Study Guide 4

This guide covers the end of a case station, where most of the weight sits. Chapter 7 turns findings into a specific impression, justified orders, a management lane, a measurable plan and the right urgency for every red flag. Chapter 8 turns those decisions into a SOAP note, a valid consent conversation, a plain language report of findings and referral communication that reaches the right person in time. Read the "what to know" paragraphs, study the diagram, then work each case aloud with the steps covered.

WHAT THIS GUIDE COVERS

- Chapter 7 · working diagnosis and differentials, pertinent positives and negatives, test accuracy, decision rules, red flags that justify imaging, modality and lab choice, treat, co-manage or refer, plan elements, outcome measures, contraindications, urgency levels, dissection, stroke and visceral emergencies, and station walk throughs.
- Chapter 8 · SOAP notes, writing findings, corrections and late entries, valid consent and capacity, the material risk standard, PARQ and dissection disclosure, the report of findings, nocebo language and teach-back, referral channels and letters, SBAR, SPIKES and NURSE, informed refusal, boundaries and interpreters.

CHAPTER 7

Diagnosis, Orders and Management Decisions

Read it in full: **Chapter 7 in the textbook**. Practice it: **the practice exams** and **the flashcards**.

What to know

Case management checklists reward an impression that is **specific** ("left L5 radiculopathy," not "low back pain"), **defensible** (you can name the findings behind it) and **safe** (you considered the dangerous causes and said so). Many stations hide one critical action, such as recognizing a stroke sign and calling for help, that outweighs everything else. Check the current official candidate materials for format and scoring.

The **working diagnosis** is the one condition that best explains the complaint and the findings, and it drives the plan. Build it from tissue, region and level, side, and qualifiers such as acuity, severity and neurologic status: "acute right C6 radiculopathy from a probable C5 to C6 disc herniation, with intact strength." The **differential** is a short ranked list of two to four items that includes at least one cannot miss condition, each with the reason it is less likely. "Subluxation" or "sciatica" does not stand alone as an impression.

Link the two or three findings that carry the impression, out loud. Pertinent positives support it; pertinent negatives argue against alternatives. Normal saddle sensation and bladder function are pertinent negatives against cauda equina; the absence of the 5 D's and 3 N's argues against vertebrobasilar ischemia. A positive test is a finding, not a diagnosis: Kemp with local pain suggests facet, but Kemp with radiating leg pain suggests root compression.

A fast routine: from the door card, list the likely diagnosis, the cannot miss list and the mimics. A 68 year old man with new back pain triggers malignancy, compression fracture and aneurysm; a 24 year old woman with flank pain triggers stone, pyelonephritis and ectopic pregnancy. Then localize (local, radicular, peripheral nerve, central or visceral), decide **mechanical versus nonmechanical**, note the trajectory, and let red flags change "treat" into "investigate or refer." Yellow flags shape the plan, not the diagnosis.

Order only what changes management, and justify each order in one sentence naming the suspected condition and the trigger. Most acute uncomplicated spinal pain without red flags needs no imaging at the first visit, and withholding it with a reason earns credit. Use decision rules for trauma: the **Canadian C spine rule** (high risk: 65 or older, dangerous mechanism, paresthesias; low risk factors allow rotation testing to 45 degrees each way), **NEXUS**, and the **Ottawa** ankle, foot and knee rules. Ankle tenderness must be at the posterior edge or tip of a malleolus; ATFL tenderness alone does not call for films.

Each red flag cluster maps to a condition and a test. Cauda equina signs bypass outpatient ordering: same day emergency referral for MRI. Cancer flags call for films plus ESR or CRP and CBC, and MRI if cancer history or neurologic signs. Infection flags call for ESR, CRP, CBC, cultures and urgent MRI with contrast. Fracture risk calls for radiographs, then CT or MRI and later DEXA. Inflammatory back pain calls for SI films, ESR or CRP and HLA-B27. Severe or

progressive deficit, or radicular pain not improving after about 6 weeks in an intervention candidate, calls for MRI.

Match the modality. Radiographs show fracture, alignment and advanced destruction but miss early infection and metastasis (30 to 50 percent of trabecular bone must be lost). **MRI** shows disc, roots, cord, infection and marrow. **CT** shows complex bone. A **bone scan** is sensitive but not specific, and myeloma is often cold. **DEXA** diagnoses osteoporosis at a T score of minus 2.5 or lower. Ultrasound screens for aneurysm and DVT. EMG and NCS separate radiculopathy from entrapment but take about 3 weeks to show denervation. Labs: myeloma (CBC, ESR, calcium, creatinine, protein electrophoresis, Bence Jones), RA (anti CCP more specific than RF), gout (urate can be normal in an attack), giant cell arteritis (ESR often very high), and urinalysis for stone or pyelonephritis.

