Appendix 1. PCEA chart with follow-up section

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PCEA CHART

INSERTION AND PRESCRIPTION

Operation/Diagnosis: ..... Anaesthesiologist: .....

Date: ..... Time: ..... Needle size: 16 G 18 G Other: .....

Insertion level: ..... Length of catheter in the epidural space: ..... cm

Test dose: Mepivacaine+epi. 20 mg/ml ..... ml Effect after ..... minutes: .....(levels)

Insertion:
☐ OK
☐ .....
.....
.....

Patient ID:

Intraop. infusion: Bupivacaine 2,4 mg/ml, Fentanyl 1,8 µg/ml, Epi. 2,4 µg/ml

Bolus dose (4-10 ml): ..... ml Time: ..... **Bolus dose** ..... **µg Fentanyl** Time: .....

Infusion (4-10 ml/hr): ..... ml/hr Time: ..... (recommendation 25-100 µg)

This is a re-inserted catheter ☐ Yes

Ward name:	Time to ward:	PCEA pump no:

Postop. infusion:
☐ Standard solution: Bupivacaine 1 mg/ml, Fentanyl 2 µg/ml, Epi. 2 µg/ml (max 10 ml/hr)
☐ "Double" solution: Ropivacaine 3 mg/ml, Fentanyl 5 µg/ml, Epi. 2 µg/ml (max 8 ml/hr)

Hypotension treated if syst. BP < : .....mm Hg
(see reverse page)

PACU MONITORING	
Date	
Time	
Sign. doctor at prescription	
Sign. nurse at administration	
Infusion rate (ml/hr)	
Bolus dose (routine 2 ml)	
Refr.time,min(Std =10,Doub =20)	
Bolus doses/hr (Std =4,Doub =2)	
Extra bolus at PACU (ml)	
Resid.volume PCEA (start500ml)	
Given doses x 2 daily	
Desired doses x 2 daily	
Zeroing, lock level 2 (x) x 1 daily	
BP, systolic (mmHg)	
Pulse (/min)	
Respiratory rate (/min)	
NRS at rest (0-10)	
NRS at mobiliz./cough (0-10)	
Motor blockade, Bromage (0-3)	
Sedation score (0-3 or sleep)	
Nausea (Y/N)	
Pruritus (Y/N)	
Sensory upper level if VPS>4	
Control insertion (x) x 2 daily	
Sign. nurse after control	

Comments:

FOLLOW UP

PCEA treatment stopped:

Date: Time:

Cause:
☐ Elective
☐ Inadequate analgesia
☐ Suspected infection
☐ Other (state below):

Transition to i.v. PCA?
Yes ☐ No ☐

Patient satisfaction (1-10)
1 = very poor analgesia
10 = very good analgesia

☐ **Sign. ward nurse:**

See check list for PACU discharge criteria and treatment of side effects on reverse page!

Appendix 2. Reverse page of PCEA chart with quick-guide

Check list - actions

OR and PACU

Intraoperative epidural infusion:
Bupivacaine epi 5 mg/ml, 20 ml
Saline 20 ml
Fentanyl 0,05 mg/ml, 1,5 ml (75 µg)
Total volume 41,5 ml

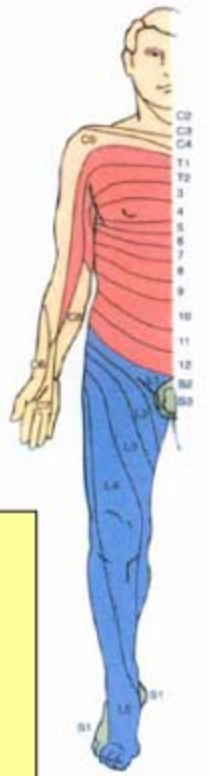
Discharge criteria PACU (anaesthetist must approve discharge):
Every 4-hour controls started (see PM).
Circulatory and respiratory stable.
Fully awake.
NRS < 4 without supplemental analgesics.
Sensory level documented if assessment is possible.
Motor function should be unaffected.
Mobilization should be started.

Ward

Motor blockade according to Bromage (every 4 hrs)
0 = full movement, flexion in the hip possible.
1 = can bend the knees.
2 = can bend the ancle.
3 = can not bend the ancle, paralysis.
If increasingly impaired motor function:
1 Stop the infusion.
2 Call **APS nurse (97026)** at day time
or **anaesthetist (97010)** at other hours.

Respiratory rate (every 4 hours)
If < 10 / min:
1 Promote deep breaths.
2 Administer oxyxen on mask 10 l/min.
3 Stop the epidural infusion.
4 Give naloxone, 0,4 mg/ml, 0,25 ml iv. Can be repeated.
5 Call **anaesthetist (97010)**.

Sedation score (every 4 hrs)
0 = awake.
1 = drowsy.
2 = asleep, easy to arouse.
3 = asleep, hard to arouse.
S = normal night sleep.
If score 1-2 day time – pay extra attention.
If score 3 – **act in the same way as at low respiratory rate < 10!**
If score S – no action.



NRS (every 4 hrs)
NRS at rest > 3 despite patient bolus doses:
Call **APS nurse (97026)** at day time
or **anaesthetist (97010)** on other hours.
NRS at rest < 3, but NRS at mobiliz./cough. > 3:
Instruct patient to adm bolus pre-mobiliz. If no effect
call **APS nurse (97026)** at daytime
or **anaesthetist (97010)** at other hours.

Hypotension treatment
(if systolic BP < prescribed level on front page)
1 Lower the head (tilt the bed) or raise the legs.
2 Give Ringers' Acetate 250-500 ml fast i.v. (max 15 min).
3 Stop the epidural infusion if no improvement.
4 Give inj efedrine 5 mg/ml, 5-10 mg iv.
(dilute efedrin 50 mg/ml, 1 ml + saline 9 ml).
5 Call **anaesthetist (97010)** if necessary.

Termination of the PCEA treatment
Start other appropriate pain relief to avoid brake through pain.
> 10 hrs since last LMWH dose 3500-4500 E sc. before the catheter is removed.
Keep in-dwelling urine catheter 6 hrs after epidural catheter is removed.
Keep iv. line 6 hrs after epidural treatment is terminated .
Continue controls 4 hrs after epidural treatment is terminated.
> 2 hrs after removal of the epidural catheter before new LMWH dose.
Warfarin may not be re-instituted before epidural catheter is removed!
Don't forget to fill in the "Follow-up section" on the front page!