

Analgesia safety checklist^{RTM}

unusual positive. *choice between yes and significant negative. Only tick once you've checked*

Failure: renal... heart... lung... liver... Chronic pain: Chronic opiates:

anticoagulated: other coagulopathy... Ward/Bed: _____

allergies/comment:

date+time - -200 :				consultant	pain/10 rest: moving: on cough:			PCEA or PCA tries/good:
regional >				OK: motor <input type="checkbox"/> <input type="checkbox"/> pressure <input type="checkbox"/> <input type="checkbox"/> block <input type="checkbox"/> <input type="checkbox"/> site <input type="checkbox"/> <input type="checkbox"/>				/
day	std	0.25	peth	rate(ml/hr):		top-ups:		
iv pca				morph	fent	tram	bolus: lockout: basal <input type="checkbox"/> taking po? <input type="checkbox"/> <input type="checkbox"/>	ketamine ml/hr
orals				<i>para</i>	<i>nsaid</i>	<i>tram</i>	<i>morphine</i> $\frac{mg}{24h}$ short: long: <i>m'done</i> $\frac{mg}{24h}$	clonidine TTS <input type="checkbox"/>
				<i>3cyc</i>	<i>gaba</i>	<i>mexil</i>		QC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
alerts				↓ BP	sedatn	nausea	initials	
date+time - -200 :				consultant	pain/10 rest: moving: on cough:			PCEA or PCA tries/good:
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The Analgesia Safety Checklist

A new form for Acute Pain Services

Version 1.00

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1 Executive summary

This checklist is intended to improve safety in the field of acute pain. It's designed to *flow* from left to right, and from top to bottom. It covers most important checks. The Analgesia safety checklist is designed to help you, not to 'cover your arse'. Studies and experience in medicine and other high-risk areas such as the airline industry have shown that *even in the hands of experts* the use of relevant checklists enhances performance and lowers error rates. Fill out fields as follows:

Y is used to identify *unusual* things which should be brought to the attention of the pain team. Examples include cardiac disease, and the use of a basal PCA infusion

Y N also alerts one to insert significant *negative* information — not only do we wish to know whether the pressure areas are OK, we also want to know if they're not!

para(cetamol) Abbreviated items like this can be ticked or circled as needed.

bolus: For such items, fill in the blank!

Important points:

1. *Evaluate* the patient. Impressions are more important than simply writing down numbers. Only write down information you have checked personally. If you need to write a long spiel, write it in the clinical notes.
2. To use the form optimally, there are four things you need to do:
 - (a) Put a patient sticker on the top of the form;
 - (b) Complete *relevant* safety alert items at the top of the form, writing in significant allergies, and a brief virtuoso comment if needed.
 - (c) Complete the checklist whenever you see the patient (At least twice a day for epidurals, at least once a day for other pain relief modalities);
 - (d) *Respond* to problems. If the patient looks bloody ill, make sure they are attended to by the relevant person. (Perhaps we should have a 'bloody sick' tickbox!) If they have motor block or are hypotensive or over-sedated, address the issue!
3. Don't see filling out the checklist as a painful ritual. It's there to improve safety! Just fill out the items you consider relevant, using the checklist as a *visual aid to memory*. If there's something you think should be on the list, don't chafe about it, talk to us! The following section discusses each field in detail.

2 Form details

Here we provide a brief justification for the existence and structure of the form, and then address each section, row and field in the form.

2.1 Rationale

Humans are fallible. Even experts get it wrong, especially when their routine is disrupted, for example by somebody talking to them. The most important way of preventing errors is to check things at several levels, and repeatedly. Such checking is best done by multiple individuals, perhaps augmented by computer checks. Checklists help us by reminding us what we need to check, and providing a visual record of what was checked. Having safe systems with repeated checks and visual reminders is more important than relying on an individual to perform flawlessly (and then blaming that individual when things go wrong)!

The *Analgesia safety checklist* is far from perfect, and attempts to improve it are welcome. The basic idea behind the form is that it is a visual aid, and not simply a ritual checklist to ‘prove that you did the job’. We’d rather you left fields blank than simply copied them from the previous entry. Physically check the items before you fill them in!

If you’re not using a field, this is valuable information that either our form is bad, or there are other system errors which need to be addressed!

2.2 The top of the form

It’s obvious why we need to put the correct patient label on the form. On the ward, check for duplicate names and be particularly careful if the patient folder has a red label advising you that a duplicate name exists. This is just common sense!

Fill in the ward and bed for the patient, and keep this information updated as the patient moves around. Put a single line through past entries.

2.3 Safety alerts

The idea behind this section is that by simply glancing at the top of the form, you will be reminded about major problems relevant to good analgesia. If the patient is in renal failure, you probably want to avoid giving morphine. If they have heart failure, you won’t be keen to use NSAIDs. If they have a bleeding diathesis and an epidural, there’s a disaster waiting in the wings. And so on . . .

