

PURPOSE

To define the standard process for the development and approval of **order sets** (previously referred to as *pre-printed orders [PPO]*) across the site.

DEFINITIONS

Bolded, italicized terms found in this policy, whether in single or plural form, refer to the following definitions:

Primary Authors lead the order set development and may include more than one health professional. Ideally the primary authors would include a physician, nurse and clinical pharmacist from the specialty area. This is particularly relevant with the creation of a new order set. For small and minor changes, the primary author may be a single individual.

An **independent review** is a formal review of an 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.

High Alert Medication means any medication designated by the C&W PT&N as a medication whose use represents a significantly elevated potential for patient harm, including system error potential.

A **second independent review** occurs only on order sets with **High Alert Medications**. This review is done by a stakeholder with clinical knowledge of the order set.

Order Set means a standard, pre-defined order (or set of orders) which is provided in electronic format and can be printed on-demand, and have been developed and approved according to this policy. The order, or **order set**, contains medication or medication-related orders which, together, are considered to comprise a medication therapeutic intervention for the designated clinical circumstance. (Previously known as a Pre Printed Order [PPO])

Stakeholders are all 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, etc. **Stakeholders** should be contacted when content of the **order set** will impact their department/service differently from normal practice.

BACKGROUND

Standardized **order sets** are a reflection of evidence based-medicine and best practice for a specific population and clinical circumstance. They are designed to simultaneously promote clinical consistency of care, reduce potential for adverse events (including medication error) and promote system efficiency. In addition, **order sets** reduce the risk of errors arising from illegible handwriting, transcribing errors and misinterpretation of the prescriber's intent.

POLICY

The development and approval of all **order sets** will follow the standardized process as outlined:

In-scope

- All medication-related prescriptions or **order sets**, including other associated medication-related orders such as fluid therapies, laboratory, and patient monitoring orders.
- Fluid or acid-base orders, including general fluid orders and hydration orders associated with the treatment of the stated clinical condition.
- Nutritional orders, including all standardized parenteral nutrition, oral or parenteral concentrated electrolytes, general diet orders, infant or enteral formula, or other special nutrition supplements (eg. formula powder or modular nutrition products).
- Radiological orders with or without medications or contrast media .

PROCEDURES

Service or Program-level **order set** Development

- When the program determines the need for an **order set**, authorization of the Program (Service) Medical Director is obtained.
- **Primary Author** contacts Clinical Informatics (C&WClinicalInform@cw.bc.ca) to obtain C&W Order Set Request Form (Appendix A) and Working Order Set Template (Appendix B or C).
- **Primary author** obtains Program (Service) Medical Director approval for order set development, completes C&W Order Set Request form and sends to C&W Clinical Informatics.
- **Primary author** drafts order set using BC Children's Hospital or BC Women's Hospital template.
- **Primary author** sends draft order set to Clinical Informatics.
- Clinical Informatics works with **primary author** to ensure **order set** is in compliance with C&W medication policies, including Safe Medication Order Writing policy and the C&W Standardized Order Set Style Guide (Appendix D).
- Clinical Informatics will facilitate an **independent review** by a clinician with expertise for clinical content.
- **Primary author** identifies appropriate stakeholder group. Clinical Informatics will facilitate **stakeholders** input and review.
- If the **order set** contains a designated **High Alert Medication**, a **second independent review** for safety is performed.
- Clinical Informatics will facilitate submission of the final **order set** to the Pharmacy for PT&N approval. The **primary author** (or designate) will represent their order set at the committee meeting.

Service or Program-level **order set** Changes

- **Primary Author** contacts Clinical Informatics (C&WClinicalInform@cw.bc.ca) to obtain Order Set Request Form.
- **Primary author** highlights changes to existing **order set** and submits to Clinical Informatics with the completed Order Set Request Form.
- **Stakeholder** review process facilitated by Clinical Informatics as outlined above.

Service or Program-level *order set* 3-year review

- Prior to 3-year expiration date, Clinical Informatics will contact the Program (Service) Medical Director to remind them that the order set is up for review. Program (Service) Medical Director to identify **primary author**.
- **Stakeholder** review process facilitated by Clinical Informatics as outlined above.

