HEALTH ASSESSMENT · STUDY GUIDE

Exam 3 Study Guide

This guide covers chapters 5 and 6. First you will learn to produce vital signs you can trust and to read them against the adult ranges, the lifespan bands and the patient's own baseline. Then you will learn the interview: how to prepare the room, open with a question that yields a story, dissect any symptom with OLDCARTS, reconcile medications, document allergies with their reactions, and notice the sentence that means stop and escalate. Work one chapter at a time. Read the "what to know" paragraphs, study the tables, then try each worked case with the steps covered. Finish each chapter with its ten self-test items. The cram sheet at the end puts the numbers and rules in one place.

WHAT THIS GUIDE COVERS

- Chapter 5 · trend versus snapshot, respiratory rate as the earliest sign, frequency and delegation, adult and pediatric ranges, thermoregulation and fever versus hyperthermia, temperature routes and offsets, pulse sites, rate, rhythm and 0 to 4+ amplitude, apical pulse and pulse deficit, respiratory patterns, pulse oximetry limits and occult hypoxemia, cuff sizing and technique errors, Korotkoff phases, ACC/AHA categories, MAP, pulse pressure, orthostatic vital signs, red flags and SBAR.
- Chapter 6 · preinteraction, the room and positioning, orientation, working and termination phases, therapeutic and nontherapeutic responses, hard conversations, interpreters, hearing loss and aphasia, biographic data, source and reliability, reason for seeking care, HPI, past history and GTPAL, medication reconciliation, allergy versus intolerance, family history and genograms, ADLs and IADLs, OLDCARTS and PQRSTU, pertinent negatives, the review of systems, HEEADSSS, PHQ-2, AUDIT-C and CAGE, red flags and delegation.

CHAPTER 5

Vital Signs

Read it in full: **Chapter 5 in the textbook**. Practice it in the lab: **Rate, Rhythm and Amplitude** and **Blood Pressure, and Knowing When to Call**.

What to know

The five vital signs are five windows on two questions: is this patient perfusing tissue with oxygenated blood, and is the body still holding the line? When one moves, look at the others, because compensation is a pattern. **Trend beats snapshot.** A pressure of 104/62 is fine in a small young adult and alarming in a patient whose baseline is 160/90. Before you call a number normal, look at the last three sets.

Respiratory rate is the earliest and most sensitive sign of deterioration and the one most often charted as 18 without being counted. Count it without telling the patient: keep your fingers on the wrist after the pulse and watch the chest. Count 30 seconds and double if regular; count a full 60 seconds if irregular, abnormal or in an infant.

Adult values: oral temperature 36.5 to 37.5 °C (fever at 38.0 °C), pulse 60 to 100, respirations 12 to 20, blood pressure under 120/80, SpO_2 95 to 100%, pulse pressure 30 to 40 mm Hg, MAP 70 to 100 mm Hg (organs threatened below 65). As children grow, heart and breathing rates fall and pressure rises. For ages 1 to 10, the lowest acceptable systolic is 70 + (2 × age). In pregnancy the heart rate rises 10 to 20 and pressure dips in the second trimester. Older adults show isolated systolic hypertension and a blunted fever, so a 1.1 °C rise over their own baseline matters.

Fever is a raised hypothalamic set point: chills while it climbs, a hot plateau, then sweating as it breaks. **Hyperthermia** has a normal set point overwhelmed by heat gain (heat stroke, malignant hyperthermia) and does not respond to antipyretics; it needs active cooling. Temperature is lowest at 0400 to 0600 and highest at 1600 to 1800. To convert, multiply °C by 1.8 and add 32.

Routes differ. Rectal runs about 0.5 °C above oral; axillary about 0.5 °C below and is the least reliable; tympanic and temporal run a little above oral. Chart the route every time. Avoid oral in confusion, seizure risk or young children; avoid rectal with neutropenia, low platelets, anticoagulation, rectal surgery or cardiac patients. In infants under 3 months, rectal is the standard, and a rectal 38.0 °C is an emergency. For the tympanic route, pull the pinna up and back in adults and children over 3, down and back under 3.

Feel the pulse with the index and middle fingers, never the thumb. Report rate, rhythm (regular, regularly irregular, irregularly irregular) and amplitude on the 0 to 4+ scale: 0 absent (confirm

with Doppler), 1+ weak and thready, 2+ normal, 3+ full, 4+ bounding. The **apical pulse** is at the fifth intercostal space, left midclavicular line, counted a full minute; use it for children under 2, irregular rhythms and before digoxin. A **pulse deficit** is apical minus radial, counted by two nurses at the same time for one minute.

