Shared health Soins communs Manitoba

Provincial Clinical Guideline

Provincial Clinical Order Set Development and Approval Process
Service Area: All Provincial Clinical Programs
Approved By: Shared Health Clinical Implementation
Approved Date: MMM/DD/2023

1.0 CLINICAL GUIDELINE STATEMENT

1.1

- This guideline defines a standardized process for clinical order set development and approval ensuring that provincial order sets are consistent and adhere to best practices.

- This guideline is applicable to:
  All Manitoba clinical service areas and programs that develop provincial clinical order sets which may impact two or more service delivery organizations (SDOs). The guidelines are also applicable to provincial programs that operate out of one facility or SDO.

- Action required:
  Provincial clinical order set developers are expected to utilize these guidelines to identify the actions to be undertaken when seeking provincial approval. Developers are also expected to utilize the guidelines as a reference to ensure that the design and language of the clinical order set align as much as reasonably possible with the best practice directives.

- Timing of required actions:
  It is advisable to reference the guidelines before and during the development process of provincial clinical order sets to mitigate unnecessary revisions, consultations and delays.

2.0 GUIDELINE:

2.1 INCLUSION/EXCLUSION CRITERIA

2.1. Important Notes

1

Order sets exist in two formats within the province – paper and electronic. The Manitoba Digital Health Clinical Informatics Specialist (CIS) team assists in the development of provincial order sets and translating paper prototypes into the Electronic Medical Record (EMR) Computer Physician Order Entry System (CPOE). EMR constraints limit order set design which may result in content not translating effectively into an electronic format.

- Acute facilities in Winnipeg and Brandon use Clin Doc as their CPOE EMR in varying capacities.

- Outpatient facilities in Manitoba utilize Accuro as their CPOE EMR.
- Non-Accuro or Clin Doc EMR CPOW facilities or units will use a PDF/paper version from the Shared Health Health Providers website.

2.1. Inclusion

2

- All Manitoba clinical service areas and programs that develop provincial clinical order sets which may impact two or more service delivery organizations (SDOs). The guidelines are also applicable to provincial programs that operate out of one facility or SDO.
- Examples of clinical service areas and programs include but are limited to acute care, long-term care, pediatrics, palliative care, surgery, mental health and pharmacy.
- All medication-related prescriptions, fluid therapies, nutritional orders, radiological orders, laboratory tests, patient monitoring, consultation and clinical care provision such as clinical assessments and wound care.

2.1. Exclusion

3

- The guidelines are not applicable to individual healthcare facilities and SDOs that develop specific order sets for local use in the absence of provincial clinical order sets.
- In exceptional circumstances, provincial clinical order sets that require urgent approval may receive alternate permissions than identified within the guideline.

2.2 Guideline

2.2. Order Set Development

1

- Proposals for a provincial clinical order set are escalated to the Provincial Clinical Service lead and Medical Lead that collaboratively determine the need for the order set and provide authorization to proceed.
- The PCS/SH Lead, in conjunction with their working group, performs a Manitoba SDO jurisdictional scan to determine whether a baseline clinical order set exists within the local healthcare system and best-practice principles.
- The Primary Author(s) notifies the Manitoba Digital Health Clinical Informatics Specialists (CIS) Team (servicedesk@sharedhealthmb.ca), the Executive Director of provincial Pharmacy (jlamont@sharedhealthmb.ca) and SH Clinical Implementation (SHQualityImprovement@sharedhealthmb.ca) by submitting a Notification of Provincial Clinical Order Set Development Form. (Appendices A)
- Primary author(s) and or working group drafts or identifies content for the order set using the Manitoba Clinical Order Set Template (Appendices B) and Style Guide (Appendices C).

Option 1 – Primary Author(s) submit the list of detailed order set content, with as much detail as possible, to servicedesk@sharedhealthmb.ca. In the submission, identify the request as a Provincial Standard Order Set. The Primary Authors will be emailed a paper-based prototype of the order set by the Digital Health Clinical Informatics Specialist Team.

