



HEALTH HOLDING

HAFA ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

Department:	Pharmaceutical Care Department		
Document:	Multidisciplinary Policy And Procedure (MPP)		
Title:	Standard Medication Administration Time		
Applies To:	All Pharmacists, Physicians & Nurses.		
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1. PURPOSE:

- 1.1 To enhance quality of patient care and safety, ensure consistency and uniformity all over MCH departments.

2. DEFINITONS:

- 2.1 **Standard Medication Administration Time (SMAT):** the ideal time frame when the medicine must be given to patients.
- 2.2 **"Q"** means every.
- 2.3 **STAT dose:** for doses that must be administered immediately when urgent initiation is necessary
- 2.4 **Loading dose:** a large initial dose of a substance or series of such doses given to rapidly achieve a therapeutic concentration in the body.

3. POLICY:

- 3.1 Standard once-daily, Q12H, Q8H, Q4H and Q6H medications, etc. should be administered within one (1) hour before or after the scheduled administration time. Medications prescribed Q2H and Q3H may be given within 15 minutes before or after the scheduled administration time. Anything greater than this acceptable deviation will be considered as a medication error. Except Non –Standard Medication List
- 3.2 Nurses may use their clinical judgment in deciding when to withhold medications in some occasions (e.g.: Low BP, High BP, or some physical illnesses), however, all transaction are to document and the physician should be notify a soon as possible before the next dose is due.
- 3.3 The pharmacist can put on hold medications requiring monitoring parameter after proper communication and precautions not to put patient safety under risk.
- 3.4 The physician can use STAT order or initial to start medication order at any time meanwhile pharmacy and nursing shall apply SMAT
- 3.5 The first dose of an antibiotic must be supplied nearest to SMAT
- 3.6 Administration time for all TPN order will be at 16:00. Refer To Total Parenteral Nutrition Policy (MM-MPP-027).
- 3.7 For medication must be given with or without food.
- 3.8 Loading dose must be entered as stat order.
 - 3.8.1 The physician should assign the priority of an order (STAT, Regular, and PRN) during the order of medications.
 - 3.8.2 Physician must add initial dose if the initiation of the order is necessary and the order time is outside the standard time, the initial dose will follow the STAT order rules. The pharmacy shall guarantee the medication supply for 24 hr.

4. PROCEDURE:

- 4.1 Establishing a standard time regimen: Refer to Appendix 1 "Standard Medication Administration Time Table For Intravenous medication" and Appendix 3 "Standard Medication Administration Time Regimens Table For Standard Medication Administration Time for Oral Medication".
- 4.2 Medications not administered at the Scheduled standard Times: Refer to Appendix 2 "Stagger Chart for Intravenous Medication", Appendix 1 "Stagger Chart for Oral Medication".
 - 4.2.1 Is to be used when the first dose of a medication is given outside of a standard administration time, and subsequent dose(s) need to be staggered to get back to the standard times.
 - 4.2.2 From the vertical axis of the chart identify the time of administration of the first dose (e.g., 03:00). From the horizontal axis, identify the frequency of administration (e.g., q6h). Read across from the time of the first dose to the appropriate frequency column – the time indicated will be the second administration time. Subsequent doses will be given at the next standard medication time.
- 4.3 Medication administration time window: medication may be given up to one hour before or one hour after the scheduled time without being considered as an error of time administration (e.g. insulin and oral hypoglycemia are ordered and administered half hour before meals).
- 4.4 Medications ordered for a specific number of days – calculating the number of doses to be given: the number of doses administered for medications ordered for a defined interval, for example, "three days" or "72 hours" shall be calculated as follows: (# of days ordered) X (# of doses per day "according to regimen") equals the total number of the doses to be given. For example, if a medication is ordered "Q6H" for three days, 12 doses shall be given (3days X 4 doses/day = 12doses). Therefore, if the first dose is given at 18:00 on day 8/10, the last doses will be given at 12:00 on 11/10, not 18:00.
- 4.5 Medication that needs to be administered at nonstandard times: pharmacist and nurses shall assume the responsibility for identifying medications that need to be administered at specific times or under specific conditions. Refer to Appendix 5 for commonly used "Nonstandard Medications".

