

Medication Ordering Policy

CO-MM-01-06 v. 02/17

Who has prescriptive authority?

A physician or physician extender, including physician assistants, nurse practitioners or pharmacists under protocol, is responsible for ordering or prescribing all medications. Medications ordered by a Medical Student must be cosigned by a resident, or attending physician.

Medication Orders are legible.

If necessary, the prescriber should print to make the medication order as well as signature legible.

Previously written medication orders may not be written over or edited. Always make a change entry on the next available line.



Elements of a Clear Order

For clarity each medication order should contain the following elements;

- medication name,
 - strength/concentration
 - dose,
 - route,
 - frequency,
 - an indication for use (in Medical Record)
- Indication or reason for use is required for all as needed (PRN) medications



Do Not Use Abbreviations

DO NOT USE	Acceptable Alternative
qd or q.d.	Daily, qday
QOD or q.o.d.	Every other day
U or u	Unit
IU	International unit
Leading decimal .2mg	0.2 mg
Trailing zero; 1.0mg	1 mg
MS, MSO4	Morphine sulfate
MgSO4	Magnesium sulfate



Dosing

The metric system is used for weights, volumes, and units. Apothecary symbols and units (minims, drams, and grains) are not acceptable.

Doses expressed in dosage form, volume or packages are unacceptable except when the product prescribed is a combination product. (e.g. Lasix[®] 4 mL should be written Lasix[®] X mg)

Pediatric medication orders must include the dose in mg/kg as well as the calculated dose.



Verbal Orders

Verbal medication orders are limited to emergent, urgent or procedural situations.

If the prescriber is available in the immediate area and the chart is accessible, then the order is written or entered into CPOM by the prescriber

The licensed professional receiving the verbal order must transcribe and then read back the order to the prescriber

The receiver is required to read back medication orders to the prescriber

Document the read back process by writing VOR or VORB representing verbal order read back followed by your name and credentials.

Verbal orders are cosigned in accordance with medical staff rules and regulations

Verbal orders for chemotherapy are prohibited. The prescriber must write the order in-house or must fax a written copy to the patient care unit or to the pharmacy.



Telephone Orders

Telephonic medication orders are recorded directly on a physician's order sheet or within CPOM which is part of the medical record.

Telephonic Order Read-back

The receiver is required to read back medication orders to the prescriber.

Document by writing TOR or TORB representing telephone order read back followed by your name and credentials.

Pharmacists do not accept verbal requests for medications from nurses unless a written order is simultaneously scanned or otherwise seen before the medication is released unless there is an emergent need. Pharmacists input verbal orders directly into CPOM or write verbal orders on a physician medication order form stored in pharmacy and then placed in the orders section of the medical record on the unit.

When pharmacists receive verbal medication orders, or changes to orders are received in the course of clarifying orders, the orders and changes are transcribed directly to the medical record by the pharmacist (not relayed to another caregiver).



Verbal Or Telephonic Orders

Whoever takes a verbal or telephonic order is responsible for making sure that it contains all of the required elements.

medication name,
strength/concentration

dose,

route,

frequency,

an indication for use (in Medical Record)

Indication or reason for use is required for all as needed (PRN) medications



Range Orders: Pain

Pain Medications:

Dose Range (unless otherwise stated in physician order):

The nurse assesses the patient's pain score and documents it on the medical record.

If two dose options:

The lower dose for 0 – 5 on the numeric pain scale.

The higher dose for 6 – 10 on the numeric pain scale.

If three dose options:

The lowest dose for 0 – 3 on the numeric pain scale.

The middle dose for 4 – 6 on the numeric pain scale.

The highest dose for 7 – 10 on the numeric pain scale.

A similar method is used with Wong-Baker faces.

Dose ranges beyond three are not acceptable unless explicitly detailed by the physician or via protocol.

Interval Range

Range Frequencies are modified to the shortest time interval, (e.g. q4 – 6 hrs will be dosed at q4h).



