Pre-printed Medication Order Sets

<table>
<thead>
<tr>
<th>Corporate Policy &amp; Procedures Manual</th>
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</thead>
<tbody>
<tr>
<td>Number: VII-B-445</td>
</tr>
<tr>
<td>Date Approved: January 8, 2018</td>
</tr>
<tr>
<td>Date Effective: February 9, 2018</td>
</tr>
<tr>
<td>Next Review: (3 years from Effective Date) February 2021</td>
</tr>
</tbody>
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Approved by:
Chief Medical Officer; and
Chief Operating Officer

**NOTE:** The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

### Purpose

**Pre-printed Medication Order Sets (PMOS)** are standardized order sets reflecting the evidence and/or a broad consensus among the clinical interdisciplinary team for use in the management of a specific patient population (e.g., oncology, pediatrics, obstetrics geriatrics, etc.), diagnosis, procedure and/or specific medication (e.g., anticoagulant agent).

Proper use of PMOS has the potential to reduce medication errors, reduce variation and unintentional oversight, enhance workflow and communicate best practices.

### Policy Statement

The creation, revision and maintenance of PMOS shall follow defined guidelines and procedures. Only Covenant Health-approved PMOS shall be used.

### Applicability

This policy and procedure applies to all Covenant Health facilities, staff, medical staff, and any other persons acting on behalf of Covenant Health.

### Responsibility

It is the responsibility of Covenant Health administrative and medical leaders, staff and physicians to support patient safety by ensuring the proper use and development of PMOS.

It is the responsibility of units/programs, medical leaders, staff and physicians to ensure that they are using the most current version of Covenant Health-approved PMOS.

It is the responsibility of the PMOS lead/initiator to contact the Medication Management Safety Team (MMST) before initiation of a PMOS or alteration of an existing PMOS.

It is the responsibility of a Covenant Health representative on a Provincial Working Group (when these exist and are the impetus for a PMOS) in the development of a PMOS to communicate with and bring information to relevant Covenant Health stakeholders and MMST throughout the PMOS development process, and take Covenant Health stakeholder and MMST feedback back to the Provincial Working Group.

All final approved PMOS shall be maintained and kept in a database by the MMST.
### Principles

When PMOS are properly created, reviewed, and maintained, this results in well-designed medication order sets that have the potential to contribute to positive patient outcomes and optimal communication between prescribers, nursing staff, and allied health care professionals. However, if PMOS are not properly created, reviewed or maintained, they can potentially contribute to errors. Accordingly:

1. The initial creation, revision, or review shall take place at the site, unit/program or provincial level;

2. PMOS shall be developed, revised, and/or reviewed through consensus amongst an appropriate representative group of prescribers and health care professionals who treat the condition/targeted populations. Multiple PMOS for the same condition/targeted populations are discouraged;

3. All PMOS shall comply with current policies and procedures, provincial drug formulary, and best practice guidelines; and

4. PMOS are only to be used in the management of a specific patient population, diagnosis, procedure and/or specific medication.

### Policy Elements

1. MMST must be notified prior to using a PMOS on a trial basis. PMOS in draft form may be used within a site, or unit/program, but must be evaluated at six months, and finalized within one year unless a short time-defined extension has been granted.

2. A review of each PMOS is to be completed every three years to ensure it continues to meet best practice standards.

**Exception:** In the case of a PMOS that is developed within a provincial Strategic Clinical Network (SCN) or Clinical Knowledge & Content Management Service (CKCM), it shall be the responsibility of Alberta Health Services (AHS) to review and update the order set based on current literature and standards of practice. Any updates to the provincial PMOS shall be communicated to MMST by the Covenant Health representative on the provincial working group.

3. The MMST will notify the site or unit/program when a PMOS is due for review.

4. All components of the PMOS are to be clear and concise to avoid ambiguity.

5. The PMOS must be signed by an **authorized prescriber** as per Covenant Health policy VII-B-125, *Medication Orders*.

6. Development of a PMOS shall involve the following stakeholders as appropriate:

   a) physician (program or site);
   b) nurse practitioner;
   c) pharmacists;
   d) nurses;
7. The PMOS must be evidence-informed and reflect best clinical and patient safety practices.