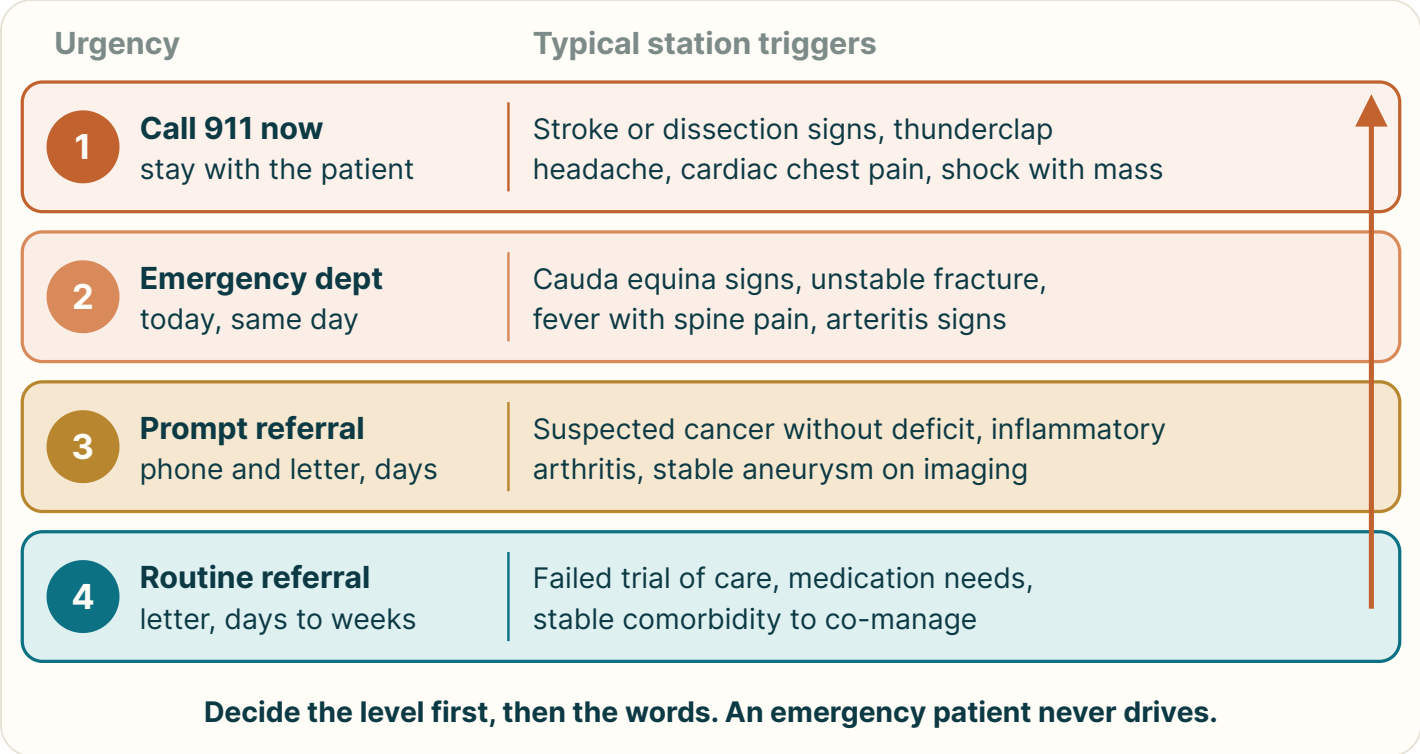
Choose a **lane** and say why. **Treat** a mechanical neuromusculoskeletal problem within scope with red flags cleared and no contraindication. **Co-manage** when another provider must handle part of it: a stable radiculopathy that may need medication, diabetes, anticoagulants, osteoporosis, inflammatory arthritis, mood disorders or pregnancy. **Refer** for a nonmusculoskeletal cause, an uncleared red flag, an absolute contraindication, a progressive deficit or a failed trial of care. Referral is not abandonment.

A complete plan names the diagnosis, procedures, frequency and duration, **measurable functional goals**, outcome measures with baselines, home care, the re-examination date and a safety net. An acute case commonly starts at two to three visits a week for two weeks, then reassessment. A trial of care (about two weeks) must produce measurable change; if a second trial also fails (about four weeks overall), change the plan, investigate or refer. Meaningful change: pain scale about 2 points or 30 percent, Oswestry about 10 points, NDI about 5 to 7 of 50, PSFS about 2 points. STarT Back stratifies risk.

Absolute contraindications forbid thrust in that region: suspected acute dissection, symptomatic aneurysm, acute fracture, tumor or infection in the region, severe osteoporosis at the segment, atlantoaxial instability, an acute inflammatory flare, unstable spondylolisthesis, cauda equina, myelopathy, progressive deficit, no consent and no working diagnosis. **Relative** contraindications

call for modification: anticoagulants, a stable small aneurysm, uncontrolled hypertension (defer), osteopenia, stable spondylolisthesis, stable radiculopathy, prior fusion, pregnancy.

Use four urgency levels: **call 911** (stroke or dissection signs, thunderclap headache, cardiac chest pain, shock with a pulsatile mass), **emergency department today** (cauda equina, unstable fracture, fever with spine pain, giant cell arteritis signs), **prompt referral** within days (suspected cancer without deficit, inflammatory arthritis, a stable aneurysm), and **routine referral** (failed trial, medication needs, stable comorbidity). Stroke signs follow **BE FAST**: balance, eyes, face, arm, speech, time. If a problem appears after treatment, stop, position safely, check ABCs and vitals, screen BE FAST and the eyes, call 911 for any focal sign, stay and document. Call a vasovagal episode benign only after the neurologic screen.