Patterns: Kussmaul is deep, rapid and regular (metabolic acidosis, classically DKA). Cheyne-Stokes waxes and wanes with apnea (heart failure, raised ICP, end of life). Biot is irregular with apnea (brainstem injury, ominous). Agonal gasps mean no effective breathing. Pulse oximetry reports saturation only. SpO_2 90% is about a PaO_2 of 60 mm Hg, where the curve turns steep. It reads falsely normal in carbon monoxide poisoning, near 85% in methemoglobinemia, unreliably in poor perfusion, motion and dark nail polish, and it can **overestimate** in darker skin (occult hypoxemia).

The cuff bladder should be about 40% of arm circumference wide and encircle about 80% of the arm. Too small reads falsely high; too large reads falsely low. Rest five minutes, back supported, feet flat, legs uncrossed, arm bare and at heart level, no talking. Palpate the systolic first, inflate 20 to 30 mm Hg above it to avoid the **auscultatory gap**, and deflate at 2 to 3 mm Hg per second. Korotkoff phase I is systolic; phase V is diastolic.

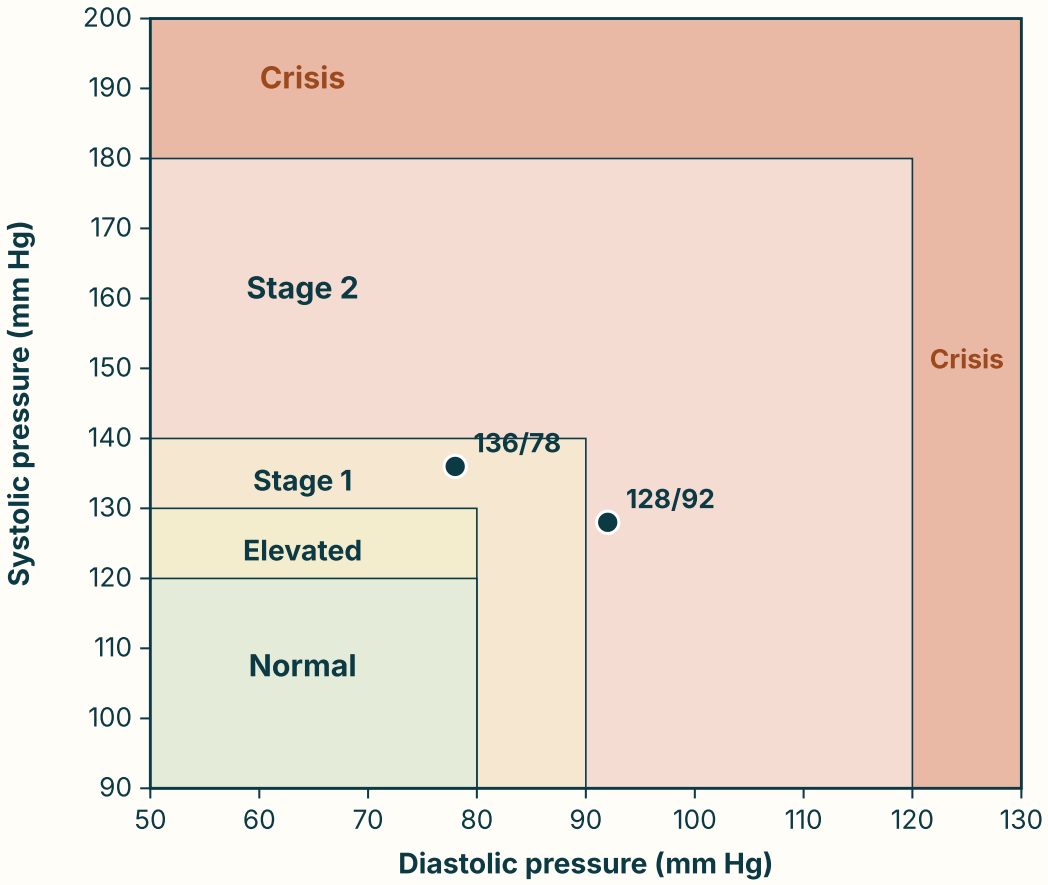
ACC/AHA categories: normal under 120 and under 80; elevated 120 to 129 and under 80; stage 1 130 to 139 or 80 to 89; stage 2 140 or more or 90 or more; crisis above 180 and/or above 120. Crisis with target organ signs is an emergency, and MAP is lowered no more than about 25% in the first hour. A narrowing pulse pressure suggests falling stroke volume; Cushing triad (widening pulse pressure, bradycardia, irregular breathing) signals herniation.