Range Orders: Other

Non-pain Medications:

Dose Range:

If the dose range is ordered for a non-pain medication for symptom control:

The lowest dose will be used for the initial dose.

If symptom control is inadequate, the next higher dose will be used.

The dose may continue to be increased within the ordered dose range in a stepwise fashion until adequate symptom control is achieved throughout the dose interval.

Interval Range: Range Frequencies will be entered according to the shortest interval, e.g. q4 – 6 hrs will be entered as q4h.



Home Medications

Home Medications order (see Home/Own Use Medications Policy, CO-MM-01-22.2).

Hold Orders will be evaluated by the pharmacist and either deactivated in Meditech, which print "hold" on the subsequent printed MAR, or discontinued altogether. Orders which are deactivated are evaluated by the pharmacist and "resumed" or reactivated based on a profile evaluation and communication with the nurse or physician as needed.

Blanket renewal of medications is unacceptable; see Reconciliation of Medications policy CO-MM-03-22.



Titration Orders for Parenteral Infusions

Titration is defined as the dose adjustment (increase or decrease) of the medication in response to the patient's clinical status.

Titration orders must include the desired physiologic state the prescriber desires for the patient (e.g., titrate medication to achieve blood pressure of ___/___). Specific drug dosage adjustment increments must be stated. For titrated medications: Orders must include all five elements listed below:

1. Initial Dose/rate
2. Dose adjustment increments
3. Time interval (s) for evaluation, adjustment of dose, and re-evaluation
4. Maximum (minimum) dose
5. Patient response or goal;

Example – "Dopamine – start at 140 mcg [2 mcg/kg/min]; increase/decrease at 1 mcg/kg/min every 20 minutes until blood pressure equals systolic greater than 90 or 10 micrograms per kilogram per minute is reached."



Titration Orders for Parenteral Infusions

Clinical staff will assess the patient after every incremental dose or more often as indicated by the patient's clinical condition.

The ordered maximum dose may not be exceeded. If the desired patient's response/goal as ordered is not achieved at the maximum dose specified in the order, the physician is contacted for additional orders.

Titration orders must contain all five elements above, if not, the physician is contacted for order clarification.

All changes must be documented.



Titration Order Example

Orders are available for each titrate medication that meet the requirements for a complete order.

DOPamine Standard Titration Order Sheet

DOPamine Standard Concentration = 400 mg / 250 ml D5W

Final Concentration = 1,600 mcg / ml or 1.6 mg / ml

Dosing Increments	Interval	Max Dose	Taper
1 mcg / kg / min	2 minutes	20 mcg / kg / min	Same as titration.

Check appropriate dosing box:

<input type="checkbox"/> Starting Dose: 3 mcg/Kg/min	<input type="checkbox"/> Starting Dose: _____
End Point: _____	End Point: _____
<input type="checkbox"/> Infuse at fixed rate _____ mcg/kg/min, do not titrate.	



Taper Orders

Tapering of medications is the progressive decrease in dose and/or frequency of a medication by established increments.

Tapering is predicated on patient improvement/stabilization.

If the order states “wean” this is considered Tapering of Medication.

Initial Dose

Incremental dose

Time interval for incremental dose

This order must include all the elements of an order plus the duration for each order and the start date of the first order.



Unclear Medication Orders

Two categories of incomplete or unclear orders exist;

Category I – Nurse has primary responsibility to clarify

Illegible order or signature

Missing element including PRN reason, dose, route, frequency

Medication reconciliation form missing elements after 24 hours

Unapproved abbreviations

Lack of appropriate TOR/VOR for medication.

Category II - Pharmacist has primary responsibility to clarify

Inappropriate therapeutics including dose, route or frequency,

Illogical order or unknown drug ordered

Duplicate Therapy

Other variance from ordering policy



Unclear Medication Orders

Unclear or incomplete medication orders are clarified by nurses and or pharmacists within 24 hours.

