



# CLINICAL NURSING

**Purpose:** To provide the Health Science student with an opportunity to develop and demonstrate knowledge and skills in Clinical nursing.

**Description of Event:** This event will consist of two rounds of competition. Round One will be a written, multiple choice test of knowledge and understanding. The top scoring competitors will advance to Round Two for the performance of selected skill procedure(s) identified in a written scenario. The scenario will require the use of critical thinking skills. The performance will be timed and evaluated according to the event guidelines.

**Dress Code:** Competitors shall wear proper business attire or official HOSA uniform, or attire appropriate to the occupational area, during the orientation and written test. Competitors will wear attire appropriate to the occupational area during the skill procedure(s). School identification or name pins must be removed or covered during competition. Bonus points will be awarded for proper dress.

**Rules and Procedures**

1. Competitors in this event must be active members of HOSA in good standing in the category in which they are registered to compete (Secondary or Postsecondary/Collegiate). Competitors should compete in skill events at the highest level of their training.

2. The test shall be developed from the National HOSA test item bank and will consist of fifty (50) multiple choice items. Competitors will be given one hour to complete the test.

Round One: Written Test Plan

Basic Care .....	30%
Medication Management .....	10%
Fluids and Nutrition.....	10%
Medical-Surgical Nursing.....	20%
Geriatrics .....	10%
Pediatrics .....	10%
Home Care .....	10%

3. All competitors shall report to the site of the event orientation at the time designated. The Round One test will immediately follow the orientation. **No proxies will be allowed for the orientation.** No study materials are allowed in the room.

4. All official references are used in the development of the written test. The specific reference selected for each procedure is listed in the Facilities, Equipment and Materials section of these guidelines.

- Perry and Potter, *Clinical Nursing Skills and Techniques*, Elsevier Science/Mosby, Inc. Latest edition.
- Timby, Barbara, *Introductory Medical Surgical Nursing*, Lippincott. Latest edition.

5. The test score from Round One will be used to qualify the competitor for the Round Two skill procedures. The procedures approved for this event are:
  - Procedure I: Administer Medication Intramuscular
  - Procedure II: Administer Medication Subcutaneous
  - Procedure III: Measuring Oxygen Saturation
  - Procedure IV: Discontinuing Peripheral IV Access
  - Procedure V: Urethral Catheterization - Straight
  - Procedure VI: Applying a Nasal Cannula or Oxygen Mask
6. The selected procedure(s) for Round Two, in the form of a written scenario, will be presented to the competitor at the start of the skill to be performed. The timing for the skill will begin when the scenario is presented. The scenario will be the same for each competitor and will include a challenging component that will require the competitor to apply critical thinking skills.
7. The scenario is a secret topic. Professional ethics demand that competitors DO NOT discuss or reveal the secret topic until after the event has concluded. Competitors who violate this ethical standard will be disqualified.
8. In case of a tie, the highest test score will be used to determine the rank.
9. Competitors must complete all steps of the procedure listed in the guidelines even if the steps must be simulated/verbalized. Steps may NOT be simulated/verbalized when the equipment/materials are available.
10. The competitor must earn a score of 70% or higher on the combined skill procedure(s) of the event (excluding the test) in order to be recognized as an award winner at the NLC.
11. Competitors will be stopped at the end of the time allowed for a selected procedure(s).
12. Competitors must bring all items noted with \*\*\* in the materials section of these guidelines to the event.
13. Competitors must be familiar with and adhere to the **"General Rules and Regulations of the National HOSA Competitive Events Program."**

#### Required Personnel

1. One Event Manager per event
2. One Section Leader per section
3. One judge per procedure selected per section (with expertise in the specific skill area)
4. Proctors for testing
5. One-two Courtesy Corps per section
6. One-two patients as required by the scenario (per section) with identification band(s)
7. Timekeepers (if necessary)

**Facilities, Equipment and Materials (Per Section)**

- General**
1. Clinical and/or laboratory stations for selected procedures
  2. Holding rooms or areas for competitors
  3. Written scenario (one copy per competitor and judge)
  4. Calculators, note pads, pencils for judges
  5. Certificates for each competitor who completes Round One.
  6. Event evaluations and pencils (per competitor)
  7. Stopwatch
  8. Charts with physician's orders, progress notes, medication administration record
  9. Hospital beds or exam tables (with linens)
  10. Bedside or over bed table
  11. Alcohol-based handrub (for hand hygiene)
  - \*\*\* 12. Watch with second hand
  - \*\*\* 13. Pens and Pencils to all events