5. MATERIAL AND EQUIPMENT:

5.1 Forms and Records:

- 5.1.1 Standard Medication Administration Time Regimens Table For Intravenous Medications
- 5.1.2 Stagger Chart for Intravenous Medications
- 5.1.3 Standard Medication Administration Time Regimens Table for Oral Medications
- 5.1.4 Stagger Chart for Oral Medications
- 5.1.5 Nonstandard Medication Administration Time Regimens Table

6. RESPONSIBILITIES:

- 6.1 Nurses
- 6.2 Pharmacists
- 6.3 Physicians







7. APPENDICES:

- 7.1 Standard Medication Administration Time Regimens Table For Intravenous Medications
- 7.2 Stagger Chart for Intravenous Medications
- 7.3 Standard Medication Administration Time Regimens Table for Oral Medications
- 7.4 Stagger Chart for Oral Medications
- 7.5 Nonstandard Medication Administration Time Regimens Table

8. REFERENCES:

- 9.1 General Pharmaceutical Care Administration policies and procedures.
- 9.2 Medication Management Hospital Orientation Program (CBAHI)

9. APPROVALS:

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Appendix 1: Standard Medication Administration Time (SMAT) for Intravenous Medication

Order	Time Frame
Daily	06:00
Daily at 6PM	18:00
Daily at 6AM	06:00
Every 12 hours / Twice daily*	6:00, 18:00 for special administration time refer to "Appendix 5" Nonstandard Medication NSMAT
At bed time	22:00 for regular medication exceptions are hypnotic and sleeping aid pills which must be given when patient is ready for receiving them
Three times daily / Every 8 hours	6:00, 14:00, 22:00. For Exceptional Point Refer To for special administration time refer to "Appendix 5" Nonstandard Medication
Four times daily / Every 6 hours	6:00, 12:00, 18:00, 24:00 for special administration time refer to "Appendix 5" Nonstandard Medication
Every 4 hours	2:00, 6:00, 10:00, 14:00, 18:00, 22:00
Every 3 hours	3:00, 6:00, 9:00, 12:00, 15:00, 18:00, 21:00, 24:00
Every 2 hours	2:00, 4:00, 6:00, 8:00, 10:00, 12:00, 14:00, 16:00, 18:00, 20:00, 22:00, 24:00
Every 48 hour	06:00
Weekly	06:00
Every 2 weeks	06:00
Monthly	06:00
Once every 3 months	06:00
Once every 3 weeks	06:00
Twice per week	06:00 (e.g. Saturday , Tuesday)
	06:00
Every 24 hours/ once daily	06:00 For Exceptional Point Refer To for special administration time refer to "Appendix 5" Nonstandard Medication
Every hour	6:00, 7:00, 8:00, 9:00, 10:00, 11:00, 12:00, 13:00, 14:00, 15:00, 16:00, 17:00, 18:00, 19:00, 20:00, 21:00, 22:00, 23:00, 24:00
Every 72 hours	06:00
Every 3 days	06:00
3 times weekly	06:00 (e.g. Saturday , Monday ,Wednesday)
Every 36 hour	06:00 first dose ,18:00 second dose second day
a.c.	Before Meal
p.c.	After Meal