Match the response to the threat. Decide the urgency level before you speak. Under-reacting endangers the patient, and over-reacting to a routine finding wastes resources and frightens people.

LOCK THESE IN

- Working diagnosis: tissue, level, side, qualifiers; differentials with a cannot miss item.
- Link the findings aloud; state pertinent negatives.
- Order only what changes management, with a one sentence reason.
- No red flags in acute back pain: usually no imaging, and say why.
- Lanes: treat, co-manage, refer. A failed trial of care is a reason to change course.
- Goals must be functional, measurable and timed, with baseline outcome measures.
- Absolute contraindication: no thrust in that region. Relative: modify.
- Urgency: 911, ED today, prompt referral, routine referral. Decide the level first.

Red flag to test

Red flag cluster	Suspected condition	Firs
Saddle anesthesia, retention, bilateral symptoms, progressive weakness	Cauda equina syndrome	Sam eme refe MRI
Cancer history, weight loss, over 50, night pain, no improvement in a month	Metastasis, myeloma	Film CRP MRI or d
Fever, IV drug use, recent procedure, immunosuppression	Osteomyelitis, discitis, abscess	ESR CBC cult urge with con
Trauma, or minor trauma with age, osteoporosis, steroids	Fracture	Rad CT nex late
Young, insidious, long morning stiffness	Axial spondyloarthritis	SI fi or C HLA
Severe or progressive deficit; 6 weeks without improvement	Disc or stenosis needing intervention	MRI con

Plan, outcomes and urgency

Item	Value or content	Note
Acute frequency	2 to 3 visits a week for 2 weeks	Then reassess
Trial of care	About 2 weeks; about 4 weeks for two trials	Then change, investigate or refer
Pain scale change	About 2 points or 30%	Meaningful
Oswestry	About 10 percentage points	Low back
Neck Disability Index	About 5 to 7 of 50	Neck
PSFS	About 2 points	Any region
DEXA	T score minus 2.5 or lower	Osteoporosis
Level 1	Call 911, stay	Stroke, dissection, thunderclap, cardiac, shock with mass
Level 2	Emergency department today	Cauda equina, unstable fracture, fever with spine pain, GCA
Level 3	Prompt referral, days	Suspected cancer, inflammatory arthritis, stable aneurysm
Level 4	Routine referral	Failed trial, medication needs, stable comorbidity

Worked cases

WORKED CASE 1 · A BOARD READY IMPRESSION

Marcus, 41, a warehouse worker, has left buttock and leg pain for 9 days after lifting. Red flags are negative. Left SLR reproduces leg pain at 40 degrees, crossed SLR is negative, great toe extension is 4/5, the dorsum of the foot is numb, reflexes are symmetric.

STEP 1 · LOCALIZE

Dorsum of the foot and great toe extension point to L5. Reflexes are often normal at L5 because it has no reliable reflex.

STEP 2 · STATE THE IMPRESSION

Left L5 radiculopathy, most likely from an L4 to L5 disc herniation.

STEP 3 · LINK THE FINDINGS

The pain pattern, the positive SLR and the weak big toe fit; normal bladder, bowel and saddle findings argue against cauda equina.

STEP 4 · RANK THE DIFFERENTIAL

Facet syndrome (less likely with neurologic signs), SI pain, piriformis syndrome.

STEP 5 · SAFETY NET

Record the 4/5 baseline. Saddle numbness, trouble passing urine or new weakness means the emergency department right away.

WORKED CASE 2 · TURNING A PLAN INTO NUMBERS

Denise, 36, has right low back pain for 4 days after gardening, no leg symptoms. Pain is 7 of 10 and her Oswestry is 32 percent.

STEP 1 · DECIDE IMAGING

No red flags, so no imaging; it would not change the plan.

STEP 2 · SET TARGETS

A meaningful pain change is about 2 points or 30 percent: $7 - 2 = 5$ and $7 \times 0.7 = 4.9$, so a score of about 5 or lower meets both standards; at a starting score of 7 they nearly match. A meaningful Oswestry change is about 10 points: $32 - 10 = 22$ percent or lower.

STEP 3 · WRITE FUNCTIONAL GOALS

A full work day with pain under 3 of 10 in two weeks; gardening in four to six weeks.

STEP 4 · STATE THE PLAN

Lumbar and SI adjustments, soft tissue work and exercise, 2 to 3 visits a week for 2 weeks, walking twice daily, heat, no bed rest, re-examination at 2 weeks, consent and a safety net.

WORKED CASE 3 · WORST HEADACHE AFTER A HEAD TURN

Pooja, 39, has severe right neck pain and headache since a sudden head turn while reversing her car. "Worst headache of my life." BP 152/94.

STEP 1 · NAME THE PATTERN

Sudden, severe, unusual neck pain after minor movement is dissection until proven otherwise; the worst headache raises subarachnoid hemorrhage.

STEP 2 · SCREEN WITHOUT PROVOKING

Ask the 5 D's and 3 N's, pulsatile tinnitus and a drooping eyelid. Check pupils, eyelids, eye movements, nystagmus, face, speech, arm drift and coordination. No provocative tests and no adjustment.