8. Approval of a PMOS is required any time there are alterations made to the PMOS.

**Procedure**

1. **Development of a PMOS**

   1.1 Prior to the development of a new PMOS, the lead/initiator shall contact the MMST at Medication.Management@covenanthealth.ca in order to determine if a new PMOS is required, or if an existing PMOS can be revised to suit the current requirements.

   1.2 An interdisciplinary team shall be involved in the development of the PMOS as per policy element # 7.

   1.3 The lead/initiator shall complete the PMOS Worksheet form for all new and revised PMOS. The PMOS Worksheet will be reviewed by the interdisciplinary team and stakeholders impacted by the PMOS. (See attachments.)

      1.3.1 Consider setting a two week timeframe for response from stakeholders impacted by the PMOS so as not to delay the process. Identify that no feedback received shall be interpreted as implied consent.

   1.4 The Covenant Health PMOS template can be found on CompassionNET, or on CLiC (see attachment 2).

   1.5 PMOS that require revisions shall be submitted with the following information:

      1.5.1 Name of the PMOS, followed by the site, and unit/program.

      1.5.2 Version number indicated on the bottom left.

      1.5.3 Date of the version created or revised indicated on the bottom left.

   1.6 The site or unit/program that creates, revises, or reviews a PMOS shall follow:

      1.6.1 The Institute for Safe Medication Practices (ISMP) Guidelines for Standard Order Sets;
1.6.2 Covenant Health Policies/Procedures;
- VII-B-340, Tall Man Lettering
- VII-A-25, Prohibited Abbreviations, Symbols and Dose Designations
- VII-B-125, Medication Orders
- VII-B-80, Standardized Medication Concentrations for Parenteral Administration;

1.6.3 Evidence-based guidelines reflect best clinical and patient safety practices. Current literature references (within five years) must be included when submitting the PMOS Worksheet.

2. Approval of a PMOS

2.1 The completed PMOS Worksheet form must be submitted to MMST. All members and stakeholders of the developing or review group must sign the form indicating consent with the application, and one individual from the unit/program shall be designated as the lead/initiator.

2.2 The draft form of the PMOS (revised or new) must be submitted to MMST for review and processing, along with the following:

2.2.1 current PMOS (must have the original version number and date); and
2.2.2 current applicable guidelines or policies.

2.3 The MMST shall review the PMOS draft for, but not limited to, the following:

2.3.1 Covenant Health policies and procedures listed in 1.6 above;
2.3.2 human factors engineering;
2.3.3 ISMP guidelines;
2.3.4 formatting; and
2.3.5 alignment with existing policy/procedure.

2.4 PMOS with AHS logo must be transcribed to the Covenant Health-approved PMOS template, approved for use within Covenant Health, and have the Covenant Health logo applied.

2.4.1 Exception: A PMOS that is developed within a provincial SCN or CKCM may vary from the design format outlined in the Covenant Health PMOS Guidelines for Design (subject to MMST approval), and must have the Covenant Health logo applied.

2.5 Draft PMOS and worksheet shall be reviewed by MMST within two weeks of submission. MMST will notify lead/initiator of any issues with the PMOS.

2.6 The lead/initiator is to finalize any issues and forward the final PMOS draft to the MMST.
2.7 Changes shall be reviewed by MMST within two weeks of resubmission.

Note: The process from submission to assignment of form number (finalization) may take up to three to six months, depending on the complexity of the PMOS and the stakeholders involved.

2.8 If any issues exist with the PMOS, MMST will send the final version back to the lead/initiator for resolution.

2.9 The lead/initiator is then to obtain the final signature from the appropriate Program Director(s) and the Program Facility Chief(s), or the site Senior Operating Director(s) and Medical Director(s) for site/organizational PMOS.

2.9.1 Exception: In the case of a PMOS that is developed within a provincial SCN or CKCM, a Covenant Health-specific stakeholder group is not required.

- The Covenant Health representative on the Provincial Working Group (lead/initiator) shall keep records of communication and feedback obtained from relevant Covenant Health stakeholders throughout the PMOS development process, and shall supply such records to MMST.
- The lead/initiator shall obtain final signatures from the relevant site or unit/program stakeholders and submit evidence of Covenant Health stakeholder feedback and Provincial Working Group stakeholder feedback (may be in the form of the Provincial Working Group minutes).
- The lead/initiator shall inform MMST when the final provincial PMOS is approved, and when it will be posted (for AHS).
- The lead/initiator shall identify any other documents such as policies, education, or charting documents that are referenced within the provincial PMOS.