Appendix 2: Stagger Chart For Intravenous Medications

Time of 1 st dose	Time of 2 nd dose					3 rd Dose
	Q4h 2,6,10,14 ,18,22	Q6h (QID) 6,12,18,24	Q8h (TID) 6,14,22	Q12h BID 6,18	DAILY 06:00	
24:00	03:00	06:00	07:00	09:00	Administer 2 nd dose at 06:00 the following calendar day	Administer 3rd dose and subsequent doses at next standard medication administration time.
01:00	06:00	06:00	07:00	15:00		
02:00	06:00	07:00	08:00	16:00		
03:00	06:00	07:00	14:00	16:00		
04:00	07:00	11:00	14:00	17:00		
05:00	10:00	12:00	14:00	18:00		
06:00	10:00	12:00	14:00	18:00		
07:00	10:00	12:00	14:00	18:00		
08:00	11:00	13:00	15:00	19:00		
09:00	14:00	13:00	15:00	19:00		
10:00	14:00	18:00	15:00	20:00		
11:00	14:00	18:00	22:00	20:00		
12:00	15:00	18:00	22:00	21:00		
13:00	18:00	18:00	22:00	06:00		
14:00	18:00	19:00	22:00	06:00		
15:00	18:00	19:00	22:00	06:00		
16:00	19:00	24:00	23:00	06:00		
17:00	22:00	24:00	23:00	06:00		
18:00	22:00	24:00	23:00	06:00		
19:00	23:00	24:00	06:00	06:00		
20:00	23:00	01:00	06:00	07:00		
21:00	02:00	01:00	06:00	07:00		
22:00	02:00	06:00	06:00	08:00		
23:00	02:00	06:00	07:00	08:00		

Appendix 3: Standard Medication Administration Time (SMAT) for Oral Medication

Order	Time Frame
Daily	06:00
Daily at 6PM	18:00
Daily at 8AM	08:00
Every 12 hours	6:00, 18:00
At bed time	22:00 for regular medication. If for sleeping pill then must be given when patient is ready for sleeping.
Twice daily	6:00, 18:00
Three times daily	6:00, 14:00, 22:00 please consider timing when giving with food as per pharmacy instruction.
Four times daily	6:00, 12:00, 18:00, 24:00
Every 8 hours	6:00, 14:00, 22:00
Every 6 hours	6:00, 12:00, 18:00, 24:00
Every 4 hours	2:00, 6:00, 10:00, 14:00, 18:00, 22:00
Every 3 hours	2:00, 5:00, 8:00, 11:00, 14:00, 17:00, 20:00, 23:00
Every 2 hours	2:00, 4:00, 6:00, 8:00, 10:00, 12:00, 14:00, 16:00, 18:00, 20:00, 22:00, 24:00
Every 48 hour	06:00 or As Starting Time
Weekly	06:00 or As Starting Time
Every 2 weeks	06:00 or As Starting Time
Monthly	06:00 or As Starting Time
Once every 3 months	06:00 or As Starting Time
Once every 3 weeks	06:00 or As Starting Time
Twice per week	06:00 or As Starting Time (e.g. Saturday , Tuesday)
3 times weekly	06:00 or As Starting Time
Every 24 hours	06:00
Every hour	06:00, 07:00, 8:00, 9:00, 10:00, 11:00, 12:00, 13:00, 14:00, 15:00, 16:00, 17:00, 18:00, 19:00, 20:00, 21:00, 22:00, 24:00, 1:00, 2:00, 3:00, 4:00, 5:00
Every 72 hours	06:00 or As Starting Time
Every 3 days	06:00 or As Starting Time
3 times weekly	06:00 or As Starting Time (e.g. Saturday , Monday , Wednesday)
Once per day for one day only	06:00
Every 36 hour	06:00 first dose , 18:00 second dose second day
a.c.	Before Meal
p.c.	After Meal