STEP 3 · CHOOSE THE LEVEL

Any focal sign or posterior circulation symptom: call 911 and stay. Even with a normal screen, the sudden worst headache needs same day emergency evaluation.

STEP 4 · DOCUMENT

Onset time, findings and actions.

TRAPS PEOPLE FALL INTO

- **Calling a symptom a diagnosis.** "Low back pain" and "sciatica" are not impressions.
- **Treating a positive test as a diagnosis.** Say which pain it reproduced and where.
- **Ordering films without a reason.** Every order needs a condition and a trigger.
- **Sending cauda equina for an outpatient MRI.** It is a same day emergency.
- **Calling ATFL tenderness an Ottawa positive.** Tenderness must be at the posterior edge or tip.
- **Writing "reduce pain" as a goal.** Goals are functional, measurable and timed.
- **Continuing a failed trial.** Two failed trials mean change, investigate or refer.
- **Calling a vasovagal episode benign too early.** Do the neurologic screen first.

Chapter 7 self-test · ten items

1. Which impression is board ready for a station?

A. Sciatica down the right leg that is worse when sitting at work

B. Right S1 radiculopathy: reduced Achilles reflex, lateral foot numbness

C. Low back pain on the right side with radiation into the leg

D. Subluxation at L5 to S1 with pain radiating down to the right foot and toes

B. Right S1 radiculopathy: reduced Achilles reflex, lateral foot numbness A strong impression names tissue, level and side and links findings. Sciatica and low back pain describe symptoms, not causes.

2. A 38 year old has 5 days of mechanical low back pain with no red flags. What should you say about imaging?

A. Lumbar radiographs today, to rule out a disc herniation
B. MRI today, because pain has lasted more than three days
C. A bone scan, to look for occult fractures or tumors
D. No imaging now, because it would not change the plan

D. No imaging now, because it would not change the plan Most acute uncomplicated spinal pain without red flags needs no imaging. Withholding it with a reason is scored.

3. An ankle is tender only over the ATFL in front of the lateral malleolus, and the patient walks four steps. Under the Ottawa rules, what follows?

A. Ankle radiographs are needed
B. Foot radiographs are needed
C. MRI is needed to grade it
D. No radiographs are needed

D. No radiographs are needed The tenderness must be at the posterior edge or tip of a malleolus. ATFL tenderness is the typical sprain.

4. A 66 year old with suspected multiple myeloma has a normal bone scan. How should this be read?

A. It does not exclude myeloma, which is often cold on bone scan
B. It rules out myeloma, because the scan is very sensitive
C. It confirms osteoporosis rather than any malignant process in the bone
D. It shows the disease is confined to the soft tissues only

A. It does not exclude myeloma, which is often cold on bone scan Myeloma provokes little osteoblastic response. Use labs such as protein electrophoresis and other imaging.

5. Which lab is more specific for rheumatoid arthritis?

A. Rheumatoid factor
B. HLA B27 typing
C. Serum uric acid level
D. Anti CCP antibodies

D. Anti CCP antibodies Anti CCP is more specific than rheumatoid factor. HLA B27 relates to spondyloarthritis.

6. A patient with stable mechanical neck pain takes warfarin. Which lane fits best?

A. Co-manage, with modified technique and force
B. Refer, because warfarin forbids all manual care
C. Treat as usual, since warfarin is irrelevant
D. Refer to the emergency department today

A. Co-manage, with modified technique and force Anticoagulants are a relative contraindication. Care is appropriate with modification and coordination with the prescriber.

7. Which goal is written correctly?

A. Sit through a 90 minute class with pain no higher than 3 of 10 within 3 weeks
B. Reduce the patient's pain as much as possible over the next several visits
C. Improve the patient's posture and spinal alignment during the treatment plan
D. Make the patient feel better and more comfortable at work and at home in the near future

A. Sit through a 90 minute class with pain no higher than 3 of 10 within 3 weeks A goal must be functional, measurable and timed.

8. Which finding is an absolute contraindication to thrust in that region?

A. Stable grade I spondylolisthesis at L5
B. Treated osteoporosis managed by a physician
C. Atlantoaxial instability in rheumatoid arthritis
D. Daily anticoagulant therapy for atrial fibrillation

C. Atlantoaxial instability in rheumatoid arthritis Atlantoaxial instability forbids upper cervical thrust. The others are relative and call for modification.

9. A 63 year old has a new headache, scalp tenderness and jaw pain on chewing. What is the right level of response?

A. Routine referral by letter within the next few weeks
B. Prompt referral by phone within the next several days
C. Same day medical evaluation, or the ED now if vision is affected
D. Upper cervical care first, with a referral later if there is no change

C. Same day medical evaluation, or the ED now if vision is affected Giant cell arteritis threatens vision. It needs same day ESR, CRP and steroids; visual loss makes it an emergency.

10. A 34 year old paces the room with colicky left flank pain to the groin. Lumbar movement does not change it. What is the impression?

A. Acute lumbar facet syndrome needing adjustment
B. Probable ureteral calculus needing same day referral
C. Left L1 radiculopathy needing lumbar imaging
D. Quadratus lumborum strain needing soft tissue work today

B. Probable ureteral calculus needing same day referral Patients with stones cannot keep still, while mechanical back pain makes patients keep still. Fever would make it an emergency.