Orthostatic vital signs: supine 5 minutes, then sitting at 1 minute, then standing at 1 and 3 minutes, with a gait belt and a chair behind. Positive if within 3 minutes of standing the systolic falls 20 or more or the diastolic falls 10 or more; a heart rate rise of 20 or more supports volume loss. UAP may take routine vital signs on stable patients, but the admission set, unstable patients, transfusions, orthostatics, the apical pulse before digoxin and all interpretation stay with the RN.

LOCK THESE IN

- Trend beats snapshot: compare with the last three sets and the patient's baseline.
- Count respirations, never estimate. A rate above 24 is abnormal at any adult age.
- Chart the temperature route. Rectal about 0.5 °C above oral; axillary about 0.5 °C below.
- Irregular pulse: apical, full minute. Pulse deficit: two nurses, same minute.
- SpO_2 lies in CO poisoning, poor perfusion and can overestimate in darker skin.
- Cuff too small reads high; too large reads low. Palpate first to beat the auscultatory gap.
- Orthostatic positive: systolic down 20, diastolic down 10, within 3 minutes of standing.
- MAP = diastolic + one third of pulse pressure; below 65 threatens organs.

Adult blood pressure categories, drawn to scale



The higher category wins
136/78 is stage 1 by its systolic; 128/92 is stage 2 by its diastolic.

MAP
diastolic + one third of pulse pressure; below 65 threatens organs

Pulse pressure
systolic minus diastolic; 30 to 40 normal

Read both numbers, then take the higher category. Each band is defined by systolic or diastolic, so one high number is enough to move a reading up. Points are plotted to scale.

Pediatric and adult ranges (chapter 5, PALS based)

Age	Heart rate	Respirations	Systolic BP
Neonate, under 1 month	100 to 205 awake	30 to 60	60 to 90 (below 60 is hypotension)
Infant, 1 to 12 months	100 to 180 awake	30 to 53	72 to 104 (below 70 is hypotension)
Toddler, 1 to 2 years	98 to 140	22 to 37	86 to 106
Preschool, 3 to 5 years	80 to 120	20 to 28	89 to 112
School age, 6 to 11 years	75 to 118	18 to 25	97 to 115
Adolescent, 12 to 15 years	60 to 100	12 to 20	110 to 131
Adult	60 to 100	12 to 20	Under 120

Technique errors and what they do

Error	Effect
Cuff too narrow or short	Falsely high
Cuff too wide or long	Falsely low
Cuff over clothing or loose	Falsely high
Arm below heart level	Falsely high
Legs crossed	Systolic higher by 2 to 8 mm Hg
Full bladder, talking, caffeine or nicotine	Higher by about 10 mm Hg each
Deflating faster than 3 mm Hg per second	Systolic falsely low, diastolic falsely high
Skipping the palpated estimate	Auscultatory gap: systolic charted 20 to 40 too low
Mouth breathing during an oral temperature	Reading drifts low
Doubling a 30 second count on an irregular pulse	Rate wrong in either direction

Worked cases

WORKED CASE 1 · MAP AND PULSE PRESSURE

Mr. Delgado's pressure falls from 124/72 at 1000 to 96/54 at 1400. Find the MAP and pulse pressure for each set.

STEP 1 · PULSE PRESSURE AT 1000

124 − 72 = 52 mm Hg.

STEP 2 · MAP AT 1000

72 + 52 ÷ 3 = 72 + 17.3 = 89.3, about 89 mm Hg.

STEP 3 · PULSE PRESSURE AT 1400

96 − 54 = 42 mm Hg.

STEP 4 · MAP AT 1400

54 + 42 ÷ 3 = 54 + 14 = 68 mm Hg. Still above 65, but falling fast.

READ THE TREND

Systolic is down 28 points. With a temperature of 38.4 °C, HR 118, RR 26 and new confusion, he meets all three qSOFA criteria. Call now with SBAR.

WORKED CASE 2 · ORTHOSTATIC VITAL SIGNS

Ms. Grant has been dizzy when standing. Supine: 128/78, HR 72. Sitting 1 minute: 118/74, HR 84. Standing 1 minute: 102/66, HR 96. Standing 3 minutes: 98/62, HR 104. She feels lightheaded at 3 minutes.

STEP 1 · COMPARE SYSTOLIC

128 − 98 = 30 mm Hg drop. That is 20 or more: positive.

STEP 2 · COMPARE DIASTOLIC

78 − 62 = 16 mm Hg drop. That is 10 or more: positive.

STEP 3 · COMPARE HEART RATE

104 − 72 = 32 beats per minute rise, which supports volume depletion.

STEP 4 · ACT

Return her to bed with two-person assist, start fall precautions, notify the provider, and chart every set with the symptom.