Option 2 – Primary Authors(s) submit the order set content already within the Manitoba Clinical Order Set Template to servicedesk@sharedhealthmb.ca. In the submission, identify the request as a Provincial Standard Order Set. The Primary Author(s) will be emailed a revised paper-based prototype of the order set by the Digital Health Clinical Informatics Specialist Team.

- A clinical review, operational/patient safety/workflow impact and validation of the draft order set should be conducted by all applicable physicians, clinical heads, program councils, pharmacy and provincial program medical directors, SH Clinical Implementation (formatting) and subject matter experts from Manitoba SDOs for content consensus and to ensure that there's equitable provincial input.
- Consult disciplines identified within the draft order set e.g. spiritual care, physiotherapy and diagnostic imaging.

  If the order set contains a designated provincial high-alert medication, a second independent review from Pharmacy is recommended.
- The Primary Author(s) identify future implementation considerations related to the new provincial order set and consults SH Clinical Implementation as needed. Considerations include:
  - Education and Training
  - Provincial communication (announcement)
  - Shared Health website content upload
- The Primary Author(s) submit the order set for provincial committee review and signoff. Required consultations include:
  - RMAC: Regional Medication Advisory Council;
  - PCLT: Provincial Clinical Leadership Team; and
  - PNLC: Provincial Nursing Leadership Council.

  Other provincial councils to be consulted? e.g. Health Services Leadership Council (HSLC)

  Question: Is PCLT and provincial program medical director approval a sufficient substitute for SDO-site-based CMO approval? If it is sufficient, is it appropriate to ensure that there is due diligence for someone at the SDO or program to bring forward the provincial order set to the local CMO for awareness?

  ? SBH Professional Advisory Committee (SBH) approval? *Skip*

- The Primary Author(s) submit a provincially approved prototype to Digital Health CIS for electronic prototype development.
- Functional validation of the electronic prototype is performed by CIS and the Primary Author(s). Authors seek consultation as needed before signing off post-review.
- CIS Team receives written final approval from the Primary Author(s) after which a go-live date is arranged.

2.2.2 Modifications

- There is no allowance for SDOs or facilities to modify the content of a provincially approved order set e.g. medication and general orders. This ensures provincial consistency in prescriber practice, document content and a coordinated document update process.
- Provincial order set content may be inserted into SDO or facility-specific order set templates based upon the provincial order set primary authors' approval and assurance of the following:
  a) no modification (additions, deletions, substitution of words) of the content of the provincial order set;
  b) provincial order set content is inserted in its entirety; and
  c) the SDO or Facility order set clearly displays that the order set is provincial and therefore cannot be locally modified.
- Requests for local template modification require

Exceptions: handled on a case-by-case basis?

- Order set change requests are submitted to the Primary Author(s).
- Contingent on the scale and nature of the proposed change the Primary Author(s) utilize judgement to the degree content experts and stakeholders are consulted. Recommendations should align with clinical best practices and minimize operational, patient safety and workflow impacts. Consensus on content changes should be obtained from impacted stakeholder groups.
- If the order set contains a designated provincial high-alert medication, a second independent review from Pharmacy is recommended.
- The Primary Author(s) submit changes to the Manitoba Digital Health Clinical Information Specialist team via servicedesk@sharedhealthmb.ca.
- The order set modification process thereafter mirrors the new provincial order set development process (2.2.1).

2.2.3 Reviews

- Order set document review and revisions occur in 1 to 3-year cycles from the date of final approval.
- Revisions may occur earlier than 3 years if new information become available or as determined by the primary authors of the stanard order set.

3.0 APPLICATION OUTCOMES:

3.1 For Patients

What consumers (patients, families etc) of healthcare services in Manitoba can expect to experience as a result of this guideline?

- Prescribers will be more consistent and more fulsome in their use of best clinical practice that will improve patient outcomes.
- Decreased provincial variability in the care provided to patients within different SDOs.

3.2 For Clinicians

What clinicians can do to implement the guideline?

- Utilize the standardized provincial order sets within their local clinical environment.
- Communicate standard order set opportunities for improvement as part of the regular standard order set review process.
- Consider/apply the standard order set style guide principles when developing local standard order sets.