Approval of *order set*

- PT&N will review the order set and approve the process conducted by the Program
- Clinical Informatics will assign a unique control number and send an electronic copy of the order set to the PT&N Secretary or Recorder
- Order set will be placed on central site repository, with notification to the Program/Service leads and others (as necessary).

RESPONSIBILITIES

Committee/ Individual	Responsibilities
Program/Service Medical Director	<ul style="list-style-type: none"> • Assignment of the order set primary author. • Ensure stakeholders are educated about new or deleted order sets • Review Program/Service order sets at least every 3 years for relevant practice changes.
Primary author	<ul style="list-style-type: none"> • Develop initial order set using evidence-based/ best practice medicine • Refer draft for safety and Stakeholder Independent Reviews • Take draft order set to PT&N for approval after completing review process with Clinical Informatics
Stakeholders	<ul style="list-style-type: none"> • Review proposed order set for clinical appropriateness, and impact on any requested services.
Independent Reviewers	<ul style="list-style-type: none"> • Double-check order set clinical aspects, including treatment plan, drug selection(s) and dose(s). • Double-check compliance with existing medication policies, including medication order safety principles (order writing and patient monitoring).
Pharmacy	<ul style="list-style-type: none"> • Act as stakeholder or independent reviewer • Notify Pharmacy staff (as necessary)
PT & N	<ul style="list-style-type: none"> • Confirm appropriate stakeholder and independent review conducted • Approve submitted order set
Clinical Informatics	<ul style="list-style-type: none"> • Facilitate review of order set by primary author, stakeholders and independent reviewer. Identify expired order sets and inform Program/Service Medical Director • Upload electronic order sets to central repository

PRE-PRINTED ORDER FORMAT

Refer to the C&W Standardized Order Set Style Guide (Appendix D)

REFERENCES

CHEO Pre-printed order policy. OTH3. May 2006

Vancouver Acute Pre-printed order development process. Oct 2010

C&W Medication Policies and Procedures

ISMP Canada Guidelines for Standard Order Sets 2010. Available at:

<http://www.ismp.org/Tools/guidelines/StandardOrderSets.asp>

Stultz JS et al. Computerized clinical decision support for medication prescribing and utilization in pediatrics. J Am Med Inform Assoc 2012;19:942-53.

Van Rosse F. The effect of computerized physician order entry on medication prescription errors and clinical outcome in pediatric and intensive care: a systematic review. Pediatric 2009;123:1184-90.

APPENDIX A

C&W ORDER SET REQUEST FORM

Order Set Title

TITLE: [Specialty][Condition/Procedure and/or Event][Phase/Stage][Additional Information]

Primary Author(s)

Name RN:

Name MD:

Name Pharmacist:

Name Allied Health Professional (if applicable):

Background Information (Rationale for change/new order set)

Stakeholders

External Stakeholders (ex. Child Health BC)

Request

- New Order Set**
- Change to existing**
- Three-year review**

Primary Author Signature

Approval from Medical Director **Medical Director Name:** _____

Signature: _____ **Date:** _____

Signature: _____ **Date:** _____

Signature: _____ **Date:** _____

Signature: _____ **Date:** _____

APPENDIX B



**PRESCRIBER'S ORDERS FOR:
Order Set Name**

DATE ____/____/____ TIME _____
DD MM YYYY

WEIGHT: _____ KG HEIGHT: _____ CM

DRAFT

ALLERGY CAUTION sheet reviewed

Symbols to use: (unchecked order) ✓ (prechecked order) ▶ (reminder)

Code status

Status/Admit/Transfer/Discharge

Patient Care

Activity

Vital Signs

Medications

IV Infusions

Nutrition

Respiratory

Laboratory

Blood Products

Medical Imaging

Diagnostic Tests/Procedures

Allied Health

Consults

Communication Orders

Equipment/Supplies

APPENDIX C



PRESCRIBER'S ORDERS FOR:
Order Set Name

DATE ____/____/____ TIME _____
DD MM YYYY

WEIGHT: _____ KG HEIGHT: _____ CM

DRAFT

ALLERGY CAUTION sheet reviewed

Symbols to use: (unchecked order) (prechecked order) (reminder)