WORKED CASE 3 · MEASURING A PULSE DEFICIT

Mr. Ito is in atrial fibrillation. You and a second nurse count together for one full minute: apical 118, irregularly irregular; radial 92.

STEP 1 · SUBTRACT

118 − 92 = a pulse deficit of 26.

STEP 2 · EXPLAIN IT

Some beats come too soon to fill the ventricle, so they are heard at the apex but never reach the wrist.

STEP 3 · CHART ALL THREE NUMBERS

"Apical 118, irregularly irregular; radial 92; pulse deficit 26. Counted simultaneously for 1 minute with a second RN."

WATCH THE TREND

A widening deficit means fewer beats are perfusing the body, even if the apical rate looks stable.

WORKED CASE 4 · PEDIATRIC HYPOTENSION AND TEMPERATURE CONVERSION

A 6 year old has a systolic of 80 mm Hg. Separately, a parent reports a temperature of 102.2 °F.

STEP 1 · FIND THE SYSTOLIC FLOOR

70 + (2 × 6) = 82 mm Hg.

STEP 2 · COMPARE

80 is below 82, so this child is hypotensive. Escalate now; it is a late sign.

STEP 3 · CONVERT THE TEMPERATURE

(102.2 − 32) ÷ 1.8 = 70.2 ÷ 1.8 = 39.0 °C.

CHECK IT BACK

39.0 × 1.8 + 32 = 70.2 + 32 = 102.2 °F.

TRAPS PEOPLE FALL INTO

- **Calling a value normal without the trend.** A "normal" pressure may be a 50 point fall from this patient's baseline.
- **Charting a respiratory rate you did not count.** It is the earliest warning sign and the most often falsified.
- **Trusting a 99% SpO_2 after smoke exposure.** Carbon monoxide reads as oxyhemoglobin. Get co-oximetry.
- **Using a standard cuff on a large arm.** Too small reads falsely high and creates false hypertension.
- **Inflating only until sounds vanish.** The auscultatory gap can hide a systolic 20 to 40 points higher.
- **Giving antipyretics for hyperthermia.** There is no raised set point to lower. Cool actively.
- **Counting the pulse with your thumb.** The thumb has its own pulse.
- **Taking the deficit alone, one count after the other.** The rhythm changes between counts. Use two nurses at once.

Chapter 5 self-test · ten items

1. Which vital sign is the earliest and most sensitive sign that an adult patient is getting worse?

A. The respiratory rate
B. The blood pressure
C. The oral temperature
D. The oxygen saturation

A. The respiratory rate Respiratory rate rises in hypoxemia, sepsis and acidosis before blood pressure falls.

2. An axillary temperature reads 37.0 °C. About what would the oral reading be?

A. About 36.5 °C
B. About 37.5 °C
C. About 37.0 °C
D. About 38.0 °C

B. About 37.5 °C Axillary runs about 0.5 °C below oral, so the oral value would be about 37.5 °C.

3. Which patient should NOT have a rectal temperature taken?

A. A healthy infant who is 6 weeks old
B. An adult who is confused and restless
C. A patient with severe neutropenia
D. A toddler who will not hold a probe

C. A patient with severe neutropenia Rectal routes are avoided in neutropenia, low platelets and anticoagulation. In infants under 3 months, rectal is the standard.

4. A pulse is weak, thready and easily stopped by light pressure. How is it graded?

A. 0
B. 2+
C. 3+
D. 1+

D. 1+ 1+ is weak and thready, suggesting low stroke volume. 2+ is normal; 0 is absent.

5. A patient breathes deeply and rapidly in a regular pattern, with a glucose of 520 mg/dL. What is this pattern?

A. Cheyne-Stokes breathing
B. Biot respirations
C. Apneustic breathing
D. Kussmaul respirations

D. Kussmaul respirations Kussmaul breathing blows off CO_2 to offset metabolic acidosis, classically in DKA.

6. A patient rescued from a house fire is confused and short of breath with SpO_2 99% on room air. What explains the reading?

A. The probe overestimates in a cold finger
B. Smoke tints the nail bed and the light
C. Carboxyhemoglobin is read as oxyhemoglobin
D. Oxygen debt is not present after a fire

C. Carboxyhemoglobin is read as oxyhemoglobin Pulse oximetry cannot tell carboxyhemoglobin from oxyhemoglobin. Treat clinically and get co-oximetry.

7. A standard cuff on a patient with a large upper arm gives 168/94. What is the most likely problem?

A. The cuff is too small, so the reading is falsely high
B. The cuff is too large, so the reading is falsely low
C. The arm is above heart level, so the reading is high
D. The deflation was slow, so the systolic is falsely low

A. The cuff is too small, so the reading is falsely high The bladder should be about 40% of arm circumference. A small cuff needs extra pressure to close the artery and reads high.

