

PENNSYLVANIA HOSPITAL ENGAGEMENT NETWORK: ORGANIZATION ASSESSMENT OF SAFE OPIOID PRACTICES

As a high-alert medication class, opioids bear a heightened risk of causing significant patient harm when used in error.¹ Errors with opioids have led to serious adverse events, including allergic reactions, failure to control pain, oversedation, respiratory depression, seizures, and death.² According to data from various error reporting programs, opioids, particularly morphine, HYDRomorphone, and fentaNYL, are among the most frequent high-alert medications to cause patient harm.³⁻⁵

Proactively assessing safety practices, especially those involving opioid use, can provide hospitals with valuable information about the weaknesses that exist within their medication-use system. As the harm from errors involving opioids can be potentially devastating, identifying the risks associated with opioid use should be considered a priority by healthcare organizations.

This tool will help you assess the safety of opioid practices in your facility, and identify opportunities for improvement.* The findings also may be used to develop an action plan for implementing recommended error reduction strategies in order to assist your hospital in enhancing opioid safety.

Instructions for Completing the Assessment

Please note:

Each hospital should *only* complete *one* (1) assessment.

It is important for each hospital in a multihospital system to complete the assessment *individually*.

1. **Establish an interdisciplinary team** consisting of the following (or similar) roles:

- Chief medical officer
- Nurse executive
- Director of pharmacy
- Clinical information technology specialist
- Medication safety officer/manager
- Risk management and quality improvement professionals
- At least two staff nurses from different specialty areas
- At least two staff pharmacists (one clinical and one distribution)
- At least one active staff physician who regularly orders opioids

Your team should be provided with sufficient time to complete the assessment and be charged with the responsibility to evaluate, accurately and honestly, the current status of opioid practices in your facility. Because medication use is a complex, interdisciplinary process, *the value and accuracy of the assessment is significantly reduced if it is completed by a single discipline involved in medication use.*

2. **Read and review the assessment in its entirety (including the instructions) before beginning the assessment process.**

¹Institute for Safe Medication Practices. ISMP's list of high-alert medications [online]. 2012 [cited 2012 Apr 1]. <http://www.ismp.org/Tools/highAlertMedications.asp>

²Institute for Safe Medication Practices. High-alert medication feature: reducing patient harm from opiates. *ISMP Med Saf Alert Acute Care* 2007;12(4):1-3. Also available at <http://www.ismp.org/newsletters/acutecare/articles/20070222.asp>

³Focus on high-alert medications. PA PSRS Patient Saf Advis [online] 2004 Sep [cited 2012 Apr 1]. [http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2004/Sep1\(3\)/Pages/06.aspx](http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2004/Sep1(3)/Pages/06.aspx)

⁴Hicks RW, Santell JP, Cousins DD, et al. *MedMARX 5th anniversary data report: a chartbook of 2003 findings and trends 1999-2003*. Rockville (MD): United States Pharmacopeia Center for the Advancement of Patient Safety; 2004.

⁵Institute for Safe Medication Practices Canada. Top 10 drugs reported as causing harm through medication error [online]. *ISMP Canada Saf Bull* 2006 Feb 24 [cited 2012 Apr 1]. <http://www.ismp-canada.org/download/safetyBulletins/ISMPCSB2006-01Top10.pdf>

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Instructions for Completing the Assessment (continued)

Each team member should be provided with either a hard copy or electronic version of the assessment and the definitions for review before the first team meeting.

3. **Verify your demographic information.** Before the first team meeting, the team leader should complete this section and, if necessary, verify any responses with hospital administration. All demographic questions must be answered.
4. **Convene the team.** During the evaluation process, ensure that each team member can view the assessment during the meeting by providing each member with a printed hard copy of the assessment and definitions.
5. **Discuss each assessment item.** As necessary, investigate and verify the level of implementation with other healthcare practitioners outside your team. When a consensus on the level of implementation for each assessment item has been reached, select the appropriate choice. For the majority of the assessment items, your hospital will have the following options: Not implemented, Partially implemented, and Fully implemented.