Clearly you will only be alerted to such major problems if somebody (you) has ticked the relevant box. Also, things won’t work if there’s a lot of distracting scribbling in this section, so only tick a box if you believe it’s a substantial problem. It’s your call!

2.4 Checklist structure

Often you won't have to complete more than 3 lines:

1. The top line (date, time, consultant, etc);
2. A check on one modality (for example, PCA);
3. 'The bottom line' — alerts, a note, your initials, and, oh yes, the quality control (QC) assessment of the patient's pain documentation, just above your initials!

Things may be more time-consuming and complex with complex patients on several analgesic modalities, but these are precisely the patients who are at high risk, and thus need to be checked more diligently!

2.5 Checklist details

2.5.1 The top line

Vital information is kept on the top line. It's pointless keeping a record if there's no date and time. Likewise we need to know the initials of the pain consultant if they were present, verbally reported pain scores, and the quality of nursing documentation of pain issues. Let's look at these in turn:

Date Because of local conventions, we write dates as DD-MM-YYYY rather than the international YYYY-MM-DD. Having the year nearly filled in is convenient and mnemonic.

Time We use the twenty-four hour clock, for example 23:30. Record midnight as 00:00 at the start of the new day, rather than 24:00 on the previous day!

consultant Only write in the initials of the relevant consultant if they were present and saw the patient. (Helps us keep an eye on them :-)

pain/10 The patient's verbal reported scores (out of 10). If the patient can't communicate these, don't make it up, rather put in a question mark, as this too is useful information. (You may then also wish to write a comment, something along the lines of 'comfortable' or 'pain ++++').

Because they're so important, we've also started the PCEA/PCA documentation on the top line. Fill out the number of tries and successes at PCA presses.

2.5.2 Regional procedures

regional To the right of the ▷ mark, *write in* the regional modality. This will usually be ‘epidural’, which you can abbreviate if you wish to *epi*.

std/0.25/pethidine Circle one of these common options, after checking that the correct infusion is present. Know the various mixtures (standard, 0.25% bupivacaine, or pethidine). If something arcane is being infused, make a brief note of it in the ▷ area (and where necessary, supplement this with a later comment).

motor Is motor function completely OK — if so, tick the **Y** box. If there’s *any degree* of motor block, tick **N** and respond appropriately by stopping the epidural infusion, waiting an appropriate length of time, and then either resuming the epidural or ordering the MRI!

site Again, only tick **Y** if things are hunky-dory. If not, document and act.

pressure Are the pressure areas completely normal? If so, tick **Y**, otherwise tick **N** and sort things out.

block Is the block good? If so, tick **Y**, otherwise **N** and address the issue.

rate Record the rate, taking appropriate action if you think it’s excessive, or increasing it if the patient is haemodynamically stable and pain is an issue.

top-ups Record the number of top-ups.

tries/good Don’t only write down this information from the PC(E)A device, but ask yourself “Why?” if the number is very low, very high, or there is discordance between the two numbers!

2.5.3 PCA

Circle (or tick) the relevant PCA agent (morphine, fentanyl or tramadol), if the patient is on a PCA. Then complete the rest of the line . . .

bolus Read the bolus dose from the pump. This check is slow and mildly irritating owing to the design of our current (Abbott) PCA pumps;

lockout What is the lockout interval in minutes? Occasionally, you’ll find this has been mysteriously programmed to something silly like twenty minutes, so don’t just write down ‘5’ minutes! Look and see!

basal Although basal infusions are discouraged, you may encounter them. A high-risk approach, so tick the **Y** if a basal infusion is being used!

taking po? Once the patient is taking orally well, the PCA can usually be discontinued, which is why we have this question on the PCA line of the form!

tries/good As for regionals, record PCA usage.

If ketamine is being used in association with PCA for co-analgesia, there's a box where you can record the infusion rate. You generally won't find value in going over 10ml/hr.

2.5.4 Orals

para/nsaid/tram Most patients should be on paracetamol, but don't tick (or circle) the item if it's not being given. Also record use of non-steroidal anti-inflammatories, and tramadol.

morphine mg/24hr We break up this field into two:

short Refers to use of either Sevredol, or morphine elixir. Add up and record the total dose given over the 24 hours *up until 08:00 today*,¹ in milligrams.

long Long acting morphine, such as M-Eslon, Kapanol, or LA morph. Add up the total dose over the 24 hours *up until 08:00 today*, in milligrams.

3cyc/gaba/mexil Specialised agents, often used for central/neuropathic pain — tricyclics such as nortriptyline and amitriptyline, gabapentin and mexiletine. If the patient is on these, virtuoso comments are generally in order!

2.5.5 Free text lines — two of them!

This area is a 'one size fits all' section where you can briefly document 'other therapy'. You'll sometimes need to put in extra oral pain medication but can potentially use this area for alerts about drugs such as:

- calcitonin;
- lignocaine infusion;
- rectally administered drugs (PR paracetamol, PR diclofenac, PR morphine);
- certain transcutaneous drugs (fentanyl). Note that there's already a box for transdermal (TTS) clonidine.