8. A reading of 134/76 falls in which ACC/AHA category?

A. Normal pressure
B. Stage 1 hypertension
C. Elevated pressure
D. Stage 2 hypertension

B. Stage 1 hypertension Systolic 130 to 139 is stage 1 even with a diastolic under 80.

9. Orthostatic readings: supine 132/80, standing at 3 minutes 116/72, heart rate 76 to 84. How should this be read?

A. Positive: any systolic drop on standing counts
B. Positive: the heart rate rose by 8 on standing
C. Cannot be read without the sitting values
D. Negative: drops of 16 systolic and 8 diastolic

D. Negative: drops of 16 systolic and 8 diastolic Positive requires a systolic drop of 20 or more or a diastolic drop of 10 or more within 3 minutes.

10. A 4 year old has a systolic pressure of 80 mm Hg. How should it be read?

A. Above the floor of 78, so not hypotensive
B. Below the floor of 84, so it is hypotensive
C. Below the floor of 90, so it is hypotensive
D. Below the adult floor of 90, so it is low

A. Above the floor of 78, so not hypotensive 70 + (2 × 4) = 78. A systolic of 80 is above it, though you still read it with the trend and the child's condition.

The Health History and the Therapeutic Interview

Read it in full: **Chapter 6 in the textbook**. Practice it in the lab: **The History Bench** and **From Symptom to Sequence**.

What to know

The history is assessment, not preamble. Study after study finds that it points to the right diagnosis in most cases. Prepare first: review the chart in the preinteraction phase so you do not make the patient repeat what is already documented. Then prepare the room: close the curtain fully, silence the TV, keep the light off your back, and put in glasses, hearing aids and dentures. Treat pain, nausea or the need for a bedpan before you ask anything.

The interview has three phases. **Orientation**: knock, use the preferred name, give your name and role, state the purpose and confirm two identifiers. **Working**: start open, let the patient talk without interruption, then narrow to closed questions. Patients are usually interrupted within 11 to 23 seconds; staying quiet for 60 to 90 seconds often yields the whole history. **Termination**: summarize and ask for corrections, ask "Is there anything else you think I should know?", and say what happens next.

Sit at eye level or slightly below, about four to five feet away (twice arm's length) for conversation, with an open posture and no workstation between you. Announce each move into personal space for the exam. Follow the patient's lead on eye contact. Ask visitors to step out for sensitive questions with a general request so a controlling partner is not tipped off. If a family member answers every question for a competent adult, that is data.

Opening moves: open-ended questions, silence of three to five seconds, general leads, restating, reflection, clarification ("Dizzy as in spinning, or about to pass out?"), focusing, empathy, offering self, validation, summarizing and gentle confrontation of a discrepancy. Closing moves to avoid: false reassurance, advice, "why" questions, leading questions ("You don't drink much, do you?"), stacked questions, jargon, "I know exactly how you feel," defensiveness and elderspeak.

Use a qualified interpreter (Title VI and Section 1557), never a child. For hearing loss, check the aids, face the patient, lower your pitch, and rephrase rather than repeat louder. ASL is a distinct

language and needs an ASL interpreter. In **expressive** (Broca) aphasia, comprehension is fairly intact and output is effortful; in **receptive** (Wernicke) aphasia, speech is fluent but comprehension is impaired. Record the source and your judgment of reliability.

The history runs: biographic data, source and reliability, the **reason for seeking care** in the patient's own quoted words with a duration, the **history of present illness** from the last time they felt well, past health history (with immunizations and GTPAL for pregnancy), medication reconciliation, allergies, family history, functional assessment, social drivers of health and the patient's perception of health.

Medication reconciliation asks about every category by name (prescriptions, OTC, vitamins, herbals, inhalers, eye drops, patches, injectables, PRNs) and captures drug, dose, route, frequency, indication and the last dose actually taken. Bring in the bottles. **Allergies** need the reaction: "hives and lip swelling within 1 hour, needed epinephrine" is an allergy; "upset stomach" is an intolerance. Family history covers three generations with **age at diagnosis**; a genogram uses squares for males, circles for females and a slash for deceased.

Analyze every symptom with **OLDCARTS** (onset, location, duration, characteristics, aggravating and associated factors, relieving factors and radiation, timing and treatment, severity) or **PQRSTU**. Capture **pertinent negatives**: symptoms you asked about and the patient denies. The **review of systems** is questions only, by system in a fixed order; say whether it was complete or focused.

Subjective data are reported and charted as "reports," "states" or "denies"; objective data are observed or measured. Pain is both: the score is subjective, the guarding and sweating are objective, and you never override the patient's score. The exam then runs inspection, palpation, percussion, auscultation, except the abdomen (inspect, auscultate, percuss, palpate), with painful areas last.