Appendix 4: Stagger Chart For Oral Medications

Time of 1 st dose	Time of 2 nd dose					3 rd dose
	Q4h 2,6,10,14 ,18,22	Q6h (QID) 8,14,20,24	Q8h (TID) 8,16,24	Q12h BID 8,20	DAILY 08:00	
01:00	06:00	08:00	08:00	10:00	Administer 2 nd dose at 08:00 the following calendar day	Administer 3rd dose and subsequent doses at next standard medication administration time.
02:00	06:00	08:00	08:00	10:00		
03:00	06:00	09:00	08:00	13:00		
04:00	07:00	09:00	11:00	13:00		
05:00	10:00	10:00	11:00	14:00		
06:00	10:00	10:00	11:00	20:00		
07:00	10:00	14:00	16:00	20:00		
08:00	11:00	14:00	16:00	20:00		
09:00	14:00	14:00	16:00	20:00		
10:00	14:00	14:00	18:00	20:00		
11:00	14:00	18:00	18:00	20:00		
12:00	15:00	18:00	18:00	20:00		
13:00	18:00	18:00	19:00	23:00		
14:00	18:00	18:00	19:00	23:00		
15:00	18:00	20:00	24:00	23:00		
16:00	19:00	24:00	24:00	23:00		
17:00	22:00	24:00	24:00	23:00		
18:00	22:00	24:00	24:00	08:00		
19:00	23:00	24:00	02:00	08:00		
20:00	23:00	02:00	02:00	08:00		
21:00	02:00	02:00	03:00	08:00		
22:00	02:00	03:00	03:00	08:00		
23:00	02:00	04:00	08:00	08:00		
24:00	03:00	04:00	08:00	08:00		

Appendix 5: Non Standard Medication Administration Time (NSMAT)

Pharmacologic gp	Example	Optimal Administration
ACEI	Captopril Enalapril Lisinopril	In early morning On empty stomach (one hour before meals)
Antilipemic Agent	Simvastatin, Atorvastatin	Evening , at bed time
Beta-Blockers	Bisoprolol Metoprolol	Administer in the morning regardless to meals With meal or right after a meal.
Insulin short acting	Regular and aspart insulin	15 minutes before meals
Oral hypoglycemic	,acarbose ,nateglinide, repaglinide, glimepirid	Before or with meals
Regular Opioids for chronic or palliative pain control	Morphine fentanyl	As per schedule to avoid fluctuation in pain control
CCBs	Nifedipine LA Verapamil SR Diltiazem controlled release	Take at bedtime
Diuretic	Furosemide	Administer in the morning on an empty stomach
	Spironolactone	Should be taken with food
Vasodilators, Nitrates Mono- / Di-Isosorbide	Immediate release	Need nitrate-free interval ≥ 14 hours twice daily, consider administering at 8 AM and 1 PM For 3 times/day dosing, consider 8 AM, 1 PM , and 6 PM
	Sustained release	Twice-daily dosing at 8 AM and 2 PM.
Thyroid Medicines	Levothyroxine	Administers once a day in the morning on an empty stomach, at least one-half hour to one hour before eating any food
Anticoagulants	Warfarin	Administers at 6 pm at the same time each day
ANTACIDS	Aluminum and magnesium preparations	Before or after meals one to two hours
Bile Acid	Ursodeoxycholic Acid	With food

Glycosides	Digoxin	Take digoxin one hour before or two hours after eating food. at the same time(s) every day
PPIs	Omeprazole Pantoprazole Esomeprazole	Administer in the morning on an empty stomach, at least 30 minutes before food
H2 Blockers	Ranitidine Famotidine	Take 30-60 minutes prior to meal
NSAIDs	Diclofenac Ibuprofen Naproxen Aspirin	with food or after meal
Bisphosphonates	Ibandronate Alendronate	On an empty stomach. In the morning with a full glass of water, While patient sitting or standing up. Don't lie down for at least 30 minutes after taking the medication
Antidepressants	Tricyclic Amitriptyline Clomipramine Mirtazapine	At night due to their sedative effects.
	SSRIs Escitalopram Sertraline Fluoxetine SNRI Duloxetine Venlafaxine	In the morning due to better tolerance and efficacy.
Asthma & Bronchodilators	Montelukast	should be taken at bedtime
	Once-daily theophylline	should be taken in the evening
Antibacterials	Macrolide Azithromycin Quinolone Levofloxacin	One Hour before or two hours following a meal
Miscellaneous	<ul style="list-style-type: none"> • Laxative tablets • Skeletal muscle relaxants for once • Suppositories for once daily • Vaginal creams 	At bedtime
	<ul style="list-style-type: none"> • Doxycycline • Iron 	One hour before meal or 2 hours after (especially Ca ⁺² containing food, calcium supplements or multivitamins)