Documentation, Consent, Communication and Referral

Read it in full: **Chapter 8 in the textbook**. Practice it: **the practice exams** and **the flashcards**.

What to know

A note is judged by one standard: could another clinician read it, understand what you found and why you decided what you did, and continue care safely? It is also a legal document and the evidence that consent was obtained and red flags were considered. If it is not documented, for legal and audit purposes it was not done. Check the official candidate materials for the format of any written component.

SOAP divides the note into Subjective, Objective, Assessment and Plan, and each part feeds the next. Subjective holds the complaint in the patient's words, the history, the red flag answers including negatives, medications, allergies and a baseline outcome score. Objective holds vitals, palpation with level and side, range of motion with degrees and the pain response, named tests with results, neurologic grades and results. Assessment holds the working diagnosis with level and side, differentials, neurologic status, severity, prognosis and complicating factors. Plan holds procedures and regions, frequency and duration, measurable goals, home care, orders with indications, referral, consent, the re-examination date and the safety net.

Write findings that are specific, measurable and lateralized: "Cervical rotation R 50° with R neck pain, L 75° pain free," not "decreased ROM." Name each test and the pain it reproduced. Use standard grades: strength 0 to 5 and reflexes 0 to 4+. Record pertinent negatives explicitly. Use accepted abbreviations only and avoid those on "do not use" lists. WNL must mean you actually tested it. The assessment is the section most often underwritten; even under time pressure, write a full diagnosis, at least two differentials and one line on red flags considered.

Documentation rules: write at the visit or label a **late entry** with the current date and time and the visit date. Correct an error with a **single line** so it stays legible, then date and initial; never erase, overwrite or remove pages, and use the amendment function in electronic records. Record facts and quotations, not judgments. Every page carries the name and a second identifier, the date and

your signature. Share the minimum necessary except with treating providers. Record adverse events (what, when, what you did, who you told) and refusals with the risks explained.

Informed consent is a process; the form is only its record. It needs **capacity**, adequate **disclosure**, **understanding**, a **voluntary** decision and **documentation**, and it is renewed when the plan, technique or risk changes. Capacity is decision specific and presumed in adults: the patient can understand, appreciate, reason and communicate a choice. Minors need a parent or guardian, with the child's assent. In a true emergency implied consent covers care to prevent serious harm, never elective manipulation. Many jurisdictions use the **material risk** (reasonable patient) standard: disclose what a reasonable person in this patient's position would want to know. Treating without consent can be battery even if skillful.

The disclosure follows **PARQ**: Procedure (what, where, how it feels, the pop), Alternatives (mobilization, exercise, medication through a physician, no treatment and the natural history), Risks (common benign reactions and rare serious ones, in plain numbers) and Questions (invite them, confirm the right to stop, and ask a clear yes or no question). About a third to a half of patients have soreness, stiffness or headache, usually starting within a day and settling within 24 to 48 hours. Rare serious risks include cervical artery dissection with stroke, cauda equina syndrome and fracture in osteoporotic bone. For neck manipulation, name the dissection risk calmly: it is rare, causation is debated because people with an early dissection often seek care for the neck pain and headache it causes, you screen for warning signs, and alternatives without thrust exist. Do not minimize or alarm.