3.3 For Health Service Organizations

What SDOs and healthcare facilities can do to implement the guideline?

- Implement guidelines in their entirety so that SDO level document revisions are not required and when practice standard order change it is performed on a provincial scale
- Modify local standard order set development policies and procedures to reflect provincial guidelines.
- Communicate to local stakeholders the availability, location and key local practice changes related to the provincial standard order set guideline.
- Communication with local stakeholders about the value of standardized provincial order sets as patients, residents and clients as they transition between facilities and SDOs.

4.0 DEFINITIONS:

4.1 Terms

Clinical Order Set - is a standardized, pre-defined order (or set of orders) which is provided in electronic format or printed for patients or groups of patients with similar diagnostic and treatment requirements. Order sets aim to reflect evidence-informed care for a specific patient population and or clinical circumstance which increases clinical consistency and reduces the risk of adverse outcomes.

Independent Review - is a formal review of a clinical order set draft by stakeholder clinicians with expertise in the subject. The review should be completed separately from the order set author and, upon completion, involve a communication to reveal their critique and make changes to order sets

accordingly. In particular, issues related to patient safety are of paramount concern. When the order set contains medications, a pharmacist should conduct an independent review.

Primary Author(s) - oversees the clinical order set development and may include more than one health professional. Ideally, the primary authors include a content specialist (physician), a facilitator (Nurse Educator, Clinical Nurse Specialist), and a clinical pharmacist from the clinical service area or program. For small and minor changes, the primary author may be a single individual.

Stakeholders – are individuals or services whose practice will be directly influenced by the *order set.* Stakeholders may include but are not limited to Physicians, Nurses, Laboratory, Respiratory Therapists, Pharmacists, Physiotherapists, Patients etc. Stakeholders should be contacted when the content of the order set will impact their department/service differently from normal practice.

4.2 Abbreviations:

CIS – Clinical Informatics Specialist team, Manitoba Digital Health
CPOE – Computerized Physician Order Entry
EMR – Electronic Medical Record
EPR – Electronic Patient Record
PCS – Provincial Clinical Service

5.0 CONTACT:

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Clinical Educator, Shared Health
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Key Supporting Documents/Resources:

- 350.110.105-HSC-Medication-Order-Writing-Standards
- 350.110.111-HSC-Standards-for-Inpatient-health-record-Documentation-by-Medical-Staff
- 350.115.139-HSC-Documentation: Medication Administration Record (MAR)
- 350.115.140-CPG-HSC-Use-of-Abbreviations-Acronyms-and-Symbols-when-Documenting-in-the-Patient-Chart
- 350.115.131 – HSC – Pre-printed Physician's Orders Development and Management of (Adults/Pediatrics)

References:

BC Women's Hospital and BC Children's Hospital. 2015. "Order Set Development and Approval Process: Policy PTN.01.002". http://policyandorders.cw.bc.ca/resource-gallery/Documents/Pharmacy%2C%20Therapeutics%20and%20Nutrition/PTN.01.002%20-%20ARCHIVE%2022%20Nov%202018.pdf.

Elsevier. 2015. The Four Essential Steps to Effective Order Set Management at the University of Kentucky Healthcare.https://www.elsevier.com/__data/assets/pdf_file/0003/812262/2951_EL-CL-UKHealthCare-CaseStudy-MOS210pod-Web.pdf.

Institute for Safe Medication Practices. 2010."Guidelines for Standard Order Sets". https://www.ismp.org/guidelines/standard-order-sets.

https://cshp-scph.ca/sites/default/files/Clinical%20Pharmacy/Toolkit3.1D_HowtoPromoteBestPracticeandSafetythroughUseofOrderSets-final.pdf

Document Review History

Version #	Date	Reviewer	Action
0.0	MMM/DD/YYYY	Provincial Pharmacy	TBD
0.0	MMM/DD/YYYY	Provincial Health Information Services	TBD
0.0	MMM/DD/YYYY	Digital Health Clinical Informatics Specialist Team	TBD
0.0	MMM/DD/YYYY	PCLT	TBD

Appendices A

Shared health Soins communs Manitoba

Notification of Provincial Clinical Order Set Development Form

Date Of Submission

Click or tap to enter a date.

