

The Launch of Patient-Controlled Analgesia with Remifentanyl during Labour in a Private Hospital in Switzerland

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hirslanden 

- **983 Births in 2009**
- 34% Cesarean section
- 23% Epidurals

- 70% public health insurance



Remifentanyl PCA for Labour at Salem Hospital

- Pilot Project 11/2008 – 4 /2009: 40 Women
- Audit project for routine use of Remifentanyl PCA in labour
- Website with results
- Extension of the project in all hirslanden hospitals and other hospitals in Switzerland

Pilot Project

Regime

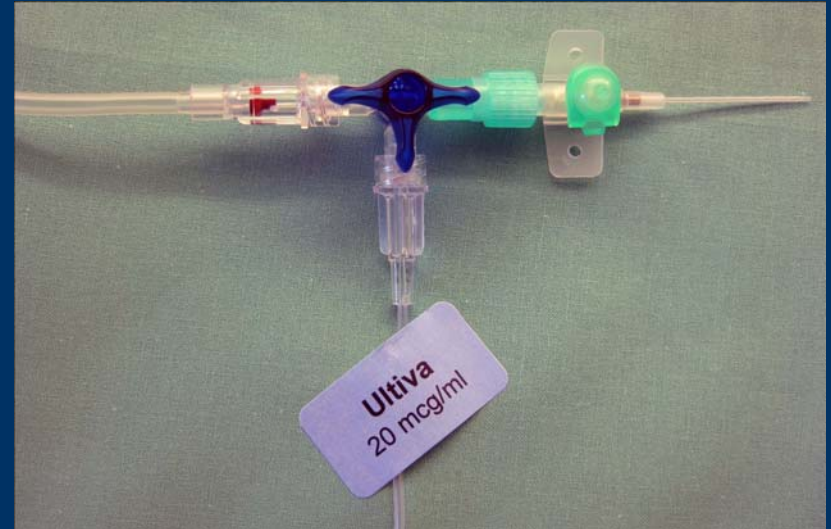
- Remifentanil 20 mcg/ml
- Bolus 20-40 mcg (1-2 ml)
- Lockout interval 2 min
- Short application time (1ml/6sec)
- Specially programmed infusion pump (BBraun)

NO continuous infusion of Remifentanil

Pilot Project

Requirements

- iv access (special setup)
- Continuous SpO₂ measurements
- Supplemental Oxygen if SpO₂ < 92%



NO additional opioids

Pilot Project

Requirements

- Presence of Midwife
- Questionnaire for every application



Audit since 4/2009

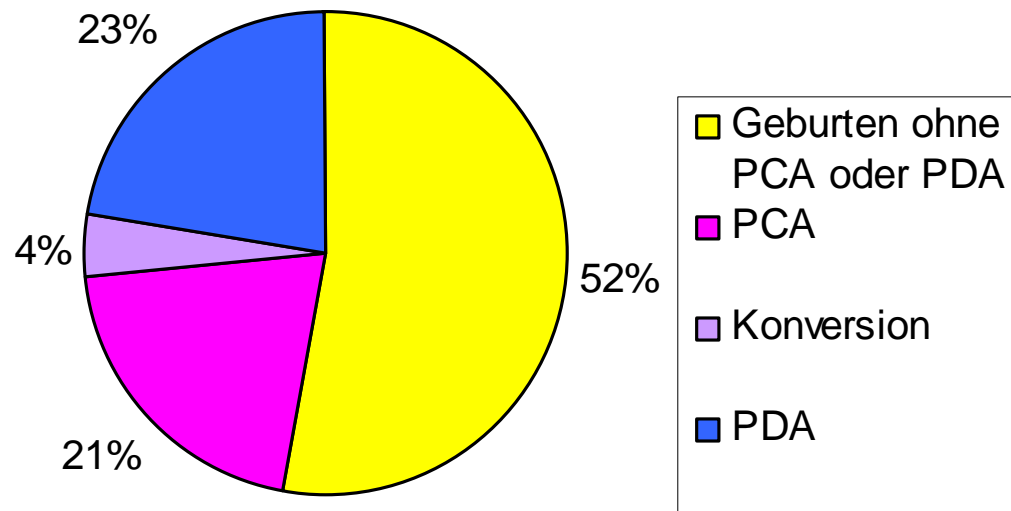
- Introduction as a standard method of pain control in labour
- Teaching of all involved specialities
- Extended questionnaire
- Data recording
- Regular analysis of data