Screen deliberately. PHQ-2 of 3 or more leads to the PHQ-9; any positive item 9 or statement about wanting to die means a direct suicide question, then plan, means, timeline and intent. Asking does not plant the idea. AUDIT-C is positive at 4 or more for men and 3 or more for women; CAGE at 2 or more. Adolescents get time alone and the **HEEADSSS** interview. Red flags

stop the history: chest pressure with sweating or jaw pain, the worst headache of a life, new facial droop or weakness (get last known well), airway swelling, hematemesis or melena, suicidal ideation with plan, and a sense of impending doom. The history may not be delegated.

LOCK THESE IN

- Orientation, working, termination; start open and stay quiet, then narrow.
- Sit at eye level, four to five feet away; announce each move closer.
- Reason for seeking care in the patient's own words, with a duration.
- Allergies need the reaction; an upset stomach is an intolerance.
- OLDCARTS every symptom, every time, plus pertinent negatives.
- The ROS is questions only. Say whether it was complete or focused.
- PHQ-2 3 or more; AUDIT-C 4 men, 3 women; CAGE 2 or more.
- A red flag mid-history ends the history: assess, stay, escalate.

OLDCARTS: one symptom, dissected the same way every time

"It feels like a belt tightening across my chest."

O — Onset
0850, sudden, while walking

L — Location
Substernal; points with a flat hand

D — Duration
Constant for 25 minutes

C — Characteristics
"Like a belt tightening"

A — Aggravating, associated
Worse walking; sweating, nausea

R — Relieving, radiation
Rest did not help; goes to left jaw

T — Timing, treatment
First episode; nothing taken

S — Severity
7 out of 10; had to sit down

Pertinent negatives prove your reasoning
Denies fever, cough, leg swelling, recent travel and prior similar episodes.

Red flag pattern: stop the history and escalate now

OLDCARTS turns a sentence into a pattern. Each letter is a question you ask every time. Here the pattern, exertional pressure with jaw radiation, sweating and nausea, is a red flag, so the history stops and escalation starts.

History components and why they matter

Component	What you ask	Why it changes care
Reason for seeking care	"What brought you in today?" (quote it, add duration)	Prevents premature diagnostic closure
HPI	"Start from the last time you felt completely well."	Separates acute from acute on chronic
Past history	Conditions, surgeries, transfusions, immunizations, GTPAL	Comorbidity drives risk and drug choice
Medications	"Walk me through everything, including drops, patches and supplements."	Prevents omissions, duplication, interactions
Allergies	"What happens? How soon? What was done?"	Separates allergy from intolerance
Family history	Three generations, age at diagnosis	Sets screening age and genetic risk
Functional	ADLs and IADLs: "Walk me through a typical day."	Decides discharge safety and services
Social drivers	Housing, food, transport, utilities, safety, cost of meds	Predicts readmission

Screens and frameworks

Tool	Content	Positive or use
OLDCARTS	Onset, Location, Duration, Characteristics, Aggravating/associated, Relieving/radiation, Timing/treatment, Severity	Every symptom
PQRSTU	Provocative/palliative, Quality, Region/radiation, Severity, Timing, Understanding	Every symptom
GTPAL	Gravida, Term (37w0d+), Preterm (20w0d to 36w6d), Abortions before 20 weeks, Living	Obstetric history
HEEADSSS	Home, Education, Eating, Activities, Drugs, Sexuality, Suicide, Safety	Adolescent, alone, least to most sensitive
PHQ-2	Depressed mood and loss of interest, 2 weeks	3 or more: give the PHQ-9
AUDIT-C	Alcohol frequency and amount	4 or more men; 3 or more women
CAGE	Cut down, Annoyed, Guilty, Eye opener	2 or more
Weight loss flag	Unintentional 4.5 kg (10 lb) or 5% in 6 months	Malignancy, TB, HIV, hyperthyroidism

Worked cases

WORKED CASE 1 · CLARIFYING A SINGLE WORD

Mrs. Lopez says, "I get dizzy when I stand up."

STEP 1 · DO NOT ACCEPT THE WORD

"Dizzy" covers several problems with different workups.

STEP 2 · ASK THE CLARIFYING QUESTION

"When you say dizzy, does the room spin, or do you feel like you might pass out?"

STEP 3 · SORT THE ANSWER

Spinning suggests vertigo and a vestibular cause. Feeling faint suggests presyncope: orthostatic hypotension, dehydration, bleeding, arrhythmia or a medication effect.

STEP 4 · CONNECT TO THE EXAM

Presyncope on standing calls for orthostatic vital signs next.