**Round One Written Test** (Reference: All resources)

1. One test copy per competitor
- \*\*\* 2. Scantron forms
3. Pencil(s)

**Round Two:**

**Proced I & II Administer Medication** (Reference: Perry and Potter)

1. Sterile safety syringe of correct size
2. Sterile safety syringes of incorrect sizes (to allow for choice)
3. Labeled medication to be injected
4. Labeled medications to serve as distractions (to allow for choice)
5. Medication Administration Record (MAR)
6. Patient chart with physician orders and nurses' notes
7. Needle/syringe sharps container
8. Disinfectant for skin/alcohol wipes
9. Injection pad or chase doll (manikin) for injection with identification band
- \*\*\* 10. Waste container
- \*\*\* 11. Barrier devices (gloves, gown, goggles, mask)

**Procedure III Measuring Oxygen Saturation** (Reference: Perry and Potter)

1. ID band
2. Nail polish remover and cotton balls
3. Oximeter with finger probe
3. Patient Chart with Physicians orders and nurses' notes

**Procedure IV Discontinuing Peripheral IV Access** (Reference: Perry and Potter)

1. Waste container and plastic bags for waste
- \*\*\* 2. Simulated IV dressing to be removed
- \*\*\* 3. Barrier devices (gloves, gown, goggles, mask)
4. Manikin arm
5. Patient Chart with Physicians orders and nurses' notes.
6. IV set-up with bottle/bag, tubing and catheter, taped to manikin arm
7. Antimicrobial scrub or swab
8. 2X2" gauze sponges
9. Tape

**Procedure V Urethral Catheterization - Straight** (Reference: Perry and Potter)

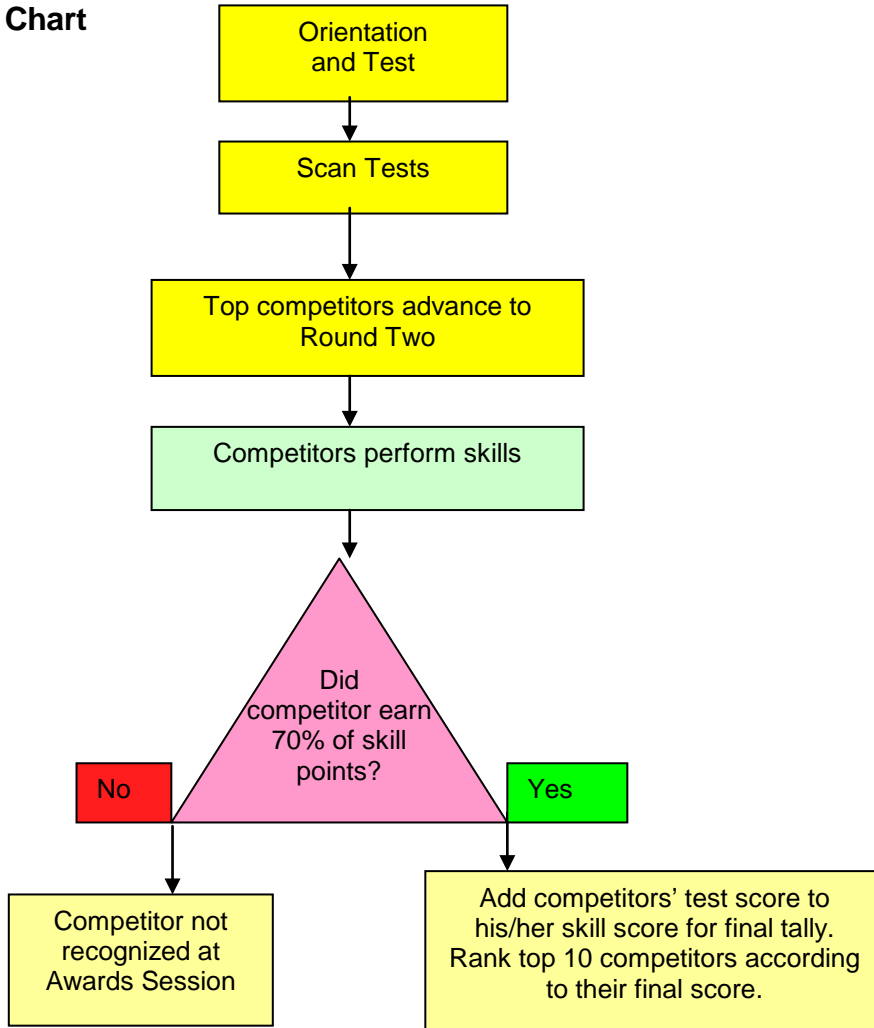
- \*\*\* 1. Catheterization tray (disposable)
2. Doll (\*manikin) for catheterization with identification band