Website

- SOP (standard operating procedure)
- Online questionnaire
- Regular statistical analysis of data
- Authors available for feedback & questions

www.soscisurvey.de/ultima

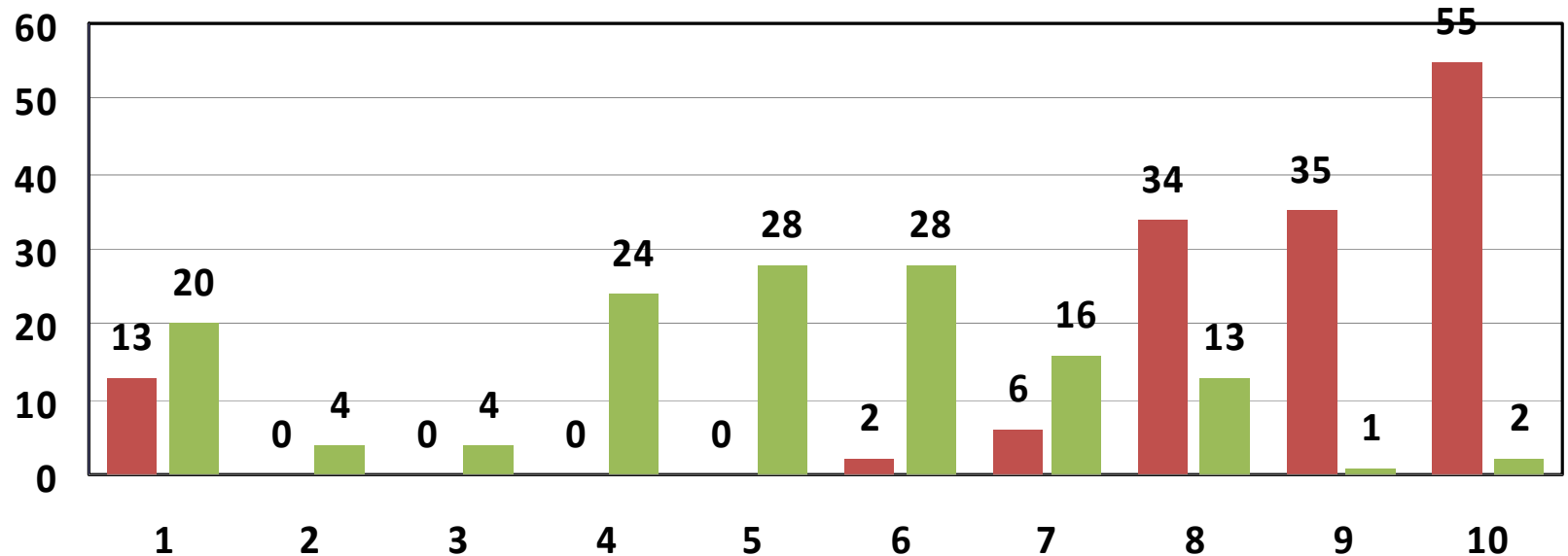
Schmerztherapie zur Geburt (n=773)