Key: Please use the following key and guidelines to select the most appropriate response:

- Not implemented: This item has *not* been implemented within the hospital.
- Partially implemented: This item has been *partially implemented in some or all areas* of the hospital, or this item has been *fully implemented in some areas* of the hospital.
- Fully implemented: This item is *fully implemented throughout the hospital*.

Hospitals may want to consider assigning an individual to record any discussion generated around each assessment item and the rationale behind the selected choice.

Definitions: Within the assessment, defined terms are highlighted throughout the text in bold letters. Definitions are provided on the last page of this tool.

For all assessment items: Unless otherwise stated, assessment items refer to opioids prescribed, dispensed, and administered to all inpatients and outpatients typically seen in most hospitals, including patients admitted to the emergency department and ambulatory surgery/procedure units.

- **For assessment items with multiple components:** The choice of “Fully implemented” should only be selected if *all components* are present in *all areas* of the hospital. If only one or some of the components have been partially or fully implemented in some or all areas of the hospital, a choice of “Partially implemented” should be selected.
 - **For assessment items with an option of “Not applicable”:** Select “Not applicable” *only* if your hospital meets the statement that follows. For example, for assessment item #9, only select “Not applicable” if your hospital does not provide care to pediatric patients, even in the emergency department.
6. **Repeat the process outlined in step 5 for all assessment items.** All assessment items must be answered. *Save the paper copy* of your hospital’s assessment.

Adapted with permission from the Institute for Safe Medication Practices, Horsham, Pennsylvania.

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DEMOGRAPHIC QUESTIONS

1. Please select the *one category* that best describes the number of inpatient beds currently set up and staffed for use in your hospital.

Fewer than 100 beds

100 to 299 beds

300 to 499 beds

500 beds and over

2. Please select the *one category* that best describes the type of service that your hospital provides to the majority of its admissions.

General medical and surgical

Long-term acute care

Specialty: cardiology

Specialty: oncology

Specialty: orthopedic

Specialty: pediatric

Specialty: psychiatric

Specialty: rehabilitation

Specialty: women and children

Other:

3. Does your hospital also provide any of the services listed below?

Yes

Please select all that apply.

Oncology services (select even if chemotherapy is administered infrequently)

Pediatric services (select even if pediatric care is provided only in the emergency department and/or outpatient surgery)

Neonatal intensive care unit (select for any level of service)

Trauma services (select for any level of service)

Transplant services

No

4. Is your hospital accredited?

Yes

Who accredits your hospital?

The Joint Commission

Healthcare Facilities Accreditation Program (HFAP)

Det Norske Veritas (DNV)

Other:

No

CONTINUED...

5. Is a pharmacist available in the hospital 24 hours a day, seven days per week to review orders and dispense medications?

Yes

No

Please specify how many hours a day a pharmacist is available.

Monday through Friday: hours

Saturday and Sunday: hours

6. Please select the *one category* that best describes the type of medication administration records (MARs) used at your hospital?

Handwritten MARs

Paper MARs printed from the pharmacy information system

Electronic MARs

7. Does your hospital use **bar-coding technology**?

Yes

Please select the *one category* that best describes your hospital's use of bar-coding technology.

Bar-coding technology is *only* used in the pharmacy for drug selection.

Bar-coding technology is *only* used at the patient bedside for medication administration.

Bar-coding technology is used *both* in the pharmacy and at the patient bedside.

No

8. Does your hospital use **smart infusion pumps** with computer software that is capable of alerting the user to unsafe doses for continuous opioid infusions? (This question does *not* apply to patient-controlled analgesia [PCA] therapy.)

Yes

No

9. Does your hospital use a **computerized prescriber order entry (CPOE)** system?

Yes

Please select the *one choice* that best describes the area(s) where CPOE is used.

All inpatient areas

Emergency department only

Used in both the inpatient areas and the emergency department

Other:

No

CONTINUED...