Code status

Status/Admit/Transfer/Discharge

Patient Care

Activity

Vital Signs

Medications

IV Infusions

Nutrition

Respiratory

Laboratory

Blood Products

Medical Imaging

Diagnostic Tests/Procedures

Allied Health

Consults

Communication Orders

Equipment/Supplies



C&W Standardized Order Set Style Guide

6/16/2015

C&W Standardized Order Set Style Guide

PURPOSE

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.

C&W Standardized Order Set Style Guide

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C&W Standardized Order Set Style Guide

1. Order Set Naming Conventions (Title)

Consistent naming enhances the ability of the clinician to find and choose the correct order set.

- Order set title naming convention:
[Specialty][Condition/Procedure and/or Event][Phase/Stage][Additional Information]
- Specialty: will be spelled out where possible unless there are known abbreviations (ex. NICU, PICU, ENT, ORTHO)
- 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
- Additional information: any additional information relevant to the order set name
- Patient group (care area) to which the orders apply will be suffixed in “brackets” (eg: Pediatrics, Infants and Children, Neonates, Adult, Mental Health)
 - “Pediatrics” suffix refers to an order set that applies to any Pediatric patient, whereas Infants & Children, Neonates refer to specific subgroups of the Pediatric population
 - eg: GI Bleed-Admission (Pediatrics)
- 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”**
 - eg: Deep Neck Abscess-Admission- **FOR ENT ONLY**
 - eg: Dopamine Low Dose Infusion-**FOR ONCOLOGY ONLY**
- The naming convention of an order set will be limited to a maximum of 100 characters including spaces. 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
 - eg: GI Bleed:Upper-Admission-Medical/Surgical

2. Clinical Categories

A clinical category is the highest level sequence of orders displayed in PowerPlans. The following order categories are to be used in the order that they are listed. As content for order sets is developed there may be sections that do not have any orders; these sections may be omitted.

Examples of orders found in the various categories are listed - **this is not a complete list.**

- **Code status**
 - Adult Code Status
 - Pediatric Code Status
- **Status/Admit/Transfer/Discharge**
 - Includes additional precautions (contact, droplet),
 - Eg: Spinal Precautions, Wandering Risk, Seizure Precautions, Isolation Precautions, etc
- **Patient Care**
 - Includes non-vitals nursing assessment, Lines, Tubes (NG, G-Tube, Chest Tube), wound care, urinary catheter, Insert IVs, HOB, Point of Care testing etc
- **Activity**
 - eg: bed rest with bathroom privileges, weight bearing as tolerated, positioning
- **Vital Signs**
 - eg: routine vitals, telemetry, neurovital signs, postural vitals

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- **Medications**
 - Includes all medications but **excludes** all continuous medication infusions.
- **IV Infusions**
 - Includes all continuous medication infusions. Eg: Dopamine, Epinephrine, Morphine.
 - Includes all IV fluids.
- **Nutrition**
 - Includes enteral feeding orders.
 - Nutrition will include all diet orders including NPO.
 - Total Fluid Intake will be in Patient Care.
- **Respiratory**
 - Includes all oxygen therapy, ventilation orders, CPAP/BiPAP, pulmonary function testing orders etc
- **Laboratory**
 - eg: Bloodwork, Urine Samples, Sputum Samples, all specimens to hematology/chemistry/pathology/virology/microbiology
- **Blood Products**
 - **All blood products for order**
- **Medical Imaging**
 - eg: General Radiography, Ultrasound, CT, Fluoro, MRI
- **Diagnostic Tests/Procedures**
 - eg: ECG, EMG, EEG, Audiology, Urodynamics,
- **Allied Health**
 - eg: Dietician, Respiratory Therapist, Pharmacist, Pastoral Care
- **Consults**
 - eg: Physician Service consults (Infectious Diseases, Nephrology)
- **Communication Orders**
 - eg: In cases where clinicians wish to be notified about abnormal vitals or results, a “Notify Physician” communication orderable will be used
for example: Notify Physician if SBP greater than 160, HR greater than 55
- **Equipment/Supplies**
 - Eg: Crutches, Canes, Special Beds, Pillows, Trapeze, etc.

