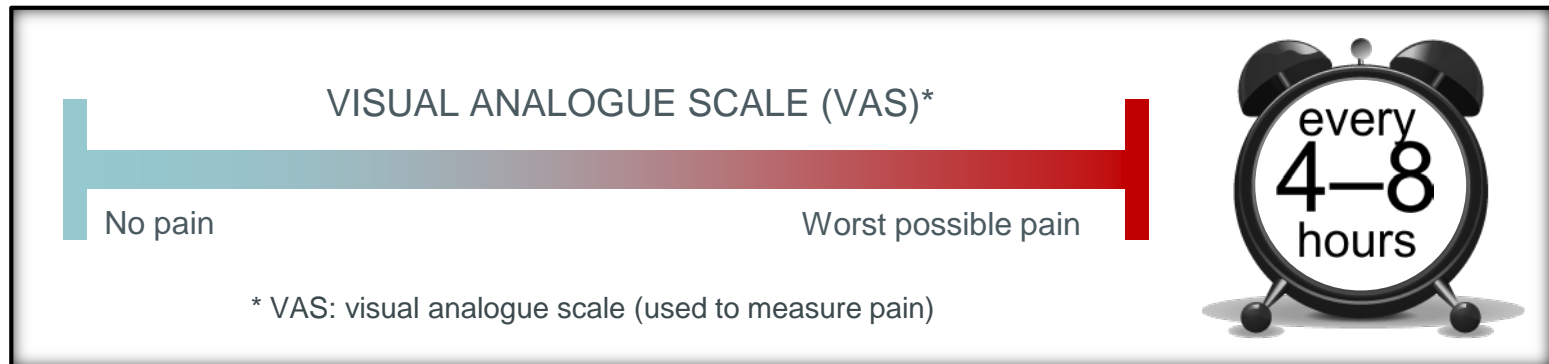


- A study has identified that experience exchange between physicians and caring staff is a key factor for success in POPM<sup>1</sup>
- This requires:
  - Involvement of all stakeholders
  - Clarity of roles and responsibilities
  - Effective patient handover meetings
  - Staff training to enhance knowledge
  - Cooperation with the acute pain service (APS)

<sup>1</sup> Gerbershagen HJ et al. *Anesthesiology*. 2013;118:934–944

# Pain assessment needs to be performed regularly

- According to ESRA, repeated assessment of pain is a vital element in effective POPM<sup>1</sup>
- Post-operative pain should be assessed regularly (every 4–8 hours) on the ward, and even more regularly in the post-anaesthesia care unit<sup>1</sup>



- Helps to enable determination of the suitability and adequacy of prescribed drugs, and their doses and dosage intervals<sup>2</sup>

# Chronic Pain after Total Hip Replacement

## *Pre-operative actions*

- Obesity
  - Mental health
    - Depression
  - Severe comorbidity
  - Elderly patients
  - Lower educated
  - Immigrants
  - Pain catastrophing
  
  - Implant
  - Approach
- Adjust expectation
  - Consider delaying surgery
    - Weight loss
    - Comorbidity
    - Psychiatric treatment
  - Improve information and patient education



# Thank you for your attention