10. Does your hospital use automated dispensing cabinets (ADCs) (e.g., Pyxis, Omnicell) to store opioids in patient care areas?

No

Yes

a. Please select all areas where opioids are stored in ADCs.

- | | |
|-------------------------------|------------------------------------|
| Catheterization lab | Oncology units |
| Dialysis | Operating room |
| Emergency department | Outpatient ambulatory care clinics |
| Endoscopy | Pediatric units |
| Intensive care units | Postanesthesia care unit |
| Labor and delivery units | Radiology |
| Medical-surgical units | Same-day surgery/pre-op |
| Neonatal intensive care units | Other: |
| Newborn nursery | |

b. Please select the one statement that best describes the primary drug distribution model in those areas.

- ADCs are used only for controlled substances and common "as needed" (prn) medications.
- ADCs are used for controlled substances, common prn medications, and most first doses.
- ADCs are the primary means of medication distribution (i.e., most medication doses are obtained from this source).

c. Please select all areas that have active "profiling" functionality available and turned on (e.g., opioids cannot be accessed from the ADC without an order review by a pharmacist, with the exception of a limited supply of drugs needed for emergent situations).

- | | |
|-------------------------------|------------------------------------|
| Catheterization lab | Oncology units |
| Dialysis | Operating room |
| Emergency department | Outpatient ambulatory care clinics |
| Endoscopy | Pediatric units |
| Intensive care units | Postanesthesia care unit |
| Labor and delivery units | Radiology |
| Medical-surgical units | Same-day surgery/pre-op |
| Neonatal intensive care units | Other: |
| Newborn nursery | |

11. What types of clinical decision support are available in the pharmacy information system and are used by pharmacists when processing orders for opioids? (Please select all that apply.)

- Dose range checking for maximum *single* doses
- Dose range checking for maximum *total daily* doses
- Hard stops (catastrophic stops)** for doses known to cause serious harm

CONTINUED...

12. Does your hospital have an interdisciplinary pain management team?

Yes

Which disciplines are represented on the pain management team? (Please select all that apply.)

Anesthesia provider

General surgeon

Nurse

Oncologist

Pharmacist

Social worker

Other:

No

13. Which opioids are used for parenteral pain management in your hospital? (Please select all that are used. This question does not apply to PCA therapy.)

morphine

HYDROmorphone (Dilaudid®)

meperidine (Demerol®)

fentaNYL

Other:

14. What is the *primary* opioid prescribed for parenteral pain management in your hospital? (Please select *one* choice. This question does not apply to PCA therapy.)

morphine

HYDROmorphone (Dilaudid®)

meperidine (Demerol®)

fentaNYL

Other:

Not applicable: we do not have a primary opioid prescribed for parenteral pain management.

ASSESSMENT ITEMS

Organizational Structure

1. Current pain management protocols and guidelines for opioid use are available to guide prescribers, pharmacists, and nurses when opioids are prescribed, dispensed, administered, and monitored.

Not implemented

Partially implemented

Fully implemented

2. The organization uses a standardized pain scale(s) appropriate to the patient population to assess a patient's level of comfort or pain. For example, a numerical scale of 0 to 10 is used for conscious adults; Wong-Baker FACES scale is used for pediatric patients; and FLACC (face, legs, activity, crying, consolability) scale is used for infants.

Not implemented

Partially implemented

Fully implemented

3. Pain management protocols define **opioid-naïve** and **opioid-tolerant** patients and outline the differences in the management of these patients.

Not implemented

Partially implemented

Fully implemented

Not applicable: our hospital does not have pain management protocols.

4. A limited variety of opioids, concentrations of each opioid, and formulations of each opioid are included on the hospital formulary.

Not implemented

Partially implemented

Fully implemented

CONTINUED...

5. Equianalgesic dosing charts for oral, parenteral, and transdermal opioids (e.g., fentaNYL patches) have been established and are easily accessible to all practitioners when prescribing, dispensing, and administering opioids.

Not implemented Partially implemented Fully implemented

Prescribing

6. Standardized preprinted order forms or CPOE order sets are used to prescribe oral and parenteral opioids. (This question does not apply to PCA therapy.)