Medications should not be dispensed or vended until the order is clarified in the medical record.

Two medications with the same PRN indication are not acceptable. Only one medications can be ordered per PRN indication unless order states which to use first or the pain scale is different.

A single dose of medication may be dispensed in cases where delay would result in patient harm.

As Needed, PRN, orders will not be filled by pharmacists until clarified. PRN orders not clarified in 24 hours are documented in the chart by the pharmacist in the orders and the progress notes.

When initial attempts to clarify an order fail, and to ensure adequate communication between prescriber, nurse, & pharmacist, all remaining incomplete or unclear orders will be entered as follows:

A placeholder drug "CLARIFY" is entered and will print on the MAR and on the e-MAR and will show up on Pyxis.

This ordered placeholder medicine will be tracked and trended by the pharmacist and time to clarification will be evaluated.



Escalation of Problem Orders

If an order is not clearly or completely written and the order is not clarified in 24 hours, the pharmacist will contact the attending physician or engage medical staff chain of command for resolution of the order.



Question 1

Which line has a defect?

HOME MEDICATION ORDERS UPON ADMISSION TO THE HOSPITAL						
The following medications have been identified as Home Medications the patient is <u>currently</u> taking (Including prescriptions, OTC'S, herbals, inhalers, eye drops, patches, & supplements)						
DO NOT USE Abbreviations						
qd	qod	U or IU	Trailing zeros	Leading decimal	MS or MSO4	
MEDICATION NAME STRENGTH/CONCENTRATION	DOSE (If pedi mg/kg)	ROUTE	FREQ	S C R	P R N	INDICATION
Glyburide-metformin	5/2000	PO	BID	✓		
Ciprodolol	500mg	PO	QD	✓		
Azithromycin	250mg	PO	TID	✓		




Question 1

Line 2 has a frequency of "qd"

HOME MEDICATION ORDERS UPON ADMISSION TO THE HOSPITAL
 The following medications have been identified as Home Medications the patient is currently taking
 (including prescriptions, OTC's, herbals, inhalers, eye drops, patches, & supplements)
DO NOT USE Abbreviations

qd qod U or IU Trailing zeros Leading decimal MS or MSO4

MEDICATION NAME STRENGTH/CONCENTRATION	DOSE (If pedi mg/kg)	ROUTE	FREQ	S C H	P R N	INDICATION
Glyburide-metformin	5/2000	PO	QD			
Aspirin	100mg	PO	QD			
Azithromycin	250mg	PO	TID			

 Health.

Question 2 – Multiple Choice

What is the correct way to correct the defect?

1. Write "ay" next to the term to make "qday"?
2. Write a clarification entry on the next available line of a physician's order form?



Question 2 – Multiple Choice

The correct answer is:

2. Write a clarification entry on the next available line of a physician's order form?

Date MM/DD/YY	Time (MILITARY)	Allergies (NKA)
4/1/07	1500	Lipitor order from Home Med Reconciliation Form interpreted as:
		Lipitor 40mg PO once daily
		Atorvastatin



Question 3 – Multiple Choice

What is the proper way to clarify the previous incomplete order?

1. Write "anxiety" next to PRN in the incomplete order.
2. Write a clarification entry on the next available line of a physician's order form.



Question 3 – Multiple Choice

The correct answer is:

2. Write a clarification entry on the next available line of a physician's order form.

See example below:

MODIFY	MILITARY	PHYSICIAN ORDER
6/15/07	1030	Clarification of above order for Lorazepam:
		LORAZEPAM 0.5 mg PO Q12° PRN <u>anxiety</u>
		JANE DOE, R.N.



Question 4 – Multiple Choice

What is the proper way to correct the previous order?

1. Add a "0" in front of the ".5" on the original order
2. Write a clarification entry on the next available line of a physician's order form.



