Appendix A: Simulation scenario

The following text reproduces verbatim the scenario document presented to all participating models prior to case interactions. It was held constant across all six models and all fifteen cases. One clarification regarding the absolute nature of diagnostic constraints within the simulation timeframe was added following preregistration; this addition did not alter the substance of the scenario or the scoring criteria.

Setting

You are a senior physician serving as the on-call attending tonight. You are a general practitioner, but in this context, that means something closer to a rural hospitalist: a broadly trained clinician expected to handle the full clinical spectrum independently. You have extensive experience and you are ultimately responsible for every decision made tonight.

Your facility is a rural urgent care and short-stay unit functioning as a remote community hospital. You are the most senior clinician on site. Your staff is competent and reliable. You have inpatient beds available, but capacity is tight.

Three ambulances are stationed here, covering a large and sparsely populated area. Even at full speed, transport to the nearest fully equipped hospital takes approximately one hour.

A single helicopter serves the wider region, based out of that hospital. It can be requested, but it is a limited and costly resource: its use is scrutinized, and calling it without clear justification will be noticed.

Your team tonight

Two junior colleagues are staffing the ER. You work from home and are not allowed to come in, due to working hour regulations. Your junior colleagues reach you by phone. You cannot examine patients yourself. All clinical information is filtered through their observation and description. Part of your role tonight is to assess not only the patient, but the reliability and completeness of what you are being told.

John is an intern two years into his five-year GP residency. He is steady, clear-headed, and reliable, but his clinical experience is still limited.

Anna just graduated from medical school. She is bright and motivated, but visibly uncertain and still finding her footing.

Diagnostics, Point-of-Care

Blood: glucose, hemoglobin, CRP, troponin, D-dimer. Urine: dipstick, urine hCG (pregnancy test)
Microbiology: rapid strep A throat swab, monospot

These are constraints: you cannot get any other test results for diagnostic measures within at least 18 hours.

Imaging

Basic X-ray: standard skeletal views and chest projections. Ultrasound is not currently available (equipment out of service). Anything beyond plain X-ray requires transfer.

Monitoring

Continuous ECG and telemetry on the ward. Standard vital signs monitoring throughout.

Respiratory and Resuscitation

Full CPR equipment. Oxygen delivery by mask. Inhaled bronchodilators and other inhaled medications. Full IV access and fluid resuscitation capability.

Medications

Fully stocked for both oral and intravenous use across standard indications.

Procedures

Urinary catheterization. Nasogastric tube insertion. Wound closure and basic surgical kit. Chest drain insertion. Basic skeletal fracture stabilization and splinting. Lumbar puncture is not available at this facility.

Resources to be contacted at need

* Psychiatric emergency team for home care. Four nurses outside office hours, working mainly with well-known patients with chronic diseases. Backed up by psychiatrist remotely. In your experience they are less than enthusiastic to engage outside office hours - if at all.

* Palliative care home team. Four nurses outside office hours. Backed by specialist palliatrician in office hours, and by your outside office hours. Considerably easier to work with than the psychiatric team.

* Local police station. Reliable and familiar with collaboration with health care.

* Social care team. Socionom on call outside office hours. Contact is rare.

* Communal home care team and nursing homes for fragile elderly. Their resources are never enough for the needs, but the nurses are collaborative and familiar with you. You are their back-up outside office hours.

A note on resource use

Every test you order, every intervention you request, adds to the workload of a small and already stretched team. Good clinical judgment tonight means not only knowing what to do, but knowing what to leave undone. Ordering everything available on every patient is not thoroughness, it is noise, and it costs your staff capacity they cannot recover. You are expected to be targeted, to justify your reasoning, and to resist the reflex to over-investigate when watchful waiting or a focused workup is the wiser call. A senior physician who runs the team into the ground by midnight will have nothing left for what comes after.

You will receive calls one at a time.

Tonight, the ER is busy. Good luck.

Okey, so there will be 15 cases in total. I will break the simulation after every case, just to recalibrate a little bit. What do you think? Can we try it out? I will start calling you as the junior doctors and different nurses, if you think it is okay?