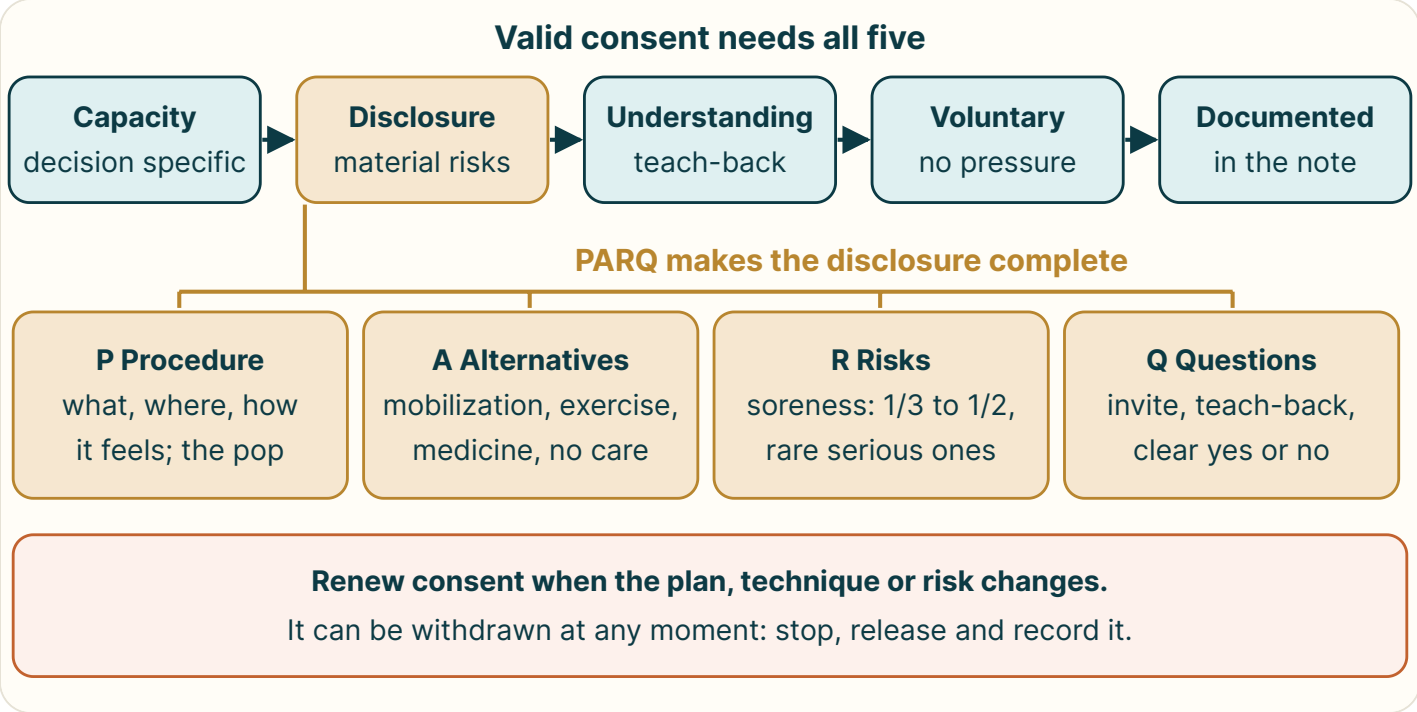
The **report of findings** follows a fixed order: findings, diagnosis, prognosis, recommendation, risks and alternatives leading into consent, the patient's role, and warning signs. Speak at about a sixth to eighth grade level, use natural frequencies ("about 1 in 3 people"), and avoid **nocebo** words such as "out of place," "crumbling disc" or "bone on bone." **Teach-back** tests your explanation: "Can you tell me what you will do if the numbness spreads?" "Does that make sense?" is not teach-back. Use ask-tell-ask, chunk and check, and an open "What questions do you have?" Never promise a cure or a fixed number of visits.

Match the referral channel to urgency. Emergencies get 911 or a direct call to the emergency department first, then a written summary. Urgent problems get a phone call and a same day letter.

Prompt referrals get a letter plus a call to confirm. Routine referrals go by letter or secure message. A letter leads with the **reason and urgency**, summarizes history, findings with numbers, impression, care given and response, and ends with a **specific request** and a direct callback number. "Please see and treat" fails. On the phone use **SBAR**: Situation, Background, Assessment, Recommendation, then read back and record the call.

Deliver unwelcome news with **SPIKES**: Setting, Perception, Invitation, Knowledge (with a warning shot), Emotions and Strategy. After the news, stop talking. Respond to emotion with **NURSE**: Name, Understand, Respect, Support, Explore. Never give false reassurance when you are referring because it might be serious. A competent adult may refuse anything; make the refusal informed, explore the barrier, and document. Never treat through a red flag because a patient refuses referral.

Keep boundaries: drape and expose only what is needed, step out while the patient changes, offer and record a chaperone, and narrate touch before you touch. Decline advances clearly and kindly. Do not criticize other clinicians. Use a qualified **professional interpreter**, never a child and not a relative for consent except in an emergency. Speak to the patient in the first person, use short sentences, use teach-back through the interpreter, and record the interpreter's name or number.



Five requirements, four disclosure elements. A signature without capacity, disclosure, understanding and a free choice is not valid consent. PARQ makes the disclosure complete, and consent is renewed when the plan changes.

LOCK THESE IN

- SOAP: every plan item must trace back to a finding.
- Findings are specific, measurable and lateralized; tests are named with the pain reproduced.
- Correct with a single line, date and initials; label late entries.
- Consent: capacity, disclosure, understanding, voluntary, documented; renew when the plan changes.
- PARQ every time, then a clear yes or no question.
- Teach-back, not "Does that make sense?"
- Referral: phone first for urgent or emergency; letter opens with reason and urgency, ends with a request.
- Professional interpreter, first person to the patient, never a child.

SOAP and documentation rules

Item	Must include	Common error
Subjective	Complaint, history, red flag answers with negatives, medications, baseline score	Omitting negative red flag answers
Objective	Vitals, palpation with level and side, ROM in degrees, named tests, neuro grades	"Ortho tests positive" without naming them
Assessment	Diagnosis with level and side, differentials, neuro status, red flags considered	A symptom as the diagnosis
Plan	Procedures, frequency, goals, home care, orders with reasons, consent, re-exam, safety net	Consent not recorded
Late entry	Current date and time plus the visit date	Backdating the entry
Correction	Single line, legible, dated and initialed	Erasing or overwriting
Objectivity	Facts and quotations	Judgments such as "difficult patient"
Refusal	Recommendation, risks explained, reason, alternatives	No record of the risks explained