¹A line needs to be drawn in the sand. Recording dose 'from 24 hours ago' is a disaster if the patient isn't seen at precisely the same time on subsequent days!

2.5.6 The bottom line — problems

Although you will want to record all sorts of problems, (which you can do in the white space below the checklist box, and in the patient’s notes), we have chosen three main issues. On the form we have reminders for hypotension (↓ BP), sedation and nausea, as we believe these are most important.

↓ **BP** The relevance of substantial hypotension is clear — particularly with epidural analgesia;

sedation Is the patient excessively sedated? We have emphasised sedation over ‘respiratory rate’ as we believe it’s far more important to record whether the patient is over sedated than simply writing down a respiratory rate. The risk comes more with excessive sedation, which is what you should document by ticking (or circling) ‘sedation’.

nausea Is the patient troubled by nausea? (This is often more debilitating than either pain or vomiting).

We also encourage you to comment on the quality of the relevant pain documentation in the patient’s notes using the ‘QC’ field. Use the following conventions:

- A** Clear, good quality documentation;
- B** Average quality documentation;
- C** Documentation that is unclear or difficult to read, hindering communication.

By rating the notes, we are not condemning the creators of those notes, but simply making a observation as to how we feel the system is working in this particular instance!

2.5.7 Additional information - “It doesn’t fit”

What if there’s not enough space on the form? The form can’t and won’t cover every eventuality. There are two things you can do:

1. Write it all out in the clinical notes. This approach keeps everyone in the loop.
2. Use the *blank line* below the checklist box to make a brief note *and* indicate that you’ve written all the gory details in the clinical notes!

3 Design rationale

This form is still very tentative, and recommendations to improve it will be welcomed.² Our rationale for various ‘design features’ (quirks?) is as follows:

- Serif fonts have been used predominantly, to improve legibility;
- We have largely avoided use of uppercase, as such usage impairs readability;
- We have not used shading, because this impairs legibility and quality of copies, as well as vastly increasing the size of digitised files;
- Epidural and PCA have been combined on one form to allow for the possibility of this combination in real life;
- ‘Vital information’ — date, time, initials of consultant (if present), and level of pain — has been placed on the top line to ensure that these are brought to the attention of the user. Flow is logically from left to right in this and the subsequent lines;
- The next lines in turn deal with major aspects of epidural, pca and oral therapy. In accordance with the associated acuity, the epidural has been allocated substantial space. Oral drugs generally used for ‘neuropathic’ or complex pain have been placed on a new line, with a free-format comment area nearby;
- We have tried to resist the temptation to capture too much information. The assumption is made that if there are problems with motor function, pressure areas, the epidural site, or the block, then further documentation will be made of such problems in the patient notes. The problem list has similarly been limited to three major problems (nausea, sedation and hypotension) as we regard these three as critical;
- We have specified *either* PCA *or* PCEA as the reasonable assumption is made that use of the two together will not occur, as such usage is confusing for any patient. If the patient is on PCA, the implication is that they are *not* on PCEA!
- *Oral* items have been shown in italics to set them off from other therapy;
- The use of morphine is displayed prominently in italics, and we have subdivided this usage into ‘short’ and ‘long’ acting (Sevredol versus M-Eslon, LA morph, and so on). We have avoided using trade names;

²LaTeX was used to create the form, as we found it gave us more control over design. Our editor was WinEdt version 5.

- Apart from morphine, we have limited the commonly used oral options. This choice is for reasons of space and frequency of use.
- Form users are encouraged to use initials to save time and facilitate identifying user and consultant.
- We have avoided using *boxes* for numeric data such as pain on rest and movement, rates, and so forth, in order to improve form legibility³
- Only three epidural options are provided (standard mix i.e. 0.125% bupivacaine with 2 μ g/ml fentanyl; 0.25% bupivacaine, or pethidine) — but the rather ugly blank space above can be used to document other options, as well as *other regional infusions* of local anaesthetic;
- The term ‘failure’ has been used to characterise what otherwise might be termed ‘organ dysfunction’ (or whatever) to emphasise that we are interested in substantial ‘dysfunction’ which has an effect on our pain therapy!

4 Possible improvements

- At present total PCA dose isn’t documented, but this might be inserted in the ‘PCA or PCEA’ box, at the expense of clarity;
- Consider having a ‘see notes’ checkbox somewhere prominently displayed!

5 Translation to PDA format

Implementation of data capture on a personal digital assistant (PDA) is discussed in an accompanying document called *PDA data capture based on a form template*.

6 Availability

The L^AT_EX source for the Analgesia safety checklist is made available under the GNU Public Licence (GPL) at <http://www.anaesthetist.com/analgesia/>

³Often form users don’t keep within the bounds of such boxes, anyway!