Question 4 – Multiple Choice

The correct answer is:

2. Write a clarification entry on the next available line of a physician's order form.

Clarification of Previous Order:
Xanax 0.5 mg po hs
Chris Brown, Pharm.D



Question 5

Which line has a defect?

lisinopril 20 mg PO Qday
Protonix 40 mg PO Qday
MSO ₄ 35 mg IV Q4 ^o pm pain



Question 5

The third line has an unapproved abbreviation "MSO4."

lisinopril 20 mg PO Qday
Protonix 40 mg PO Qday
MSO4 35 mg IV Q4 ^o pm pain



Question 6

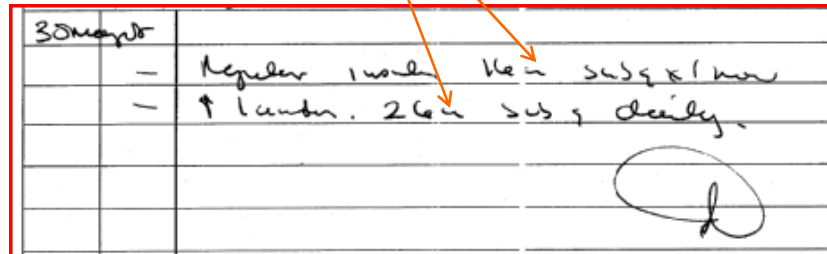
What is wrong with the following order?

30mg po	
-	Regular insulin 1 unit 4 times daily
-	↑ Lantus 26u sub q daily



Question 6

These orders include the unapproved abbreviation "u" in both lines.



Question 7

What is the proper way to correct the previous Diprivan order?



Question 7

The physician will need to complete the Propofol Standard Titration Order Sheet by filling in all required parameters.

All titration order sets can be found on the Sharepoint website

PROpofol (Diprivan) Standard Titration Order Sheet			
PROpofol (Diprivan) Standard Concentration = 1000 mg / 100 mL lipid			
Final Concentration = 10,000 mcg / mL or 10 mg / mL			
Dosing Increments	Interval	Max Dose	Taper
5 mcg / kg / min	5 minutes	40 mcg / kg / min	After 96 hours - See Below
Check appropriate dosing box:			
<input type="checkbox"/> Starting Dose: 5 mcg / Kg / min		<input type="checkbox"/> Starting Rate: _____	
Goal: Ramsay sedation scale level 3		Goal: _____	
1.) Reassess the patient's Ramsay sedation level every 5 minutes. If the appropriate level of sedation has not been achieved, increase the rate by 5 mcg/kg/min. If the patient becomes oversedated the patient's infusion rate should be reduced by 5 mcg/Kg/min every 15 minutes, until the appropriate level of sedation is reached. 2.) After the appropriate sedation level is reached the patient should be reassessed every shift.			



Antimicrobial Stewardship

As of January 1st, 2017, antimicrobial stewardship is a requirement set forth by The Joint Commission

It is a multidisciplinary effort to curb antimicrobial use and ultimately increase patient safety

It starts with physician's prescribing antimicrobials

Antimicrobials are the only drugs where use in one patient can impact effectiveness in another patient



Antimicrobial Stewardship

- With less antimicrobial development in the pipeline, and more antimicrobial use:
 - Rise in resistant infections
 - MDRO
 - Increase *C. difficile* infections
 - Due to inappropriate antimicrobial use



Antimicrobial Stewardship

- Up to 30-50 % of all antibiotics prescribed are unnecessary or inappropriate
- 23,000 people die each year due to antibiotics resistant organisms
- 250,000 people are estimated are ill due to *C. difficile*
- 14,000 people die due to *C. difficile* infections



Centers for Disease Control and Prevention

Antimicrobial Stewardship

•Examples of how antimicrobials are misused:

- Ordered when not indicated
- Continued for a longer duration than necessary
- Incorrect dose and frequency
- Lack of discontinuation and de-escalation



Antimicrobial Stewardship

Remember the 4 Ds:

Drug

Is the drug prescribed the most appropriate for the suspected infection? Is it the most narrow? Is there a need for broad spectrum coverage?