WORKED CASE 2 · AN ALLERGY THAT IS REALLY AN INTOLERANCE

Two patients say they are "allergic to penicillin." Mr. Ross had hives and lip swelling within an hour at age 22 and needed epinephrine. Ms. Hart had an upset stomach as a child.

STEP 1 · ASK ABOUT THE REACTION

What happened, how soon, and what was done?

STEP 2 · CLASSIFY

Mr. Ross: immune mediated allergy, severe. Ms. Hart: intolerance, not an allergy.

STEP 3 · CHART IT

"Penicillin: hives and lip swelling within 1 hr, age 22, epinephrine in ED." "Penicillin: nausea as a child (intolerance)."

WHY IT MATTERS

The distinction changes antibiotic choice and outcomes.

WORKED CASE 3 · READING GTPAL

Ms. Nguyen is pregnant now. She had one baby at 39 weeks, twins at 34 weeks, and a loss at 10 weeks. All three children are living.

STEP 1 · GRAVIDA

Count pregnancies, not babies, and include the current one: 1 + 1 + 1 + 1 = 4.

STEP 2 · TERM AND PRETERM

The 39 week birth is term: T = 1. The twins at 34 weeks are one preterm birth event: P = 1.

STEP 3 · ABORTIONS

The loss before 20 weeks: A = 1.

STEP 4 · LIVING

Three living children: L = 3. GTPAL is 4-1-1-1-3.

WORKED CASE 4 · A RED FLAG MID-HISTORY

During a routine admission history, Mr. Alvarez says he has had chest pressure "like a belt tightening" for 25 minutes, going to his left jaw, with sweating and nausea.

STEP 1 · STOP THE HISTORY

The family history can wait; an infarct window cannot.

STEP 2 · ASSESS AND STAY

ABCs, a full set of vital signs, and do not leave him.

STEP 3 · ESCALATE WITH SBAR

Situation, then history and his father's MI at 51, then the numbers and "I think this is cardiac," then the ask: 12-lead ECG now, cardiac markers, aspirin order, come now or rapid response.

STEP 4 · DOCUMENT

Time, his words in quotes, the pertinent negatives, the vital signs and who was called.

TRAPS PEOPLE FALL INTO

- **Starting with closed questions.** You get yes and no answers and miss the story.
- **Charting "atrial fibrillation" as the reason for seeking care.** Quote the patient: "My heart's been flip-flopping since Saturday."
- **Recording "allergic to sulfa" with no reaction.** Without the reaction, nobody can judge severity or alternatives.
- **Skipping age at diagnosis in family history.** An MI at 44 changes care; an MI at 78 usually does not.
- **Putting observed findings in the ROS.** The ROS is questions only.
- **Charting "poor historian" or "drug seeking."** Chart the behavior and the source instead.
- **Asking stacked questions.** Three at once gets one answer, and you will not know which.
- **Letting a UAP "do the admission questions."** The history is assessment and cannot be delegated.

Chapter 6 self-test · ten items

1. A nurse begins a new admission interview. Which question best opens the working phase?

A. "Do you have any chest pain right now?"

B. "Your pain is not too bad today, is it?"

C. "Tell me what brought you in today."

D. "Any fever, cough or swelling lately?"

C. "Tell me what brought you in today." Start open to get the patient's story. The others are closed, leading or stacked.

2. A patient answers a hard question, then falls quiet. What should the nurse do?

A. Ask the next question on the form at once
B. Wait three to five seconds before speaking
C. Say, "Don't worry, it will be all right."
D. Change the topic to something lighter

B. Wait three to five seconds before speaking Silence is the most underused technique; disclosures happen in the pause.

3. Which statement belongs in the reason for seeking care?

A. "My heart's been flip-flopping," for 3 days
B. New onset atrial fibrillation for about 3 days
C. Palpitations from a likely thyroid disorder
D. Cardiac arrhythmia; rule out a heart attack

A. "My heart's been flip-flopping," for 3 days Use the patient's own words and a duration. A diagnostic label closes the thinking too early.

4. A patient reports nausea after taking codeine. How should this be documented?

A. As a severe allergy with an alert band
B. As no reaction, since nausea is expected
C. As an intolerance, with the reaction described
D. As an allergy to all opioids and narcotics

C. As an intolerance, with the reaction described Nausea is an adverse effect without an immune mechanism. Document it with the reaction, but it is not an allergy.

