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SECTION ONE
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD  
Department of Nursing  

NURSING 252 ANCE  
Health Care of Adults Through Senescence, Part 1  
Fall Quarter/2006

FACULTY:  
Brenda Pulskamp R.N Edd  
Office/Phone NB 112 654-3498  
WEB bpulskamp~csub.edu

DAY(s)/TIME/LOCATION:  Tuesday and Wednesday 7 to 1:15 (1st 5 weeks)  
Tuesday 7 to 7:30 (2nd 5 weeks) OR  
Wednesday 7 to 7:30 (2nd 5 weeks)

CREDITS: 5 Quarter Units; 15 50-minute clinical hours per week

COURSE DESCRIPTION:

The CSUB Systems Model of Nursing, as the conceptual basis of the nursing process and as a means of maintaining physiological, psychological, behavioral and socio-cultural integrity is applied. Biological and psychosocial theories are utilized in the development of the nursing process. Emphasis is placed on nursing interventions directed towards promotion of system stability/maximum functional status and evaluation of the results of interventions. Clinical experiences for implementing the nursing process in the care of young, middle-aged, and older adults with common illness conditions are provided. Acute geriatric health-care health settings are utilized. Critical analysis of patient data and responses to nursing intervention are emphasized.

PREREQUISITES:  N241, N242, N243, N244, N245, BIO355

COREQUISITES:  N251, BIO370

COURSE OBJECTIVES:

Upon successful completion of this course, the student will:

1. Utilize knowledge of development, psychosocial, physiological, socio-cultural and pathophysiological factors that influence adults in assessing health care needs.  
   (Evaluation #1)

2. Demonstrate beginning proficiency in assessment and identification of nursing problems, and in developing, implementing, and evaluating nursing care in the acute area.  
   (Evaluation #3, 10)

3. Develop/revise written nursing care plans for individual clients.  (Evaluation #3, 9)
4. Utilize nursing publications/research findings in planning and evaluating nursing.  
   (Evaluation #8)

5. Demonstrate beginning proficiency in verbal/written communication with others through 
   skillfully reporting and recording data. (Evaluation #5, 6, 9)

6. Exhibit professional behavior in interactions with clients, health team members, peers, 
   and the public. (Evaluation #4)

7. Demonstrate beginning proficiency in geriatric assessment, identification of geriatric 
   specific problems, and development and utilization of geriatric specific care plans. 
   (Evaluation #1, 2, 3, 6, 7, 9, 10, 11)

8. Develop nursing process which demonstrates application of CSUB Department of 
   Nursing conceptual model.

9. Demonstrate motivation for self-learning through the selection of clients appropriate to 
   their own learning needs. (Evaluation #10).

**Required Materials:**

1. CSUB Student Uniform. See uniform policy in Student Handbook.
2. Current health care provider CPR
3. Health Clearance
4. Malpractice Insurance

**TEXTBOOKS REQUIRED:**

**New texts:**
*California State University nursing* 244-252, clinical manual

MO: Mosby.


**All Texts from previous nursing classes:**

**Highly RECOMMENDED TEXTBOOKS:**


medical-surgical nursing: Assessment and management of clinical problems* (5th 
ed.). St. Louis: Mosby.


*An NCLEX review text*
EVALUATION OF STUDENTS:

1. Grading Scale: The policy of the Department of Nursing is that the lowest passing score for the course is 73%. There is no rounding up of the final composite course grade to reach 73%.

   - A = 100-93
   - A- = 92-90
   - B+ = 89-87
   - B = 86-83
   - B- = 82-80
   - C+ = 79-77
   - C = 76-73
   - C- = 72-70
   - D+ = 69-67
   - D = 66-64
   - D- = 63-60
   - F = 59 and below

2. Letter Grade will be based on the following:
   
   A. Hospital clinical performance/Geriatric clinical performance 20%
   
   B. Passing of medication math test with 100%/ and administration of medications P/F
   
   C. Short Care Plan (1) 20%
   
   D. Modified Care Plans 10%
   
   E. Long Care Plan/with paper/article 25%
   
   F. Geriatric rotation care plans (1 long care plan, 1 modified) 20%
   
   G. Facilitative Communication 5%

   **NOTE:** Late assignments will have 5 points per 24-hour day including weekends (if not on time by Thursday or Friday noon, the care plan is considered late through Monday noon) deducted unless specific arrangements for extenuating circumstances are made with the instructor at least 48 hours prior to the time due. All extensions must be in writing.

3. Services for Students with Disabilities:

   To request academic accommodations due to a disability, please contact the Office of Services for Students with Disabilities (SSD) as soon as possible. Their office is located in SA 140, and they may be reached at (661) 654-3360 (voice) or (661) 654-6288 (TDD).

   If you have an accommodations letter from the SSD Office documenting that you have a disability, please present the letter to me during my office hours as soon as possible so we can discuss the specific accommodations that you might need in this class.

4. All students are expected to read and adhere to the Academic Honesty Policy detailed in the 2004-05 CSUB Catalog and the Ethical Standards found in the Undergraduate Nursing Student Policy Handbook.

   All work must be original work written for this course by the individual submitting it. See definition of plagiarism according to University General Catalogue and Department of Nursing Student Handbook. The penalty for plagiarism is an “F” in the course for the first offense and termination from the University for the Second Offense. If there are any questions, the instructor should be consulted.
Teaching Methods:

- Formulation of Nursing Care Plans
- Discussion
- Laboratory Practice with demonstration/return demonstration
- Clinical Practicum, supervised care of patients.
- Audio-Visual

Attendance: Orientation Sept 12 and 13, 2006 is Mandatory for all students and will result in failure of the course if not present.

1. Students are required to attend all clinical sessions. Excused absence consists of time missed due to illness or extenuating circumstances (such as sudden illness or death of an immediate family member). The student is responsible for notifying the instructor about the illness or extenuating circumstances prior to the start of the assigned clinical day. Check with your clinical faculty as to how this contact is to be made. The student is responsible for making arrangements for make up.

   **Illness Policy:** Students with chronic or contagious health conditions limiting their ability to perform all aspects of nursing care must submit a doctor's certificate stating that it is safe for the student to perform nursing care at 100% capacity before returning to the clinical area. All absences more than 12 hours, even if excused, must be made up and at the discretion and availability of the nursing faculty.

2. Late Policy: Students failing to arrive to the clinical setting at the appointed time will be considered late after 15 minutes. The student will be sent home and this will constitute an unexcused absence. It will be the responsibility of the student to make up the clinical time before the end of the quarter. Be aware that arranging this make up time may be difficult. Habitual lateness (even 5-10 minutes) may result in a grade reduction reflecting poor professional behavior.

3. Unexcused absence is any absence not due to illness or extenuating circumstances, and without prior notification of the instructor. All unexcused absences must be made up. An unexcused absence which is not made up will result in failure of the course.

4. Provision for make-up of clinical time will be offered at the discretion and availability of faculty, with priority given to those with excused absences.

**Clinical Warning:** Students are advised to familiarize themselves with the provision of Clinical Warning Procedure (Nursing Student Policy Handbook). Clinical Warnings may result in a reduction in the student’s final grade.
Clinical Assignments: (See Nursing Policy Handbook)
A nursing student must follow the Nurse Practice Act and the policies of the agency in which he/she is assigned for clinical experience. Students are expected to obtain their clinical assignments for the week on the day prior to the clinical day, at a time designated by the instructor. Required care plan preparation must be completed before patient care. If not adequately prepared, the student will be sent home from the clinical area and given an unexcused absence. Nursing care may only be performed on assigned clinical days, with faculty supervision.

Lab/Clinical Attire:
Students are responsible for following the uniform policy in the Student Policy Handbook. Uniforms are to be worn during assigned clinical time in the hospital. When getting assignments at the hospital on the day prior to care: lab coats over appropriate street clothes (no jeans, sweats or shorts) with name tags are necessary.

Conferences:
Individual and group conferences may be scheduled at the initiative of the student or the instructor.

Evaluation Methods/Assignments:

a. Clinical Evaluation Tool: In order to receive a passing letter grade for the course, the student must receive a “pass” grade on each item of the clinical evaluation tool. If a student receives a “fail” grade on any item, he/she has failed the course regardless of other grades earned. Students will be evaluated in the clinical area on preparedness and performance of skills, patient care, communication skills, written requirements, and medication preparedness. See evaluation tool. A clinical warning will be issued if there is a pattern of unsatisfactory behavior/grades in the skills lab or hospital setting. Clinical warnings may result in a reduction in your final grade.

b. Medication Calculations:
   1. Students must pass the medication calculation test with a grade of 100% before administering medications in the clinical area. Medication testing is limited to 3 attempts. Failure to successfully pass the medication examination on the third attempt will result in failure of the course.

   2. Students must successfully administer medications to patients by the end of the 6th week of clinical to receive a passing grade unless there are other arrangements with faculty. This includes parenteral, non-parenteral, and IV medications.

c. Modified Nursing Care Plans: Must be started for all hospitalized patients prior to clinical care. Required sections (first page, pathophysiology, and professor specified additions) must be completed before giving care. If not completed, student will be sent home from clinical area and given an unexcused absence.

d. Short Care Plan: One short care plan is due. See requirements and grading criteria in your N252 Clinical Manual.
e. **Long Nursing Care Plan:** One long care plan is due no later than 7th week of the quarter on an acute client. See requirements above for hospital preparation.

f. A 2 page paper addressing the developmental, social, economic status of the patient for the long care plan may be submitted with the long care plan. A nursing article must be submitted with the care plan with a two paragraph summary of an article.

g. **Geriatric Care Plan:** One long care plan and one modified care plan, utilizing geriatric-specific assessment forms is required. Assessment tools of Mini Mental Status and Minimum Data sets must be included See format in N252 Clinical Manual

h. **Facilitative Communication:** A grade of 88% or better is required on this assignment. See N252 Clinical Manual for requirements. Complete within the first six weeks of patient care.
N252 ANCE Orientation Schedule
2006

Sept 12, 2006

CSUB Department of Nursing
N252 ANCE

Schedule for Sept 12, 2006

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 to 8:00</td>
<td>Math Review /Calculations Room #115 Boschini</td>
</tr>
<tr>
<td>7 to 8</td>
<td>Room NB115 Math review</td>
</tr>
<tr>
<td>8 to 10:00</td>
<td>Room NB 115 Rotations as listed below</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Break</td>
</tr>
<tr>
<td>10:30 to 11:30</td>
<td>Syllabus/Care plans Room DDH- H101</td>
</tr>
<tr>
<td>11:30 to</td>
<td>I.V. Therapies/IV Meds/Lab application/Video Room DDH-H101</td>
</tr>
<tr>
<td>12:45</td>
<td>Solutions/TPN/Blood/Lipids</td>
</tr>
<tr>
<td>1:00 to 2:00</td>
<td>Medication test Rooms to be announced DDH-H101</td>
</tr>
</tbody>
</table>

Stations from 8:00 to 10:00 Room NB 115

<table>
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<tr>
<th>Section</th>
<th>8:00</th>
<th>8:30</th>
<th>9:00</th>
<th>10:00-10:15</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>Practice on models/I.V insertion in lab Pulskamp Staff</td>
<td>Practice on models/I.V insertion in lab Pulskamp, Staff</td>
<td>IV insertion Pulskamp, Staff</td>
<td>Break</td>
</tr>
<tr>
<td>2</td>
<td>Practice on models/I.V insertion in lab Pulskamp, Staff</td>
<td>Practice on models/I.V insertion in lab Pulskamp, Staff</td>
<td>IV insertion Pulskamp, Staff</td>
<td>Break</td>
</tr>
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Sept 13, 2006
RNEC (Locations to be announced)

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<tr>
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<th>Activity</th>
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<tbody>
<tr>
<td>0700-0730</td>
<td>Video: Geri Assessment RNEC 105 Sections 1, 2</td>
</tr>
<tr>
<td>0730-0800</td>
<td>Video: Blood Administration RNEC 116-B Sections 1, 2</td>
</tr>
<tr>
<td>0900-0930</td>
<td>Video: Chest Tubes RNEC 115 Sections 1, 2</td>
</tr>
</tbody>
</table>

0930-1300: To hospitals for Orientation
Student Information Sheet

Name: ________________________________________________________________

Name you prefer to be called ______________________________________________

Phone # _______________________ Message Phone # ___________________

Address: __________________________________________________________________

_________________________________________________________________________

How many units are you enrolled in this quarter? ______________

Classes other than Nursing: _______________________________________________

Are you employed? _________ How many hours a week do you work? _________

What languages do you speak besides English? ________________________________

How do you feel about the nursing program up to this point? ____________________

_________________________________________________________________________

_________________________________________________________________________

What do you feel are your strengths? _______________________________________

_________________________________________________________________________

_________________________________________________________________________

What do you feel are your weaknesses? _____________________________________

_________________________________________________________________________

_________________________________________________________________________

What can I do to facilitate your learning? ____________________________________

_________________________________________________________________________

_________________________________________________________________________

What are your expectations for this clinical rotation? __________________________
ORIENTATION HELPS

Find answers to the following questions:

1. At what time and where do I report at the beginning of the shift?

2. How do I obtain a report on my individual patients?

3. Who is the head nurse? Charge nurse? Team leaders?

4. At what time does the bedside nurse give report on her patients to the team leader? What type of information should it include?

5. What is the routine for break time? How do I know when to go on my breaks?

6. At what times should I chart? By what time should my charting be completed?

7. What time do meal trays arrive on this unit?

8. How are additional items ordered from the kitchen?

9. What is done with “Hold Trays’’?

10. When are routine vital signs taken on this unit?

11. Do I answer only my own patient’s lights?

12. Where are reference materials kept on this unit? (Procedure Manual, PDR, Policy Manual)

13. What is the policy of this unit for making and receiving private phone calls?

14. Where are the care plans located, and what is the responsibility of the student nurse?

15. What is a standard care plan? Where is it kept?

16. How are the narcotics counted on this unit?

17. Who gives routine medicine?

18. How are STAT and PRN medications handled?

19. What is the policy for IV’s?
   a. Who starts them?
   b. What about IV pushes?
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD
Department of Nursing

“The Scavenger Hunt”

Locate the following items on your unit:

- Dressings
  - ABD
  - 4x4’s, 2x2’s
  - Tape
- Incentive Spirometer
- Portable & Bed IV Poles
- IV Solutions & Supplies
- Wheelchairs & Gurneys
- Kardex (Nursing Rand)
- Thermometers
- Drinking Glasses
- Oxygen Equipment
- Syringes, Needles
- Band-Aids
- Enema Kits
- Ice Bags
- Chux, Underpads
- Lab Slips
- Chart Forms
- Crash Cart
  - Ambu Bag
  - Defibrillator
  - # Used for Code
- Medication Cart
- Narcotics
- Stock Medications
- Bags - Patient & Trash
- Hopper
- Syringe Disposal Containers
- Disposable Gloves
- Sterile Gloves
- Scalpels
- Suture Material

- Phone #’s
  - Your Floor
  - Kitchen
  - Pharmacy
  - Lab
  - Dirty Utility Room
  - Linen Chart
  - Linen Chute/Bags
  - Trash Room
  - Clean Utility Room
  - Tub, Sitz Bath Room
  - Nurse Report Room
  - Glass Disposal Container
  - Kitchen
  - Examining Room
  - Nurse’s Lounge
  - Patient Charge System
  - Fire Alarm/Extinguisher
  - Ice Machine
  - Bed Pans/Urinals
  - Admission Pack
  - Glucose Monitor
  - Client Assignment Sheet
  - Addressograph
  - Alcohol Wipes
  - Urine Measuring Containers
  - Catheter Insertion Trays
  - Bed Scale
  - Isolation Supplies (Cart)
  - Reference Books
  - Policy & Procedure Books
  - Disaster Manual
  - Head Nurse’s Name

Locate the Laboratory, Pharmacy, X-ray Department, Respiratory Therapy Department, OR, ER and Chapel.
N252-3/05 kg/bp
Policy for students practicing procedures on each other

In the course of the nursing program, when learning new skills, it is often useful for students to take the role of the patient. This enhances the learning experience in several ways:

1) for the practicing students in that a live "patient gives them a more realistic experience.

2) for the student "patient" since it gives her/him an idea of what the procedure is like from the patient's perspective and should help her/him be a more sensitive care-giver.

In asking the individual student to take on the patient role, the student's right to privacy and right to refuse a given procedure should be protected. Faculty will make every effort to protect student's privacy by making sure other students follow the same guidelines they would use in the hospital to avoid exposure of the patient. In the case of some procedures, such as baths, students will be given the opportunity to bring bathing suits or other appropriate clothing which provides more exposure, but not too much.

If a student chooses not to be a "patient" for a particular skill, such as an injection or bath, the instructor will arrange a simulated experience for that student's practice, unless another student is willing to take his/her turn as patient. Students will demonstrate IV insertion in N252 skills lab.

Certain procedures may be deemed by the faculty to be unsuitable or potentially dangerous for students to practice on each other. Each faculty team or the total faculty will make this decision when the occasion arises.

Students may not practice any invasive procedure on another student unless there is faculty supervision and it is in the skills laboratory. At no time is an invasive procedure to be performed on any person or client outside of the nursing classes or clinical area unless supervised by a faculty member.

Please sign and return one copy to your clinical faculty.

I have read and understand the above policy.

Name: ______________________________

Date: _______________________________
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Please sign and return one copy to your clinical faculty.

I have read and understand the above policy.