No

Yes

a. Recommended doses for parenteral opioids are listed on preprinted order forms or CPOE order sets to guide appropriate dosing of opioids.

Not implemented Partially implemented Fully implemented

b. Order sets with opioid doses also contain orders for naloxone and directions for use.

Not implemented Partially implemented Fully implemented

7. Patients are screened for the following elements that might affect the dose, monitoring parameters, or appropriateness of opioid use. (Select all elements for which patients are screened.)

Allergies

Opioid status (naïve or tolerant)

Obstructive sleep apnea

Asthma or chronic obstructive pulmonary disease

Age

Weight

Altered mental status

Renal function

Concomitant use of other sedating medications
(e.g., other opioids, benzodiazepines)

8. Range-of-dose orders for parenteral opioids (e.g., morphine 1 to 2 mg intravenously every 2 hours prn pain) include the organization's approved pain scale to assist nurses in determining the appropriate dose to administer (e.g., give 1 mg for moderate pain [scale 4 to 7] and 2 mg for severe pain [scale 8 to 10]).

Not implemented Partially implemented Fully implemented

Not applicable: we do *not* allow range-of-dose orders.

9. Parenteral opioid orders include the mg/kg or mcg/kg dose for *pediatric* patients along *with* the total calculated patient-specific dose (e.g., morphine 0.1 mg/kg x 15 kg = 1.5 mg intravenously every 4 hours prn severe pain).

Not implemented Partially implemented Fully implemented

Not applicable: we do *not* provide care to pediatric patients, even in our emergency department.

10. Long-acting opioids (e.g., fentaNYL patches, MS Contin® 100 and 200 mg tablets, OxyCONTIN® doses greater than 40 mg) are restricted for use in **opioid-tolerant** patients and are *not* used for acute pain management.

Not implemented Partially implemented Fully implemented

11. When prescribing an opioid, prescribers review the patient's active medication list and limit the number and variety of concurrent opioid orders.

Not implemented Partially implemented Fully implemented

12. A pain management specialist (e.g., physician, pharmacist, nurse practitioner) or pain team is consulted for patients with complex pain management issues (e.g., patients whose pain is difficult to control, patients with chronic pain, other high-risk patients).

Not implemented Partially implemented Fully implemented

CONTINUED...

Order Review, Compounding, and Product Storage

13. Pharmacists have easy access to the patient’s opioid status (**opioid-naïve** or **opioid-tolerant**) and take it into consideration when profiling or reviewing orders for opioids.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
14. Pharmacists evaluate the patient’s current medication profile for concurrent opioid use during order verification.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
15. Concentrations of parenteral opioid infusions for *adult* patients are standardized to a single concentration per drug and are used in at least 90% of the cases.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
16. Concentrations of parenteral opioid infusions for *pediatric* patients (including neonates) are standardized to a single concentration per drug and are used in at least 90% of the cases.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
- Not applicable: we do *not* provide care to pediatric patients, even in our emergency department.
17. Pharmacy purchases commercially available parenteral opioid infusions or prepares opioid infusions in the pharmacy (i.e., nurses do not prepare opioid infusions).
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
18. A pharmacist double-checks all opioid products before they are dispensed from the pharmacy, including those opioids placed into ADCs.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
19. An **independent double check** is performed for *all* parenteral opioids that are compounded in the pharmacy. (One of the checks *must* be done by a pharmacist.)
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
20. Storage of highly concentrated opioid products (parenteral and oral liquids) is restricted to the pharmacy and certain units (e.g., oncology units).
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
21. Morphine and HYDROmorphine are segregated from one another in *pharmacy storage*.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
22. Morphine and HYDROmorphine are segregated from one another in *clinical unit storage*.
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|
23. **Tall man letters** are used to differentiate look-alike opioid names (e.g., HYDROmorphine and morphine) on the following. (Please select all that apply.)
- | | |
|--|--|
| Pharmacy-prepared medication labels | MARs |
| Medication bin labels | Preprinted order forms |
| Drug listings in computer order entry systems (pharmacy or prescriber) | ADC (e.g., Pyxis, Omnicell) screens |
| Smart infusion pump screens | Not applicable: we do <i>not</i> use tall man letters. |
24. Parenteral opioid products stocked in patient care units are available in the least number of doses, concentrations, and forms that will meet essential patient needs between replenishment (not to exceed 72 hours).
- | | | |
|-----------------|-----------------------|-------------------|
| Not implemented | Partially implemented | Fully implemented |
|-----------------|-----------------------|-------------------|