Submitting Provincial Clinical Service or Provincial Program

PCS/Program Name:

Intended Clinical Order Set Title

Title: (Program/Condition/Procedure/Event)

New or Change to Order Set Choose an item.

Primary Author(s)

Provincial Clinical Service Lead Name:
Medical Provincial Clinical Service Lead Name:
Pharmacist Name(s):
Additional Health Professional Name(s):

Background Information – Rationale for Development or Change

Stakeholders Identification

Internal Healthcare/System Stakeholders (e.g. ER Physicians, Pharmacy, Physiotherapy)

External Stakeholders (e.g. Patient advisors)

Email the intake form to Digital Health Clinical Informatics Specialist Team, Provincial Pharmacy Executive Director and SH Clinical Implementation

R. May 2023

Appendices B

Specialty or Program

Condition/Procedure and or Event Order Set

(additional information)

DRAFT TEMPLATE IN PRODUCTION

DO NOT USE

These orders are to be used as a guideline and do not replace sound clinical judgment and professional practice standards. Patient allergy and contraindications must be considered when completing these orders.

■ **Automatically activated, if not in agreement, cross out and initial** ☐ **Requires Check (√) for Activation**

Patient Weight ____ kg ☐ Estimated ☐ Actual Weight. Date (yyyy/mmm/dd) _____
Patient Height ____ cm ☐ Estimated ☐ Actual Height. Date (yyyy/mmm/dd) _____
Relevant Co-morbidities_____ *(optional)*
ACP STATUS _____

Medication Orders	General Orders
	Admission Status/Admit/Transfer/Discharge Diagnosis Condition Vital Signs and Monitoring Activity Nursing - Patient Care e.g. blood products, dressings Respiratory IV Infusions Nutrition Laboratory Diagnostic Tests/Procedures e.g. medical Imaging Clinical Consults Communication Orders e.g. alerts or escalation
Prescriber's Signature: _____	Date and time (yyyy/mmm/dd): _____
Faxed date and time (yyyy/mmm/dd): _____	Initials: _____

P&T Approved:
RMAC Approved:
Original Effective Date:
Revised Effective Date:

Prescriber Orders

Page 1 of 1
Order Set #0000

Appendices C

Style Guide

The purpose of the style guide is to ensure consistent, standard order set development.Order sets will contain only the orderables and important reminders appropriate for a particular condition/symptom. An order set includes the logical flow of various orders, procedures, and medications grouped by their clinical categories to address a specific procedure, clinical situation or diagnosis.

Font Selection

Arial 12-point font unless otherwise identified within the style guide.
Recommended use of 12-point font for readability and clarity when scanned or faxed.

Left alignment.

General Formatting

- Periods to be used between sentances but no periods at the end of lines.
- Wherever possible, only one order per line.
- Special characters and special formatting including bold, italics or colour should be avoided wherever possible.
- Use “OR” to indicate when choices between products must be made and includes specific guidance regarding that choice.
- Provide adequate space between the medication name and dose (e.g., “propranolol 20 mg, not propranolol20 mg, which may look like 120 mg), and between the numerical dose and unit of measure (e.g., 3 units, not 3Units, which can look like 30 units).
- Provide adequate space between numbers used to sequence orders and the actual orders themselves (to prevent misinterpretation of the number as part of the order, such as a medication dose).
- Avoid or reduce the amount of look-alike or sound-alike items? For example, “BNP” vs. “BMP”. Instead, write out *“brain natriuretic peptide”* (or *“BN peptide”*) and *“basic metabolic panel”*.

Measurements

Weight

Is documented in metric kilograms only or grams for low-birth-weight infants. Accuracy is captured by the prescriber checking whether the weight is estimated or actual and the date it was taken.

Patient Weight ____ kg. ☐ Estimated or ☐ Actual Weight. Date (yyyy/mmm/dd)

Height

Is documented in metric centimetres only.