Name: ______________________________

Date: _______________________________
In order to complete the requirements of Nursing 252, each student will be required to complete the following skills:

<table>
<thead>
<tr>
<th>Skill</th>
<th>Date Completed</th>
<th>Your Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Start</td>
<td></td>
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<tr>
<td>Insulin Injection</td>
<td></td>
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<tr>
<td>Heparin Injection</td>
<td></td>
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<tr>
<td>Suctioning (nasotracheal, endotracheal tube, tracheal)</td>
<td></td>
<td></td>
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<tr>
<td>Catheterization (Foley or straight)</td>
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<td></td>
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<tr>
<td>NG Insertion (suction or feeding)</td>
<td></td>
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<tr>
<td>Stoma Care</td>
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<tr>
<td>NG/G-Tube Feeding</td>
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<tr>
<td>IV Therapy Maintenance</td>
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<tr>
<td>Continuous IV Medication Calculation</td>
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<tr>
<td>IV Push</td>
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<tr>
<td>IVPB</td>
<td></td>
<td></td>
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<tr>
<td>K protocol, (heparin protocol)</td>
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<tr>
<td>Central Line Dressing</td>
<td></td>
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<tr>
<td>O₂ Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complicated dressings</td>
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</tbody>
</table>

Although your instructor can and will assist you, it is your responsibility to find opportunities to complete these skills. Assign yourself to patients with the required procedures and/or ask your instructor and/or the team leaders to help you find patients who need these procedures.  Don't wait until the final week...
SYSTEMS ASSESSMENT

GENERAL APPEARANCE: Physical appearance: age, sex, level of consciousness, facial features; body structure: stature, weight, posture, position; mobility: gait, ROM; behavior: facial expression, mood and effect, speech, personal hygiene.

NEUROLOGICAL: Level of consciousness; orientation to person, place time; confused; lethargic; comatose; hallucinations; pupils (size, equality, reaction to light); hand grips; movement of extremities (which ones are moved; quality of movements - purposeful, non-purposeful, seizures); speech; hearing deficiencies; pain (type, location, relief).

CARDIOVASCULAR: Quality, rate, and regularity of pulse; presence of carotid, radial, femoral, posterior tibial, dorsalis pedis pulses; unstable vital signs; calf pain; edema (dependent, pitting); neck vein distention; chest discomfort; capillary refill.

PULMONARY: Regularity; depth; type of breath sounds by auscultation (crackles, rhonchi, wheezes); symmetry of chest expansion; use of accessory muscles; audible noises or pain accompanying respiration; SOB; production cough/suctioning frequency; consistency, color, odor, and amount of sputum; type of trach; treatment and response - oxygen (rate of flow and how delivered), IPPB, deep breathing, coughing; central or peripheral cyanosis (color of mucosa and nailbeds).

GASTROINTESTINAL: NG tube (patency, drainage color and amount); tube feedings (formula, rate, residual) quality of bowel sounds and location; abdominal distention and tone; tenderness; BM (consistency, amount, frequency, color, odor); presence of nausea; emesis (color and amount), diet (type, percentage eaten, tolerance).

GENITOURINARY: urine output (method of collection, amounts, color, odor, S/A results, specific gravity); pain or burning on urination; dialysis -- condition of shunt and dressing, condition of fistula; vaginal drainage (amount, color, odor, itching).

INTEGUMENTARY: color, moisture, turgor; rash, ecchymotic areas; areas of tissue breakdown (lesions, lacerations, decubitus); restraints; egg crate; sheepskin; air mattress, specialty bed, footboard; cooling mattress.

MUSCULOSKELETAL: range of motion of extremities (active, passive); traction (types and amounts); casts, circulation, motion, and sensation of affected extremities; gait.

PSYCHOSOCIAL: acceptance of disease process; coping mechanisms (examples of); family situation (who are significant others); patient concerns; cooperation with care.

(Miscellaneous: Dressing - chart under appropriate system.)
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD
Department of Nursing

THERAPEUTIC COMMUNICATION

Reflection
Repeating all or part of a verbal or nonverbal message for the client’s benefit. Gives the client the opportunity to hear and mull over what he or she has said. Most misused and overused methods.

Reflecting Feelings
Verbalization of what seems to be implied about feelings in the client’s comment. An attempt to identify latent and connotative meanings that may either clarify or distort the content. Is useful for encouragement of the client to make additional clarifying comments.

“It sounds like you’re really angry.”
“You’re feeling uncomfortable about . . .”

Imparting Information
Helps by supplying additional data and encourages further clarification based on new or additional input.

“I am a nursing student”

Pitfalls: Distortion into advice
Use to avoid an area of interpersonal difficulty.

Clarifying
An attempt to understand the basic nature of a client’s statement.

“You say you’re feeling anxious -- What’s that like for you?

Paraphrasing
The nurse assimilates and restates what she or he has heard the client communicating.

“You mean that when people complement you, you feel embarrassed. If they knew the real you, they’d stay away.”

Offers an opportunity to test the nurse’s understanding of what the client is trying to say. Reflective in nature—lets the client know how another person understands the message.

Checking Perceptions
After the nurse shares how he/she perceives the client’s behaviors, thoughts, and feelings, the client is asked to verify the perception.

“Is this the way you see it too?”

“I get the feeling that you’re uncomfortable when we are silent. Is that right?”

Questioning
Direct way of speaking. Can control the nature and range of the client’s responses. Useful when you are seeking specific information. Of limited usefulness when meaningful dialogue is intended.

-Should be open-ended.

“Why” questions have the same effect as a closed-ended question.

Structuring
An attempt to create order or evolve guidelines. This helps the client to become aware of problems in the order in which they might be dealt with.
Useful when clients introduce a number of concerns in a brief period of time with little idea of which to begin work on.
Used also to delimit the parameters of the nurse-client relationship and identify how the nurse will participate with the client in the problem-solving process.

Pinpointing
Calls attention to certain kinds of statements and relationships.
Examples:
- Inconsistencies among statements
- Similarities in points of view, feelings or actions of several persons.
- Differences between what one says and does.

Linking
Response to the client in a way that ties together two events, experiences, feelings or persons.
May be used to connect past experiences with current behaviors.
Linking the tension between two persons with current life stress.

Giving Feedback
Helps others become aware of how their behavior affects us and how we perceive their actions.
Can be therapeutic self-disclosure.

Confronting
A deliberate invitation to another to examine some aspect of personal behavior in which there is a discrepancy between what the person says and what he or she does.
Informational confrontation: visible behavior of another person.
Interpretive confrontation: expresses thoughts and feelings about the other’s behavior and includes drawing inferences about the meaning of the behavior.

Summarizing
Highlighting main ideas that have been discussed.
Can be used to recall previous interaction.

Processing
Comments that direct attention to the interpersonal dynamics of the nurse-client experience.

Assignment: Read N244 Fundamentals Skills Manual p. 74-87 and previous pages.

Conduct an interview with a patient. Identify the patient's recognition of a problem area and explore the implications it has for this client in the physical, psychosocial, emotional, or economic areas. This must include meaningful information about the identified problem and any other pertinent details. Document this interview and submit in following form:

A. Introduction (25 points)
1. Describe client and setting
2. Identify the problem and why it is important to the client.
3. Give brief introduction to the conversation, & explain briefly what information has already been exchanged.
4. 1-2 typed paragraphs

B. Therapeutic Exchanges (50 points)
5. Content is health-related, relevant to individual patient’s identified problem, & stays focused on identified problem throughout.
6. Show use of 5 therapeutic exchanges, with the following components:
   a. Patient states: give patient’s verbal statement, & document all non-verbal communication that you are able to observe
   b. Interpretation: based on the patient’s verbal & non-verbal communication, what is really going on? What is the deeper/true meaning of the patient’s message?
   c. Nurse states: give your verbal statement, & document all non-verbal communication that you observe yourself displaying
   d. Technique used & rationale: name the technique you just used, & give the rationale for why you chose that technique
7. Must demonstrate the use of 4-5 different therapeutic techniques.
8. Use therapeutic communication template to complete this portion.

C. Summary (25 points)
10. What techniques worked, and why? What techniques did not work, and why not?
11. What should you have done differently? What will you do next time to be more effective?
12. Don’t just summarize content of the interview…analyze the exchange from an academic perspective!
13. 1-2 typed paragraphs

Requires at least 88% or must be repeated.

Must be completed within the first five weeks of patient care.
<table>
<thead>
<tr>
<th>Patient states (Verbal and non-verbal cues)</th>
<th>Interpretation</th>
<th>Nurse states (Verbal and non-verbal cues)</th>
<th>Technique/rationale Used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
SECTION 2
NURSING LABORATORY GUIDELINES
CARDIAC FUNCTION

LABORATORY TESTS

- Troponin I
- Cardiac Enzymes
- CK/CPK
- AST/SGOT
- LD/LDH
- CBC
- Electrolytes (Serum)
- Lipoproteins (Serum Lipids)
- Clotting Times
- PT
- PTT/APTT
- Coagulation Time
- Leukocytes (WBC)
- ABG’s
- TDM
- Glucose (Serum)
- ESR
# Diagnostic Tests

- ECG/EKG
- Echocardiography
- Phonocardiography
- X-Ray
- Exercise/Stress Test
- Cardiac Catheterization (Cardiac Angiography)

**Cardiac Enzymes:**
Serum cardiac enzyme levels are generally ordered immediately upon complaint of cardiac discomfort.

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NORMAL VALUE</th>
<th>ELEVATED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troponin I</td>
<td>&lt;0.6 ng/ml</td>
<td>1.5 ng/ml Suggests MI</td>
</tr>
</tbody>
</table>

## Cardiac Enzymes

<table>
<thead>
<tr>
<th>Enzyme</th>
<th>Normal Value</th>
<th>Elevated Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>CK/CPK</td>
<td>30-200 IU</td>
<td>Not specific by itself for MI 3-6 hrs after heart damage. Maximum level reached with in 24 hours.</td>
</tr>
<tr>
<td>CKMB</td>
<td>&lt;5 ng/ml</td>
<td></td>
</tr>
<tr>
<td>AST/SGOT</td>
<td>4-36 IU/L</td>
<td>&gt;8 ng/ml suggest MI , 6-12 hrs after heart damage.</td>
</tr>
<tr>
<td>LD/LDH</td>
<td>70-200 IU/L</td>
<td>6-12hrs after heart Damage. Peak 2-6 days.</td>
</tr>
</tbody>
</table>

## CBC

<table>
<thead>
<tr>
<th>Test</th>
<th>Normal Value</th>
<th>Indicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin</td>
<td>13.5-18 g/dl (male) 12-16 g/dl (female)</td>
<td>dehydration, fluid overload or iron deficiency anemia.</td>
</tr>
<tr>
<td>Hematocrit</td>
<td>40-54% (male) 36-46% (female)</td>
<td>dehydration or hypovolemia, diabetic acidosis, etc.</td>
</tr>
<tr>
<td>RBC (million/mm³ X 10¹²/L [SI units])</td>
<td>4.6-6.0 (male) 4.0-5.0 (female)</td>
<td>indicates acute blood loss, anemias, malignancy, cirrhosis of liver, malnutrition, vitamin deficiencies or drug induced.</td>
</tr>
<tr>
<td>MCV (SI units)</td>
<td>80-98</td>
<td>Indicates the size of the RBCs</td>
</tr>
<tr>
<td>MCHC (SI units)</td>
<td>32-36%</td>
<td>Indicator of hemoglobin concentration per unit volume of RBCs. indicates hypochromic anemias.</td>
</tr>
</tbody>
</table>

## Lipoproteins (Serum Lipids)

<table>
<thead>
<tr>
<th>Test</th>
<th>Normal Value</th>
<th>Indicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>400-800 mg/dl</td>
<td>Elevated lipoproteins are considered a risk factor in cardiac disease.</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>150-250 mg/dl</td>
<td></td>
</tr>
<tr>
<td>Triglycerides</td>
<td>10-190 mg/dl</td>
<td></td>
</tr>
<tr>
<td>Phospholipids</td>
<td>150-380 mg/dl</td>
<td></td>
</tr>
</tbody>
</table>
Clotting Times

<table>
<thead>
<tr>
<th>Test</th>
<th>Time Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT</td>
<td>11-15 seconds (or 70% anticoagulation therapy – 2 to 2.5 times control in seconds)</td>
<td>Used to monitor clot formation and oral anticoagulant therapy.</td>
</tr>
<tr>
<td>PTT</td>
<td>60-70 seconds</td>
<td>PTT &amp; APTT used to detect clotting factor defects and heparin therapy.</td>
</tr>
<tr>
<td>APTT</td>
<td>25-35 seconds</td>
<td></td>
</tr>
<tr>
<td>Coagulation Time</td>
<td>3-15 minutes</td>
<td>An infrequently used test to determine coagulation problems.</td>
</tr>
</tbody>
</table>

Leukocytes (WBC) 5-10 X 10⁹/L (SI units) WBC may occur after MI as inflammatory response to infarction or may indicate bacterial endocarditis.

ABG’s

<table>
<thead>
<tr>
<th>Test</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>7.35-7.45</td>
<td>Alterations in ABGs can occur after an acute MI due to compromised pumping action.</td>
</tr>
<tr>
<td>PCO2</td>
<td>35-46 mmHg</td>
<td></td>
</tr>
<tr>
<td>PO2</td>
<td>75-100 mmHg</td>
<td></td>
</tr>
<tr>
<td>HCO₃</td>
<td>24-28 mEq/L</td>
<td></td>
</tr>
<tr>
<td>BE</td>
<td>+2 to –2</td>
<td></td>
</tr>
</tbody>
</table>

TDM Therapeutic drug monitoring See specific drug.

<table>
<thead>
<tr>
<th>Test</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucose (Serum)</td>
<td>65-110 mg/dl</td>
<td>Serum glucose may occur in conjunction with acute MI.</td>
</tr>
<tr>
<td>ESR</td>
<td>Male: 0-20 (over 50 yr.) Female: 0-30 (over 50 yr.)</td>
<td>Sedimentation rate may be elevated after MI or may indicate bacterial endocarditis.</td>
</tr>
</tbody>
</table>

Troponin I – Troponin is a regulatory protein attached to or affecting actin. Actin is one of the myofibrils composing part of the cardiac muscle fibers.

Cardiac Enzymes

CK/CPK – Creatine kinase or Creatine Phosphokinase are cardiac enzymes released into the circulating blood following cardiac trauma or ischemic injury.

AST/SGOT – Aspartate Aminotransferase or Serum Glutamic-oxaloacetic Transaminase is a cardiac enzyme released into the circulation blood following cardiac trauma or ischemic injury in proportion to the extent of the myocardial injury.

LD/LDH – Lactic Dehydrogenase is an enzyme released late in the injury cycle of myocardial damage.

CBC - Complete Blood Count includes Red Blood Count (RBC), Hematocrit, Hemoglobin, mean corpuscular volume (MCV), and mean corpuscular hemoglobin concentration (MCHC). The purpose of these tests is to identify the types of anemias present, blood loss or to indicate dehydration or polycythemic condition.

Electrolytes (Serum) – Significant serum electrolytes pertaining to cardiac function include: Potassium, Sodium, Chloride, Magnesium, and Calcium.

- Potassium (Cation) plays an important role in nerve conduction, muscle function, acid-base balance and osmotic pressure. Along with calcium and magnesium, potassium controls the rate and force of contraction of the heart and thereby, the cardiac output. 90% of the body’s potassium is concentrated in the cell.
- **Sodium** is the most abundant cation (90% of the electrolyte fluid and chief base of the blood. Its primary functions in the body are to chemically maintain osmotic pressure, acid-base balance, and to transmit nerve impulses.

- **Chloride** is an anion that exists predominantly in the extracellular spaces as a combination in sodium. Chloride maintains cellular integrity through its influence on osmotic pressure and acid-base balance and to transmit nerve impulses.

- **Magnesium** is concentrated in the body, cartilage and intracellularly, and is required for the use of adenosine triphosphate (ATP) as a source of energy. Magnesium is necessary for the action of numerous enzyme systems such as carbohydrate metabolism, protein synthesis, nucleic acid synthesis, and contraction of muscular tissue. Along with sodium, potassium, and calcium ions, magnesium also regulates neuromuscular irritability and the clotting mechanism.

- **Calcium** 98% of calcium is stored in the skeleton and teeth. However, only ionized calcium can be used by the body in such vital processes as muscular contractions, cardiac function, transmission, or nerve impulses and blood clotting.

**Lipoproteins (Serum Lipids)** – Lipoproteins indicate the amount of fat and free fatty acids circulating in the blood. Elevated lipid levels (cholesterol, triglycerides, and phospholipids) could be the major factor in the cause of coronary artery disease (CAD). Since most lipids are bound to protein (lipoproteins), electrophoresis is used to separate the lipoproteins. Low-density-lipoproteins (LDL) is composed of 45% cholesterol and very-low-density lipoprotein (VLDL) is composed of 70% triglycerides. Both LDL and VLDL are strongly associated with CAD. High-density-lipoprotein (HDL) is a carrier of cholesterol. It is suspected that the purpose of HDL is to remove the cholesterol from the peripheral tissues and to transport this to the liver for excretion.

**Clotting time** – The tests used to monitor clotting time are prothrombin time (PT), partial thromboplastin time (PTT), activated partial thromboplastin time (APTT), and coagulation time (CT) or Lee-White clotting time (LWCT).

**Leukocytes (WBC)** – Elevations in White Blood Cell Counts indicates the body’s response to an infectious invasion or an increased inflammatory response. See WBC for specific responses to various disease processes.

**ABG’s** – Arterial Blood Gases indicate the efficacy of the oxygen carrying capacity of the circulating blood. ABG’s also indicate the oxygen vital organs are supplied by circulating blood. (see information on Oxy-hemoglobin Curve for further information.)

**TDM** – Therapeutic Drug Monitoring enhances the medical practitioner’s ability to titrate and control blood serum levels of pharmaceutical agents routinely used in the treatment of acute cardiac and chronic cardiac diseases and conditions.

**Glucose (Serum)** – Serum glucose indicates the amount of fuel potential for cellular function available in the circulating volume. Serum glucose may be elevated in an Acute Myocardial Infarction indicating the body’s stress response.

**ESR** – Erythrocyte Sedimentation Rate elevation might occur after myocardial infarction or in the presence of bacterial endocarditis.

**ECG/EKG** – Electrocardiography records the electrical impulses of the heart by means of electrodes attached at the appropriate sites on the chest.
**Echocardiography** – Echocardiography or Cardiac Ultrasound test is useful in detecting enlargement of heart chambers, changes in heart dimensions, valvular disease, pericardial effusion, and congenital heart disease.

**Phonocardiography** – This graphically records the sounds from the heart. Usually done in conjunction with echocardiography to determine valvular defects.