2.10 Once final signatures have been obtained on the PMOS Worksheet form and sent to MMST, the PMOS will be processed with a contracted printing service (assignment of a form number).

2.11 The lead/initiator of the PMOS will be notified by MMST via email and be given ordering instructions from the contracted printing service for the new/revised PMOS.

2.12 In the case of a Corporate PMOS, MMST shall issue a corporate memo notifying the Medical Directors and Covenant Health staff of the new or revised PMOS.

2.13 In the case of a site-specific or program-specific PMOS, the lead/initiator shall inform the site Medical Director and program staff of the new or revised PMOS.
3. **Implementation of PMOS**

3.1 The unit/program manager and Program Facility Chief must ensure proper education of all users of the PMOS.

3.2 PMOS must be signed and dated by the authorized prescriber as per the Covenant Health Policy VII-B-125, *Medication Orders*.

3.3 PMOS must have an individual patient label affixed.

3.4 In the absence of an approved PMOS, the authorized prescriber must complete his or her own specific orders according to the Covenant Health Policy VII-B-125, *Medication Orders*.

3.5 The unit/program manager is responsible for ensuring that any old or expired PMOS are destroyed or removed from patient care areas and computers. Only the most current version of a PMOS shall be kept and used in a clinical area.

4. **Review and Maintenance of PMOS**

4.1 Each site or unit/program shall be responsible for reviewing PMOS every three years, upon notification from the MMST. The purpose of the review and maintenance is to ensure that the PMOS is reflective of current literature and standards of practice.

4.1.1 Exception: In the case of a PMOS that is developed within a provincial SCN or CKCM, it will be the responsibility of AHS to review and update the order set based on current literature and standards of practice. Any updates to the provincial PMOS shall be communicated to MMST by the Covenant Health representative on the provincial working group.

4.2 MMST shall be responsible for maintaining all current and old Covenant Health PMOS in a database for the required legal time.

4.3 MMST will notify the unit/program manager three months in advance that review of PMOS is required.

4.4 If a PMOS is deleted for any reason or no longer in use, the unit/program manager must notify the MMST (in order for the MMST to update the database and communicate with the contracted printing service).

4.5 Should evidence or best practice guidelines change, the unit/program manager / Facility Chief must review and revise the impacted PMOS, and follow the steps in Procedures for development and approval of a revised PMOS as outlined in this policy.
Definitions

**Authorized prescriber** means a health care professional who is permitted by Federal and Provincial legislation, her/his regulatory college, Covenant Health and practice setting (where applicable) to prescribe medications.

**Development team** is an interdisciplinary working group delegated with the responsibility of developing or revising a PMOS.

**Health care professional** means an individual who is a member of a regulated health discipline, as defined by the Health Disciplines Act or the Health Professions Act, and who practices within scope or role.

**Human Factors Engineering** is the discipline concerned with understanding how humans interact with the world around them. It draws upon applied research in many areas, such as biomechanics, kinesiology, physiology, and cognitive science, to define the parameters and restraints that influence human performance. This knowledge can be used to design systems so that they are compatible with human characteristics. Conversely, if systems are not compatible with human characteristics, performance can be adversely affected. (ISMP Canada).

**PMOS lead/initiator** is a health care professional (e.g., prescriber, clinical nurse educator, program/unit manager), from a site, unit or program who determines a PMOS needs to be developed or revised based on evidence based literature and / or best clinical practice. The lead/initiator is responsible for creating an interdisciplinary working group (**development team**) that will develop and review a PMOS.

**Pre-Printed Medication Order Set (PMOS)** is a formal document that includes a pre-determined group of medication orders that work to standardize diagnosis and treatment choices applicable to a specific patient population. PMOS have the potential to make ordering more efficient and represent a significant opportunity to decrease variation in care and enhance compliance with treatment guidelines.

**Provincial Working Group** is a group formed of subject matter experts who collaborate in the development of provincially agreed upon clinical guidance and practice standards based on clinical best practice and evidence. Examples include: Strategic Clinical Networks (SCN), and Clinical Knowledge & Content Management (CKCM).