3. Sub Categories

A sub category is a category within a clinical category. Should only contain one level. For example; clinical category – Medications, sub category – Analgesia. Subcategories are groupings within a category that makes clinical sense (eg: chemistry, antibiotics or age group and/or weight groupings (neonates))

C&W Standardized Order Set Style Guide

4. Formatting Guidelines

4.1 General Formatting

- Periods to be used only between sentences. No periods at the end of lines.
- Wherever possible, only one order per line.
- If additional information is required to be added to the template, it will be placed in the first line of the order set. For example: body surface area or gestational age.
- Special characters and special formatting including bold or italics or colour should be avoided wherever possible.
- An order or orderable, is a single, stand-alone procedure or medication.
- Preselected orders within order sets/PowerPlans are “pre-checked” and should be ordered 100% of the time. NOTE: Medication orders should not be prechecked unless clinically required.
- Pre-checking of orders requires consensus by the Clinical Champion and working group for each order set to ensure patient safety and to optimize quality of care.

4.2 Time Formatting

- Hours will be abbreviated to capital “H” for hours as part of a frequency (eg. Q4H), and “h” for other directions (eg. Q4H for 72 h)
- Minutes will be abbreviated to capital “MIN” for minutes as part of a frequency (eg.Q60MIN), and “min” for other directions.(eg: Repeat dose in 30 min)

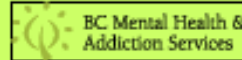
4.3 Abbreviations

- The use of abbreviations will be avoided unless accompanied by the full term or approved by PT&N.

4.4 Reminders

- Reminders are statements which give providers and clinicians information/guidance regarding clinical best practice or access to Zynx evidence links, approved Internet sites or appropriate internal reference documents
- Wherever possible, reminders should be placed immediately above the orderables to which they apply
- Text in reminders should be succinct so to minimize reading and space taken up on the screen. Additional detail can be included in supporting documentation on Medworxx
- Reminders should not be used unless absolutely necessary. Over use of reminders may increase the length and therefore the usability of an order set/PowerPlan. Reminders should only be used when they will add value or clarity to the decision making process at the point of order entry.

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SAFE MEDICATION ORDER WRITING

- Double-check you have the correct patient chart.
- For newly admitted or transferred patients, complete or consult the "Medication Reconciliation Form" prior to prescribing.
- Review the hospital approved patient allergy and adverse reaction form.
- **Print or legibly write** medication orders using blue or black ballpoint pen.
- Write only one medication or laboratory order per line.

Unacceptable Abbreviations and Symbols	Correct Term or Method
Drug Name Abbreviations	Print generic drug name fully
U or IU	unit
QD or OD or QOD	daily or every other day
OS, OD, OU	left eye, right eye, both eyes
D/C when intended for patient discharge	Write "discharge patient" (D/C for discontinuation of a medication order is acceptable)
cc	mL or milliliter or millilitre
µg	microgram or mcg
@	at
> or <	greater than, less than
Trailing Zero (X.0 mg)	X mg
Lack of Leading Zero (.X mg)	0.X mg
Dosage fractions ½ or ¼ to designate part units	0.5 or 0.25
IT	intrathecal
No abbreviations for parenteral solutions, except correct terminology	NS or NaCl 0.9%, NaCl 0.45%, D5W, D10W, D50W, D5 RL, D5-NaCl 0.45%, D5-NaCl 0.9%, D5NS

Key Required Medication Order Elements	Notes
Patient Name and Medical Record Number	
Date and Time	
Generic Drug Name	Except combination products
Dose with Correct SI units	<ul style="list-style-type: none"> ○ Use SI units and measures ○ Range orders should provide increments and clinical dosing criteria
Route of Administration	
Frequency of Dosing	
Prescriber Signature, Printed Last Name, College ID	Add pager or phone number also, if possible
Example of a complete medication order: ibuprofen 200 mg PO q8h (10 mg/kg/dose)	

No Verbal or Telephone medication orders, except in emergent care:

- Repeat back orders to prescriber. Attempt to have a second RN or pharmacist overhear
- Prescriber to counter-sign all such orders as soon as possible (maximum 24 hours)

Excerpts from the C&W Policy: Medication Order Requirements
 Refer to the complete policy for additional information, definitions and additional requirements.