**X-Ray** – Heart and chest x-rays are used to determine heart size or anomalies of the aorta.

**Exercise/Stress Test** – Stress testing is a diagnostic tool that provides information about the cardiac function during exercise. Results aid decision making about the degree of safe heart function vs. potential risk for MI.

**Cardiac Catheterization (Cardiac Angiography)** – Cardiac Angios are invasive procedures to determine the patency of coronary arteries and valvular function. Under fluoroscopy dye is injected into the circulation and viewed on a monitor by the physician to determine ventricular function, trace major cardiac vessels and observe heart valves in action.
## RESPIRATORY FUNCTION

**LABORATORY TESTS**
- ABG’s
- Sputum Cultures
- A-1-Antitrypsin (Serum)
- TDM
- Skin Test

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NORMAL VALUE</th>
<th>ELEVATED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABG’s</td>
<td></td>
<td>Alterations in ABGs can occur after an acute MI due to compromised pumping action.</td>
</tr>
<tr>
<td>pH</td>
<td>7.35-7.45</td>
<td></td>
</tr>
<tr>
<td>( P_{CO2} )</td>
<td>35-45 mmHg</td>
<td></td>
</tr>
<tr>
<td>( P_{O2} )</td>
<td>75-100 mmHg</td>
<td></td>
</tr>
<tr>
<td>( HCO_3^- )</td>
<td>24-28 mEq/L</td>
<td></td>
</tr>
<tr>
<td>BE</td>
<td>+2-2</td>
<td></td>
</tr>
<tr>
<td>Sputum Cultures</td>
<td>C&amp;S No growth</td>
<td>Useful for diagnosing microorganisms causing respiratory infections and appropriate treatment.</td>
</tr>
<tr>
<td>Acid-Fast bacilli (AFB)</td>
<td>No growth</td>
<td>Indicator of active Tuberculosis infection.</td>
</tr>
<tr>
<td>Cocci-Serology</td>
<td>No growth</td>
<td>Indicator of exposure to Valley Fever.</td>
</tr>
<tr>
<td>Cytology</td>
<td></td>
<td>Indicator of malignant cells present in lungs.</td>
</tr>
<tr>
<td>a-1-Antitrypsin (Serum)</td>
<td>159-400 mg/dl</td>
<td>Indicate presence of absence of protective inhibition of proteolytic enzymes which destroy lung tissue.</td>
</tr>
<tr>
<td>Therapeutic Drug Monitoring</td>
<td>See specific drug</td>
<td></td>
</tr>
<tr>
<td>Skin Tests</td>
<td>See specific test.</td>
<td>Skin tests are useful for determining the presence of or exposure to respiratory diseases.</td>
</tr>
</tbody>
</table>

ABG’s – Arterial Blood Gases indicate the efficacy of the oxygen carrying capacity of the circulating blood. ABG’s also indicate the oxygen vital organs are supplied by circulating blood. (See information on Oxy-hemoglobin Curve for further information.)

Sputum Cultures – Sputum specimens are useful for diagnosing microorganisms causing respiratory infection and for detecting malignant cells in lung tissue.

a-1-Antitrypsin (Serum) – Antitrypsin inhibits proteolytic enzymes in destroying lung tissues. With a lack of this protein, the alveoli are damaged resulting in chronic obstructive lung disease.

TDM – Therapeutic Drug Monitoring, see specific drug for significance to respiratory treatment and management.

Skin Test – Skin tests are useful for determining the presence of suspected bacterial or mycotic organisms that can infect lung tissue. This test is one of the methods used to diagnose tuberculosis, valley fever, and histoplasmosis.
**RENAL FUNCTION**

**LABORATORY TESTS**

- Urinalysis
- BUN
- Creatinine (Serum)
- Protein (24-hour Urine)
- Electrolytes (Serum)
- Electrolytes (Urine)
- Osmolality (Serum)
- Osmolality (Urine)
- Aldosterone (Serum)
- Renin (Plasma)
- Urine Culture

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NORMAL VALUE</th>
<th>ELEVATED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinalysis</td>
<td>pH 4.5-8.0</td>
<td>levels may indicate compromised renal or endocrine function.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.015-1.025</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>10-140 mg/L (random sample)</td>
<td>reflects a gross index of glomerular function.</td>
</tr>
<tr>
<td>Glucose</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Blood cells</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>BUN</td>
<td>10-25 mg/dl</td>
<td></td>
</tr>
<tr>
<td>Creatinine (Serum)</td>
<td>0.6-1.2 mg/dl</td>
<td>a reliable indicator of compromised renal function.</td>
</tr>
<tr>
<td>Protein (24-Hour Urine)</td>
<td>25-100 mg/24 hours (Total volume)</td>
<td>indicate glomeruli damage or disease.</td>
</tr>
<tr>
<td>Electrolytes (Adult Serum)</td>
<td></td>
<td>Electrolyte levels too low or too high adversely affect cardiac function.</td>
</tr>
<tr>
<td>Potassium</td>
<td>3.5-5.3 mEq/L</td>
<td>K+ increases cardiac irritability. Primary indicator of renal insufficiency.</td>
</tr>
<tr>
<td>Sodium</td>
<td>135-145 mEq/L</td>
<td>K+ decreases cardiac output potential. Can indicate fluid overload or endocrine imbalance.</td>
</tr>
<tr>
<td>Chloride</td>
<td>98-105 mEq/L</td>
<td>Na+ increases intracellular fluid and circulating fluid volume.</td>
</tr>
<tr>
<td>Magnesium</td>
<td>1.3-2.1 mEq/L</td>
<td>Mg+ decreases cardiac output thru decreased muscle fiber contraction. Mg+ increases cardiac irritability with potential lethal arrhythmias.</td>
</tr>
<tr>
<td>Calicium</td>
<td>8.6-10 mg/dl or 2.15-2.5 mmol/L</td>
<td>Ca+ may result in cardiac arrect. may result in life threatening cardiac arrhythmias.</td>
</tr>
<tr>
<td>Electrolytes (Urine)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Potassium</strong></td>
<td>25-120 mEq/24 hours</td>
<td>Urine potassium level &lt;25 mEq/24 hours with serum K+ could indicate acute renal failure. Also could indicate chronic renal failure.</td>
</tr>
<tr>
<td><strong>Sodium</strong></td>
<td>40-220 mEq/24 hours</td>
<td>Low urine sodium occurring with oliguria could indicate acute renal failure from decreased perfusion to kidneys.</td>
</tr>
<tr>
<td><strong>Osmolality (Serum)</strong></td>
<td>280-300 mOsm/Kg/H2O</td>
<td>Serum osmolality could be due to inadequate ADH release or due to the distal renal tubules inadequate response to circulating ADH.</td>
</tr>
<tr>
<td><strong>Osmolality (Urine)</strong></td>
<td>500-1200 (random sample)</td>
<td>In advanced renal medullary disease the urine osmolality could be decreased because of the inability of the kidneys to concentrate urine.</td>
</tr>
<tr>
<td><strong>Aldosterone (Serum)</strong></td>
<td>1-9 ng/dl (supine position)</td>
<td>Serum aldosterone can be associated with renal disease and chronic renal failure.</td>
</tr>
<tr>
<td><strong>Renin (Plasma)</strong></td>
<td>0.4-4.5 ng/ml/hour</td>
<td>Diagnostic test to determine renal vascular hypertension.</td>
</tr>
<tr>
<td><strong>Urine Culture</strong></td>
<td>No growth</td>
<td>Urine cultures determine the type of microorganism present in the genitourinary tract.</td>
</tr>
</tbody>
</table>

**Urinalysis** – Routine urinalysis is performed in a variety of settings for checking kidney and endocrine function.

**BUN – Blood Urea Nitrogen** – Urea is a by-product of protein metabolism excreted by the kidneys. If the BUN is slightly elevated the cause could be dehydration caused by hemoconcentration. Elevated BUN that remains elevated after hydration is an indicator of renal disorder.

**Creatinine (Serum)** – Creatinine a by-product of muscle creatinine phosphate, is excreted entirely by the kidneys. Serum creatinine is a more reliable test to determine renal function since it is less affected, if at all, by dehydration.

**Protein (24-Hour Urine)** – If urinalysis report indicated proteinuria, a 24-hour protein urine test might be ordered. The presence of protein in the urine, more than 100 mg/24 hours could indicate glomeruli damage or disease.

**Electrolytes (Serum) and (Urine)** – Electrolytes are closely monitored in renal disorders. They indicate the amount of renal dysfunction as well as warn of impending catastrophe for other organ systems.

**Osmolality (Serum) and (Urine)** – These tests are indicators of distal tubular response to circulating antidiuretic hormone (ADH). It is an accurate indicator of the kidney’s ability to concentrate urine.

**Aldosterone (Serum)** – Increased aldosterone levels are associated with acute and chronic renal disease.

**Renin (Plasma)** – An enzyme secreted by the kidneys, is a test used for diagnosing renal vascular hypertension. The result of this hypertension could lead to renal failure.

**Urine Culture** – Urine cultures are performed to determine microorganism presence in the genitourinary system.
LABORATORY TESTS

LIVER

- Bilirubin (Serum)
- Bilirubin (Urine)
- Liver Enzymes Tests
- ALT/SGPT (Serum)
- LDH and Isoenzymes (Serum)
- Protein (Serum)
- Ammonia (Plasma, Serum)
- PT (Plasma)
- Cholesterol (Serum)
- HbsAg (Serum)
- HbsAb/Anti-HBs (Serum)
- HbcAb/Anti-HBc (Serum)
**PANCREAS**
- Amylase (Serum)
- Amylase (Urine)
- Lipase (Serum)
- Electrolytes (K+, Na+) (Serum)
- BUN (Serum)
- Creatinine (Serum)
- Acetone/Ketone Bodies (Serum, Plasma, Urine)

**THYROID**
- TSH (Serum)
- T<sub>3</sub>&T<sub>4</sub> (Serum)
- Calcitonin (Serum)

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NORMAL VALUE</th>
<th>ELEVATED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIVER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilirubin (Serum)</td>
<td>Indirect: 0.1-1.0 mg/dl Direct: 0.1-0.3 mg/dl</td>
<td>Indicates the breakdown of red blood cells. Can be present in cirrhosis, biliary obstruction, sickle cell anemia, infectious hepatitis, CA, blood transfusion reactions and drug induced.</td>
</tr>
<tr>
<td>Bilirubin (Urine)</td>
<td>Negative</td>
<td>Bilirubin present in the urine means conjugated hyperbilirubinemia is a likely cause.</td>
</tr>
<tr>
<td><strong>LIVER ENZYMES TESTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALT/SPGT (Serum)</td>
<td>4-36 U/L at 37C (SL units)</td>
<td>Indicator of liver obstruction. Serum ALT is slightly to moderately increased in cancer of the liver and cirrhosis. ALT is highly increased during viral hepatitis and hepatotoxicity.</td>
</tr>
<tr>
<td>LDH and Isoenzymes (Serum)</td>
<td>70-200 IU/L</td>
<td>In heart, lung, liver and renal disease. To determine if elevation is due to liver disease, isoenzymes are measured.</td>
</tr>
<tr>
<td>Total Protein (Serum)</td>
<td>6-8 g/dl</td>
<td>Indirect measure of liver function.</td>
</tr>
<tr>
<td>Ammonia (Plasma, Blood)</td>
<td>3.2-4.5 g/dl</td>
<td>Byproduct of protein metabolism. Indicates severe liver diseases.</td>
</tr>
<tr>
<td>PT (Plasma)</td>
<td>11-15 seconds (or 70% anticoagulation therapy – 2 to 2.5 times control in seconds.)</td>
<td>Used to monitor clot formation and oral anticoagulant therapy. PT frequently occurs in liver disease.</td>
</tr>
<tr>
<td>Cholesterol (Serum)</td>
<td>150-250 mg/dl</td>
<td>Indicates possible biliary obstruction and pancreatitis. Indicator of chronic liver disease.</td>
</tr>
<tr>
<td>HbsAg (Serum)</td>
<td>Negative</td>
<td>Positive indicates acute hepatitis B, chronic active hepatitis or a carrier of hepatitis B.</td>
</tr>
<tr>
<td>HbsAb/anti-HBs (Serum)</td>
<td>Negative</td>
<td>Indicator of recent hepatitis infection or receipt of hepatitis series vaccination.</td>
</tr>
</tbody>
</table>
Bilirubin (Serum) – Bilirubin is derived from hemoglobin and results from the breakdown of red blood cells. There are two forms of bilirubin in the body; indirect or unconjugated, and direct or conjugated.

- **Indirect or Unconjugated**: Elevated indirect bilirubin is related to increased destruction of red blood cells (RBCs).

- **Direct or Conjugated**: Bilirubin is conjugated (transformed) by the liver and made water-soluble. There are smaller amounts of conjugated bilirubin than unconjugated bilirubin in the blood. Only water-soluble bilirubin can be excreted in the urine. Causes of increased direct bilirubin are cirrhosis, biliary obstruction, infectious hepatitis, carcinoma of the pancreas, and drugs.

Bilirubin (Urine) – Unconjugated bilirubin (fat-soluble) cannot be excreted in the urine because it is not water-soluble. If the urine bilirubin test is positive, then conditions causing conjugated hyperbilirubinemia are likely to be the cause.

Liver Enzymes Tests – As the result of the liver damage, by indult or disease, most of the liver enzymes are released into the blood stream, resulting in increased enzyme levels.

ALT/SGPT (Serum) – Found primarily in liver cell and is effective in diagnosing hepatocellular obstruction.

LD/LDH and Isoenzymes (Serum) – Lactic Dehydrogenase is an enzyme released late in the injury cycle of myocardial damage. LDH rises before jaundice occurs and falls before bilirubin level does.

Total Protein (Serum) – Serum protein indicates levels of albumin and globulin. Albumin and globulin are indicators of liver function and disease.

Ammonia (Plasma, Blood) – A by-product of protein metabolism, is converted to urea by the liver. Ammonia levels are elevated in severe liver diseases, cirrhosis, acute hepatic necrosis, or when blood flow to the liver is altered.

PT (Plasma) – Prothrombin, factor II of the coagulation factors, is produced by the liver and requires vitamin K for its synthesis. Increase in PT time frequently occurs in liver disease.

Cholesterol (Serum) – Cholesterol is a blood lipid that is synthesized in the liver. In chronic liver disease, serum cholesterol could be decreased. In biliary obstruction and pancreatitis, serum levels could be increased.

HbsAg (Serum) – Positive HbsAg is an indicator of acute hepatitis B, chronic active hepatitis or a carrier of hepatitis B.

HbsAb/anti-HBs (Serum) – A positive test indicates a previous infection of hepatitis B virus.

HbcAb/anti-HBc (Serum) – This test is performed following negative serum HbsAg and HbsAb results when hepatitis is suspected. A positive HbcAb might indicate a recent hepatitis B infection.

*A note regarding Hepatitis*: The variety of hepatitis that we now recognize and test for could fill a laboratory reference. For more information please refer to a recent manual specializing in hepatitis.
### PANCREAS

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NORMAL VALUE</th>
<th>ELEVATED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amylase (Serum)</td>
<td>111-296 U/L (SI units)</td>
<td>Indicates acute pancreatitis and may also indicate biliary duct obstruction.</td>
</tr>
<tr>
<td>Amylase (Urine)</td>
<td>6.5-48.1 U/L (SI units)</td>
<td>Useful in confirming diagnosis for acute pancreatitis.</td>
</tr>
<tr>
<td>Lipase (Serum)</td>
<td>14-280 U/L (SI units)</td>
<td>Pancreatic enzyme elevation early indicator of acute pancreatitis.</td>
</tr>
<tr>
<td>Electrolytes (K+, Na+) (Serum)</td>
<td>See specific electrolytes</td>
<td>Refer to lab manual or cardiac table above.</td>
</tr>
<tr>
<td>BUN</td>
<td>10-25 mg/dl</td>
<td>Reflects a gross index of glomerular function.</td>
</tr>
<tr>
<td>Creatinine (Serum)</td>
<td>0.6-1.2 mg/dl</td>
<td>A reliable indicator of compromised renal function.</td>
</tr>
<tr>
<td>Acetone/Ketone Bodies (Serum, Plasma, Urine)</td>
<td>0.3-2.0 mg/dl (serum ketone: 2-4 mg/dl)</td>
<td>By-product of fat metabolism. Indicates ketoacidosis.</td>
</tr>
</tbody>
</table>

**Amylase (Serum)** – Amylase is a pancreatic enzyme that changes starch to sugar. In acute pancreatitis, serum amylase level is elevated in 2-6 hours after onset and remains elevated for 2-3 days. Levels are also increased in biliary duct obstruction, ie – gallstones.

**Amylase (Urine)** – Urine amylase levels are useful in confirming the diagnosis of acute pancreatitis.

**Lipase (Serum)** – Lipase is a pancreatic enzyme that aids in the digestion of fats in the duodenum. Serum lipase level is elevated early in acute pancreatitis and remains elevated longer than serum amylase levels.

**Electrolytes (K+, Na+) (Serum)** – See lab reference or see cardiac table above.

**BUN** – Blood Urea Nitrogen – Urea is a by-product of protein metabolism excreted by the kidneys. If the BUN is slightly elevated the cause could be dehydration caused by hemoconcentration. Elevated BUN that remains elevated after hydration is an indicator of renal disorder.

**Creatinine (Serum)** – Creatinine a by-product of muscle creatinine phosphate, is excreted entirely by the kidneys. Serum creatinine is a more reliable test to determine renal function since it is less affected, if at all, by dehydration.

**Acetone/Ketone Bodies (Serum, Plasma, Urine)** – Ketone bodies, byproducts of fat metabolism and fatty acids, are greatly increased during uncontrolled diabetes mellitus and starvation. Elevation of urine ketone bodies indicative of ketoacidosis.