**Signature** implies hand written, or an electronic signature.

**Stakeholders** are individuals, a department or service whose practice involves patients targeted by a specific PMOS, or have expertise in the content of the proposed PMOS.

Related Documents

PMOS Resources, available on compassionNET @ [http://www.compassionnet.ca/Page2950.aspx](http://www.compassionnet.ca/Page2950.aspx)

Attachments:
- PMOS Form Worksheet
- PMOS Template document
Covenant Health Corporate Policies available on compassionNET @
http://www.compassionnet.ca/Page2099.aspx

- VII-B-340, Tall Man Lettering
- VII-A-25, Prohibited Abbreviations, Symbols and Dose Designations
- VII-A-50, Medication Administration
- VII-B-125, Medication Orders
- VII-B-80, Standardized Medication Concentrations for Parenteral Administration
- III-55, Records Management

### References

ISMP Guidelines for Standard Order Sets
Healthcare Human Factors University Health Network: Order Sets in Healthcare: An Evidence-based Analysis

### Previous Version Date(s)

July 8, 2016
MEDICATION PRE-PRINTED MEDICATION ORDER SET (PMOS)
FORM WORKSHEET
Complete each section of the worksheet. Sections below are to be completed by developer when looking at developing or review a PMOS.

**Step 1: Initiating Development or Review of PMOS**

1. Notify (email or phone) MMST when developing a PMOS. MMST will search the PMOS database for existing PMOS;
2. Ensure all stakeholders are identified & included in the development/review process;
3. The following resources should be used when developing a PMOS and may be found on CompassionNET under Pharmacy/Medication Management Safety Team:
   a. PMOS Policy and Procedure
   b. PMOS Guidelines
   c. PMOS Fact Sheet
   d. PMOS FAQ
   e. ISMP Guidelines
   f. Process Overview Chart
4. Please complete the information below:

**Lead/Initiator (Indicate Site and Unit/Program):**

<table>
<thead>
<tr>
<th>All stakeholders identified?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit/Program Managers aware:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is your Program Medical Director aware?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is the Pharmacy Manager aware?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Date sent to MMST: Click here to enter a date.

**Title of PMOS:**

Is this a new PMOS? □ Yes - □ No

Is this a revision to a current PMOS? □ Yes - □ No

If so provide CV number: and version number:
*(this must be provided with all revisions submitted)*

**Purpose of developing/review of PMOS:**

Have you collaborated with any other program? □ Yes - □ No

Is this PMOS (select below)?
□ Corporate PMOS – Applicable to all sites
□ Corporate PMOS – Applicable to Acute Care sites only
□ Corporate PMOS – Applicable to Continuing Care only
□ Site / Program PMOS – Indicate Site / Program
### Step 2: Details specific to the layout and to all medication orders

**To be completed by the initiator:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order set is on the Covenant Health-approved template</td>
<td>☐</td>
</tr>
<tr>
<td>Checkboxes ☐ have been used when there is more than one option for the prescriber to select</td>
<td>☐</td>
</tr>
<tr>
<td>Each order is on a separate line and separate lines are used when choices between products must be made and includes specific guidance regarding that choice</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Medication orders include the following:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication name (generic name, followed by brand name when appropriate)</td>
<td>☐</td>
</tr>
<tr>
<td>Metric dose/strength</td>
<td>☐</td>
</tr>
<tr>
<td>Frequency</td>
<td>☐</td>
</tr>
<tr>
<td>Route of admission</td>
<td>☐</td>
</tr>
<tr>
<td>Indication of use (this is required for PRN medications)</td>
<td>☐</td>
</tr>
<tr>
<td>Tall Man lettering used where applicable</td>
<td>☐</td>
</tr>
<tr>
<td>Medication ordering policy followed</td>
<td>☐</td>
</tr>
<tr>
<td>Prohibited abbreviation policy applied to PMOS</td>
<td>☐</td>
</tr>
</tbody>
</table>
Step 3: Key Stakeholders signatures

To be completed by all stakeholders involved in the development/review of a PMOS

Ensure all criteria for standard order sets have been met and approved at the program and/or specialty level. **Signatures must be obtained by the form initiator/representative**