Dose

Is the dose reflective of the patient's renal function? Is the dose most appropriate for the suspected infection?

Duration

Is the patient on this antimicrobial for an appropriate period of time? Is there an opportunity to de-escalate or discontinue the medication?

De-escalation/Discontinuation

Are C&Ss appropriately ordered and drawn?



Antimicrobial Stewardship

Reassess patient after 48- 72 hours
Follow hand hygiene
Provide patient education on antimicrobial use



Antimicrobial Stewardship

What are we doing here:
Multidisciplinary team to oversee appropriate use
7 day auto-stop date for all antimicrobials prescribed
Effective January 31, 2017



Antimicrobial Stewardship

Potential outcomes:

- Improve patient outcomes
- Reduce antimicrobial resistance and overuse
- Decrease health care associated infections



Antimicrobial Stewardship

Question #1:

A patient is in the emergency room and is started on broad spectrum antibiotics. Piperacillin/tazobactam 3.375 g iv q8hrs (extended infusion) and vancomycin (pharmacy to dose protocol) is started. What are things we should do **before** and **after** initiation of antibiotics?



Antimicrobial Stewardship

Question #1:

Before: Ensure that appropriate labs are orders; Two sets of blood cultures and any other subsequent cultures for site specific infections

Example: Urine cultures for suspected UTI

Appropriate imaging

After: 48-72 antibiotic review; Review C&S and opportunity for de-escalation or discontinuation; Review dose and frequency



Antimicrobial Stewardship

Question #2:

Patient presents with PNA from the emergency room.
Before initiation of antibiotics, what are things to consider?



Antimicrobial Stewardship

Question #2:

HCAP or CAP (different antimicrobial regimens)

Where did the patient come from?

Home, nursing home, long term care facility?

Is the patient a dialysis patient?

Have they been recently hospitalized?

Double check, they may have been hospitalized at a different facility

Have they received other antibiotics recently as an outpatient?



Antimicrobial Stewardship

Question #3:

Patient's blood cultures has grown back *Kleb pneumoniae ESBL*. The cultures show:

Microbiology	
Susceptibilities M.I.C	
Org 1: Kleb pneumoniae ESBL producer	
	Org 1
Ampicillin	R
Ampicillin/Subactam	R
Cefazolin, Other	R
Cefoxitin	S
Ceftriaxone	R
Ciprofloxacin	R
Gentamicin	R
Levofloxacin	R
Piperacillin/Tazobactam	I
Tobramycin	R
Trimet/Sulfa	R

Do you start cefoxitin for this patient?



Antimicrobial Stewardship

Question #3:

No, because this is an ESBL producing organism, it will make the drug (cefoxitin) inactive

Susceptibilities		M.I.C	
Org 1: Kleb pneumoniae ESBL producer			
Org 2: Kleb pneumoniae ESBL producer			
	Org 1	Org 2	
Ampicillin	R		
Ampicillin/Sulbactam	R		
Cefazolin, Other	R		
Cefoxitin	S		
Ceftriaxone	R		
Ciprofloxacin	R		
Gentamicin	R		
Levofloxacin	R		
Meropenem	S		

A call to laboratory will release additional drugs on the C&S

A carbapenem may be started for this patient



Antimicrobial Stewardship

Question #4:

You want to start ceftriaxone one gram IV daily for a patient with suspected UTI. Upon order entry, you realize the patient has a penicillin allergy. What are things we should consider?



Antimicrobial Stewardship

Question #4:

Confirm that it is a true allergy

Anaphylaxis vs. rash vs. N/V

Ask the patient or family members to provide a description of the symptoms with previous antibiotic exposure

Weigh benefits vs. risk