### THYROID

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NORMAL VALUE</th>
<th>ELEVATED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH (Serum)</td>
<td>2-10 mU/L (SI units)</td>
<td>Level with T4 indicates hypothyroidism.</td>
</tr>
<tr>
<td>T3 &amp; T4 (Serum)</td>
<td>T3: 80-200 ng/dl</td>
<td>Helpful in diagnosing thyrotoxicosis. Indication of hyperthyroidism, acute thyroiditis, thyrotoxicosis. Found in hypothyroidism.</td>
</tr>
<tr>
<td></td>
<td>T4: 1.0-2.3 ng/dl</td>
<td></td>
</tr>
<tr>
<td>Calcitonin (Serum)</td>
<td>0.155 ng/ml (male)</td>
<td>Could indicate medullary carcinoma of the thyroid.</td>
</tr>
<tr>
<td></td>
<td>&lt;1.105 ng/ml (female)</td>
<td></td>
</tr>
</tbody>
</table>
TSH (Serum) – Thyroid Stimulating Hormone is secreted from the anterior pituitary gland in response to thyroid releasing hormone (TRH) from the hypothalamus. Secretion of TSH is dependant upon a negative feedback loop that promotes the release of TRH when the level of T4 is decreased.

T₃₆₄ (Serum) – T3 or Triiodothyronine is a potent, short acting, thyroid hormone. The test is helpful in diagnosing thyrotoxicosis. T4 or Thyroxine is a major hormone secreted by the thyroid gland. It is an effective indicator of thyroid function. Elevated serum T4 levels are found in patients with hyperthyroidism, acute thyroiditis, thyrotoxicosis.

Calcitonin (Serum) – Calcitonin is a hormone secreted by the C cells of the thyroid gland. Calcitonin lowers calcium levels. Elevated plasma calcitonin levels could indicate medullary carcinoma of the thyroid.


Arterial blood gasses (ABG’s) provide valuable information about the acid-base balance, ventilatory ability, and oxygenation status of a client. The major components are:

1. pH (7.35-7.45): pH reflects the blood’s acid-base balance. Generally, a pH of less than 7.40 is considered acidotic, and a pH of greater than 7.40 is considered alkalotic.

2. pCO2 (35-45): pCO2 is the respiratory buffer for the acid-base system, in the form of carbonic acid. The lungs are able to respond quickly to acid-base changes in the blood. In acidosis, the lungs respond by increasing the rate and depth of respiration to “blow off” the CO2, and decrease the carbonic acid. In alkalosis, the lungs respond by slowing respirations, retaining the carbonic acid (CO2).

3. HCO3 (22-26): HCO3 (Bicarbonate) is the metabolic buffer in the acid-base system. Bicarbonate is a base. The kidneys respond more slowly to release or retain Bicarbonate ions to maintain a normal pH.

4. pO2: Is not part of the acid-base equation, but is a measure of oxygenation. pO2 measures the amount of O2 dissolved in the plasma.

5. O2 saturation is the measure of hemoglobin saturated with O2, the tissues are receiving adequate amounts of O2.

ABG analysis can be tricky. You can have:

1. Respiratory Acidosis
2. Respiratory Alkalosis
3. Metabolic Acidosis
4. Metabolic Alkalosis
5. Mixed acid-base disturbances (a little of both)
6. Compensated Acidosis or Alkalosis
7. Uncompensated Acidosis or Alkalosis

Using step-by-step analysis is the easiest way to analyze ABGs. If you do this each and every time you analyze a blood gas, you will find that analysis gets easier. You can always be confident in your assessment. Remember to validate your lab findings with your patient’s appearance!

1. Look first at the pH. Use 7.40 as your measuring tool. On which side of 7.40 does the pH fall? Remember that less than 7.40 will be considered acidosis, and greater than 7.4 will be considered alkalosis.

2. Look that the pCO2. Remember that this is the respiratory component of the ABG. The pH and pCO2 move in opposite directions. If the pH is low (acidosis), the pCO2 us usually elevated if the underlying pathophysiology is respiratory. If the pH is high (alkalosis, the pCO2 is usually low). Remember that respiratory disorders are related to ventilatory effort. In respiratory acidosis, the patient will not be breathing rapidly, thus CO2 is retained. In respiratory alkalosis, the patient will be hyperventilating, blowing off the CO2.

3. Next, look at the bicarbonate levels (HCO3). Remember that this is the metabolic component of the ABG. The pH and the HCO3 move together, much like an elevator. If the pH is low (acidosis), the bicarb will also be low. Conversely, if the pH is high (alkalosis) the HCO3 will also be high. Remember that the kidneys respond more slowly to correct acid base disturbances.

4. To determine whether or not there is compensation, look again at your pH. If it is in the normal range, there is compensation. If it remains abnormal, it is uncompensated.

5. Mixed acid-base disturbances can be tricky, and take practice. Please consult your clinical faculty when you have questions regarding your patient’s acid-base status.
Acid Base Practice Exercises:
1. Mr. D. is in the recovery room following a bowel resection. He has been quite drowsy, but continues to complain of pain. He has received 200 mcg of Fentanyl for pain, and is now quite difficult to arouse. His ABG results are:
   - pH: 7.20
   - pCO₂: 60
   - pO₂: 65
   - HCO₃: 24
   1. pH is less than 7.4, so he has Acidosis
   2. pCO₂ is elevated, so we know that there is a respiratory component. If the lungs were compensating, we would expect a low pCO₂ (blowing off acid in response to the acid state). Therefore, we know that the primary disorder is respiratory.
   3. The bicarb is normal. His kidneys have had not had time to compensate for the acidosis.
   4. Looking again at the pH, he is very acidotic, so there is no compensation.
   **Diagnosis?** Uncompensated Respiratory Acidosis

2. Mrs. P. just learned that she needs surgery for what her physician thinks is breast cancer. She is quite anxious and breathing very rapidly. She tells you that her lips and fingers are numb. Her ABG results are:
   - pH: 7.50
   - pCO₂: 25
   - pO₂: 80
   - HCO₃: 24
   1. pH: Acidosis or Alkalosis?
   2. pCO₂: Normal or Abnormal?
   3. HCO₃: Normal or Abnormal?
   4. Compensation: pH within normal range or not?
   **Diagnosis?**

Mr. W. is in the emergency department after being found unconscious at home. He has a history of Diabetes mellitus. His ABG results are:
   - pH: 7.20
   - pCO₂: 40
   - pO₂: 85
   - HCO₃: 15
   1. pH: Acidosis or Alkalosis?
   2. pCO₂: Normal or Abnormal?
   3. HCO₃: Normal or Abnormal?
   4. Compensation?
   **Diagnosis?**

4. Mrs. G. has been vomiting for 3 days. She feels very weak and tired. Her ABG analysis reveals:
   - pH: 7.50
   - pCO₂: 40
   - pO₂: 85
   - HCO₃: 30
   1. pH:
   2. pCO₂:
   3. HCO₃:
   4. Compensation?:
   **Diagnosis?**

2006/DW
CHEST TUBES

OBJECTIVES: At the end of this video the student is expected to:

1. Explain how the chest tube works related to the patient's anatomy and other physical principles.

2. Explain the basic principles of one bottle, two bottle, and three bottle systems of chest drainage.

3. Describe setting up a chest drainage system.

4. Describe important nursing actions when monitoring the patient with a chest drainage system.

5. Describe nursing measures to ensure proper functioning of the drainage system.

6. Describe the basic principles of auto-transfusion.

CONTENT OUTLINE:

I. Chest tube
   A. Basic principles of chest tube drainage
      1. Purpose
      2. Insertion of chest tube
   B. Chest drainage systems
      1. Collection chamber
      2. One-way mechanism
      3. Gravity drainage system
      4. One-bottle system
      5. Two-bottle system
      6. Three-bottle system
      7. Suction
         a. Principles
         b. Intrapleural collections
         c. Mediastinal collections
   C. Monitoring the patient
      1. Assessment of patient on chest drainage
         a. Patient, entry site, tubing
         b. Drainage unit chambers
      2. Positioning
      3. Clamping the chest tube
      4. Replacing the unit
      5. Removing the chest tube
   D. Setting up the system
      1. Water seal chamber
      2. Suction chamber
      3. Trouble shooting
CHEST TUBE PROTOCOL

I. CONTENT
   A. Assessment
      1. Assess the following parameters on every patient with chest tubes
         a. Vital signs as ordered
         b. Breath sounds every 2 hours
         c. Auscultate lungs for air leaks
      2. Observe
         a. No clots are clogging the tubes
         b. Water seal is maintained
         c. Suction is ON if ordered
         d. If bottles or thoradrain are in need of changing, replace them.
            DO NOT EMPTY BOTTLES IF FULL !!!
         e. That all connections are patent.
         f. That fluid in chest tubes fluctuates with inspiration of suction and no clots are plugging tubes
      3. Complications
         a. Excessive blood loss (notify physician)
         b. Tension pneumothorax if chest tubes are clamped in presence of air leak
         c. Contamination of chest area with drainage from bottle (keep bottles lower than patient)
         d. Possible tension pneumothorax if suction turned off in presence of air leak
         e. Disconnections can result in possible tension pneumothorax
         f. Dislodgement can also result in tension pneumothorax
         g. In surgical patients with a hemo- or pneumo-thorax, cardiac tamponade can occur from disconnects, clogged, or clamped tubes.
   4. Documentation
      a. Record chest tube I & O every one hour for 24 hours, then every shift on I & O flowsheet
      b. Describe drainage in nursing documentation, i.e., color and consistency
      c. Describe the location, size, and number of tubes in nursing documentation.
      d. Describe dressing and site, change daily, date and initial
Intravenous Therapy

IV Fluid Regulation

1. IV therapy refers to the infusion of fluid into a vein to prevent or treat electrolyte imbalance.
   a. IV drug therapy is a term used to describe the administration of drugs directly into the blood stream in order to achieve rapid and predictable serum levels.

2. Why are IV's utilized? Fluid replacement, electrolyte replacement, administer blood products, easy access to a vein to administer IV medications on a routine or emergency basis.

3. 60% of body weight is water: Intracellular fluid = 40%
   Extracellular fluid = 20%

4. Normal blood Osmolarity is about 275 - 295 mOsm
   a. Isotonic solutions are within or near normal blood range.
   b. Hypotonic solutions are a lower osmolarity than blood.
   c. Hypertonic solutions are higher osmolarity than blood.

5. KNOW
   a. Isotonic solutions: Lactated Ringers, Normal Saline, D5W, D5.2%NS. Used to expand Intravascular compartment.
   b. Hypotonic solutions: 0.45% saline, 0.33% saline, 2.5% dextrose. Fluid shifts from the blood into the cells, can cause cardiovascular collapse.
   c. Hypertonic solutions: 5% dextrose in 0.45% saline (D5 1/2NS), 5% dextrose in Lactated Ringers (D5LR), 5% dextrose in 0.9% normal saline, 50% dextrose, 10% dextrose, 10% dextrose in 0.9% normal saline, TPN, and Intralipids. Fluid shifts from the cells into the blood.

6. Advantages of IV drug therapy
   -gets meds even when npo
   -control over rate of administration and dosage
   -relatively painless
   -preferred route in emergency situations

7. Disadvantages
   -unwanted effects present rapidly
   -possible complications must be anticipated
   -allergic and anaphylaxis reactions can be life threatening
8. Nursing Responsibility in IV Therapy
   a. Initiating
   b. Monitoring
   c. Maintaining
   d. Discontinuing
   e. Patient teaching

9. Types of Access
   a. Triple Lumen Catheter
   b. Hickman/Broviac/Groshong Catheter
   c. Port-a-Cath
   d. PICC - peripherally inserted central catheters
   e. Butterfly needles
   f. Angiocatheters
   g. Heparin/Saline Locks

10. Complications:
    a. Infiltration of IV. Look for swelling (edema) at the site, pain at the site, redness at the site, streaking of the veins.
    b. Air embolism - make sure all air bubbles are out of the IV line; especially important for infants and children. Symptoms: Chest pain, shoulder pain, shortness of breath, cyanosis, low back pain, hypotension, weak pulse, shock, respiratory/cardiac arrest. Place pt. on left side in Trendelenburg and contact MD. Stay with pt., monitor VS, consider oxygen tx.
    c. Fluid overload - check IV bag, is the infusion pump working correctly? Symptoms: Dyspnea, cough, auscultating rales in lungs, coughing up thin pink foamy secretions, pitting edema in dependent areas, puffy eyelids, weight increase in last 24 hours.
    d. Fluid overload (pulmonary edema) - check IV bag, is the infusion pump working correctly? IV fluids infused too rapidly, causing increased venous pressure. Symptoms: Dyspnea, tachypnea, SOB, JVD, cough, auscultating rales in lungs, coughing up thin pink foamy secretions, pitting edema in dependent areas, puffy eyelids, weight increase in last 24 hours. TX: Notify MD, decrease IV rate, place pt. in upright position with O2, Lasix, Bumex.
    e. Septicemia - infection in the blood due to contamination. Sources of contamination are: airborne organisms from the pt. body and dsgs, skin, contamination during venipuncture, blood- bacterial contamination from blood spills, when drawing blood samples, and performing venipuncture, contaminated IV sets or IV fluid. SX’s: shock, ^temp., chills, weak rapid pulse, N, V, headache. TX: Notify MD if it has progressed to septic shock TX as shock, blood cultures, antibiotics, fluid replacement, medications as ordered.
11. Performing a Venipuncture
   a. Selecting the site
   b. Preparing the site
   c. Performing the venipuncture
   d. Taping the cannula securely
   e. Connect to IV line or flush and saline lock

12. Regulation of Drip rate
   a. IV fluids are usually ordered as so many ml's per hour for ex. 125ml/hr. The volume
      ordered is administered by adjusting the rate at which the IV runs.
   b. IV tubings have a drip chamber where the drops can be counted. The size of the
      drops is regulated by the size of the IV tubing.
   c. There are standard or macrodrip sets used for routine adult IV administration. There
      are mini or micro drip sets which are used when exact measurements are needed like
      in ICU or infants, or pediatric pts. Each IV type has printed on the package how
      many drops/ml.
   d. If your order reads 125ml/hour how many drops per minute will you administer if
      your IV tubing is 20gtts/ml?

      \[
      \frac{125\text{(ml)} \times 20\text{(gtts/ml)}}{60\text{ minutes}} = 41.66 \text{ or } 42\text{gtts/min}
      \]
   e. Use the roller clamp on the IV tubing to regulate the drip rate. The way to adjust the
      IV flow rate is count the number of drops for 15 secs. In the above example you
      should be able to count 10 gtts in 15 sec or 21 gtts per 30 sec.

13. Why are medications given via an IV? Rapidly absorbed, convenient, helps when pt. not
    able to take po fluids.
    a. Check your MD order. Some medications are directly added to the IV bag for
       example KCL, Heparin, Insulin, others are administered through intermittent infusion
       for example antibiotics, antiulcer agents, etc.
    b. Need to be able to quickly calculate the correct dosage. Need to have looked up the
       drug in an IV drug book, determined a safe administration rate, side effects of the
       drug, IV solution compatibility/incompatibilities.
    c. Drugs that are in solution must check expiration date, look for changes in color of the
       solution, look for particulate matter in vial. READ THE LABEL it will tell you how
       many milliequivalents/ml, how many units/cc, or how many mg/cc there are in the
       vial.
    d. Drugs that are in powdered form, you must read the label. It will usually state how to
       reconstitute it. Need to address is it for IV or IM use? Make sure you mix it for IV
       use. Sometimes the method of reconstituting and type of dilutant utilized is different.
       What kind of IV dilutant is recommended? If not stated on the vial check in your
       drug book, if all else fails call the pharmacy for a drug insert.

a. IV piggyback (IVPB) if a MD writes an order for IVP double check, some MD's mean IVPB. IV piggyback bags are usually a smaller amount of IV solution, some are premixed by the pharmacy. premixed bags you will need to check: is it the right dose, is it mixed in the right solution, has it expired, does it have particulate matter in it, is this medication supposed to be refrigerated and it has been out all day, or is it a medication that is not to be refrigerated and it has been in the refrigerator? If you are mixing the IVPB make sure you have selected the correct IV solution, calculated correct dose, prepared a label with name of drug, Dose, date, time, your initials. Label piggyback tubing also with date, time, and your initials. You will find at some hospitals piggy back tubing is changed q 24 hours and all tubing is taken down at the end of the night shift and is not labeled. Set the infusion pump rate according to how much solution is to be delivered over what period of time.

For example: Claforan 1 gm IV q 6 hours. Each gram is to be diluted in 10ml sterile water and then dilute to a final volume of 50 - 100 ml D5W, D10, LR, D5 0.25%NaCl, D5 0.45%NaCl, D5 0.9%NaCl, .9%NaCl and give over 30 minutes. You mix your Claforan in 100 ml D5W fluid. Place label on piggy back and administer it at 200cc/hr. Remember to set the volume to be infused as 100ml so your IV rate will return to the original order.

b. IV buretrol, Why is it used? For safety purposes especially on the floors: aminophylline, heparin, insulin, all are given via IV buretrol. This way the nurse is checking hourly the IV amount infused; you should also be checking your patient for adverse reactions at the same time. Pediatric medications/IV fluids are routinely given via buretrol to prevent fluid overload of infants. The volume of fluid a medication is diluted can be adjusted easily. Make sure buretrol chamber is labeled each time a med is infused.

c. Addition of fluid to a primary infusion solution. The medication is added to a large volume of parental solution. Usually regulated with a pump to ensure an accurate flow rate.
Introduction to Intravenous Therapy
Jaime Mendiola, RN, MSN, CCRN, ACNP

I. Goals for intravenous (IV) Therapy.
   A. Maintain daily water, electrolyte, and nutrient requirements.
   B. Replace electrolyte and water deficits.
   C. Provide access route for medications, both routine and emergent.
   D. To avoid creating new disturbances as a result of IV therapy.

II. Types of access.
   A. Peripheral.
      1. Continuous infusion; saline locks.
      2. Butterfly needles.
   B. Central.
      1. Percutaneous insertion.
         a. Peripherally inserted central catheter (PICC).
         b. Triple lumen catheters (TLC).
         c. Introducer / pulmonary artery catheter.
      2. Implanted devices.
         b. Hickman / Broviac.
         c. Groshong.
      3. Continuous infusion; heparin lock; clamps.