Provide names, signatures, titles and dates below for all users and experts involved in the development/review of the PMOS:

☐ Prescriber: Program Medical Director/Medical Lead/Nurse Practitioner

Name: ___________________________  Title: ___________________________

Signature: _______________________  Date: _________________________

☐ Specifying any medications? Pharmacy Manager: (Mandatory)

Name: ___________________________  Title: ___________________________

Signature: _______________________  Date: _________________________

☐ Clinical Nurse Educator (CNE):

Name: ___________________________  Title: ___________________________

Signature: _______________________  Date: _________________________

☐ Health Record: Health Information Management (health records)

Name: ___________________________  Title: ___________________________

Signature: _______________________  Date: _________________________

☐ Unit/Program Manager:

Name: ___________________________  Title: ___________________________
Signature: __________________________ Date: __________________________

☐ Legal Services: **Consent Form, Release of Information, or Risk Management Issues?**
Name: __________________________ Title: __________________________

Signature: __________________________ Date: __________________________

☐ Respiratory Therapist (RT): **Program/Department RT Manager/Designate**
Name: __________________________ Title: __________________________

Signature: __________________________ Date: __________________________

☐ **Laboratory Services Manager**
Name: __________________________ Title: __________________________

Signature: __________________________ Date: __________________________

☐ **Diagnostic Imaging/Laboratory Manager**
Name: __________________________ Title: __________________________

Signature: __________________________ Date: __________________________

List additional stakeholders, **who have not signed above** and who are involved in the development process (collaboration amongst disciplines and programs whenever possible)

1. Name: __________________________ Title: __________________________
   Signature: __________________________ Date: __________________________

2. Name: __________________________ Title: __________________________
   Signature: __________________________ Date: __________________________
<table>
<thead>
<tr>
<th></th>
<th>Name:</th>
<th>Title:</th>
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<td>Signature:</td>
<td>Date:</td>
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<tr>
<td></td>
<td>Signature:</td>
<td>Date:</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature:</td>
<td>Date:</td>
</tr>
</tbody>
</table>
FINAL SIGNATURE APPROVAL FROM (obtained by initiator):

Program Medical Director:

Name: ____________________________

Signature: ________________________ Date: ________________________

Step 4: Return completed form MMST:

Once steps 1 through 3 of this worksheet have been completed, please send the worksheet and all relevant documents (current PMOS, current applicable guidelines or policies) to the MMST at:

Medication.Management@covenanthealth.ca

NOTE: If this is a PMOS revision, please indicate the current version and the CV number of the PMOS you wish to revise/review. This information should be found at the bottom of the PMOS. This information is required by MMST as well as DATA Communications Management.

NOTE: In the case of an AHS provincial order set, submit records of communication and feedback obtained from relevant Covenant Health stakeholders throughout the PMOS development process, final signatures from the relevant program stakeholders and evidence of Provincial Working Group stakeholder feedback (may be in the form of the Provincial Working Group minutes).

For use by the Medication Management Safety Team only:

Notification sent to Medical Lead(s)/ Director(s) by MMST:

Name of Medical Director | Date and type of notification sent by MMST
--- | ---
☐ Dr. Bob Black
☐ Dr. Greg Hrynychshyn
☐ Dr. Guy Lamoureux

PMOS Name, CV and version Number __________________ OR E-Number__________

☐ DATA Communications Management: ________
☐ MMST Database updated ________________________
☐ AHS IT (for electronic order set): ____________

MMST Name: ________________ Title: ________________________

Signature:____________________ Date PMOS finalized: ____________
Title:

1. **Allergies**: Check Caution Record before ordering.
2. Shaded box □ indicates mandatory orders.
3. Open boxes left blank □ will not be processed.
4. Orders may be deleted with a single stroke through the order, and initialing the deletion.

<table>
<thead>
<tr>
<th>Date: ___________________</th>
<th>Time: __________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: (cm) ______________</td>
<td>Weight: (kg) ___________</td>
</tr>
</tbody>
</table>

☐ sample open box (indicates a choice; optional order)

■ sample shaded box (indicates a mandatory order)

Prescriber’s Signature: ____________________________

CV# (DATE) Version X Do Not Write in This Space – Will Not Scan