CONTINUED...

Administration and Monitoring

25.

- a. *Prior to the administration of oral opioids, nurses perform a baseline assessment of the following. (Select all that are assessed.)*

Respiratory rate	Quality of respirations
Heart rate	Blood pressure
Level of sedation	Pain level (using the hospital-designated pain scale)
Last dose of an opioid or other sedating agent	Other:

Not applicable: a baseline assessment is *not* routinely performed prior to the administration of oral opioids.

- b. *Prior to the administration of parenteral opioids, nurses perform a baseline assessment of the following. (Select all that are assessed.)*

Respiratory rate	Quality of respirations
Heart rate	Blood pressure
Level of sedation	Pulse oximetry
Capnography	Pain level (using the hospital-designated pain scale)
Last dose of an opioid or other sedating agent	Other:

Not applicable: a baseline assessment is *not* routinely performed prior to the administration of parenteral opioids.

26.

- a. *Following the administration of oral opioids, nurses perform a postadministration assessment within the hospital-designated time frame of the following. (Select all that are assessed.)*

Respiratory rate	Quality of respirations
Heart rate	Blood pressure
Level of sedation	Pain level (using the hospital-designated pain scale)
Other:	Not applicable: an assessment is <i>not</i> routinely performed following the administration of oral opioids.

- b. *Following the administration of parenteral opioids, nurses perform a postadministration assessment within the hospital-designated time frame of the following. (Select all that are assessed.)*

Respiratory rate	Quality of respirations
Heart rate	Blood pressure
Level of sedation	Pulse oximetry
Capnography	Pain level (using the hospital-designated pain scale)
Other:	Not applicable: an assessment is <i>not</i> routinely performed following the administration of parenteral opioids.

27. Patients are assessed for the use of fentaNYL patches on admission or entry into the hospital.

Not implemented	Partially implemented	Fully implemented
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CONTINUED...

28. The location and removal of fentaNYL patches is clearly documented on the MAR/patient chart.

Not implemented Partially implemented Fully implemented

Not applicable: we do *not* use fentaNYL patches.

29. An **independent double check** is performed *with each new infusion bag, bottle, or syringe* and/or change in the rate of infusion of parenteral opioids (i.e., one practitioner readies the solution for administration and a second practitioner independently verifies all of the items listed below before starting the infusion). (This question does *not* apply to PCA therapy.)

We do not perform an independent double check for parenteral opioids with each new infusion bag, bottle, or syringe and/or change in the rate of infusion.

We perform an independent double check with each new infusion bag, bottle, or syringe, which includes checking the following components against the MAR or medication order as appropriate. (Select all that apply.)

Patient (using two unique identifiers)	Drug and base solution on pharmacy label
Drug concentration on pharmacy label	Rate of infusion on pharmacy label
Channel selection (for multiple-channel pumps)	Pump settings (e.g., drug, concentration, rate)
Line attachment	

We perform an independent double check with *each change in the rate* of infusion, which includes the following components against the MAR or medication order as appropriate. (Select all that apply.)

Patient (using two unique identifiers)	Drug and base solution on pharmacy label
Drug concentration on pharmacy label	Rate of infusion on pharmacy label
Channel selection (for multiple-channel pumps)	Pump settings (e.g., drug, concentration, rate)
Line attachment	

30. Naloxone and accompanying guidelines for the reversal of opioid toxicity are readily available wherever opioids are administered.