Patient Height ____ cm. ☐ Estimated or ☐ Actual Height. Date (yyyy/mmm/dd) _____

Date and Time

Prompts for dates are written in yyyy/mmm/dd e.g. 2023/Jun/15

The 24-hour clock is utilized for time.
Hours may be abbreviated to capital "H" for hours as part of a frequency (eg. Q4H), and "h" for other directions (eg. Q4H for 72 h).

Paper-Based Pre-Printed Order Sets

8.5 inch x 11inch white bond paper

Orders are recommended to be printed on one side of a double-sided paper. Rationale: Orders written on the reverse side of sheets are often overlooked. The reverse sides of orders are best used only for references, additional information, etc.

Must include page numbers in the bottom right corner of each page of the document. It should total the number of pages e.g. page 1 of 3.

Order Set Naming Conventions (Titles)

Consistent naming enhances the ability of the clinician to find and choose the correct order set.
Template location: Upper, left corner.

[Specialty or Program]

- If applicable to all – "All programs"
- Specialty: will be spelled out where possible unless there are commonly known abbreviations (e.g. NICU, PICU, ENT, ORTHO). Abbreviations in all caps.
- ARIAL 12pt font

-

[Condition/Procedure and/or Event][Phase/Stage]

- Condition/procedure and/or event*: order set disease state or surgical intervention description and/or event (e.g., admission, transfer, discharge)
- Phase/stage: Pre Op, Post Op
- ARIAL 14pt font, BOLD

[Additional Information]

- Additional information: any additional information relevant to the order set name Patient group (care area) to which the orders apply will be in “brackets” (e.g. Pediatrics, Adults)
  Eg. GI Bleed-Admission (Pediatrics)
- ARIAL 14pt font, BOLD

- Restricted order sets to a particular service or location will have a post-fix added after the purpose portion of the order set name in **all capitals and BOLD “FOR _____ ONLY”** e.g. Dopamine Low Dose Infusion-**FOR ONCOLOGY ONLY**
- ARIAL 14pt font, BOLD, all CAPS

Specialty or Program

Condition/Procedure and or Event, Phase/Stage Order Set

(Additional Information)

FOR ____ ONLY (if applicable)

The naming convention of an order set will be limited to a maximum of 100 characters including spaces. The first letters of all words will be capitalized.

If multiple order sets apply to a condition being managed based on the existence of sub-types of the condition, each subtype will be identified by a colon. e.g. GI Bleed:Upper-Admission-Medical/Surgical.

SDO Logos

Provincial order sets display the logos of all SDOs that have provided document sign-off, individually or through a representative committee. The presence of a SDO logo indicates the applicability of the order set to the SDO.

Rationale for individual logos is that a Shared Health logo on a provincial document may not be interpreted by the end users as applicable to their SDO.

Template location: Header, on each page.

Demographic Information

Template location: Upper, right hand corner of each order set page that contains a patient order.
Rationale: Patient demographic information must be visible and readable when faxing and or to ensure the orders are applied to the correct patient.

The demographic space is to be left blank e.g. no demographic prompts.
Rationale: Printed prompts may obscure stamped or written patient information and may darken when faxed. Illegible demographic information invalidate orders.

Disclaimer

Standard disclaimer immediately under demographic and document title. Not to be modified.

These orders are to be used as a guideline and do not replace sound clinical judgment and professional practice standards. Patient allergy and contraindications must be considered when completing these orders.

Activation of Orders

■ Automatically activated, if not in agreement, cross out and initial ☐ Requires Check (√) for Activation

The criterion for order pre-checking requires providers to use an order 95 percent of the time if it is to be pre-checked.

Medications

- Includes the name of the drug and dose/strength on the same line/entry.
- Lists the most common or preferred drug, strength, and dose first, if multiple drugs, strengths, and doses are available from which to choose.
- Drug name (generic, followed by brand name when appropriate).
- Ensure medications are within the formulary and are available within the SDOs.
- Use separate lines/entries for each medication order. Multiple orders do not appear on one line or within a single entry.
- Usual drug dosages and infusion rates appear in parentheses beside the drug name in order to facilitate the administration of dosages/rates specified in recommended references (Parenteral Drug Manuals and the current Compendium of Pharmaceuticals and Specialties).