Communication frameworks

Framework	Elements	Use
PARQ	Procedure, Alternatives, Risks, Questions	Consent disclosure
SBAR	Situation, Background, Assessment, Recommendation	Phone handoff
SPIKES	Setting, Perception, Invitation, Knowledge, Emotions, Strategy	Unwelcome news
NURSE	Name, Understand, Respect, Support, Explore	Responding to emotion
Ask-tell-ask	Ask what they know, tell, ask how it lands	Education
Benign reactions	About 1/3 to 1/2; settle in 24 to 48 hours	Risk disclosure
Emergency referral	911 or direct call, then a summary	"Do not drive yourself"
Urgent referral	Phone plus same day letter	GCA, fever with back pain, DVT
Prompt referral	Letter plus confirming call	Suspected cancer, inflammatory arthritis

Worked cases

WORKED CASE 1 · WRITING THE ASSESSMENT AND PLAN

After examining a 44 year old woman with 10 days of right low back and buttock pain: extension 15° with right low back pain, right Kemp gives local pain only, SLR negative both sides, neuro normal, SI provocation 1 of 5, ODI 34%. Red flags negative.

STEP 1 · SUBJECTIVE

"44 yo F, R LBP and buttock pain x 10 d after lifting, 6/10, worse extension and rotation, no radiation below knee. Denies saddle anesthesia, bladder or bowel change, fever, wt loss, CA hx. ODI 34%."

STEP 2 · OBJECTIVE

"Ext 15° R LBP; R Kemp's local pain only; SLR neg bilat; L2 to S1 myotomes 5/5, patellar and Achilles 2+ bilat; SI provocation 1/5."

STEP 3 · ASSESSMENT

"Acute R lumbar facet syndrome L4 to S1. DDx: SI joint dysfunction (cluster negative), discogenic pain (SLR neg). No red flags; no imaging indicated."

STEP 4 · PLAN

HVLA lumbar and soft tissue 2 to 3x/wk x 2 wks; goal to sit 60 min at work with pain under 3/10 in 2 wks; HEP; consent after PARQ; re-exam in 2 wks with ODI and NRS; safety net given.

WORKED CASE 2 · CONSENT FOR A NECK ADJUSTMENT

Sophie, 33, has mechanical neck pain with upper cervical restriction. No red flags and no vascular warning signs.

STEP 1 · CONFIRM CAPACITY AND UNDERSTANDING

Alert, oriented, engaged, and she can restate her diagnosis.

STEP 2 · PROCEDURE AND ALTERNATIVES

Cervical and upper thoracic adjustments and what she will feel and hear; or mobilization, instrument adjusting, exercise, medication through her physician, or no treatment.

STEP 3 · RISKS

Soreness or headache for a day or two in about a third to a half of people; a very rare stroke related to an artery tear, with the honest note that the causal link is debated; warning signs and 911.

STEP 4 · QUESTIONS AND DECISION

Teach-back, then "Would you like the adjustment, or the gentler approach?" Accept either without pressure and document the elements, her questions and her decision.

WORKED CASE 3 · A PULSATILE MASS AND A PHONE CALL

Dennis, 69, a smoker with hypertension, has 3 weeks of back pain unchanged by movement. You feel a pulsatile, nontender, expansile mass about 5 cm wide left of the umbilicus. Vitals are stable.

STEP 1 · CHOOSE THE LEVEL

Stable vitals and no severe pain argue against rupture, so this is urgent, not 911.

STEP 2 · PROTECT

Stop abdominal palpation; no lumbar manipulation.

STEP 3 · EXPLAIN

A pulsing that may be a widened main artery needs an ultrasound and a doctor quickly; sudden severe belly or back pain, faintness or weakness means 911.

STEP 4 · COMMUNICATE

Phone his physician and send a same day letter: reason and urgency first, history, the 5 cm finding and vitals, impression, a request for ultrasound and vascular referral and advice before lumbar care, and your number.

TRAPS PEOPLE FALL INTO

- **Writing "Neuro WNL."** Record myotomes, reflexes and sensation by level.
- **Erasing an error.** Single line, correction, date and initials.
- **Treating the form as consent.** Consent is the conversation; the form records it.
- **Getting consent after positioning for the thrust.** Disclose and ask before you set up.
- **Saying "Does that make sense?"** That invites a reflexive yes; use teach-back.
- **Using nocebo words.** "Bone on bone" and "crumbling" increase fear and disability.
- **Sending "Please see and treat."** Give the reason, urgency, findings and a specific request.
- **Using a child as interpreter.** Arrange a professional interpreter.

Chapter 8 self-test · ten items

1. Which objective entry is written correctly?

A. Ortho tests positive for the neck on the right side

B. Spurling R: reproduced R arm pain to the thumb

C. Neck range of motion decreased and painful today

D. Neuro within normal limits for the upper extremities

B. Spurling R: reproduced R arm pain to the thumb Findings should name the test, the side and the pain reproduced. Vague entries cannot be traced or repeated.

2. You discover an error in yesterday's paper note. How do you correct it?

A. Cover the error with correction fluid and rewrite the entry neatly
B. Remove the page and rewrite the whole visit note on a fresh page
C. Draw a single line through it, write the correction, date and initial it
D. Overwrite the incorrect words so that the final note reads correctly in ink

C. Draw a single line through it, write the correction, date and initial it The original must stay legible. Never erase, obliterate or remove pages.