5. In OLDCARTS, what does the "R" stand for?

A. Risk factors and recent history
B. Relieving factors and radiation
C. Review of systems and records
D. Region and rate of change

B. Relieving factors and radiation R covers what helps and whether the symptom travels.

6. Which entry is a pertinent negative for a patient with chest pain?

A. Reports pain 7/10, worse with walking
B. Heart rate 104, regular rhythm
C. Father died of an MI at age 51
D. Denies fever, cough and leg swelling

D. Denies fever, cough and leg swelling A pertinent negative is a symptom you asked about and the patient denies, showing you considered other causes.

7. A 15 year old comes with a parent for a checkup. What is the right approach for the psychosocial history?

A. See the teen alone after explaining confidentiality
B. Ask the parent the HEEADSSS questions in the room
C. Skip all sensitive topics until the teen is 18
D. Have the teen fill out a form with the parent there

A. See the teen alone after explaining confidentiality Adolescents need time alone, with confidentiality and its legal limits explained first.

8. A woman scores 3 on the AUDIT-C. How is this read?

A. Negative, since 4 or more is needed for women
B. Negative, since 5 or more is needed for anyone
C. Not readable without a CAGE score as well
D. Positive, since 3 or more is positive for women

D. Positive, since 3 or more is positive for women AUDIT-C is positive at 3 or more for women and 4 or more for men.

9. During a history, a patient says, "Some days I think everyone would be better off if I didn't wake up." What should the nurse do next?

A. Finish the family history, then come back to it
B. Ask directly about suicide, plan and means
C. Reassure her that her family loves her very much
D. Tell her gently that she should not think that way

B. Ask directly about suicide, plan and means A direct question does not plant the idea. Then assess plan, means, timeline and intent, stay with her and escalate.

10. Which part of the admission may the nurse delegate to a UAP?

A. Asking the review of systems questions on the form
B. Collecting the history of the present illness
C. Height, weight and routine vital signs if stable
D. Teaching the patient about the new home medicines

C. Height, weight and routine vital signs if stable The history, interpretation and teaching stay with the RN. UAP may take measurements on stable patients and report what patients say.

Cram sheet

Everything from chapters 5 and 6 in one place. Cover the right column and see if you can rebuild each row.

Numbers to know

Item	Value	Note
Adult set	T 36.5 to 37.5 °C; P 60 to 100; R 12 to 20; BP under 120/80; SpO_2 95 to 100%	Fever 38.0 °C; hypothermia below 35.0 °C
Temperature offsets	Rectal about +0.5 °C; axillary about −0.5 °C	°F = °C × 1.8 + 32
Pulse pressure and MAP	30 to 40; MAP 70 to 100	MAP below 65 threatens organs
Pediatric floor	Systolic 70 + 2 × age, ages 1 to 10	Neonate below 60; infant below 70
BP categories	Elevated 120 to 129/<80; stage 1 130 to 139 or 80 to 89	Stage 2 ≥ 140 or ≥ 90; crisis > 180 and/or > 120
Orthostatic positive	SBP down 20 or DBP down 10 within 3 min	HR up 20 supports volume loss
Cuff	Width 40% of arm; length 80%	Deflate 2 to 3 mm Hg per second
SpO_2 90%	About PaO_2 60 mm Hg	Chronic CO_2 retainers: 88 to 92%
Infant fever	Rectal ≥ 38.0 °C under 3 months	Emergency evaluation
Older adult fever	Single oral 37.8 °C, repeated 37.2 °C, or +1.1 °C	Baseline often 35.8 to 36.6 °C
Screens	PHQ-2 ≥ 3; AUDIT-C ≥ 4 men, ≥ 3 women; CAGE ≥ 2	Weight loss flag: 4.5 kg or 5% in 6 months

Formulas

Name	Formula	Use
Pulse pressure	Systolic − diastolic	Narrowing suggests falling stroke volume
MAP	Diastolic + (pulse pressure ÷ 3)	Perfusion threshold 65
Pulse deficit	Apical − radial, counted together	Atrial fibrillation, PVCs
Celsius to Fahrenheit	°F = °C × 1.8 + 32	Reverse: (°F − 32) ÷ 1.8
Pediatric hypotension	Systolic below 70 + 2 × age	Ages 1 to 10

Rules that are not numbers

Topic	The rule
Counting	Respirations unannounced; irregular pulse apical for a full minute; deficit with two nurses.
SpO_2 limits	CO poisoning, methemoglobinemia, poor perfusion, motion, polish, darker skin.
Delegation	UAP: routine vitals on stable patients. RN: admission set, unstable, transfusion, orthostatics, interpretation, the history.
Interview phases	Orientation, working (open then closed), termination (summarize, "anything else?").
Allergies	Always the reaction, timing and treatment.
Red flags	Chest pressure with jaw pain, worst headache, new droop or weakness, airway swelling, GI bleeding, suicidal plan, impending doom.

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