TALLman Lettering

TALLman lettering is used for look-alike and sound-alike drug names in standard order sets by bringing attention to their points of dissimilarity.

Institute for Safe Medication Practices Canada

- Principles for the Application of TALLman Lettering in Canada
- Canadian TALLman Lettering List

If medications are not listed on the ISMP TALLman lettering list:

- Generic medication names are written in all lowercase even if it is the first word in a sentence.
- Trade/brand names are all written in UPPER CASE.

- 350.110.111-HSC-Standards-for-Inpatient-health-record-Documentation-by-Medical-Staff
- 350.115.139-HSC-Documentation: Medication Administration Record (MAR)
- 350.115.131 – HSC – Pre-printed Physician's Orders Development and Management of (Adults/Pediatrics)

Abbreviations

- 350.115.140-CPG-HSC-Use-of-Abbreviations-Acronyms-and-Symbols-when-Documenting-in-the-Patient-Chart
- 350.110.105-HSC-Medication-Order-Writing-Standards

Content and Organization

The left column of the order set is dedicated to medication orders.
The right column of the order set is dedicated to general (treatment), non-pharmceutical, orders.
Exceptions exist in circumstances where the order set is solely a medication-based order set.

Content is separated into logical groups of treatment or procedure in a manner that optimizes clinical workflow e.g. High acuity needs such as lab blood work is prioritized to the top of the order set over consultations.

All consultations are grouped rather than spread throughout the order set.

The content of an order set should reflect the acronym ADC VANDIMLS

- Admit e.g. status (admit, transfer, discharge, observation status), isolation status, ACP status (full code/no code/comfort care)
- Diagnosis

- Condition
- Vital Signs & Monitoring
- Activity
- Nursing/Patient Care e.g. blood products, equipment and supplies, dressings, communication orders (prescriber alerts or escalation), foley catheter, VTE prophylaxis (SCD therapy)
- Respiratory
- Diet (nutrition) – tube feeding, NPO, diet orders
- Intravenous infusions – type, rate, amount, IV size
- Medications
- Laboratory – blood work
- Special Studies and Consults e.g. medical imaging, ECHO, allied health consults, diagnostic tests. ? prompt for each test

Patient education – diabetes care, ostomy training, booklets

Allergies

Prescribers and clinicians are to reference allergies with their healthcare organizations' identified document that serves as the primary source of truth e.g. allergy data sheet, clinical circumstances sheet. This mitigates the risk of partial lists documented within the order set. An entry space for allergies within the order set is to be avoided.

Co-morbidities

An entry line for relevant co-morbidities is an option for printed standard order sets. It's utilized as a prescriber prompt of comorbidities that require consideration when ordering. For example, renal or hepatic impairment may require alternate dosing when ordering medication.

Alternatively, specific considerations related to orders may be incorporated within the order themselves. For example, if Creatinine Clearance is less than 100 mL/min a different medication dose is ordered.

Best Practice Reminders
Patient Safety
Infection Control
Referral to Outpatient Services

Appendices D

Post Order Set Development Criteria Checklist

Table 1. Content criteria	
Criteria	**Examples or clarification**
1. Do the orders reflect current "best practice"?	Is there evidence to support the orders? Such evidence may come from recently published literature, research, association guidelines, or recommended practices.
2. Are orders comprehensive and do they consider other disciplines?	Do orders include all likely needs, e.g., other services, other disciplines, and discharge planning as appropriate? For example, some physicians might *not* consider the following when admitting a patient for a diagnosis of *dehydration*: □ Screen patient for smoking history. RT to provide smoking cessation counseling if patient has smoked within 12 months. *(Performance measure)*
3. Are automatic orders prechecked to reduce the possibility of their being overlooked?	Do orders include the following statement? "Strike through entire line to cancel a prechecked order."
4. Are performance measures indicated, e.g., Joint Commission Core and National Hospital Quality measures?	□ Screen patient for pneumococcal vaccination history and candidacy. Administer Pneumovax® 0.5 mL IM into deltoid as appropriate prior to discharge. *(Performance measure).*
5. Is the inclusion of National Patient Safety Goals (NPSG) considered?	□ Verify (through readback) critical lab values and notify the physician immediately. *(Safety measure)* Provide vital sign parameters re: when to notify the physician and when to initiate a rapid-response team call for immediate patient assessment. *(Safety measure)*