Not implemented Partially implemented Fully implemented

31. Discharge criteria have been established for outpatient areas (including the emergency department and procedural areas) that delineate the minimum amount of time that a patient must be monitored after receiving parenteral opioids (and before discharge).

Not implemented Partially implemented Fully implemented

32. The following are used to monitor adverse drug events with opioids. (Please select all that apply.)

Medication event reports	Adverse drug reaction reports
Pharmacy interventions	Administration of naloxone
Rapid response team calls	Patient falls

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Assessment Items Related to Intravenous PCA

33. Is intravenous PCA therapy used in your hospital?

Yes — Please answer assessment items #34 through #45.

No — Please skip the remaining assessment items. Thank you for completing this assessment.

34. Which opioids are prescribed for intravenous PCA in your hospital? (Please select all that are used.)

morphine HYDROmorphone (Dilaudid®)

meperidine (Demerol®) fentaNYL

Other:

35. What is the *primary* opioid prescribed for intravenous PCA in your hospital? (Please select *one* choice.)

morphine HYDROmorphone (Dilaudid®)

meperidine (Demerol®) fentaNYL

Other: Not applicable: we do *not* have a primary opioid prescribed for intravenous PCA.

36. Patients are screened for the following elements, which might affect the dose, monitoring parameters, or appropriateness of PCA use. (Select all elements for which patients are screened.)

Allergies Opioid status (naïve or tolerant)

Obstructive sleep apnea Asthma or chronic obstructive pulmonary disease

Age Weight

Altered mental status Renal function

Concomitant use of other sedating medications (e.g., other opioids, benzodiazepines)

37. Standardized preprinted order forms/CPOE order sets are used for PCA.

No

Yes

a. Recommended doses for PCA opioids are listed on preprinted order forms/CPOE order sets to guide appropriate dosing of opioids.

Not implemented Partially implemented Fully implemented

b. Order sets with PCA orders also contain orders for naloxone and directions for use.

Not implemented Partially implemented Fully implemented

38. PCA basal infusion rates are *not* routinely ordered for **opioid-naïve** adult patients.

Not implemented Partially implemented Fully implemented

39. PCA infusion concentrations are limited to no more than one or two concentrations per drug.

Not implemented Partially implemented Fully implemented

40. **Smart infusion pumps** with computer software that is capable of alerting the user to unsafe opioid doses (i.e., soft and **hard stops**) are utilized when PCA is administered?

Not implemented Partially implemented Fully implemented

CONTINUED...

41. *Prior* to the administration of opioid PCA, nurses perform a baseline assessment of the following. (Select all that are assessed.)

- | | |
|--|---|
| Respiratory rate | Quality of respirations |
| Heart rate | Blood pressure |
| Level of sedation | Pulse oximetry |
| Capnography | Pain level (using the hospital-designated pain scale) |
| Last dose of an opioid or other sedating agent | Other: |
| Not applicable: a baseline assessment is <i>not</i> routinely performed prior to the administration of opioids with PCA therapy. | |

42. *During* the administration of PCA, nurses perform ongoing assessments within hospital-designated time frames of the following. (Select all that are assessed.)

- | | |
|-------------------|--|
| Respiratory rate | Quality of respirations |
| Heart rate | Blood pressure |
| Level of sedation | Pulse oximetry |
| Capnography | Pain level (using the hospital-designated pain scale) |
| Other: | Not applicable: an assessment is <i>not</i> routinely performed during the administration of opioids with PCA therapy. |

43. An **independent double check** is performed *with each new PCA infusion bag, cassette, or syringe* and/or change in the rate of infusion of parenteral opioids (i.e., one practitioner readies the solution for administration and a second practitioner independently verifies all of the items listed below before starting the infusion).

We do not perform an independent double check for parenteral opioids with each new PCA bag, cassette, or syringe and/or change in the rate of infusion.

We perform an independent double check with each new PCA infusion bag, cassette, or syringe, which includes checking the following components against the MAR or medication order as appropriate. (Select all that apply.)

