

CHAPTER – 1

Why neuro handover is its own skill

Handing over a neuro patient is not the same job as handing over a general ICU patient, because the thing you are protecting is a brain that cannot tell you when it is getting worse until it already has.

WHY IT MATTERS AT HANDOVER

In most ICU handovers a missed detail costs you a delayed antibiotic or a slow potassium correction, and you usually get a second chance. In neurocritical care a missed pupil change or a missed motor drift can mean a patient goes to a scanner an hour later than they should have, and that hour can be the difference between a clot evacuation and a craniectomy. I was taught this the hard way as a resident, when a night colleague told me a post clip patient was “doing fine” and did not mention that the right pupil had gone from 3mm to 5mm over the last two hours. The day team caught it late morning. It worked out, but it should not have needed luck.

WHAT YOU NEED TO KNOW

- The brain has almost no reserve once intracranial compliance is exhausted, so small changes escalate fast.
- A neuro exam is a trend, not a snapshot, so the last exam alone tells you very little without the one before it.

Handing Over the Brain

- Many of your sedated or paralysed patients cannot show you a clinical sign at all, so numbers from monitors carry more weight than usual.
- Common neuro diagnoses (SAH for subarachnoid haemorrhage, TBI for traumatic brain injury, ischaemic stroke) each have their own specific watch points and timelines.
- Vasospasm windows, oedema peaks and rebleed risk all follow day-by-day clocks that a generic handover format does not capture.
- Small numeric drifts, like ICP for intracranial pressure creeping from 14 to 18, matter more here than a similar drift in, say, a lactate.
- The people who most need the detail are often the least experienced people on the next shift, so clarity beats brevity.
- A neuro patient's "baseline" changes almost every day, so yesterday's normal may not be today's normal.

WHAT YOU ACTUALLY DO

- Treat every neuro handover as a dedicated event, not a two line add on at the end of a general ICU round.
- Start with the diagnosis and day count, for example "day 3 post clipping of a ruptured left MCA aneurysm."
- State the current conscious level using a scale, GCS (Glasgow Coma Scale) or FOUR score, never a word like "drowsy" alone.
- Describe pupils explicitly, size and reactivity for each side, every single time, even if unchanged.
- Give the trend over the last shift, not just the current value, because a stable number can hide a slow drift if you only look at the endpoint.
- Mention any new focal deficit, even a subtle one, and say when it was first noticed.
- Report the actual ICP and CPP (cerebral perfusion pressure) numbers if the patient is monitored, with the trend line in words.

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- State the sedation plan and whether a wake up test is due, overdue, or deliberately deferred and why.
- Flag any imaging done or pending, and what you are looking for on it.
- Say what you are worried about for the coming shift, specifically, not generically.
- End with one or two clear asks for the next team, phrased as actions, not observations.
- Repeat back the plan to the incoming team and ask if anything is unclear before you leave.
- Write down what you said, briefly, so the next shift's night team has the same anchor.

NUMBERS

WHAT	TARGET OR DOSE
Recommended neuro handover time per patient	3 to 5 minutes
Core items that must be said every time	8 items
Maximum pause before pupil recheck if concerned	15 to 30 minutes
Typical bedside handover total duration (unit round)	20 to 40 minutes
Minimum vitals and neuro trend window to review	last 4 to 6 hours
Acceptable gap since last documented full neuro exam	under 2 hours

WATCH OUT FOR

- Words like “stable” and “comfortable” that describe your mood, not the patient’s brain.
- A GCS given as a single number like “GCS 9” with no breakdown of eye, verbal and motor, which hides which component actually changed.
- Skipping pupils because “they were fine yesterday”, when yesterday is not now.

Handing Over the Brain

- Handing over a sedation hold plan without saying who decided it and why, so the day team either repeats a bad idea or cancels a good one.
- Rushing the neuro patient's handover because a busier looking patient in the next bed takes your attention first.

THE HANDOVER LINES

This is a 52 year old man, day 4 after decompressive craniectomy for a right sided traumatic subdural haematoma, sedated on propofol and fentanyl with an ICP monitor in place. Overnight his ICP sat around 12 to 16 with one brief spike to 24 during suctioning that settled with head up and analgesia, CPP has stayed above 65 throughout. Pupils are 3mm and reactive bilaterally, unchanged from yesterday, and off sedation for the morning exam he was localising to pain on the left and flexing on the right, which is new compared to yesterday's bilateral localising. We have not done a formal wake up test yet this morning because of that spike overnight, my plan was to let the day team decide once they have seen him fresh. I am a little worried about that right sided change, it might be nothing after a restless night, but it is worth a repeat exam in an hour and a low threshold for a CT if it persists. The overnight team has already booked a slot with radiology if you need it.

IF YOU REMEMBER ONE THING

A neuro handover is only as good as the trend you describe, so always say what changed and over what time, not just what the patient looks like right now.