III. Complications of IV therapy.
   A. Pain.
   B. Infiltration – inflammation, edema, drainage, pain.
   C. Electrolyte imbalance.
   D. Volume overload.
   E. Infection.
   F. Thrombophlebitis – red streaking along vein, firm / hard, warm, pain.
   G. Embolism – pain, SOB, hypotension, arrest.
      1. Air – can occur with insertion, tubing change, and with removal.
         Valsalva, position on left side with head of bed down
      2. Catheter fracture.

IV. Nursing interventions.
   A. Insertion of peripheral lines, aseptic technique.
      1. Choice of site.
      2. Catheter choice – size, length.
3. Continuous infusion; saline lock.
4. Per CDC, site changes every 72 hours, and new IV solution every 24 hours.
   Artificial heart valve, implanted orthopedic hardware.
5. Securing catheter and tubing; dressing.

B. Verify correct solution and rate.
   1. Check all printed pharmacy labels against bag / vial labels.
   2. Must check all TPN additives and lipids against orders / med sheet.
   3. Certain medications must be cross checked with another RN (facility specific).

C. Continual monitoring.
   1. IV site / dressing.
   2. Patient response – fluid status, lab values.

D. Sterile dressing changes.
   1. Type per facility, change if loose or wet.
   2. Peripheral line, central line.

E. IV containers.
   1. Volumes 50 – 1,000 cc routine infusions; TPN volume for 24 hours.
   2. Glass – albumin, nitroglycerin.
   4. Labeling.
      a. Nursing – patient ID, solution and additives, date / time, initials.
      b. Pharmacy – printed labels with same information, dose time, expiration date.
      c. Do not cover print on bag.

F. Tubings.
      a. Maintenance, TPN, IVPB, and PCA – Q 96 hours.
      b. Lipids – Q 24 hours.
      c. Diprivan – Q 12 hours.
      d. Change when moving IV to new central line; consider with new peripheral line. Minimize possibility of cross contamination.
   2. Vented, non vented.
   3. Low absorbing.
   4. Pump v. gravity.

G. Prompt action if problem arises – change site, notify physician, C / S.

H. Patient / family education.

V. Overview of physiology of fluid balance.
   A. Total body water.
      1. Approximately 60% of adult body is comprised of water.
      2. Varies with fat percentage as fat does not contain water.
   B. Main fluid compartments.
1. **Intracellular fluid.**
   Cells contain about 60% of the total body fluid.

2. **Extracellular fluid.**
   a. Fluid outside the cells.
   b. Consists of two compartments.
      1. **Intravascular** – plasma flowing in the blood vessels.
      2. **Interstitial** – fluid in spaces between cells and tissue.

3. **Transcellular fluid.**
   Fluid within organs – liver, kidneys, etc.

C. **Tonicity.**
   Term which describes the osmolality of a parenteral solution in relation to the normal osmolality of the blood and extracellular fluid – listed on all IV bags.
   a. **Isotonic.**
      1. “Same” osmolality as blood and extracellular fluid, about 295.
      2. Does not cause red blood cells to swell or shrink, or fluid shifts.
      3. Normal serum osmolality approximates $\text{Na}^+ \times 2 (145 \times 2 = 290)$.
   b. **Hypotonic.**
      1. Osmolality less than blood and extracellular fluid, fluid shifts to cells.
      2. Generally osmolality less than 295.
   c. **Hypertonic.**
      1. Osmolality more than blood and extracellular fluid, fluid shifts to blood vessels.
      2. Generally osmolality more than 295.

VI. **Solutions available for IV infusion.**
   A. **Crystalloids** – crystals form when water is removed.
      1. **Uses.**
         a. Maintenance fluid for daily water and electrolyte balance.
         b. Replace fluid and electrolyte deficits; fluid resuscitation.
      2. **Solutions available.**
         a. **Carbohydrate in water** (dextrose in water).
            1. Dextrose concentrations available in 2.5%, 5%, and 10 – 70%.
            2. Dextrose metabolized by the body – provides calorie source and free water.
            3. Maximum allowed for peripheral infusion is 10% due to phlebitis of veins.
         b. **Sodium chloride (NaCl)** – saline solutions.
            1. Available as only saline and in combination with dextrose.
            2. Different saline percentages available.
               a. 0.9% NaCl = normal saline or NS, isotonic.
               b. 0.45% NaCl = half normal saline or ½ NS, hypotonic.
               c. 3 – 5% = hypertonic, for replacement in severe hyponatremia.
                  Must be infused slowly. Can demyelinate nerves and can cause pulmonary edema.
         c. **Special solutions.**
            1. **Ringer’s Lactate** (LR or RL, Lactated Ringer’s).
               a. Closer to isotonic than normal saline.
b. LR contraindicated with liver failure – unable to convert lactate = acidosis.

2. Mannitol.
   a. Potent osmotic diuretic – primary use in cerebral edema and ↑ ICP.
   b. Crystals in solution – must use filter needles.

3. Ringer’s Solutions.
   Isotonic solution consisting of NaCl, KCl, and CaCl₂.

4. Alkalinizing solutions.
   a. Usually contains sodium bicarbonate; sodium racemic lactate or acetate.
   b. Used to treat metabolic acidosis.

5. Acidifying solutions.
   a. Fluid containing ammonium chloride solution (NH₄Cl).
   b. For treatment of severe metabolic alkalosis – rarely used.
   d. Electrolyte replacement – dispensed by pharmacy in most facilities.

1. Potassium (K⁺).
   a. Most commonly treated; potassium chloride / acetate / phosphate.
   b. Can be mixed in most IV solutions, maximum usually 40 mEq / liter.
   c. “K Protocol.”
      1. Potassium replaced, either orally or IV, based on sliding scale.
      2. Must keep patient history in mind, such as renal impairment.
      3. Oral – liquid most readily absorbed, taste can be an issue.
      4. IV.
         a. High concentration via central line only.
            20 mEq / 50 cc over 30 minutes.
         b. Low concentration can be given peripherally.
            10 mEq / 100 cc over one hour.
         c. With physician order and no allergy, may add Lidocaine for peripheral infusion.

2. Magnesium (Mg⁺⁺).
   a. Generally 1 – 2 grams over 1 – 2 hours.
   b. If Mg⁺⁺ level is low, very difficult to achieve normal K⁺.

3. Phosphorus (PO₄³⁻).
   a. Must be infused slowly, usually over 4 – 8 hours depending on amount.
   b. Remember ATP?

4. Calcium (Ca⁺⁺).
   a. Serum level, ionized calcium.
   b. Relationship to albumin level and banked blood.
   c. Calcium chloride, calcium gluconate.
   d. Myocardial protection (stimulation threshold) in hyperkalemia.

B. Colloid solutions – large natural or synthetic proteins in solution.
   1. Uses / effects.
      a. Volume expansion – changes intravascular pressure, fluid moves from interstitial space to blood vessels.
      b. Short term effect – body digests the protein thereby removing the large molecules.
      c. Can alter coagulation – may precipitate bleeding.
   2. Solutions available.
a. **Albumin.**
   1. Natural protein from pooled human donors; pasteurized; expensive.
   2. Percentages available.
      a. 5% (isotonic) – used for rapid volume expansion.
      b. 25% (hypertonic) – used to shift fluid, short term albumin replacement.
   3. Jehovah’s Witness patients – possible to give 5%, but need to investigate.

b. **Dextran.**
   1. Synthetic; available as Dextran 40, Dextran 70, and Dextran 75.
   2. Used for volume expansion in or when blood is not available.
   3. Can cause anaphylactic shock, renal failure, and hemorrhage.

c. **Hespan (hetastarch).**
   1. Synthetic; derived from corn starch; less expensive than albumin.
   2. Causes elevated amylase levels for 2 – 7 days.

d. **Red blood cells – packed cells, whole blood.**
   1. Considered the best physiologic volume expander.
   2. Will examine further in blood product section.

VII. Medication Administration

A. Continuous infusion.
   1. Maintains blood level of drug.
   2. Decanting.
   3. Multiple medications.
      d. Antidysrhythmics – Lidocaine, amiodarone.
      d. Vasoactives – Dopamine, Levophed, dobutamine.
      e. Insulin.

B. **IV Piggyback (IVPB).**
   1. Given in small volumes over short period of time; pump v. gravity.
   2. Routine medications, such as antibiotics, given at a prescribed frequency.
   3. Can be “one time doses” – single dose (i.e. antibiotic).

C. **IV Push.**
   1. Given via syringe, directly into IV line.
   2. To clamp or not to clamp the line; choice of line and port.
   3. Know your rates of administration – don’t guess.

D. **Patient Controlled Analgesia (PCA).**
   1. Patient controls delivery of narcotic.
   2. Specialized PCA pump, doses and frequency set and locked in.
   3. PCA tubing, need IV fluid as carrier.
   4. Can set PCA and / or continuous infusion modes.

E. **Nursing Interventions.**
1. Must verify all the “rights” – patient, drug, dose / rate, etc.
2. Know what you are giving, why, how fast – don’t guess.
   a. Know the patient’s allergies.
   b. Remember, the effects can be fast and dramatic with IV route.
4. Medications may or may not be prepared by pharmacy – check with facility.

VIII. Blood Products
A. Uses.
   1. Increase intravascular volume and pressure, pulls interstitial fluid into blood vessels.
   2. Increase hemoglobin content → increase oxygen carrying capacity.
   3. Can replace specific components → red cells / hemoglobin, platelets, clotting factors.

B. Considerations and possible side effects.
   1. Availability dependent on human donation.
   2. Type and crossmatch (antibody screen); need patient consent; Jehovah’s Witness.
   4. Infusions – via gravity; pressure bags.
      a. Cells and clotting factors infused using Y tubing with saline to prime.
         Maximum of two (2) units of cells infused for each tubing set.
      b. Platelets use straight tubing with filters.
      c. Rate.
         1. Cells – over 2 – 4 hours.
         2. Platelets / clotting factors – wide open (no antibodies as with red cells).
         3. Adjust based on patient condition / history (renal, cardiac).
   5. Adverse reactions.
      a. Infection transmission possible → hepatitis, HIV.
      b. Allergic, hemolytic (antibodies) reactions.
      c. Volume overload.
      d. Hypocalcemia possible with large volume transfusions.
   6. More expensive than crystalloids and colloids.

C. Products available.
   1. Whole blood.
      a. Excellent physiologic volume expander – contains all cells, clotting factors, water.
      b. One unit ≈450 – 500 cc.
      c. Rarely used except with autologous blood.
   2. Packed red blood cells (PRBCs).
      a. Most plasma removed from whole blood (80%), giving a reduced volume.
      b. Does not contain clotting factors or platelets.
      c. For each unit, hemoglobin can rise ≈1 – 2 mg / dl, and hematocrit rises ≈3 – 5%.
      d. One unit ≈250 – 310 cc; shelf life 42 – 45 days.
      e. Used to replace hemoglobin / hematocrit.
   3. Fresh frozen plasma (FFP).
a. Liquid content of blood after centrifuged; contains all clotting factors.
b. Colloid properties similar to high concentration albumin.
c. Thawed at time of need / transfusion – use within 24 hours, cannot be refrozen.
d. One unit ≈ 150 – 200 cc; frozen shelf life one year.
e. Used to replace clotting factors, severely elevated PT / INR, Coumadin toxicity.

4. Cryoprecipitate.
a. Highly concentrated clotting factors; very expensive.
b. Thawed at time of need / transfusion – use within 6 hours, cannot be refrozen.
c. One unit ≈ 100 – 150 cc; frozen shelf life one year.

5. Platelets.
a. Can be given as pooled (multiple donors) or single donor unit (actually = 8 units).
b. One unit ≈ 200 – 300 cc; shelf life 5 – 7 days.
c. Used to replace platelets, most allow low level before transfusion (≤ 20,000).

IX. Parenteral nutrition.
A. Goals of Therapy.
1. Maintain nutritional balance by providing variable combinations of protein, carbohydrate, fat, vitamins, and minerals.
   a. Protein as amino acids.
   b. Carbohydrate as dextrose.
   c. Fat as 10% or 20% emulsified lipid formation.
      1. Made of soy bean oil, egg yolk, components, glycerin, and water.
      2. Contraindicated in patients with allergy to eggs.
      3. Can develop fat emboli if infused too rapidly.
   d. Vitamins as multivitamin and folic acid; minerals; trace metals.
   e. Electrolytes as KCl, CaCl, various acetate preparations, MgSO₄, etc.
2. Additives are adjusted to calorie need, volume, and lab values.
3. Minimize muscle catabolism and fat breakdown.
4. Glucose control – may require insulin coverage, may be added to IV bag. Pepcid may be added to bag.

B. Indications.
1. Inadequate intake, or intolerance, of oral nutrition to meet metabolic needs.
2. Post operative; abdominal surgery; dysfunctional GI tract; malabsorption problems.

C. Available formulations.
1. Peripheral parenteral nutrition (PPN).
   a. Infused via peripheral vein.
   b. Dextrose ≤ 10%.
   c. Generally for short term therapy, 5 – 7 days.
2. Total parenteral nutrition (TPN) or hyperalimentation (HAL).
a. Delivered via large vein into central circulation, preferably subclavian or internal jugular sites. Femoral site – alternate if only access.

b. Used for longer term therapy.

c. Can infuse high dextrose concentrations above 10%.

D. Possible complications.

1. Infection.
   a. High dextrose concentration can exacerbate possibility.
   b. Tubing changes; 0.22 micron filter.
   c. Occlusive dressing – change per policy / if moisture present.
   d. Dedicated to TPN / PPN to minimize what is introduced into the line.

2. Hyperglycemia.
   a. Fingerstick glucose monitoring standard, usually at least Q 12 hours.
   b. Frequency increased and insulin coverage added if levels high.
   c. If line is lost or infusion stopped, monitor glucose more frequently for possible rebound hypoglycemia.

3. Volume overload.
   a. Monitor intake and output.
   b. Infuse via pump.

4. Abnormal lab values.
   a. Electrolytes.
   b. Acid base balance.
   c. LFTs / albumin.
<table>
<thead>
<tr>
<th>Tonicity</th>
<th>Solution (mOsm)</th>
<th>Action</th>
<th>Therapeutic Use</th>
<th>Possible Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isotonic</td>
<td>0.9% NaCl (308)</td>
<td>Stays in intravascular space.</td>
<td>Fluid replacement.</td>
<td>Volume overload.</td>
</tr>
<tr>
<td></td>
<td>LR (275)</td>
<td>“Same” osmolality as blood.</td>
<td>Volume expansion.</td>
<td>Dilutional ↓ H / H.</td>
</tr>
<tr>
<td></td>
<td>D₅W (260)</td>
<td>Steady state.</td>
<td>Maintenance therapy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(D₅W becomes hypotonic in body.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypotonic</td>
<td>0.45% NaCl (154)</td>
<td>Moves from intravascular space to cells and tissue.</td>
<td>Cellular dehydration.</td>
<td>Intravascular dehydration.</td>
</tr>
<tr>
<td></td>
<td>0.33% NaCl (103)</td>
<td>Exerts less osmotic pressure than blood (&lt; 290).</td>
<td></td>
<td>Hypotension.</td>
</tr>
<tr>
<td></td>
<td>0.20% NaCl (                  )</td>
<td></td>
<td></td>
<td>Cellular edema / damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>↑ ICP.</td>
</tr>
<tr>
<td>Hypertonic</td>
<td>D₅ 0.45% NaCl (406)</td>
<td>Moves from interstitial and intracellular spaces to intravascular space.</td>
<td>Severe sodium loss.</td>
<td>Circulatory overload.</td>
</tr>
<tr>
<td></td>
<td>D₅ 0.9% NaCl (560)</td>
<td>Exerts more osmotic pressure than blood (&gt; 290).</td>
<td>Severe water intoxication (cellular).</td>
<td>Pulmonary edema.</td>
</tr>
<tr>
<td></td>
<td>D₅ LR (575)</td>
<td></td>
<td></td>
<td>Intracellular dehydration.</td>
</tr>
<tr>
<td></td>
<td>≥ D₁₀W IntraLipid formulations</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Specialized</td>
<td>3% and 5% Saline</td>
<td>Strong movement of fluid from intracellular to intravascular space.</td>
<td>Severe hyponatremia.</td>
<td>Demyelination of nerves.</td>
</tr>
<tr>
<td>Hypertonic</td>
<td></td>
<td></td>
<td></td>
<td>Pulmonary edema.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cellular dehydration.</td>
</tr>
</tbody>
</table>
SPECIAL CONSIDERATIONS WITH MEDICATION ADMINISTRATION

1. Take a drug allergy history.
2. Check the five “rights” prior to administering the medication.
   (Right: drug; dose; time; route; child/patient.)
3. Always double check the following medications with another nurse:
   **Digoxin; Insulin; Heparin; Blood; Epinephrine; Narcotics; Sedatives.**

CALCULATION OF IV DRIP RATE

When administering IV medications to a patient, use a medication infusion pump whenever possible. If not possible, use the following formula to calculate IV drip rate:

\[
\text{Flow rate in drops per minute} = \frac{\text{Volume to be infused} \times \text{Drop factor of IV tubing}}{\text{Total infusion time (in Minutes)}}
\]
Learn how to choose the best IV site, document procedures, deal with complications, and more.

Catheter insertion device:

Here’s how to hold the insertion device for greatest control.

- Hold the catheter insertion device horizontally with your hand on top of the device. Use the flexibility of your wrist to ensure the proper entry angle.
- Make sure the bevel—the sloped distal tip of the device—is up. The stylet is the introducer needle that punctures the skin. You remove it when the vein is correctly accessed.
- Place your fingers on the flashback chamber (where you’ll see blood return when the vein is accessed), not on the color-coded hub, where the catheter gauge is indicated.
- Place your fingers even with the line of the catheter.
- Don’t hold the device like a dart—this increased the risk of pushing the device through the vein’s back wall, causing a hematoma.