Results 4/09-2/10

Pain during labour in VAS

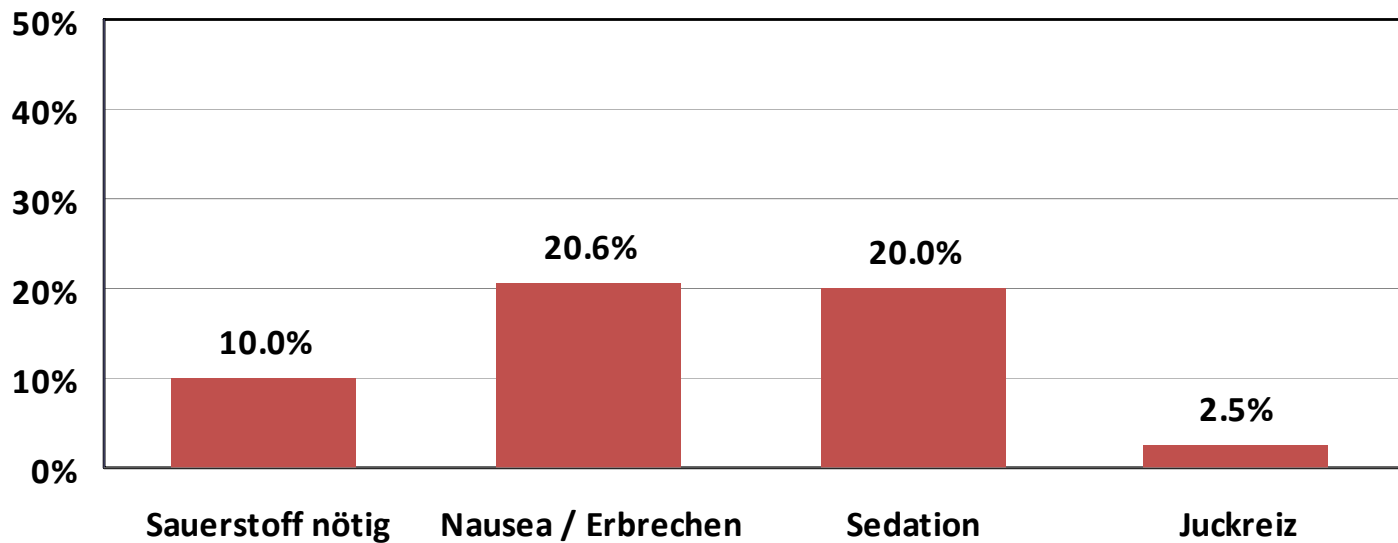
Number of patients



mean pain reduction (VAS) of 3,5

Results 4/09-2/10

Nebenwirkungen (Anteil Patientinnen in %)



Results 04/09 - 02/10

hirslanden 

APGAR < 7 after 1 minute

with PCA : 7,5 %

without PCA : 9,5 %

Results 4/09-2/10

pH arterial < 7,15

Neonates with PCA : 4%

Neonates without PCA : 4%

Control pH after 1 hour:

normal in all neonates with PCA

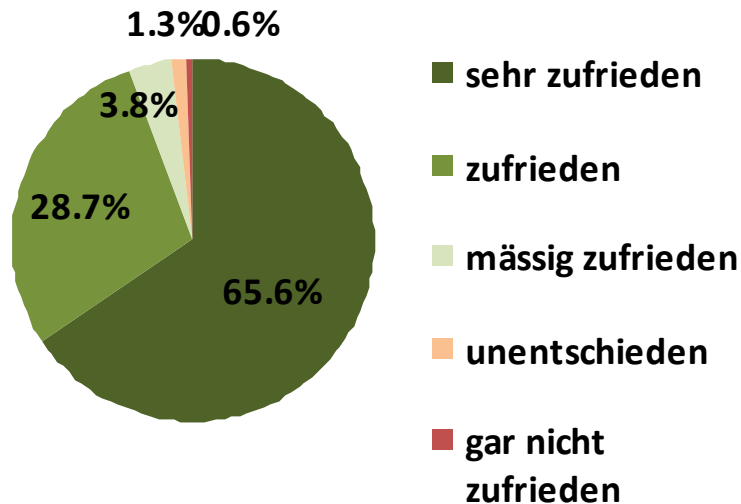
Results 4/09-2/10

Patients with planned spontaneous delivery (n=773)

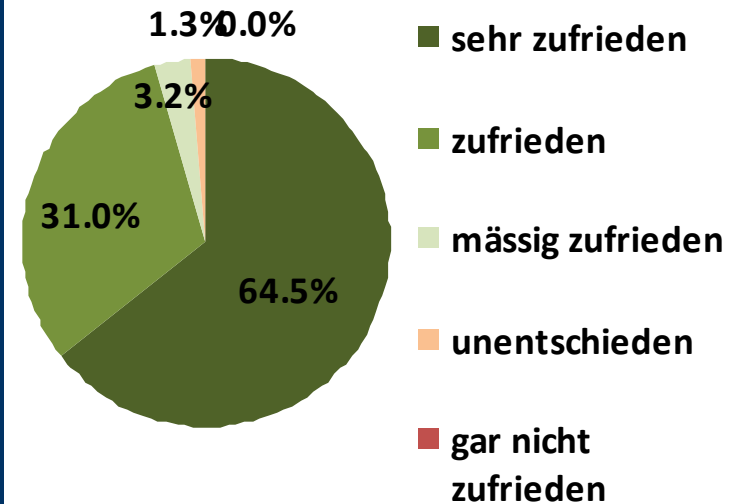
Mode of Delivery	PCA	All
Spontaneous	73.0%	66.5%
Cesarean	13.7%	22.0%
Instrumental	8.5%	11.5%

Results 4/09-2/10

Zufriedenheit der Mutter mit PCA



Zufriedenheit der Hebamme mit PCA



Reasons to continue

- Safe for mother and child
- Less side effects than other opioids
- No influence on mobility and neurological function
- No neurological complications
- Complete self control of the mother during labour
- The midwives and the obstetricians would never give it up any more

Future projects in our maternity ward

- Similar questionnaire for epidural deliveries
- Comparison EDA vs. PCA

Future of the PCA

- Standardized application in other maternity departments
- Extended statistical analysis of all participating hospitals
- Regular audits
- Quality management (feedback loop)



Merci

Results 04/09 - 02/10

APGAR <7 with PCA

	1 min	5 min	10 min
n Patients	12 (7,5%)	2	1

Apgar <7 1 min overall without PCA 9,5%

Pain & Pleasure

SATISFYING BIRTH EXPERIENCE