# Medication Administration Timing



## Purpose

The objective of this policy is to establish practical medication administration policies and procedures based on Federal and State laws, and accepted standards of practice that account for the nature of the medication, and the patient's clinical status and need. The desired outcome is to standardize medication administration times to increase patient safety and prevent harm.

## Scope

This policy applies to all patients of Spring Grove Hospital Center.

## Definitions*

**Medications <u>not eligible</u> for scheduled dosing times:**

These are medications that require exact or precise timing of administration, based on diagnosis type, treatment requirements, or therapeutic goals.

**Medications eligible for scheduled dosing times:**

These are medications prescribed on a repeated cycle of frequency, such as once a day, BID (twice a day), hourly intervals (every 1, 2, 3 or more hours), etc.

**Time-critical scheduled medications:**

These are scheduled which must be administered within thirty minutes before or after their scheduled dosing time, for a total *window of one hour*. An early or late administration might cause harm or have significant, negative impact on intended therapeutic or pharmacological effect. **Exception to 30-minute rule: rapid acting insulins (e.g. lispro insulin) given 15 minutes before a meal or with a meal.** Time-critical medications include, but are not limited to:

- Antibiotics – administered intravenously
- Scheduled narcotics for pain
- Alendronate
- Medications prescribed more frequently than every 4 hours (e.g., nicotine)

The prescriber may declare any medication as time-critical by including this designation on the medication order.

**Non-time critical scheduled medications:**

These are scheduled medications for which a longer or shorter interval of time since the prior dose does not significantly change the medication's therapeutic effect or otherwise cause harm. These medications are administered within one hour before or after their scheduled dosing time, for a total *window of two hours*.

## Responsibility

The Pharmacy and Therapeutics Committee, with medical staff oversight, will approve policies and procedures for medication administration.

## Policy

Medications will be administered in accordance with a standard medication schedule as defined by policy, unless identified as not eligible for scheduled dosing time, or defined as time-critical or otherwise indicated in the prescriber's medication order. Medication administration times will be based upon whether they are eligible or ineligible for a scheduled dosing time, and whether they are considered time critical, or non-time critical. Missed or late administration of medications are documented as such and given only upon a new order from the prescriber. Medication administration policies will be evaluated to assure safety and efficacy.

## Procedure

1. Medications <u>not eligible</u> for scheduled dosing times include:
    a. STAT doses (immediate)
    b. First doses/loading doses (ordered with "now" start time)
    c. One-time doses (timed for a procedure)
    d. Time-sequenced doses (e.g., timed for serum drug levels)
    e. PRN doses - prescribed on an as needed basis
2. A standard list of scheduled medication administration times is established. See **Appendix A.**
3. Exceptions to the standard list of medication administration times include medications not eligible for scheduled dosing times, emergency situations, specific times ordered by the prescriber, and drug/drug or drug/food interactions. See **Appendix B.**
4. Medications administered around meals will follow the timing in **Appendix C**.
    a. Medications ordered twice daily with meals will be given with breakfast and dinner unless written otherwise.
5. Medications are determined to be time-critical based on the hospital's established list or by the prescriber at the time of ordering.

6. Investigational drugs will be considered eligible for scheduled dosing and non-time critical unless dictated by protocol and specified on the order.
7. The time-critical designation will be indicated on the medication order sheet at the time of prescribing.
8. Non-formulary medications will be evaluated on a case-by-case basis to determine time critically. The pharmacist will review the non-formulary request and notify the prescriber if the drug is considered time critical. The prescriber will specify time-critical on the medication order when appropriate.
9. First dose of medications eligible for scheduled dosing times will be started at the next standard hour of administration unless ordered STAT or specified otherwise on the order.
10. Medication administration is documented on the Medication Administration Record (MAR), by initialing in the appropriate time slot which indicates that it was administered according to the medication order, corresponding administration time and within the established medication time window.
11. Doses administered outside of the time frames for scheduled medications (early/delayed/omitted) require a new prescriber order and are documented on the MAR by initialing and documenting the ACTUAL TIME of administration. The prescriber will determine need to adjust the timing of future doses and write an order if required. Those given without a new order are considered medication errors and are reported through established medication error reporting systems.
12. Time-critical medications will be transcribed on pink MARs.
13. In order to facilitate ease of administration, other scheduled non-time critical medications may be administered at the time of administration of time-critical medications.
14. For patients requiring medications outside of standard scheduled times (e.g., holidays requiring medications before sunrise and after sunset, etc.), providers must discontinue the previous orders and initiate new orders with the exact time in which they shall be given (e.g., 6am and 8pm)
    a. Providers may not write an order to "give all morning medications before sunrise and all evening medications after sunset."