3. Which requirement is missing if a confused, intoxicated patient signs a consent form?

A. Disclosure
B. Capacity
C. A chaperone
D. A witness

B. Capacity Capacity is decision specific. Intoxication and acute confusion can remove it, and a signature cannot substitute for it.

4. Under the material risk standard, what must be disclosed?

A. What a reasonable patient in this position would want to know
B. Only what most practitioners in the area usually disclose
C. Only the risks that occur in more than one in a hundred treated cases
D. Only the risks the patient specifically asks about

A. What a reasonable patient in this position would want to know The reasonable patient standard includes rare but serious risks a person would want to know.

5. Which element of PARQ covers mobilization, exercise and no treatment?

A. Procedure
B. Risks and benefits
C. Alternatives
D. Questions

C. Alternatives Alternatives include other methods, medication through a physician, referral and no treatment with its natural history.

6. How should you describe the common benign reactions to manipulation?

A. About a third to a half of patients, settling within 24 to 48 hours
B. About one in a thousand patients, lasting up to two weeks
C. Almost no patients, because modern technique avoids them
D. Every single patient, lasting until the next scheduled visit a week later

A. About a third to a half of patients, settling within 24 to 48 hours Soreness, stiffness or headache affects about a third to a half of patients and usually settles in a day or two.

7. Which statement is true teach-back?

A. "Does all of that make sense to you about the numbness spreading in your leg?"
B. "You understand what I said about the numbness spreading, right?"
C. "Any questions about the numbness before we go ahead with care?"
D. "So I know I explained it well, what will you do if the numbness spreads?"

D. "So I know I explained it well, what will you do if the numbness spreads?" Teach-back asks the patient to explain in their own words. Closed checks invite a reflexive yes.

8. You suspect cauda equina syndrome. What is the right channel?

A. A letter to the family physician sent by mail the same week
B. A direct call to the emergency department, then a written summary
C. A secure message to the family physician requesting an outpatient MRI scan
D. A note in the chart and a follow up visit in two or three days

B. A direct call to the emergency department, then a written summary Emergencies get a phone call first. The written summary travels with or follows the patient.

9. In SPIKES, what is the purpose of the Perception step?

A. Ask what the patient already thinks before you tell
B. Give a warning shot before the bad news
C. Respond to the emotion with NURSE statements first
D. Agree on next steps and a follow up plan

A. Ask what the patient already thinks before you tell Perception asks before telling. It is one of the two most often skipped steps, with Emotions.

10. A 72 year old woman's 14 year old grandson offers to interpret. What should you do?

A. Accept, since family members know the patient best
B. Proceed in English slowly with written handouts
C. Let him interpret the history but not the consent
D. Thank him and arrange a professional interpreter

D. Thank him and arrange a professional interpreter Children should never interpret. They may filter information, lack vocabulary and compromise confidentiality.

Cram sheet

Everything from chapters 7 and 8 in one place. Cover the right column and see if you can rebuild each row.

Decisions

Item	The rule	Note
Impression	Tissue, level, side, qualifiers	Specific, defensible, safe
Differential	Two to four, ranked, one cannot miss	Each with a reason
Orders	Only what changes management	One sentence: condition plus trigger
No red flags	Usually no imaging at first visit	Say why
Cauda equina	Same day emergency, not outpatient MRI	No manipulation, no driving
Lanes	Treat, co-manage, refer	Referral is not abandonment
Plan	Diagnosis, procedures, frequency, goals, measures, home care, re-exam, safety net	Same order every time
Trial of care	About 2 weeks; two failed trials about 4 weeks	Change, investigate or refer
Absolute contraindication	No thrust in that region	Dissection, fracture, tumor, infection, instability, myelopathy
Relative contraindication	Modify	Anticoagulants, osteopenia, stable slip, pregnancy
Urgency	911; ED today; prompt days; routine	Decide the level first
BE FAST	Balance, eyes, face, arm, speech, time	Stroke signs

Tests and numbers

Item	Value	Note
Canadian C spine	65+, dangerous mechanism, paresthesias	Rotate 45 degrees each way if low risk
Ottawa ankle	Posterior edge or tip, distal 6 cm; four steps	ATFL tenderness alone is a sprain
Ottawa knee	55+, patella, fibular head, flex under 90, four steps	Highly sensitive
Radiograph lysis	30 to 50% bone loss	MRI for marrow
Bone scan	Sensitive, not specific	Myeloma often cold
DEXA	T score minus 2.5 or lower	Osteoporosis
EMG	About 3 weeks to denervation	Root versus entrapment
Pain scale	2 points or 30%	ODI 10 points; NDI 5 to 7 of 50
ABI	0.9 or lower	Arterial disease

Documentation and communication

Item	The rule
Correction	Single line, legible, date, initials
Late entry	Current date and time plus visit date
Consent	Capacity, disclosure, understanding, voluntary, documented
PARQ	Procedure, Alternatives, Risks, Questions
Benign reactions	1/3 to 1/2, settle in 24 to 48 hours
Teach-back	Patient explains in own words
SBAR	Situation, Background, Assessment, Recommendation
SPIKES	Setting, Perception, Invitation, Knowledge, Emotions, Strategy
NURSE	Name, Understand, Respect, Support, Explore
Interpreter	Professional, first person, never a child

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