Tips for a perfect puncture:

- If you can’t palpate a radial pulse, the tourniquet’s too tight. You want to occlude the superficial veins, not the deeper arteries.
- Have the patient open and close her fist. The large muscles of the arm will massage the vein, increasing venous dilation. (Don’t have her make and hold a fist—this can cause the vein to spasm, which makes catheter insertion difficult and painful.
- Palpate with your index and middle fingers, which are the most sensitive for vein identification.
- Rub the intravenous (IV) site vigorously with alcohol to kill Staphylococcus epidermidis and S. aureus, the main culprits in IV site infection.
- Push blood in the vein up toward the tourniquet. This aids in vein dilation.
- Hold the catheter insertion device at a 0- to 5-degree angle for insertion into a superficial vein and at a 5- to 15-degree angle for a deeper vein (one that’s palpable but not visible). Never use an insertion angle greater than 15 degrees.

Quick check for correct vein access:

- To tell that you’ve correctly accessed a vein, look for blood return in the flashback chamber. This means that the stylet and tip of the catheter have passed into the vein’s inner lumen.
- You won’t see blood in the flashback chamber if the catheter’s tip remains in the vein wall and the stylet is withdrawn prematurely. In this case, the catheter can’t be advanced into the vein’s lumen. Remove the device and try again in a new location.
- If you see a hematoma, you probably used too much pressure on the device during insertion. This pushed the stylet and catheter through the vein lumen and out the vein’s back wall. Remove the device and try again in a new location.
Dealing with phlebitis:
Phlebitis is the top risk of short-term IV therapy. If you notice mechanical or chemical phlebitis in a patient, remove the catheter and record the degree of phlebitis in the patient’s medical record, using this system established by the Intravenous Nursing Standards of Practice:

- 1+—pain at site, erythema or edema, no streak, no palpable cord
- 2+—pain at site, erythema or edema, streak formation, no palpable cord
- 3+—pain at site, erythema or edema, streak formation, palpable cord

Fixing the flow:
Too fast? Too slow? Here’s how to get the infusion back on track.

- If the IV fluid is running more slowly than prescribed:
  1. Check the IV site. If it’s red, painful to touch, edematous, or warm, remove the catheter.
  2. Ask the patient to reposition her arm. If the fluid flows at the proper rate, you’ll know you were dealing with a positional problem.
  3. Check along the tubing for kinks or clamps that may have stopped the infusion.
  4. Check the height of the bag—the ideal is 1 meter (3.3 feet) from the IV site. Raising the bag will increase the flow rate.
  5. At the catheter site, lift the IV tubing at the hub. If the fluid flows freely, the catheter may be against a vein wall or venous valve. Place a 2x2 sterile gauze pad under the hub and re-dress the site, adjusting the catheter for better flow before applying the dressing.
  6. Remove the IV tubing from the catheter hub. If fluid flows freely through the IV tubing, the problem is with the catheter. Remove the catheter rather than flushing it, which could release clots. If the fluid doesn’t flow freely, the problem is in the IV line.

- If the IV fluid is running faster than prescribed, adjust the clamp to regulate the flow.
- If the IV fluid runs quickly and then slowly:
  1. Have the patient reposition her arm.
  2. Monitor the flow rate over several minutes.
  3. Use an arm board, if necessary, to keep the patient’s arm in the needed position.
  4. Remove the dressing and adjust the catheter.
  5. Check the IV infusion more frequently over the first couple of hours to make sure the administration rate is correct.

Through thick and thin:
Do you know which catheter gauge to use when? Here are general guidelines:

- 14—plasmapheresis patients
- 16—trauma patients, preoperative open-heart surgery patients, and people giving blood donations

- 18—general surgical patients, patients receiving multiple blood transfusions, emergency department patients
- 20—patients receiving blood transfusions, IV fluids, partial parenteral nutrition, or radiologic dyes
- 22—medical patients receiving blood transfusions or IV fluids, geriatric patients
- 24—pediatric patients and adults with small veins.
Documenting venipuncture:
Follow the example below to document catheter insertion, making sure to include:

- date and time the catheter was inserted
- gauge and length of catheter
- style and brand of catheter
- anatomic name of accessed vein
- number of venipuncture attempts
- type of infusion and flow rate (if you use a pump, indicate the brand name and model number)
- patient comments
- your signature.
**Laboring in vein:**
These superficial veins of the upper extremities are used for routine IV therapy.

<table>
<thead>
<tr>
<th><strong>Hand sites</strong></th>
<th><strong>Where it’s located</strong></th>
<th><strong>When it’s used</strong></th>
<th><strong>Nursing considerations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dorsal venous arch</td>
<td>Dorsal aspect of the wrist, at the union of the metacarpal veins</td>
<td>Routine IV therapy; small-gauge catheters</td>
<td>• Most comfortable site for patient&lt;br&gt;• Don’t place catheter over wrist; mechanical phlebitis could result or the device could be dislodged&lt;br&gt;• Vein isn’t always prominent&lt;br&gt;• Veins are large and easily accessed</td>
</tr>
<tr>
<td>Metacarpal</td>
<td>Between the metacarpal bones on the back of the and</td>
<td>In hospital settings, usually for preoperative patients; used as a last resort for home health care patients</td>
<td>• Easily infiltrated because of joint motion&lt;br&gt;• Must be immobilized by a finger splint or padded tongue blade&lt;br&gt;• Last resort</td>
</tr>
<tr>
<td>Digital</td>
<td>Lateral portion of the fingers</td>
<td>Short-term and nontoxic infusions</td>
<td>• Excellent choice for venipuncture&lt;br&gt;• Good patient mobility&lt;br&gt;• Radial bone acts as natural splint</td>
</tr>
<tr>
<td><strong>Arm sites</strong></td>
<td></td>
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<tr>
<td>Cephalic</td>
<td>Along the radial bone (thumb side), crossing the antecubital fossa; runs from wrist to shoulder, where it merges with subclavian vein</td>
<td>Large-bore IV devices; most IV therapies</td>
<td>• Not always observable&lt;br&gt;• May be difficult to access because of vein angulation&lt;br&gt;• Often overlooked because of location. Visualize vein by flexing arm, then gently lower and turn arm to perform venipuncture. Point IV device tip toward shoulder.&lt;br&gt;• Venipuncture painful because of noncallused skin&lt;br&gt;• Prone to phlebitis because vein is small in diameter</td>
</tr>
<tr>
<td>Accessory cephalic</td>
<td>Originates from the cephalic vein</td>
<td>Large-bore IV devices</td>
<td></td>
</tr>
<tr>
<td>Basilic</td>
<td>Along the ulnar bone, little finger side; runs from wrist to shoulder, crossing the antecubital fossa and merging with the subclavian vein</td>
<td>Largest arm vein; good for medications that would irritate smaller veins. Less visible to patient; good if patient tends to pull out IV line.</td>
<td></td>
</tr>
<tr>
<td>Median antebraclial</td>
<td>Center of ventral side of forearm, arising from the palm</td>
<td>Small-gauge devices</td>
<td></td>
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</tbody>
</table>
ADMINISTERING IV MEDICATIONS BY INTRAVENOUS PUSH

Retest Comments

<table>
<thead>
<tr>
<th></th>
<th>P</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Wash hands.</td>
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</tr>
<tr>
<td>2. Prepare and draw up ordered medication from vial or ampule. Apply a small gauge needle to syringe or needleless adaptor.</td>
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<tr>
<td>3. Explain procedure to client .</td>
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<tr>
<td>4. Identify client by asking name, looking at name-band, and verifying with medication record.</td>
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ADMINISTERING INTO EXISTING IV LINE

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</thead>
<tbody>
<tr>
<td>1. Select injection port in IV tubing, closet to IV insertion site.</td>
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<tr>
<td>2. Cleanse injection port with antiseptic. Allow to dry.</td>
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<tr>
<td>3. Insert needle into injection port.</td>
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<tr>
<td>4. Occlude the IV tubing above the injection port by pinching the tubing.</td>
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<tr>
<td>5. Inject medication slowly into the IV port at the prescribed rate. Use a watch to time administration rate.</td>
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<tr>
<td>6. If IV medication and IV solution in tubing are incompatible, flush with 10-ml syringe of sterile normal saline.</td>
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</tr>
<tr>
<td>7. After confirming IV catheter placement, flush line with normal saline solution while occluding catheter above port.</td>
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</tr>
<tr>
<td>8. Administer medication at prescribed rate.</td>
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</tr>
<tr>
<td>10. Discard syringe in proper container.</td>
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</tr>
<tr>
<td>11. Wash hands.</td>
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</tbody>
</table>
**ADMINISTERING IV MEDICATIONS**

**PIGGYBACK**

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>NP</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wash hands.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2.</td>
<td>Connect infusion tubing to medication containers.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3.</td>
<td>If using a needle, connect capped, sterile needle to end of infusion set. If using needleless system, connect needleless adapter.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.</td>
<td>Prime tubing.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.</td>
<td>Confirm client’s identity by asking name, and looking at identiband.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.</td>
<td>Hang medication bag above level of primary IV solution.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>a. Wipe injection port, nearest IV insertion site, on primary IV tubing with antiseptic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Insert secondary line into injection port of primary IV line that is closest to client.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8.</td>
<td>Regulate flow of medication solution. Infuse over 20 to 20 minutes according to drug directives. Monitor periodically.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9.</td>
<td>When medication has infused, turn off flow clamp. Regulate primary infusion as necessary.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10.</td>
<td>Discard medication solution container, tubing, and needle or leave hanging with needle covered for future use, according to agency policy.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11.</td>
<td>Wash hands.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12.</td>
<td>Document medication administration and add IV volume to IV intake.</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
**INTRAVENTOUS SOLUTION WITH MEDICATION**

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>NP</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gather equipment.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>2. Wash hands.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>*3. Compare solution and medication with physicians order.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>4. Calculate and add correct medication.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>5. Label solution container with client’s name, solution type, additives, date, and time hung.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>*6. Explain procedure and purpose to client. Check arm band.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>7. Prepare container for spiking:</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>a. If solution is in a plastic bag, remove plastic cover from entry nipple. Maintain sterility of nipple end.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>8. Close clamp on existing tubing.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>9. Take old solution container from IV pole and invert it.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>10. Remove spike from used container, maintaining its sterility. Spike new intravenous container with firm push/twist motion.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>11. Hang new container on IV pole.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>12. Inspect tubing for air bubbles and assess that drip chamber is one-half full of solution.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>13. Adjust clamp to regulate flow rate, according to the physician’s order.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
<tr>
<td>*14. Record medication on medication sheet.</td>
<td>☐</td>
<td>☐</td>
<td>________________________________</td>
</tr>
</tbody>
</table>

Key:  S = Satisfactory         NP = Needs Practice

☐ Pass         ☐ Fail

Student’s Signature: ________________________________ Date: ________________________________

Instructor’s Signature: ________________________________ Date: ________________________________
Skills Testing for N252

Required skills for N252 are: 1) IV medication administration, and 2) Central line dressing change. Skills testing will be done at the clinical site, with your clinical faculty. Date and time for testing will be arranged by your clinical faculty.

Criteria for administration of medications will be taken from the check lists from the N252 skills manual, pages 61, 62, 63. For medication administration you will be expected to:

- Calculate the I.V. medication dose
- Calculate an IV drip rate
- Prepare the medication (reconstitute with appropriate solution); draw up correct amount
- Dilute as needed
- Administer as Push, piggyback, or in I.V. solution that is running
- Set IV pump correctly for rate and volume; as primary or secondary infusion. Selection of tubing and solution will be required.

Medications for testing will be one of the medications that your patient is receiving, it is your responsibility to be familiar with the medication that you are administering.

Central Line Dressing Change using a Bio Patch:

- Locate the policy for central line dressing changes for your clinical facility.
- Explain procedure to client
- Gather equipment and wash hands (don mask)
- Open supplies, maintaining sterility
- Don non sterile gloves and remove tape and old dressing
- Don sterile gloves
- Beginning at the catheter insertion site, clean outward in a circular motion, using hospital approved antiseptic solution.
- Cover insertion site with Bio patch and sterile clear dressing, following hospital policy.
- Tape tubing so it does not get caught on clothing
- Label with date and time initials
- Document date, time and conditions of site, and patient’s reaction on the medical record.
## Adult Nursing Process Plans

### Required Elements and Grading

<table>
<thead>
<tr>
<th>Long Care Plan</th>
<th>Short Care Plan</th>
<th>Modified-Pre Care</th>
<th>Modified-Some Care</th>
<th>Modified-Full Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Face Sheet (5)</td>
<td>1. Face Sheet (10)</td>
<td>1. Face Sheet (10)</td>
<td>1. Face Sheet (10)</td>
<td>1. Face Sheet (10)</td>
</tr>
<tr>
<td>2. APA Paper (5)</td>
<td>2. Patho (20)</td>
<td>2. Patho (20)</td>
<td>2. Patho (20)</td>
<td>2. Patho (20)</td>
</tr>
<tr>
<td>3. Article Review (5)</td>
<td>3. Subjective data for 3 FHPs (5)</td>
<td>3. Med sheet for meds that will be given by the student (5)</td>
<td>3. Written head to toe assessment using FHPs as a guideline (15)</td>
<td>3. Written head to toe assessment using FHPs as a guideline (15)</td>
</tr>
<tr>
<td>5. Subjective data for all FHPs (10)</td>
<td>5. Lab Sheet (5)</td>
<td>5. Lab sheet (5)</td>
<td>5. Indicate abnormal labs on the FHPs using up or down arrow (5)</td>
<td>5. Lab sheet (5)</td>
</tr>
<tr>
<td>7. Lab Sheet (5)</td>
<td>7. Four priority nursing diagnoses with rationales for top first 4 diagnoses (10)</td>
<td>7. Four priority nursing diagnoses with rationales for top first 4 diagnoses (10)</td>
<td>7. Plan of care with NANDA, NIC and NOC for one nursing diagnosis (20)</td>
<td>7. Plan of care with NANDA, NIC and NOC for one nursing diagnosis (20)</td>
</tr>
<tr>
<td>9. Six priority nursing diagnoses with rationales for top first 4 diagnoses (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Plan of care with NANDA, NIC and NOC for top three nursing diagnoses (30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (100)</td>
<td></td>
<td></td>
<td></td>
<td>Total (80)</td>
</tr>
</tbody>
</table>
First Page
1. Answer every prompt; don’t leave blanks. If unknown or your patient is unable to answer, note this.
2. Most info should be available in the chart but must be verified with patient.
3. Use appropriate terminology to discuss history & current hospitalization.

APA Paper
1. In your 2-page paper address the life stage of the patient and give the theorist you are using (ie. Erickson). You MUST give 2 examples of why this patient fits in this stage and if it is appropriate.
2. Write a paragraph each on the cultural, socioeconomic, psychosocial and family issues that apply to this patient, address how these areas impact the patient’s health care. Provide examples to support you statements.
3. Use APA format with references.

Article Review
1. Include a 1-2 paragraph summary of a relevant nursing article from a nursing journal in your paper and how it relates to your patient.

Patho
1. Develop a patho report for the patient’s primary disorder
2. Be brief—use bullet points; no full sentences, please. Condense your info.
3. Highlight what applies to your patient.
4. References are required.
5. Include the following info, using the following headings:
   a. Name of Disorder
   b. Definition
   c. Etiology and/or Epidemiology
   d. Signs & Symptoms
   e. Relevant laboratory studies
   f. Diagnostic studies
   g. Medical Interventions (Medications, surgical procedures, other treatments)
   h. Nursing Interventions (what should a good nurse do?)
   i. Complications
   j. Prognosis: Acute or Chronic, or Terminal?

Meds
1. Provide a list of meds that your patient is due to receive on the date of care (24 hour period, 0700-0659).
2. Gather list of meds from current day’s MAR.
3. Include the following info:
   a. Drug name (trade & generic)
   b. Dose
   c. Route
   d. Frequency (if PRN, also state indication for administration)
   e. Classification
   f. Significance for patient (Specific to your patient, why is this drug being used?)
   g. Nursing considerations (significant side effects to monitor for, therapeutic levels, administration techniques)
### Labs
1. Complete lab sheet for all relevant labs drawn since admission.
2. For frequently ordered labs, such as CBC and BMP, use data from past three days.
3. Include the following information:
   a. Normal range
   b. Actual value
   c. Significance of lab result to your patient (i.e., a normal amylase may suggest that the patient does not have pancreatitis)

### FHPs
1. Data may be placed in either subjective or objective column, depending on source of info.
   d. Subjective data: patient’s statements only. Previous statements made by patient & documented in chart may also be recorded here. Many questions are “yes or no.” A simple “no” is fine, if that is the patient’s entire response; include further info as appropriate. For “yes” answers, provide the patient’s elaboration on this response.
   e. Objective data: all other info. Document your own observations, or indicate that you obtained the info from a secondary source by noting: Chart (C), Family (F), Doctor (D), or Case Manager (CM). For info that cannot be gathered for a legitimate reason, indicate by documenting explanation.
     a. Examples for subjective data: “Pt refuses to answer,” “pt unable to remember,” or “pt unable to formulate appropriate answer—instead stated: ___________ (actually state bizarre or inappropriate answer given)”
     b. Examples for objective data: “Unable to observe d/t (state why),” “info unavailable from chart or staff,” “N/A (but only if truly not applicable),” “patient refused assessment.”

2. Nursing Diagnoses
   a. Be sure to use NANDA format, with R/T & M/B for Actual diagnoses & R/T only for High Risk diagnoses.
   b. No goals, measurement criteria, or NIC/NOC required in the FHPs.
   c. Don’t forget to make sure your M/B—your “evidence”—is clearly supported by data stated in the corresponding S & O. If no prompt directly solicited the “evidence,” you still must include it somewhere.

### Ranking of Diagnoses
1. Rank the top 4 diagnoses for this patient for this hospitalization
   a. Choose based on life & death issues, problems that have the greatest negative impact on the patient, reason for admission, reason for continued hospitalization, problems that are most important to the patient, problems that can be most easily resolved, problems that must be addressed in chronological order, etc.
   b. Hint: medical issues will rarely appear on this list. Be aware that if medical problems are truly the priority, your patient would have a bed on the medical floor.
2. Provide rationales for each ranking. Make sure these explanations reflect why you are choosing each dx’s position in the ranking, not simply why you assigned the dx in the first place.