## References

1. *CMS Office of Clinical Standards and Quality/Survey & Certification Group
   Ref: S&C-12-05-Hospital REVISED 12.02.11
2. ISMP Nurse Advise-EER, Guidelines for Timely Medication Administration, Vol9, Issue 1, January 2011

## Appendices

A. Medication Administration Times for Scheduled Medications
B. Exceptions to Standard Oral Medication Administration Times
C. Meal Times and Before Meal Dosing Schedule

## Approved by

Signature on File — 11/24/2025
Monica Chawla, M.D., FAPA, Chief Medical Officer — Date

Signature on File — 11/24/2025
Marie Rose Alam, M.D., FAPA, Chief Executive Officer — Date

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## Appendix A. Medication Administration Times for Scheduled Medications

| Approved Abbreviation | Interpretation | Standard Administration Times | Before Meals (ac) Administration Times ac=1/2 hr before meal time* | Empty Stomach Administration Times =1 hr before meal time* |
|---|---|---|---|---|
| Daily /QAM | Once daily | 9 am | 6:45-7:55 am* | 6:15 -7:25 am* |
| QHS | Daily at bedtime | 9 pm | | |
| BID | Two times daily | 9am, 9pm | 6:45-7:55 am*,<br>9pm (n/a) | 6:15-7:25am*,<br>9pm |
| TID | Three times daily | 9 am, 1 pm, 9pm | 6:45-7:55 am*,<br>11:05 am-12:15 pm*,<br>9pm(n/a) | 6: 15-7:25 am*,<br>10:35 am-12 pm*,<br>9pm |
| Q6H 9-1-5-9 | Four times daily | 9 am, 1 pm, 5 pm, 9 pm | 6:45-7:55 am*,<br>11:05 am-12:15 pm*,<br>4:10-5:10 pm*<br>9 pm (n/a) | 6:15-7:25 am*,<br>10:35 am-12 pm*,<br>3:40-4:40 pm*<br>9pm |
| Q3H | Every three hours | 9 am, 12 noon, 3 pm,<br>6 pm, 9 pm, 12 am,<br>3 am, 6 am | | |
| Q4H | Every four hours | 9 am, 1 pm, 5 pm, 9pm,<br>1 am, 5 am | | |
| Q6H | Every six hours | 5 am, 11 am, 5 pm, 11pm | | |
| Q8H | Every eight hours | 9 am, 5 pm, 1 am | | |
| Q12H | Every twelve hours | 9 am, 9 pm | | |
| ac* | Before meals* | | 6:45-7:55 am*,<br>11:05 am-12:15pm*,<br>4:10-5:10 pm* | |
| ac and qhs* | Before meals and bedtime* | | 6:45-7:55 am*,<br>11:05 am-12:15 pm*,<br>4:10-5:10 pm*<br>9pm | |
| STAT | Immediately | | | |

*Dependent on meal time per individual unit- times reflect the range of meal times in the hospital, dose according to unit meal time

| Appendix B. Exceptions to Standard Oral Medication Administration Times | | |
|---|---|---|
| **Medication** | **Best Taken** | **Comments** |
| APAP/Codeine | | **time critical** - standing doses only |
| Alendronate | ac breakfast | **time critical**- upon arising with full glass of water only; **6am dosing**, avoid concomitant proton pump inhibitors |
| Bisacodyl | empty stomach | No dairy products or antacids within 1 hour, do not crush/cut |
| Calcium carbonate | with meal | to increase absoption |
| Carbamazepine | with meal | |
| Darunavir | with meal | with food to increase absorption, |
| Digoxin | | 1 hr before or 2 hrs after meal with consistent timing, not with pectin/fiber containing foods (pears, apples, fiber laxatives) |
| Doxycycline | with food | to improve GI tolerability, dose several hrs apart from antacids, calcium salts, iron salts |
| Ferrous sulfate | empty stomach | give with water or orange juice only; can be given with small meal to avoid GI discomfort. Separate 2 hrs from antacids and tetracycline derivatives |
| Genvoya® | with food | improved absoption of elvitegravir |
| Glipizide | ac | immediate release before food; extended release with 1st meal of day |
| Ibuprofen | with food or milk | give with food, milk or antacids - reduce GI agitation |
| Isoniazid | empty stomach | reduced absorption with food |
| Levothyroxine | 30-60min ac | separate from aluminum, calcium, iron containing products & Orlistat by 4hrs; **6am dosing** |
| Lispro insulin | with meal | **time critical- standing doses only, 15minutes before meal or immediately after meal, NOT sliding scale** |
| Lurasidone | with meal | improved absorption(350 cal), once daily |
| Metformin / ER | with meal | Improve GI tolerance |
| Methadone | | **time critical - only standing doses FOR PAIN** (for opioid use disorder not time critical) |
| Naproxen | with meal | give with food, milk or antacids - reduce GI agitation |
| Nitrofurantoin | with meal | improve absorption, reduce adverse effects |
| Oxycodone | | **time critical - standing doses only** |
| Pantoprazole | 30-60min ac | usually before breakfast - separate from alendronate |
| Penicillin VK | empty stomach | 2 hours before or 2 hours after meals, improve absorption, dose around the clock |
| Prednisone | with meal or pc | decrease GI upset, may give with antacid between meals |
| Rivaroxaban | with meal | a-fib guidelines recommend with evening meal. For other indications > 15mg give with food |
| Sodium Polystyrene | empty stomach* | *give at least 3 hours before or 3 hours after other medications |
| Tamsulosin | pc | take 30 minutes after same meal each day |
| Tetracycline Derivatives | empty stomach | 1 hr before or 2 hrs after meals to improve absorption; dose around the clock, separate from antacids and iron products |
| Ziprasidone | with meal | with 500 cal meal- to improve absorption |