- | | |
|--|---|
| Patient (using two unique identifiers) | Channel selection (for multiple-channel pumps) |
| Drug and base solution on pharmacy label | Pump settings (e.g., drug, concentration, basal infusion rate, demand dose, lockout interval) |
| Drug concentration on pharmacy label | Line attachment |
| Basal infusion rate, demand dose, and lockout interval on the pharmacy label | |

We perform an independent double check with *each change in the rate of a PCA infusion*, which includes the following components against the MAR or medication order as appropriate. (Select all that apply.)

- | | |
|--|---|
| Patient (using two unique identifiers) | Drug and base solution on pharmacy label |
| Drug concentration on pharmacy label | Basal infusion rate, demand dose, and lockout interval on the pharmacy label |
| Channel selection (for multiple-channel pumps) | Pump settings (e.g., drug, concentration, basal infusion rate, demand dose, lockout interval) |
| Line attachment | |

CONTINUED...

44. Patients, family members, and visitors are educated about the dangers of any individual, other than the patient, pressing the PCA activation button to deliver a medication dose (i.e., PCA by proxy).

Not implemented

Partially implemented

Fully implemented

45. Patients are educated about the postoperative use of PCA *before* surgery, unless it is a surgical emergency.

Not implemented

Partially implemented

Fully implemented

Adapted with permission from the Institute for Safe Medication Practices, Horsham, Pennsylvania.

For more information, visit <http://www.patientsafetyauthority.org>.

This assessment tool accompanies

Grissinger M, Lamis RL. Results of the PA-HEN organization assessment of safe practices for a class of high-alert medications. Pa Patient Saf Advis [online] 2013 Jun [cited 2014 Jan 16].

[http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2013/Jun;10\(2\)/Pages/59.aspx](http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2013/Jun;10(2)/Pages/59.aspx)

PENNSYLVANIA HOSPITAL ENGAGEMENT NETWORK: ORGANIZATION ASSESSMENT OF SAFE OPIOID PRACTICES—DEFINITIONS

Bar-coding technology	Technology that reads bar codes with a computerized reading device, such as a scanner or imager.
Computerized prescriber order entry (CPOE)	A computer system into which prescribers enter medical orders, including orders for medications.
Hard stop (catastrophic stop)	Clinical alert in electronic systems (e.g., infusion pumps, order entry systems) that notifies the user that something is out of range or incorrect and prevents them from continuing. The alert cannot be overridden, and the user must start the process over from the beginning.
Independent double check	A procedure in which two individuals, preferably two licensed practitioners, separately check each component of the work process. An example would be one person calculating a medication dose for a specific patient and a second individual independently performing the same calculation (not just verifying the calculation) and matching results.
Opioid-naïve	Patients who do not meet the definition of opioid-tolerant and who have not taken opioid doses at least as much as those listed for opioid-tolerant patients for one week or longer.*
Opioid-tolerant	Patients who are taking, for one week or longer, at least: 60 mg oral morphine/day; 25 mcg transdermal fentaNYL/hour; 30 mg oral oxyCODONE/day; 8 mg oral HYDROmorphine/day; 25 mg oral oxymorphone/day; or an equianalgesic dose of any other opioid.*
Smart infusion pump	An infusion pump with computer software that is, at a minimum, capable of alerting the user to unsafe dose limits and programming errors if standard concentrations and dose limits have been programmed into the pump's library.
Tall man letters	Refers to the use of mixed-case letters to help draw attention to the dissimilarities of certain look-alike drug name pairs. A list of look-alike drug names with recommended tall man letters can be found at https://www.ismp.org/tools/tallmanletters.pdf .

*Source: US Food and Drug Administration. Extended-release (ER) and long-acting (LA) opioid analgesics risk evaluation and mitigation strategy (REMS) [online]. 2012 Jul [cited 2014 Jan 16]. <http://www.fda.gov/downloads/drugs/drugsafety/postmarketdrugsafetyinformationforpatientsandproviders/ucm311290.pdf>

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