C&W Standardized Order Set Style Guide

4.5 Formatting of Medication Orders

- **General Principles:**

- Available in Canada and on hospital formulary (Provincial Formulary)
- Listed by Canadian generic name only (may refer to brand/trade name in brackets) except for combination products (eg: Polysporin ointment)
- Dose/frequency must be appropriate for the condition being treated
- If any medications are used first chronologically, they will be placed first within their subcategory (eg: ondansetron prior to chemotherapy orders)
- Comply with C&W Medication Order Requirement Policy (PTN.01.001 Nov 2012) and Lower Mainland Pharmacy Services Policies and Guidelines where appropriate
- The word “to” will be used to indicate range doses.
 - e.g. 1 to 2 mg instead of 1 – 2 mg
- Use correct dose field: Strength dose, not volume dose eg: amoxicillin 1 tsp PO TID
- Use primary generic name for medication orders rather than synonyms (eg: lorazepam instead of Ativan)
- Correct drug form specified if necessary (eg: controlled release tablet, suspension with concentration specified eg: morphine 1 mg/mL oral liquid)
- Drugs will be identified with their generic name. The first letter of the drug name will not be capitalized. Where trade names are used in an order sentence for combination products (eg. Polysporin ointment), the first letter will be capitalized
- Tallman lettering will be used when appropriate (eg: DOPamine) After the drug name, the dose, unit, route and frequency will be listed in order, all in lower case except for route which will be in upper case. PRN doses will include a PRN reason in lower case
 - eg: dimenhydrinate 25 mg PO Q6H PRN for nausea
- Doses will be documented in metric, not by the number of tablets or volume unless it is a multi ingredient product and approved by PT&N.
- Doses less than 1 will have a 0 prior to the decimal (eg: 0.25 mg)
- Doses greater than 1 will not have a decimal followed by a zero, but will be listed as integers instead (eg: 2 mg)
- The priorities of STAT will be capitalized and listed after the route
 - eg: metoprolol 5 mg IV STAT
- Doses based on weight or body surface area will have the formula in brackets at the end of the order. Further instructions on total dose in 24 hours will be provided where it is clinically indicated
 - eg: ampicillin ____mg IV Q6H (25 mg/kg/dose)
- Infusion rates based on weight or surface area per hour (or min) will have the formula in brackets at the end of the order (dose/kg/hour, dose/kg/min)
- Orders that are for a specified period of time or number of total doses to be administered will be documented as follows
 - eg: ampicillin _____ mg IV Q6H for 3 doses
 - eg: ampicillin _____ mg IV Q6H for 48 hours
- Maximum dose warnings for PRN medications will be listed where applicable at the end of each order sentence
 - eg: acetaminophen: (Maximum: 4 g per dose or 10 g per 24 h)
- If the order has an age range, it will appear after the order sentence and before the maximum dose.

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4.6 Formatting of Laboratory Orders

- **General Principles:**
 - Laboratory test names will be standardized according to a lab-determined set
 - The source of all specimens will be assumed as blood unless otherwise specified
eg: Urine Culture and Sensitivity Routine, Stool O&P
 - Order details and schedule will be specified as necessary
eg: CBC (routine, ASAP, STAT)
eg: CBC (routine in AM daily for 3 days)
 - Laboratory sub-headings will be used as appropriate
eg: Chemistry, Hematology, Microbiology

4.7 Formatting for Diagnostic Imaging

- **General Principles:**
 - The “reason for investigation” will be specified as necessary in the orderable
 - Diagnostic Imaging subheading (modality) will be used as appropriate
eg: General Radiology, CT Scan, Angiography, Nuclear Medicine