6. Is consideration given to infection control measures?	☐ Prep and clip hair of right groin area. *Do not shave*. ☐ Start IV antibiotic of cefazolin (Ancef®) 1 g no more than 60 min prior to incision time. *(Performance measure)* ☐ Cefazolin (Ancef®) 1 g IV q8h for up to 24 h after surgery end time. Start upon arrival at PACU. **Surgery end time** _____ (required for pharmacy to schedule doses). *(Performance measure)*

Table 2. Improving legibility of printed documents

Criteria	Examples or clarification
1. Is the print simple to read?	A nonserif font (e.g., Arial 12-point) is recommended, especially for paper orders that may be faxed. Errors are more likely to occur when faxed copies are not as clean or legible as they could be.4
2. Are instructions complete, unambiguous, and clear?	☐ Nothing by mouth after midnight. …*But no diet was ordered before midnight.* ☐ Elevate head of bed *as appropriate*. *No indication why, when, or how high.* ☐ Advance diet as tolerated. *Inadequate guidance for the nurse to determine the proper action.* Likewise, write out “Left” and “Right.” *The letters L and R may be interpreted as “Lower” or “Liter” and “Raise,” respectively.*
3. Is the use of symbols kept to a minimum? Be wary of letters and numbers that may be easily confused or misinterpreted.	. Do not use the symbols “<” and “>”. Instead, write out “less than” and “more than.” . Slashes (/) can be easily misread as the number one. If a slash must be used, provide a space before and after the slash; e.g., “20 mg / 500 mL”; or write “per” in place of the slash, e.g., 20 mg per 500 mL. . The letter “O” can be misread as the number zero. Writing out “one” and “zero” can sometimes reduce confusion.

	. Lower case L (l) can be misread as the number one or the capital letter I; e.g., Iodine (iodine) can easily be confused with Iodine, or Lodine® (etodolac). . To reduce confusion between certain look-alike letters, consideration may be given to using lower case "i" and upper case "L". This may create issues with "tall-man lettering"; e.g., "miLLiLiTERS" and certain drug names in all capital letters: "iNSULiN".
4. Are attempts made to remove or reduce look-alike or sound-alike items?	For example, "BNP" vs. "BMP". Instead, write out *"brain natriuretic peptide"* (or *"BN peptide"*) and *"basic metabolic panel".*
5. Is "tall-man lettering" used for all look-alike names and words?	"Tall-man lettering" can also apply to words like "eAr" and "eYe".
6. Do the orders include a space for physician ID# next to the signature line?	Including an identification number on the signature line helps identify the physician: _____ _____ _____ Physician signature ID# Date Time
7. Are upper case letters used appropriately?	When lowercase letters are used, "PRN" can be easily misread as "pm". The best option is to write out "as needed" or place "PRN" in all capital letters. Likewise, while not entirely chemically proper, "KCL" has been read as "KCI" when all caps are not used, as is technically correct. "STAT" may be placed in all capital letters for emphasis.
8. Are paper orders written on one side of the sheet only?	Orders written on the reverse side of sheets are often overlooked. The reverse sides of orders are best used only for references, additional information, etc.

Table 3. Common concerns regarding safety and medication orders

Criteria	Examples or clarification
1. Do the orders limit abbreviations to a minimum and never use unapproved abbreviations (e.g., QD or U)?	. Abbreviations are time-saving measures when handwriting orders. But, since preprinted orders can be readily reproduced by electronic or printed means, abbreviations are no longer a shortcut. They should be used rarely. Abbreviated medication names should be avoided. . The risk of dosing errors can also be reduced by avoiding the use of leading zeros before a decimal point and the use of trailing zeros after a decimal point.
2. Are medication orders numbered?	This is not a recommended practice because the order number may be confused with the medication dose.