- \*\*\* 3. Barrier devices (gloves, gown, goggles, mask)
- 4. Patient chart with Physician's orders and nurses' notes

**Procedure VI Applying a Nasal Cannula or Oxygen Mask** (Reference: Perry and Potter)

1. ID bracelet
2. Alcohol-based handrub
3. Oxygen set-up, wall unit or tank, with tubing, humidifier and flow meter
4. One or more of the following oxygen delivery devices (as designated in the physician's order with the others to be used as distracters.)
  - a. Nasal cannula
  - b. Nonrebreathing mask
  - c. Partial rebreathing mask
  - d. Venturi mask
  - e. Face tent
5. Manikin OR a person acting as the patient
6. Patient Chart with Physicians orders (indicating oxygen delivery device to be applied and flow rate) and nurses' notes.

**Event Flow Chart**



## CLINICAL NURSING

Competitor #: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_

<b>Procedure I:</b>	<b>Administer Medication – Intramuscular (Time: 11 minutes)</b>	<b>Possible</b>	<b>Allocated</b>
1.	Checked physician's order.	1	
2.	Verified medication administration record with physician's order.	2	
3.	Assembled equipment and supplies.	2	
4.	Used alcohol-based handrub for hand hygiene.	1	
5.	Checked administration record against the label on the medication container when removing from medication storage.	1	
6.	Calculated correct dosage of correct medication, if necessary.	1	
7.	Checked the label of the medication container for expiration date.	1	
8.	Checked the label of the medication container against the medication administration record before drawing up medication.	1	
9.	Filled the safety syringe with correct amount of medication:	1	
	a. Selected correct type of safety syringe and needle size.	1	
	b. Cleaned top of vial, if necessary.	1	
	c. Injected correct amount of air into vial.	1	
	d. Withdrew correct dosage.	1	
	e. Used sterile technique when filling syringe.	1	
10.	Checked the label of the medication container with the medication administration record before returning vial to storage.	1	
11.	Changed needle if indicated.	1	
12.	Greeted the patient and introduced self.	1	
13.	Identified patient by checking ID bracelet and asking patient name.	1	
14.	Explained procedure to patient.	1	
15.	Closed door to patient's room or enclosed unit with curtains and raised bed to appropriate height	2	
16.	Used alcohol-based handrub for hand hygiene and applied disposable gloves.	1	
17.	Assisted patient to comfortable position according to site selected	2	

Items Evaluated	Possible	Allocated
18. Selected and inspected injection site using anatomical landmarks.	1	
19. Cleansed injection site with alcohol in a circular motion, beginning in the center and wiping outward.	1	
20. Held swab between third and fourth fingers of nondominant hand.	1	
21. Administer Medication Intramuscular a. Pulled protective cap of needle off in a straight direction.	1	
b. Pinched or stretched skin according to selected site with nondominant hand.	1	
c. Held syringe between thumb and forefinger of dominant hand at a 90 degree angle to injection site.	1	
d. Injected quickly at a 90 degree angle into muscle.	1	
e. Released skin and grasped lower end of syringe barrel with nondominant hand.	1	
f. Aspirated medication by pulling back on plunger.	1	
g. Injected medication at a slow and steady rate.	1	
h. Gently applied alcohol swab or dry gauze over injection site and withdrew needle	1	
i. Applied gentle pressure over injection site, without massaging.	1	
j. Disposed of used uncapped needle and attached syringe.	2	
k. Repositioned patient, provided for comfort and safety and lowered bed if appropriate.	2	
l. Removed gloves and used alcohol-based handrub for hand hygiene.	1	
22. Recorded medication on MAR.	2	
23. Recorded assessment in nurses notes as appropriate.	2	
24. Practiced standard precautions throughout procedure.	2	
<b>TOTAL POINTS -- PROCEDURE II</b>	<b>48</b>	

*\*\*If a student jeopardizes the patient's or his/her own safety or fails to perform a critical technique and does not take immediate action to correct the error, the total points for the procedure or specific subpart(s) of the procedure will be deducted.*

## CLINICAL NURSING

Competitor #: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_

<b>Procedure II</b>	<b>Administer Medication – Subcutaneous (Time: 11 minutes)</b>	<b>Possible</b>	<b>Allocated</b>
1.	Checked physician's order.	1	
2.	Verified medication administration record with physician's order.	2	
3.	Assembled equipment and supplies.	2	
4.	Used alcohol-based handrub for hand hygiene.	1	
5.	Checked administration record against the label on the medication container when removing from medication storage.	1	
6.	Calculated correct dosage of correct medication, if necessary.	1	
7.	Checked the label of the medication container for expiration date.	1	
8.	Checked the label of the medication container against the medication administration record before drawing up medication.	1	
9.	Filled the safety syringe with correct amount of medication.	1	
	a. Selected correct type of safety syringe and needle size.	1	
	b. Cleaned top of vial, if necessary.	1	
	c. Injected correct amount of air into vial.	1	
	d. Withdrew correct dosage.	1	
	e. Used sterile technique when filling syringe.	1	
10.	Checked the label of the medication container with the medication administration record before returning vial to storage.	1	
11.	Changed needle if indicated.	1	
12.	Greeted the patient and introduced self.	1	
13.	Identified patient by checking ID bracelet and asking patient name.	1	
14.	Explained procedure to patient.	1	
15.	Closed door to patient's room or enclosed unit with curtains and raised bed to appropriate height	2	
16.	Used alcohol-based handrub for hand hygiene and applied disposable gloves.	1	
17.	Assisted patient to comfortable position according to site selected	2	
18.	Selected and inspected injection site using anatomical landmarks.	1	

Items Evaluated	Possible	Allocated
19. Cleansed injection site with alcohol in a circular motion, beginning in the center and wiping outward.	1	
20. Held swab between third and fourth fingers of nondominant hand.	1	
21. Administered Subcutaneous Medication a. Pulled protective cap from needle by pulling straight off.	1	
b. Held syringe between thumb and forefinger of dominant hand at 45-90 degree angle.	1	
c. Pinched or stretched skin according to selected site with nondominant hand.	1	
d. Injected needle quickly at a 45-90 degree angle.	1	
e. Released skin and grasped lower barrel with nondominant hand.	1	
f. Injected medication at a slow and steady rate.	1	
g. Gently applied alcohol swab or dry gauze over injection site and withdrew needle quickly.	1	
h. Applied gentle pressure over injection site without massaging	1	
i. Discarded uncapped needle and attached syringe.	1	
j. Repositioned patient, provided for comfort and patient safety. Lowered bed if appropriate.	2	
k. Removed gloves and used alcohol-based handrub for hand hygiene.	2	
22. Recorded medication on MAR.	2	
23. Recorded assessment on nursing notes as appropriate.	2	
24. Practiced standard precautions throughout procedure	2	
<b>TOTAL POINTS – PROCEDURE II</b>	<b>47</b>	

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## CLINICAL NURSING

Competitor #: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_

Procedure III	Measuring Oxygen Saturation (Time: 5 mins)	Possible	Allocated
1.	Checked physician's order.	1	
2.	Measured capillary refill in finger and verbalized findings to judge.	2	
3.	Assembled equipment and supplies.	2	
4.	Greeted patient and introduced self	2	
5.	Identified patient by checking ID bracelet	1	
6.	Explained procedure to patient and the purpose.	2	
7.	Used alcohol-based handrub for hand hygiene.	1	
8.	Positioned patient comfortably with lower arm supported and instructed patient to breathe normally.	2	
9.	Verbalized absence of polish or artificial nail, OR, removed fingernail polish from digit with polish remover.	1	
10.	Attached sensor to monitoring site while explaining to patient that the clip-on probe will feel like a clothes pin on the finger but will not hurt.	2	
11.	Turned on oximeter by activating power.	1	
12.	Observed pulse waveform/intensity display and audible beep, correlating oximeter pulse rate with patient's radial pulse.	2	
13.	Informed patient that oximeter alarm will sound if sensor falls off or if client moves sensor.	1	
14.	Read SpO <sub>2</sub> on digital display when oximeter readout reached constant value and pulse display reached full strength during each cardiac cycle.	2	
15.	Discussed findings with patient and recorded findings in nurse's notes.	2	
16.	Removed probe and turned oximeter power off.	2	
17.	Stored sensor in appropriate location.	1	
18.	Assisted patient to a comfortable position.	1	
19.	Used alcohol-based handrub for hand hygiene.	1	
<b>TOTAL POINTS -- PROCEDURE III</b>		<b>29</b>	

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## CLINICAL NURSING

Competitor #: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_

Procedure IV	Discontinuing Peripheral IV Access (Time: 6 minutes)	Possible	Allocated
1.	Checked physician's order	1	
2.	Assembled equipment and supplies	2	
3.	Used alcohol-based handrub for hand hygiene and applied gloves.	1	
4.	Introduced self and greeted patient	1	
5.	Identified patient by checking ID bracelet and asking patient name	1	
6.	Explained procedure to patient, describing sensation to be felt when catheter is removed.	3	
7.	Turned IV tubing roller clamp to "off" position.	1	
8.	Removed IV site dressing, stabilizing IV device.	2	
9.	Removed tape securing cannula.	1	
10.	Holding cannula, cleaned site with antimicrobial scrub.	3	
11.	Placed clean sterile gauze over venipuncture site, applied light pressure, and removed cannula by pulling straight away from insertion site in a slow steady motion, keeping the cannula parallel to the skin during withdrawal.	4	
12.	Inspected catheter for intactness after removal.	1	
13.	Kept gauze in place. (Verbalized continuous pressure for 2 – 3 minutes.)	1	
14.	Lifted gauze and assessed bleeding. <i>* Judge states "No bleeding or hematoma formation."</i>	1	
15.	Applied clean folded gauze dressing over insertion site, and secured with tape.	3	
16.	Discarded used dressing and supplies in waste bag.	1	
17.	Removed gloves and performed hand hygiene.	2	
18.	Documented assessment of procedure and patient's tolerance to procedure in nurses notes	3	
<b>TOTAL POINTS -- PROCEDURE IV</b>		<b>32</b>	

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## CLINICAL NURSING

Competitor #: \_\_\_\_\_ Judge's Signature: \_\_\_\_\_

Procedure V	Urinary Catheterization - Straight (Time: 15 minutes)	Possible	Allocated
1.	Checked physician's order.	1	
2.	Assembled equipment and supplies.	2	
3.	Used alcohol-based handrub for hand hygiene	1	
4.	Introduced self and greeted patient.	1	
5.	Identified patient by checking ID bracelet and asking patient name.	1	
6.	Assessed status of patient to determine equipment needs, level of cooperation and mobility.	2	
7.	Explained procedure to patient and provided privacy.	3	
8.	Positioned patient (raised bed to working height): Male - supine position with thighs slightly abducted. Female - supine position with knees flexed.	1	
9.	Draped patient appropriately.	2	
10.	Provided good light.	1	
11.	Arranged supplies and equipment for perineal care on bed or beside table.	1	
12.	Applied non-sterile gloves.	1	
13.	Washed, rinsed, dried perineal area.	2	
14.	Removed gloves and perineal care equipment, used alcohol-based handrub for hand hygiene	1	
15.	Set up sterile area: a. Removed plastic wrapping and placed within reach to use as waterproof surface. b. Placed sterile package on bed between patient legs/bedside table. c. Opened sterile kit without contamination. d. Added additional supplies if needed. e. Maintained sterile field during remainder of the procedure.	1 1 1 1 1	
16.	Put on sterile gloves.	1	
17.	Organized supplies on sterile field.	2	
18.	Placed sterile drape appropriately.	2	
19.	Opened lubricant container and applied antiseptic solution to cotton balls, or opened cleansing solution.	2	