ac=1/2hr before meals
empty stomach = 1hr before meals
with meals defined by unit mealtimes
pc = 1/2 hour after meals

## Appendix C. Meal Times and Before Meal Dosing Schedules

| Unit | Breakfast  | | | Lunch  | | | Supper  | | |
|---|---|---|---|---|---|---|---|---|---|
| | Serve Time | ½ hour before (ac) | 1 hour before (empty stomach) | Serve Time | ½ hour before (ac) | 1 hour before (empty stomach) | Serve Time | ½ hour before (ac) | 1 hour before (empty stomach) |
| **Dayhoff A** | 8:15 | 7:45 | 7:15 | 12:40 | 12:10 | 11:40 | 5:40 | 5:10 | 4:40 |
| **Dayhoff B** | 7:40 | 7:10 | 6:40 | 12:10 | 12:20 | 11:50 | 5:20 | 4:50 | 4:20 |
| **Dayhoff C** | 7:30 | 7:00 | 6:30 | 12:00 | 11:30 | 11:00 | 5:00 | 4:30 | 4:00 |
| **Dayhoff D** | 7:40 | 7:10 | 6:40 | 12:10 | 11:40 | 11:10 | 5:20 | 4:40 | 4:10 |
| **Noyes** | 8:05 | 7:35 | 7:05 | 12:00 | 11:30 | 11:00 | 5:00 | 4:30 | 4:00 |
| **White B** | 7:45 | 7:15 | 6:45 | 12:20 | 11:50 | 11:20 | 4:45 | 4:15 | 3:45 |
| **White C** | 7:10 | 6:40 | 6:10 | 11:35 | 11:05 | 10:35 | 4:15 | 3:45 | 3:15 |
| **White D** | 8:15 | 7:45 | 7:15 | 12:55 | 12:25 | 11:55 | 5:20 | 4:50 | 4:20 |
| **Smith** | 7:35 | 7:05 | 6:35 | 11:35 | 11:05 | 10:35 | 4:50 | 4:20 | 3:50 |
| **RB1 G1** | 7:30 | 7:00 | 6:30 | 12:00 | 11:30 | 11:00 | 5:00 | 4:30 | 4:00 |
| **RB1 G2** | 8:00 | 7:30 | 7:00 | 12:30 | 12:00 | 11:30 | 5:30 | 5:00 | 4:30 |
| **RB2 G1** | 7:30 | 7:00 | 6:30 | 12:00 | 11:30 | 11:00 | 5:00 | 4:30 | 4:00 |
| **RB2 G2** | 8:00 | 7:30 | 7:00 | 12:30 | 12:00 | 11:30 | 5:30 | 5:00 | 4:30 |
| **RB3 G1** | 7:30 | 7:00 | 6:30 | 12:00 | 11:30 | 11:00 | 5:00 | 4:30 | 4:00 |
| **RB3 G2** | 8:00 | 7:30 | 7:00 | 12:30 | 12:00 | 11:30 | 5:30 | 5:00 | 4:30 |
| **RB4 G1** | 7:30 | 7:00 | 6:30 | 12:00 | 11:30 | 11:00 | 5:00 | 4:30 | 4:00 |
| **RB4 G2** | 8:00 | 7:30 | 7:00 | 12:30 | 12:00 | 11:30 | 5:30 | 5:00 | 4:30 |
| **TAWES A** | 8:20 | 7:50 | 7:20 | 12:35 | 12:05 | 11:35 | 5:20 | 4:50 | 4:20 |
| **TAWES B** | 7:40 | 7:10 | 6:40 | 11:55 | 11:25 | 10:55 | 4:40 | 4:10 | 3:40 |