### Care Plans
1. Nursing diagnosis work up with NIC/NOC.
2. Goal must be individualized for patient, & be relevant to the dx.
3. Measurement criteria must be measurable! Give a time frame. If appropriate, state patient’s current status & the desired level of functioning.
4. Interventions must directly support goal.
   a. Only 1 may be a monitoring/assessing intervention.
   b. At least 2 must be active interventions that directly influence your patient’s progress towards the stated goal.
5. Rationales should be short, common-sense statements.
6. Evaluation should clearly state whether goal was met, based on measurement criteria. Restate the measurement criteria in your documentation of the patient’s response.
7. Revision of goals and or interventions should be considered for any goal not fully met.

Reference List
1. You may submit all references listed on one “Reference Page,” with subheadings to indicate which references were used for which area: Patho, Meds, Labs, Care Plans.
2. APA Paper requires its own reference page, per APA style!

Geriatric Care Plan
While in the geriatric rotation, you will develop a plan of care specific to the geriatric population. There are several specialized assessment forms that are included in Section 4. These forms include:
1. Minimum Data Set
2. Self Care and Mobility Assessment
3. Assessment for Fall Risk
4. Dehydration Fluid Maintenance
5. Braden Scale for Predicting Pressure Sore Risk
6. Mini Mental State Exam
7. Summary of Geriatric assessment.

Section 4 also contains more detailed information regarding the expectations and assignments for the geriatric rotation.
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD  
Department of Nursing

N252  

Specific Site Objectives for the Geriatric Rotation

Upon successful completion of N252, the student will:

1. Identify the developmental, psychosocial, physiological, pathophysiological, psychopathological, spiritual, and cultural factors that influence older adults.

2. Define the biopsychosocial and behavioral concepts used in identifying older adults and their families’ levels of stability.

3. Analyze the interrelationships of pathophysiological concepts with functional health patterns in selected health problems.

4. Develop awareness of current issues, research, and legislation relative to the aging client.

5. Assess physical and mental health of older adults.
Geriatric Rotation Assignment

There are two care plans required for the geriatric rotation. If possible, the student can/should select a geriatric patient that can be followed for the entire geriatric rotation (2 weeks). In the first week, a modified care plan should be completed. In the second week, a long care plan should be completed building on the information from the first week.

Modified geriatric care plan:

A. Use two or more of the geriatric assessment tools.
B. Develop a statement of one half page (typed double-spaced) identifying problem areas you have assessed. Include as much information as you can that addresses culture, socioeconomic, and family issues. Use APA format.
C. List two nursing diagnoses that are high priority. Give your rationale with references for this selection.
D. Work up a care plan for the top diagnosis (one) using goals, client outcomes, nursing interventions, rationale, and evaluation (NIC & NOC).

For the long geriatric care plan use the following directions:

A. Use the following tools to assess your client and include them in your report.
   1. Minimum Data Set
   2. Self Care and Mobility Assessment
   3. Assessment for Fall Risk
   4. Dehydration Fluid Maintenance
   5. Braden Scale for Predicting Pressure Sore Risk
   6. Mini Mental State Exam
   7. Summary of Geriatric Assessment

B. Use the FHP care plans to assess any other area that is relevant and critical. Use 1st page and patho (if applicable) with physical assessment as a minimum.

C. Write a two page paper that identifies the problem areas that you assessed. The reflection of developmental, culture, socioeconomic, and family issues must be included. Use APA format and references (Ebersole & Hess). Interpret the assessment and findings (A, 1-7 & B above).

D. From the above information, list and prioritize four nursing diagnoses. Give your rationale with references for this selection.

   E. Work up a care plan for the top two nursing diagnoses using goals, client outcomes, nursing interventions, rationale, and evaluation (NIC & NOC).
Mini Mental State Examination

Orientation
( ) What is the (year) (season) (date) (month)?
( ) Where are we: (state) (county) (town) (hospital) (floor)?

Registration
( ) Name three objects: 1 second to say each. Then ask the patient all three after you have said them. Give 1 point for each correct answer. Then repeat them until he or she learns all three. Count trials and record.

Attention and Calculation
( ) Serial 7's. 1 point for each correct. Stop after five answers. Alternatively spell "world" backwards.

Recall
( ) Ask for the three objects repeated above. Give 1 point for each correct.

Language
( ) Name a pencil, and watch (2 points)
Repeat the following "No ifs, ands, or buts." (1 point)
Follow a three-stage command:
"Take a paper in your right hand, fold it in half, and put it on the floor." (3 points)
Read and obey the following:
Close Your Eyes (1 point)
Write a sentence (1 point)
Copy design (1 point)

Total Score

Assess level of consciousness along a continuum.
Alert Drowsy Stupor Coma

Instructions for Administration of Mini-Mental State Examination

Orientation
(1) Ask for the date. Then ask specifically for parts omitted, e.g., "Can you also tell me what season it is?" One point for each correct.
(2) Ask in turn "Can you tell me the name of this hospital?" (town, country, etc.). One point for each correct.

Registration
Ask the patient if you may test his or her memory. Then say the names of three unrelated objects, clearly and slowly, about 1 second for each. After you have said all three, ask him or her to repeat them. This first repetition determines his or her score (0-3), but keep saying them until he or she can repeat all three, up to six trials. If he or she does not eventually learn all three, recall cannot be meaningfully tested.

Attention and Calculation
( ) Serial 7's. 1 point for each correct. Stop after five answers. Alternatively spell "world" backwards. Score the total number of correct answers.
If the patient cannot or will not perform this task, ask him or her to spell the word "world" backwards. The score is the number of letters in correct order, e.g., dirow = 5, diorw = 3.

Recall
Ask the patient if he or she can recall the three words you previously asked him or her to remember. Score 0-3.

Language
Naming: Show the patient a wrist watch and ask him or her what it is. Repeat for pencil. Score 0-2.
Repetition: Ask the patient to repeat the sentence after you. Allow only one trial. Score 0 or 1.
Three-stage command: Give the patient a piece of plain blank paper and repeat the command. Score 12 point for each part correctly executed.
Reading: On a blank piece of paper print the sentence "Close your eyes," in letters large enough for the patient to see clearly. Ask him or her to read it and do what it says. Score 1 point only if he or she actually closes his eyes.
Writing: Give the patient a blank piece of paper and ask him or her to write a sentence for you. Do not dictate a sentence, it is to be written spontaneously. It must contain a subject and verb and be sensible. Correct grammar and punctuation are not necessary.
Copying: On a clean piece of paper, draw intersecting pentagons, each side about 1 inch, and ask him or her to copy it exactly as it is. All 10 angles must be present, and 2 must intersect to score 1 point. Tremor and rotation are ignored.

Estimate the patient's level of consciousness along a continuum, from alert on the left to coma on the right.
**MINIMUM DATA SET (MDS) — VERSION 2.0**

**FOR NURSING HOME RESIDENT ASSESSMENT AND CARE SCREENING**

**BASIC ASSESSMENT TRACKING FORM**

### SECTION AA. IDENTIFICATION INFORMATION

<table>
<thead>
<tr>
<th>1. RESIDENT NAME</th>
<th>8. SIGNATURES OF PERSONS WHO COMPLETED A PORTION OF THE ACCOMPANYING ASSESSMENT OR TRACKING FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. First</td>
<td></td>
</tr>
<tr>
<td>b. Middle Name</td>
<td></td>
</tr>
<tr>
<td>c. Last</td>
<td></td>
</tr>
<tr>
<td>d. Prefix</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>2. GENDER</th>
<th>9. SIGNATURES AND TITLE</th>
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<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
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<table>
<thead>
<tr>
<th>3. BIRTH DATE</th>
<th>10. INTERNET ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td></td>
</tr>
<tr>
<td>Month</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4. RACE/ETHNICITY</th>
<th>11. MEDICAID IDENTIFICATION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaskan Native</td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td></td>
</tr>
<tr>
<td>Black Not Hispanic origin</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
</tr>
<tr>
<td>White Not Hispanic origin</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. SOCIAL SECURITY NUMBER</th>
<th>12. MEDICARE IDENTIFICATION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Social Security Number</td>
<td></td>
</tr>
<tr>
<td>b. Medicare Number (Include Medicare HMO)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. FACILITY PROVIDER NOS</th>
<th>13. MEDICAID HCP IDENTIFICATION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. State No.</td>
<td></td>
</tr>
<tr>
<td>b. Federal No.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. MEDICARE HCN (If Applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
</tr>
<tr>
<td>b.</td>
</tr>
<tr>
<td>c.</td>
</tr>
<tr>
<td>d.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. REASONS FOR ASSESSMENT</th>
<th>14. MEDICAID HCP IDENTIFICATION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Primary reason for assessment</td>
<td></td>
</tr>
<tr>
<td>1. Admission assessment (required by day 15)</td>
<td></td>
</tr>
<tr>
<td>2. Annual assessment</td>
<td></td>
</tr>
<tr>
<td>3. Significant change in health status assessment</td>
<td></td>
</tr>
<tr>
<td>4. Significant change in status assessment</td>
<td></td>
</tr>
<tr>
<td>5. Significant change of care plan assessment</td>
<td></td>
</tr>
<tr>
<td>6. Significant change of care plan assessment</td>
<td></td>
</tr>
<tr>
<td>7. Significant change of prior assessment</td>
<td></td>
</tr>
<tr>
<td>8. Significant change of prior assessment</td>
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</tr>
<tr>
<td>9. SIGNATURES AND TITLE</td>
<td></td>
</tr>
<tr>
<td>a. Signature</td>
<td></td>
</tr>
<tr>
<td>b. Title</td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL INSTRUCTIONS**

Complete this information for submission with all inpatient and quarterly assessments (Admission, Annual, Significant Change, State or Medicare required assessments, or Quarterly Review, etc.)
CALIFORNIA STATE UNIVERSITY
Department of Nursing

N252

Minimum Data Set (MDS) for Nursing Home Resident Assessment and Care Screening

Mini Mental assessment

Download from WEB http://www.csub.edu/~bpulskamp/
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD  
Department of Nursing  

N252  

SELF CARE AND MOBILITY ASSESSMENT

<table>
<thead>
<tr>
<th></th>
<th>“Can do by myself”</th>
<th>“Can do with help of someone else”</th>
<th>“Cannot do at all”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Care Subscore</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Drinking from a cup</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Eating</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Dressing upper body</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4. Dressing lower body</td>
<td>7</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5. Putting on brace or</td>
<td>0</td>
<td>-2</td>
<td>0 (N/A)</td>
</tr>
<tr>
<td>artificial limb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Grooming</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Washing or bathing</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. Controlling urination</td>
<td>10</td>
<td>5 (accidents)</td>
<td>0 (incontinent)</td>
</tr>
<tr>
<td>9. Controlling bowel</td>
<td>10</td>
<td>5 (accidents)</td>
<td>0 (incontinent)</td>
</tr>
<tr>
<td>movements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mobility Subscore</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Getting in and out</td>
<td>15</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>of chair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Getting on and off</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>toilet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Getting in and out</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>of tub or shower</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Walking 50 yards</td>
<td>15</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>on the level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Walking up/down one</td>
<td>10</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>flight of stairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. If not walking:</td>
<td>5</td>
<td>0</td>
<td>0 (N/A)</td>
</tr>
<tr>
<td>propelling wheelchair</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Barthel total: Best score is 100; worst score is 0. — Score: ______________

**Note:** Tasks 1-9, the self-care subscore (including control of bladder and bowel sphincters), have a total possible score of 53. Tasks 10-15, the mobility subscore, have a total possible score of 47. The two groups of tasks combined make up the total Barthel Index with a total possible score of 100.
# ASSESSMENT FOR FALL RISK

<table>
<thead>
<tr>
<th>Intrinsic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensory changes:</strong> Glasses, hearing, proprioception</td>
</tr>
<tr>
<td><strong>Cardiovascular:</strong> Dysrhythmias, orthostatic blood</td>
</tr>
<tr>
<td>pressure, dizziness</td>
</tr>
<tr>
<td><strong>Foot disorders:</strong> Footwear, deformities</td>
</tr>
<tr>
<td><strong>Musculoskeletal:</strong> Mobility, strength, gait and balance</td>
</tr>
<tr>
<td>(getting up from a chair, turning while walking, step height, sitting down) (see Table 25-3)</td>
</tr>
<tr>
<td><strong>Neurological:</strong> Tremors, gait and balance</td>
</tr>
<tr>
<td><strong>Urological:</strong> Incontinence, urgency, micturation</td>
</tr>
<tr>
<td>hypotension, diuretic use</td>
</tr>
<tr>
<td><strong>Nutrition:</strong> Anemia, fluid or electrolyte imbalance</td>
</tr>
<tr>
<td><strong>Acute illness:</strong> Infection, mental status changes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychosocial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotional health:</strong> Stress</td>
</tr>
<tr>
<td><strong>Behavior and mental status changes:</strong> Confusion, depression, anxiety, dependency, agitation, denial, fear of falling</td>
</tr>
<tr>
<td><strong>Living situation</strong></td>
</tr>
<tr>
<td><strong>Caretakers</strong></td>
</tr>
<tr>
<td><strong>Pattern of activity:</strong> How far from home does the elder venture and how often?</td>
</tr>
<tr>
<td><strong>Type of activity</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drug Use and Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of drugs</strong> (include over-the-counter)</td>
</tr>
<tr>
<td><strong>Alcohol use</strong></td>
</tr>
<tr>
<td><strong>Interactions and side effects:</strong> Orthostatic hypotension, dizziness, change in mental status</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection or discussion of home hazards inside and outside the home and wherever elders spend a significant amount of time (stairs, handrails, bathroom, rugs, cabinets, clutter)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall History (secondary prevention)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Events leading up to a fall:</strong> What was the elder doing?</td>
</tr>
<tr>
<td><strong>Any warning?</strong> <strong>Where?</strong> <strong>How?</strong> <strong>When?</strong></td>
</tr>
<tr>
<td><strong>What happened after the fall?</strong></td>
</tr>
<tr>
<td><strong>Has the elder fallen before?</strong> (including falls without injuries)</td>
</tr>
</tbody>
</table>
Dehydration/Fluid Maintenance Triggers and Additional Risk Factors for Dehydration among Residents of Long-Term Care Facilities

**Dehydration/Fluid Maintenance Triggers**
Deterioration in cognitive status, skills, or abilities in last 90 days
Failure to eat or take medication(s)
Urinary tract infection in last 30 days
Current diagnosis of dehydration
Diarrhea
Dizziness/vertigo
Fever
Internal bleeding
Vomiting
Weight loss (≥5% in last 30 days; or 10% in last 180 days)
Insufficient fluid intake (dehydrated)
Did not consume all/almost all liquids provided during last 3 days
Leaves ≥25% food uneaten at most meals
Requirement for parenteral (intravenous) fluids

**Additional Potential Risk Factors**
Hand dexterity/body control problems
Use of diuretics
Abuse of laxatives
Uncontrolled diabetes mellitus
Swallowing problems
Purposeful restriction of fluids
Patients on enteral feedings (need free water in addition to feedings)
History of previous episodes of dehydration
Comprehension/communication problems
### Braden Scale for Predicting Pressure Sore Risk

<table>
<thead>
<tr>
<th>Patients Name:</th>
<th>Sensory Perception ability to respond meaningfully to pressure-related discomfort</th>
<th>Moisture-Degree to which skin is exposed to moisture</th>
<th>Activity</th>
<th>Mobility</th>
<th>Nutrition</th>
<th>Friction and shear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Rating/Comments Date:</td>
<td>Total Rating/Comments Date:</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Braden Scale for Predicting Pressure Sore Risk:**

<table>
<thead>
<tr>
<th>Patient’s name</th>
<th>Evaluator’s name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory Perception Ability to respond meaningfully to pressure-related discomfort</td>
<td>Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation. OR limited ability to feel pain over most of body surface.</td>
<td></td>
</tr>
<tr>
<td>Moisture Degree to which skin is exposed to moisture</td>
<td>Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.</td>
<td></td>
</tr>
<tr>
<td>Activity Degree of physical activity</td>
<td>Confined to bed.</td>
<td></td>
</tr>
<tr>
<td>Mobility Ability to change and control body position</td>
<td>Does not make even slight changes in body or extremity position without assistance.</td>
<td></td>
</tr>
<tr>
<td>Nutrition Usual food intake pattern</td>
<td>Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, OR is NPO and/or maintained on clear liquids or IV for more than 5 days.</td>
<td></td>
</tr>
<tr>
<td>Friction and shear</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures, or agitation leads to almost constant friction.</td>
<td></td>
</tr>
</tbody>
</table>

**Assign the condition of the patient to one of the 4 possible descriptions stated in the scale. The single points shall be added up. At a sum of 18 or less, an increased risk for pressure ulcers is existing. The less points reached, the higher the risk. Evaluate which areas have the highest risk or involvement. In order to avoid the development of pressure ulcers the necessary caring measurements shall be planned, initiated and executed.**

NPO, Nothing by mouth; IV, Intravenously; TPM, Total parenteral nutrition.
### Summary of Geriatric Assessment

**Patient Name:** _________________________  
**Faculty:** ____________________________  
**Date:** ______________________________

Check any areas that apply:

<table>
<thead>
<tr>
<th>A. Problem Area</th>
<th>Check if Triggered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DELIRIUM</td>
<td></td>
</tr>
<tr>
<td>2. COGNITIVE LOSS</td>
<td></td>
</tr>
<tr>
<td>3. VISUAL FUNCTION</td>
<td></td>
</tr>
<tr>
<td>4. COMMUNICATION</td>
<td></td>
</tr>
<tr>
<td>5. ADL FUNCTIONAL/REHABILITATION POTENTIAL</td>
<td></td>
</tr>
<tr>
<td>6. URINARY INCONTINENCE AND INDWELLING CATHERTER</td>
<td></td>
</tr>
<tr>
<td>7. PSYCHOSOCIAL WELL-BEING</td>
<td></td>
</tr>
<tr>
<td>8. MOOD STATE</td>
<td></td>
</tr>
<tr>
<td>9. BEHAVIORAL SYMPTOMS</td>
<td></td>
</tr>
<tr>
<td>10. ACTIVITIES</td>
<td></td>
</tr>
<tr>
<td>11. FALLS</td>
<td></td>
</tr>
<tr>
<td>12. NUTRITIONAL STATUS</td>
<td></td>
</tr>
<tr>
<td>13. FEEDING TUBES</td>
<td></td>
</tr>
<tr>
<td>14. DEHYDRATION/FLUID MAINTENANCE</td>
<td></td>
</tr>
<tr>
<td>15. ORAL/DENTAL CARE</td>
<td></td>
</tr>
<tr>
<td>16. PRESSURE ULCERS</td>
<td></td>
</tr>
<tr>
<td>17. PSYCHOTROPIC DRUG USE</td>
<td></td>
</tr>
<tr>
<td>18. PHYSICAL RESTRAINTS</td>
<td></td>
</tr>
</tbody>
</table>

1. Give a summary statement of problem areas

2. List four nursing diagnoses that would be top priority with rationale.

3. Work up a care plan for the top two nursing diagnoses using NIC, NOC.

BP 2/2000, KG3/04, bp,3/05, DW 3/06 bp/7/06
Name: __________________________________

20% Participation Grading to be based on:

<table>
<thead>
<tr>
<th>0-10 Scale</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preparation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Medications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Procedures/Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Assessments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Charting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Concepts of Patient Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Implementation of Nursing Care Plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Integration of Patho, Labs, Meds and Nursing Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Participation/Professional Responsibility /Nurse Practice Act /HIPAA Requirements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evaluation will be based on the degree to which the student meets the course objectives as they are delineated by the criteria stated in this evaluation tool.