Items Evaluated		Possible	Allocated
20.	Cleansed perineal area appropriately.	2	
	<b>Male</b>		
a.	Grasped penis at shaft below glans with one hand, continued to hold throughout insertion of catheter.	1	
b.	With other hand, used forceps to cleanse meatus in circular motion.	1	
c.	Repeated cleansing three times.	1	
	<b>Female</b>		
a.	Spread labia minora with thumb and index finger of nondominant hand to expose meatus; continued to hold throughout procedure.	1	
b.	Cleansed area with dominant hand from clitoris toward anus on far side of meatus in one downward motion, then repeated on the near side.	1	
c.	Cleansed center area from the clitoris toward the anus down in one downward motion.	1	
21.	Lubricated the tip of the catheter.	1	
22.	Instructed patient to bear down gently.	1	
23.	Held catheter near tip with dominant hand.	1	
24.	Inserted catheter gently – 2-3 inches in female and 7-9 inches in male, while holding distal end opening over basin until bladder empties.	2	
25.	With dominant hand, withdrew catheter slowly and smoothly.	1	
26.	Dried perineal area.	1	
27.	Removed drape.	1	
28.	Repositioned patient, lowered bed.	1	
29.	Disposed of equipment, linen and used materials.	1	
30.	Removed gloves and used alcohol-based handrub for hand hygiene.	1	
31.	Documented procedure and patient's tolerance to procedure in nurses notes.	3	
<b>TOTAL POINTS – PROCEDURE V</b>			
	<b>Male</b>	<b>51</b>	
	<b>Female</b>	<b>51</b>	

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## CLINICAL NURSING

Competitor #: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_

<b>Procedure VI Applying a Nasal Cannula or Oxygen Mask (Time: 5 minutes)</b>	<b>Possible</b>	<b>Allocated</b>
1. Checked physician's order.	1	
2. Assembled equipment and supplies.	1	
3. Introduced self and greeted patient.	1	
4. Identified patient by checking ID bracelet and asking patient name.	1	
5. Explained procedure to patient.	2	
6. Used alcohol-based handrub for hand hygiene.	1	
7. Attached correct oxygen delivery device (cannula or mask) to oxygen tubing, and attached to humidified oxygen source.	3	
8. Adjusted prescribed flow rate.	1	
9. Placed cannula or mask on the patient and adjusted elastic headband/tubing so that a snug and comfortable fit is achieved.	3	
10. Maintained sufficient slack on oxygen tubing and secured to patient's clothing.	1	
11. Observed for proper function of oxygen delivery device: A. <i>Nasal cannula</i> : Cannula is positioned properly in the nares. B. <i>Nonbreathing mask</i> : Mask over patient's mouth and nose to form a tight seal, valves on the mask closed so exhaled air does not enter reservoir bag. C. <i>Partial rebreathing mask</i> : Mask over patient's mouth and nose to form a tight seal, bag remains partially inflated. D. <i>Venturi mask</i> : Mask over patient's mouth and nose to form a tight seal, percentage of FiO <sub>2</sub> correlates with flow rate. E. <i>Face tent</i> : Tent under patient's chin and over the mouth and nose, fits loosely, mist present.	3	
12. Assessed flowmeter and oxygen source for proper setup and prescribed flow rate.	1	
13. Used alcohol-based handrub for hand hygiene	1	
14. Documented procedure and patient's tolerance of procedure in nurse's notes.	3	
<b>TOTAL POINTS -- PROCEDURE VI</b>	<b>23</b>	

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## Medication Administration Record

Patient: \_\_\_\_\_ Physician: \_\_\_\_\_ Year : \_\_\_\_\_

Allergies: \_\_\_\_\_ Admission Date: \_\_\_\_\_ ID # \_\_\_\_\_

Standing Orders	Times	Date						
	↓	/	/	/	/	/	/	/
<b>PRN Medications – Write the date, time given and initials inside the box for each dosage given.</b>								

Name \_\_\_\_\_ Signature \_\_\_\_\_ Initials: \_\_\_\_\_  
 Name \_\_\_\_\_ Signature \_\_\_\_\_ Initials: \_\_\_\_\_  
 Name \_\_\_\_\_ Signature \_\_\_\_\_ Initials: \_\_\_\_\_  
 Name \_\_\_\_\_ Signature \_\_\_\_\_ Initials: \_\_\_\_\_