A. To achieve a passing grade the student must meet the criteria in one of the following ways:

5. **Independent performance:**
   Performance safely and accurately each time without supportive cues from preceptor or instructor.
   Demonstrates dexterity and spends minimal time on task.
   Focuses on client.
   Applies theoretical knowledge each time.

4. **Supervised performance:**
   Performs safely and accurately each time, requires supportive cues occasionally during performance of tasks.
   Demonstrates coordination, and spends reasonable time on task.
   Focuses on client with some focus on task.
   Applies theoretical knowledge with occasional cues.

3. **Assisted performance:**
   Performs safely and accurately each time, requires frequent supportive and occasional directive cues.
   Demonstrates partial lack of dexterity.
   Focuses primarily on task or own behavior, not on client.
   Can identify principles but needs direction to coordinate with application.

2. **Provisional performance:**
   Performs safely under close supervision. Not always accurate, requires continuous supportive and directive cues.
   Demonstrates lack of skill and/or performs tasks with considerable delay with omissions and delays.
   Focuses entirely on task or own behavior.
   Applies principles inappropriately or adequately.

B. A student fails the objectives if any of the following are indicated.

1. **Dependent performance:**
   Performs in an unsafe manner, requires continuous supportive directions and cues.
   Performs in an unskilled manner.
   Attempts activity or behavior yet is unable to complete.
   Focuses entirely on task or own behavior.
   Unable to identify principles or apply them.

O. **Negative Pattern:** Demonstrates a pattern of unacceptable performances.

**NSO** indicated not sufficiently observed  **N** indicates no opportunity


bbp 11/96, 2/04kg 3/05 bp
Summary of Clinical Performance. Use criteria as described to evaluate performance:
Independent; supervised; assisted; provisional; dependent; negative pattern

<table>
<thead>
<tr>
<th>Criteria</th>
<th>N244</th>
<th>N252 (MSI)</th>
<th>N342 (MSII)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Interviewing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Data collecting (subjective)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 Elicits client information</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.4 Categorize and validate data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Implement health assessment (objective data)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.2 Assess mental status through applicable theories</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.3 Accurately record data</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.1 Plan of care with physical components</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.2 Plan of care with economic, cultural, and social forces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Integrates information in nursing care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Assess and implement nursing activities</td>
<td></td>
<td></td>
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<tr>
<td>4.2 Demonstrate competency in skills testing</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4.3 Integrate theory in clinical</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5.1 Evaluate medical diagnosis and gather supporting data from labs, and procedures</td>
<td></td>
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</tr>
<tr>
<td>5.2 Report and record observations pertinent to client</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3 Integrates information in nursing care</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6.1 Communicate effectively with clients, faculty, staff and families</td>
<td></td>
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<tr>
<td>7.1 Demonstrate preparedness and safety for skills lab and/or clinical with rationale for procedures.</td>
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</tr>
<tr>
<td>7.2 Demonstrates preparedness, safety, and timeliness in administration of medications.</td>
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<tr>
<td>8.1 Utilize current and relevant literature for assignments and patient care</td>
<td></td>
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</tr>
<tr>
<td>9.1 Behaves in a safe, responsible manner while caring for patients, and families.</td>
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<tr>
<td>9.2 Demonstrates class participation in clinical and post conference</td>
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</tr>
<tr>
<td>9.3 Functions in framework of policies of hospital, CSUB, and Nurse Practice Act</td>
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<tr>
<td>9.4 Demonstrates reliability and responsibility</td>
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<tr>
<td>9.5 Demonstrates professionalism in performance and attitude</td>
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</tbody>
</table>
In order to pass the course, the student must demonstrate the ability to perform these behaviors in a safe, organized manner in the clinical practice setting. Failure in any section will constitute failure in the course.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>LEVEL 0-5</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1. Utilizes knowledge of developmental, psychosocial, physiological, psychopathological, and pathophysiological factors that influence adults in acute and geriatric care setting</strong></td>
<td></td>
</tr>
<tr>
<td>A. Development</td>
<td>Utilizes Erikson’s theory to evaluate the client’s developmental level and status. Identifies family structure and interactions and its impact on health status and risk.</td>
</tr>
<tr>
<td>B. Psychosocial</td>
<td>Identifies clients’ psychological responses to illness and their impact on health status. Identifies family structure and interactions and its impact on health status and risk.</td>
</tr>
<tr>
<td>C. Psychopathological</td>
<td>Utilizes knowledge of psychopathology to identify and analyze the dynamics of psychological disorders and therapeutic interventions.</td>
</tr>
<tr>
<td>D. Physiological</td>
<td>Utilizes knowledge of physiology to analyze basic needs and responses.</td>
</tr>
<tr>
<td>E. Pathophysiological</td>
<td>Utilizes knowledge of pathophysiology to identify and analyze the dynamics of disease pro-processes and therapeutic interventions.</td>
</tr>
<tr>
<td><strong>2. Considers cultural and socioeconomic factors influencing health outcomes and client expectations.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifies the social, cultural, and economic factors that affect health outcomes and client expectations.</td>
</tr>
<tr>
<td><strong>3. Develops competence in making assessments, formulating nursing diagnoses, and developing, implementing, and evaluating nursing care.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assessment Structures the environment to ensure privacy and uninterrupted time.</td>
</tr>
<tr>
<td>A. Subjective</td>
<td>Interview process utilizes communication skills to achieve the goals of the interview, is client centered, and is focused on client perceptions.</td>
</tr>
<tr>
<td></td>
<td>Introduces, carries out, and closes interview effectively.</td>
</tr>
<tr>
<td></td>
<td>Elicits data about client’s current status, past, family, and psychosocial history relative to current health problems and risk factors.</td>
</tr>
</tbody>
</table>
B. Objective
As appropriate, data elicited by:
(1) Physical examination,
   including: inspection/observation of overt behavior
   - palpitation
   - percussion
   - auscultation
(2) Review and interpretation of clinical laboratory data

C. Diagnosis
Synthesizes (correlates, interprets) all data collected (subjective, and objective data including clinical laboratory studies) in arriving at identification of problems.

D. Demonstrates constructive and critical thinking in analyzing and interpreting data collected.
(1) Diagnoses stated in NANDA format with identification of related Gordon’s Functional Health Patterns
(2) Identifies actual, potential, possible nursing problems and collaborative problems.
(3) Identifies and lists all client problems.

E. Planning Intervention
(1) Utilizes data collected.
(2) States Nursing Outcome Criteria (NOC) with measurement criteria.
(3) Identifies nursing intervention (NIC) & Nursing Activities appropriate to attaining objectives.
(4) Rationale for nursing action is clearly and concisely stated, documented appropriately, and reflects current research findings and other current publications.

F. Interventions
(1) Establishes rapport with the client.
(2) Establishes priorities and organizes care.
(3) Skillfully performs nursing techniques with minimal discomfort to client.
(4) Completes care in allotted time.
(5) Supports and coaches the client in acute and/or crises situations in which there is a need for immediate intervention.
(6) Utilizes opportunities for teaching clients self-care and facilitates care giving activities.
(7) Demonstrates understanding of parameters of nursing practice as prescribed by the California Nurse Practice Act.
(8) Performs care in a safe manner.
(9) Calculates, verbalize information and administers medications safely. Medication administration is accurate and timely.
(9) Monitors client’s condition in a responsible manner.
(10) Reports client status in a timely fashion to the appropriate staff members.
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>G.</strong> Evaluation</td>
<td>LEVEL 0-5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Interprets client responses to therapy accurately.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Correctly identifies ongoing stressors impacting client responses.</td>
<td></td>
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<tr>
<td>4.</td>
<td>Demonstrates <strong>professional behavior</strong> in interaction with patients, health team members, and the public.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. Seeks out and utilizes opportunities for learning by:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1) Consistently coming prepared for learning experiences (initial written care plan as expected, review of skills, and other).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) Arriving at clinical on time</td>
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<td>(3) Dressed in uniform appropriately</td>
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<tr>
<td></td>
<td></td>
<td>(4) Identifying challenging and varied experiences appropriate to self-directed learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5) Performs in a professional manner at all times</td>
</tr>
<tr>
<td></td>
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<td>(6) Follows HIPAA regulations at all times</td>
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<td></td>
<td>B. Prepared for and participates in clinical conferences.</td>
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<td></td>
<td>C. Submits written assignments on time.</td>
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<td></td>
<td>D. Makes arrangements with appropriate individuals when unable to meet written or performance commitments.</td>
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<tr>
<td>5.</td>
<td>Develop skills in therapeutic communications.</td>
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<tr>
<td></td>
<td>A. Utilizes verbal and non-verbal communication skills to encourage client expression.</td>
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<tr>
<td></td>
<td>B. Recognizes messages (feelings, intent, needs) being communicated by the client.</td>
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<td></td>
<td>C. Assists clients to gain insight.</td>
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<td></td>
<td>D. Intervenes to assist client in developing effective interpersonal relationships.</td>
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<tr>
<td>6.</td>
<td>Exhibits competence in verbal and written communication with others through charting and reporting.</td>
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<tr>
<td></td>
<td>A. Accurately and completely records and reports appropriate data in a timely manner.</td>
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<tr>
<td></td>
<td>B. Process recording is written in a manner that contributes to analysis of the nurse-client interactions.</td>
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<tr>
<td></td>
<td>C. Nursing care plans are written in a manner that contributes to analysis of the nurse-client interactions.</td>
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<tr>
<td>7.</td>
<td>Demonstrates client advocacy.</td>
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<tr>
<td></td>
<td>A. Recognizes and supports client’s autonomy and rights.</td>
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<td></td>
<td>B. Recognizes ethical dilemmas and principles, and utilizes a problem-solving method in resolving the issues.</td>
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<tr>
<td>8.</td>
<td>Utilize nursing publications and appropriate research findings for client care management.</td>
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<tr>
<td></td>
<td>LEVEL 0-5</td>
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<td>---</td>
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</tr>
</tbody>
</table>
| 9. | Completes written assignments using correct syntax, grammar, and spelling.  
   | A. Nursing process paper includes essential information and is organized sequentially and logically, and includes appropriate references.  
   | B. Nursing care plans include essential information, are organized sequentially and logically, and includes appropriate references. |   |
| 10. | Seeks to enhance their own learning through client selection, client care, discharge planning, and other independent activities. |   |
| 11. | Met the objectives of the geriatrics component. |   |
### Part II: Geriatric Assessment

<table>
<thead>
<tr>
<th>A. PHYSICAL ASSESSMENT</th>
<th>LEVEL 0-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vital signs, including BP.</td>
<td></td>
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</tbody>
</table>
| 2. General Appearance (Inspection)  
- developmental, nutritional, general health status  
- other appropriate data | |
| 3. Skin/Endocrine (Inspection & Palpation)  
- color, texture, turgor, moisture  
- vasculature  
- pigmentation  
- lesions, scars  
- hair distribution  
- edema | |
| 4. Head (Inspection & Palpation)  
- size, shape, symmetry  
- scalp, hair  
- face (CN V, VII)  
  - sensation, expression  
- symmetry, corneal reflex  
- lesions, scars, edema, taste | |
| 5. Eyes (Inspection)  
- eyebrows  
- lids: general appearance and symmetry  
- eyes: position and alignment  
- lachrymal duct: swelling, drainage  
- conjunctiva and sclera: inflammation, color  
- iris: regularity  
- pupils: size, shape, equality, response to light  
- cornea: transparency, regularity  
- visual acuity: glasses, contact lenses | |
| 6. Ears (Inspection & Palpation)  
- external ear and mastoid (appearance)  
- gross hearing (functional or nonfunctional) | |
| 7. Nose (Inspection & Palpation)  
- external structure (appearance)  
- discharge, patency | |
| 8. Sinuses (frontal & maxillary)  
- tenderness (palpation) | |
| 9. Mouth (Inspection & Palpation)  
- lips, buccal mucosa  
- teeth, gums & gag reflex | |
| 10. Neck (Inspection & Palpation)  
- swallowing  
- ROM  
- accessory muscles for respiration (use of these)  
- trachea (position)  
- thyroid (gross appearance)  
- jugular vein distention | |
11. Cardiovascular (Inspection * Palpation)
   - apical impulse (PMI)
     (palpable in 50% of the population)
   - auscultation
     - rate and rhythm
   - $S_1$ $S_2$ split
     - extra heart sounds, murmurs, clicks
   - extracardiac: identifies abnormal findings as peripheral edema, ascites, clubbing of digits, cyanosis

12. Thorax (Inspection & Palpation)
   - symmetry, shape of thorax
   - A/P diameter less or equal transverse?
   - respiratory pattern/rate
   - chest expansion (degree & symmetry)
   - percussion (anterior, posterior, lateral lobes)
     - vesicular breath sounds
     - adventitious breath sounds (type, location)

13. Breasts
   - Inspection
     - symmetry, dimpling, nipple discharge
   - Palpation (non-routine)
     - masses

14. GI/Abdomen
   - Inspection
     - contour, symmetry
     - distention, pulsations
     - scars, straie, rash
     - hernias (obvious)
     - stools: description, frequency
     - diet
     - emesis
   - Auscultation
     - bowel sounds (presence, quality)
     - bruits
   - Percussion
     - dullness, tympany
   - Palpation
     - light (for areas of tenderness)

15. GU/Renal
    Inspection
    - genitalia (gross appearance and presence of abnormalities)
    - discharge
    - urine
<table>
<thead>
<tr>
<th></th>
<th>GYN/Reproductive Inspection</th>
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</thead>
<tbody>
<tr>
<td>16.</td>
<td>menstrual flow</td>
</tr>
<tr>
<td>16.</td>
<td>discharge</td>
</tr>
<tr>
<td>16.</td>
<td>degree of cleanliness</td>
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</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>Neuro</th>
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<tbody>
<tr>
<td>17.</td>
<td>Inspection</td>
</tr>
<tr>
<td>17.</td>
<td>Mental Status</td>
</tr>
<tr>
<td>17.</td>
<td>general cerebral function</td>
</tr>
<tr>
<td>17.</td>
<td>LOC</td>
</tr>
<tr>
<td>17.</td>
<td>orientation: person, place, date, time</td>
</tr>
<tr>
<td>17.</td>
<td>memory: remote/recent</td>
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<tr>
<td>17.</td>
<td>mood, affect</td>
</tr>
<tr>
<td>17.</td>
<td>specific cerebral function</td>
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<tr>
<td>17.</td>
<td>interpretation of sensory stimuli: noxious, visual, verbal</td>
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<tr>
<td>17.</td>
<td>speech: articulation, language, content</td>
</tr>
<tr>
<td>17.</td>
<td>Inspection, Percussion, Palpation</td>
</tr>
<tr>
<td>17.</td>
<td>Motor Status</td>
</tr>
<tr>
<td>17.</td>
<td>balance &amp; coordination</td>
</tr>
<tr>
<td>17.</td>
<td>gait, steadiness</td>
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<tr>
<td>17.</td>
<td>grip strength</td>
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<tr>
<td>17.</td>
<td>reflexes - superficial and deep tendon reflexes (DTR)</td>
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<tr>
<td>17.</td>
<td>Sensory Status</td>
</tr>
<tr>
<td>17.</td>
<td>pain, tactile sense</td>
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<thead>
<tr>
<th></th>
<th>Musculoskeletal Inspection</th>
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<tbody>
<tr>
<td>18.</td>
<td>head, neck UE, LE, spine, gait, posture, symmetry</td>
</tr>
<tr>
<td>18.</td>
<td>joints</td>
</tr>
<tr>
<td>18.</td>
<td>ROM</td>
</tr>
<tr>
<td>18.</td>
<td>tenderness, inflammation, swelling</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Identified the developmental, psychosocial, physiological, pathophysiological, psychopathological, spiritual, and cultural factors that influenced older adults.</th>
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<tbody>
<tr>
<td>19.</td>
<td>Defined the biopsychosocial and behavioral concepts used in identifying older adults and their families' levels of stability.</td>
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<tr>
<td>20.</td>
<td>Analyzed the interrelationships of pathophysiological concepts with functional health patterns in selected health problems.</td>
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<tr>
<td>21.</td>
<td>Developed awareness of current issues, research, and legislation relative to the aging client.</td>
</tr>
</tbody>
</table>

**COMMENTS:**
### INSTRUCTOR’S OVERALL COMMENTS:

Midterm:

Final:

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Student Signature (indicates written evaluation has been read by student):

<table>
<thead>
<tr>
<th>Date</th>
<th>Signature</th>
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<tbody>
<tr>
<td></td>
<td>(Midterm)</td>
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<td></td>
<td>(Final)</td>
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Instructor Signature:

<table>
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<tr>
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<tbody>
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### STUDENT COMMENTS: