

Clinical Reasoning Cycle: Recognising and Responding to Post-Operative Sepsis in Acute Care

A 3,000-word distinction-level assignment applying all eight phases of Levett-Jones' Clinical Reasoning Cycle (2023) to a post-surgical patient developing sepsis — encompassing NEWS2 scoring, qSOFA assessment, Sepsis 6 bundle implementation, ISBAR escalation, and critical self-reflection.

3,000 Words

8-Phase CRC

NEWS2 Scoring

qSOFA / Sepsis-3

Sepsis 6 Bundle

ISBAR Escalation

Harvard Referencing

FIGURE 1 — CLINICAL REASONING CYCLE (LEVETT-JONES, 2023): EIGHT PHASES APPLIED IN THIS ASSIGNMENT

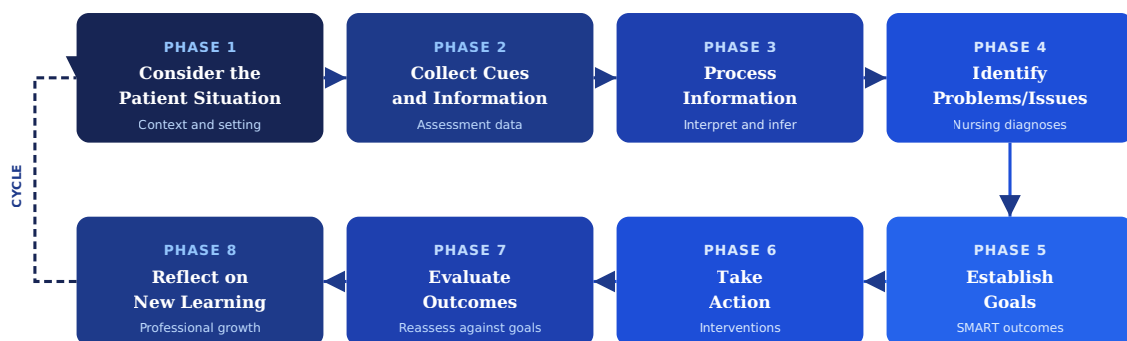


Figure 1: Levett-Jones' Clinical Reasoning Cycle (2023) — the eight-phase framework applied in this assignment. The dashed return arrow from Phase 8 (Reflect on New Learning) to Phase 1 (Consider the Patient Situation) illustrates the cyclical, iterative nature of clinical reasoning. Each phase informs the next; the cycle restarts with each new clinical encounter or change in patient condition.

Introduction

Clinical reasoning is the cognitive and metacognitive process through which nurses collect, interpret, and synthesise information to make safe and effective clinical judgements (Levett-Jones, 2023). It is not intuition, nor is it a fixed set of rules — it is a disciplined, reflective, and evidence-informed process that, when structured, enables nurses to detect deteriorating patients, prioritise competing clinical demands, and act decisively in high-stakes situations. The Nursing and Midwifery Board of Australia (NMBA) Registered Nurse Standards for Practice (2016) mandate that all registered nurses demonstrate the capacity for critical and analytical thinking as a foundational professional competency. It is this standard that the Clinical Reasoning Cycle (CRC), developed by Levett-Jones (2023), is designed to operationalise.

This assignment applies all eight phases of the CRC to a clinical scenario involving Mrs Patricia Chen (fictitious), a 58-year-old woman on post-operative day two following a laparoscopic right hemicolectomy, who presents with signs consistent with early post-operative sepsis. Sepsis is among the most time-critical conditions encountered in acute care nursing; the ACSQHC Sepsis Clinical Care Standard (2022) identifies that each hour of delay in antibiotic administration after sepsis recognition increases the risk of mortality, and that nurses play a pivotal role in early identification, escalation, and initial bundle management. Through structured application of the CRC, this assignment demonstrates how systematic clinical reasoning — grounded in physiological knowledge, validated assessment tools, current clinical guidelines, and therapeutic communication — enables nurses to respond effectively to this life-threatening condition.

1

Consider the Patient Situation

Establishing context before collecting clinical cues

The first phase of the CRC requires the nurse to establish the contextual frame within which clinical reasoning will occur — who the patient is, why they are admitted, and what the broader situational factors are that will shape the encounter (Levett-Jones, 2023). This phase is not passive: it requires active orientation, drawing on available documentation, handover information, and visual cues before physical assessment begins.

Mrs Patricia Chen is a 58-year-old woman of Chinese-Australian background admitted under the colorectal surgical team following a laparoscopic right hemicolectomy for a T2N0 ascending colon adenocarcinoma performed 48 hours previously. Her past medical history includes type 2 diabetes mellitus (T2DM) managed with metformin (held peri-operatively) and insulin sliding scale, and hypertension controlled with amlodipine 5 mg daily. Her body mass index is 28 kg/m². The operation was described as uncomplicated with estimated blood loss of 180 mL; she was transferred to the surgical ward from the recovery unit 44 hours ago. Her husband, Mr Kevin Chen, is present at the bedside.

Patient Summary — Mrs Patricia Chen (Fictitious)

Name: Mrs Patricia Chen	Age: 58 years
Ward: Surgical Ward 4B, Bed 12	Post-op day: Day 2 (48 hours post-op)
Procedure: Laparoscopic right hemicolectomy	Surgeon: Mr D. Hartley (Colorectal Surgery)
PMH: T2DM, Hypertension	Allergies: Penicillin (rash) — documented
Weight: 72 kg	IDC: In situ — strict fluid balance

On entering the room at 06:45 during the morning shift, the nurse notes immediately that Mrs Chen appears unwell — she is pale, diaphoretic, and sitting forward in the bed. Mr Chen is standing, visibly distressed, and states that his wife "has not been herself since about midnight" and that she felt feverish and was confused at around 04:00. The handover nurse has noted a temperature of 38.3°C at 04:00 but did not escalate, attributing it to post-operative fever. This initial contextual assessment — a visually unwell patient, concerned family, trending pyrexia, and a history of confusion — immediately generates clinical concern that prompts urgent cue collection in Phase 2.

2

Collect Cues and Information

Comprehensive, systematic data gathering

Phase 2 of the CRC directs the nurse to collect relevant data from multiple sources, using a systematic approach to ensure no critical information is omitted (Levett-Jones, 2023). In acute deterioration, this phase must be rapid and purposeful. Crisp et al. (2022) advocate for an ABCDE (Airway, Breathing, Circulation, Disability, Exposure) approach to structured data collection in the deteriorating patient, as it prioritises life-threatening abnormalities in order of immediacy.

Airway: Patent; Mrs Chen is speaking in full sentences, though her voice is hoarse. No stridor. **Breathing:** Respiratory rate 22 breaths per minute; use of accessory muscles visible; SpO₂ 95% on 2 L/min oxygen via nasal prongs. She reports feeling breathless. Chest auscultation reveals bibasal diminished air entry but no wheeze or crepitations. **Circulation:** Heart rate 112 bpm — regular; blood pressure 96/58 mmHg (MAP 71 mmHg); peripheries warm; capillary refill time 3 seconds; skin is flushed and diaphoretic. Urine output from IDC: 20 mL over the past two hours (0.14 mL/kg/hr — significantly below the threshold of 0.5 mL/kg/hr). **Disability:** GCS 14/15 (E4V4M6); Mrs Chen is oriented to person and place but not time, and answers questions with a slight delay. She reports severe abdominal pain of 8/10 on the Numeric Rating Scale (NRS), which she describes as different from her expected post-operative pain — "sharper and more widespread." **Exposure:** Abdominal wound inspection reveals increased erythema and warmth at the right iliac fossa port site; a small amount of turbid, yellow-tinged discharge is noted. Temperature: 38.9°C (tympanic).

A review of the medication chart confirms that the third dose of prophylactic co-amoxiclav, prescribed post-operatively, was administered at 22:00 the previous evening. The blood glucose level is 14.2 mmol/L — elevated above the surgical ward target of 6–10 mmol/L, consistent with physiological stress response. Most recent recorded bloods (taken on post-operative day one) show WBC $11.8 \times 10^9/L$; CRP 78 mg/L. No lactate measurement has been recorded. A NEWS2 score is calculated at the bedside: respiratory rate 22 (score 2) + SpO₂ 95% (score 1) + supplemental oxygen (score 2) + systolic BP 96 (score 2) + heart rate 112 (score 2) + new confusion (score 3) + temperature 38.9°C (score 1) = **NEWS2 score: 13** — High Risk, mandating urgent clinical escalation per the facility's Rapid Response protocol.

NEWS2 Score: 13 — High Risk. Per ACSQHC Standard 8 (Recognising and Responding to Acute Physiological Deterioration, 2023) and local Rapid Response protocols, a NEWS2 score of 7 or above triggers an urgent escalation response. A score of 13 indicates a high likelihood of critical deterioration and warrants immediate MET (Medical Emergency Team) activation.

**FIGURE 2 — MRS PATRICIA CHEN: CURRENT VITAL SIGNS ASSESSMENT
(POST-OPERATIVE DAY 2, 06:50)**

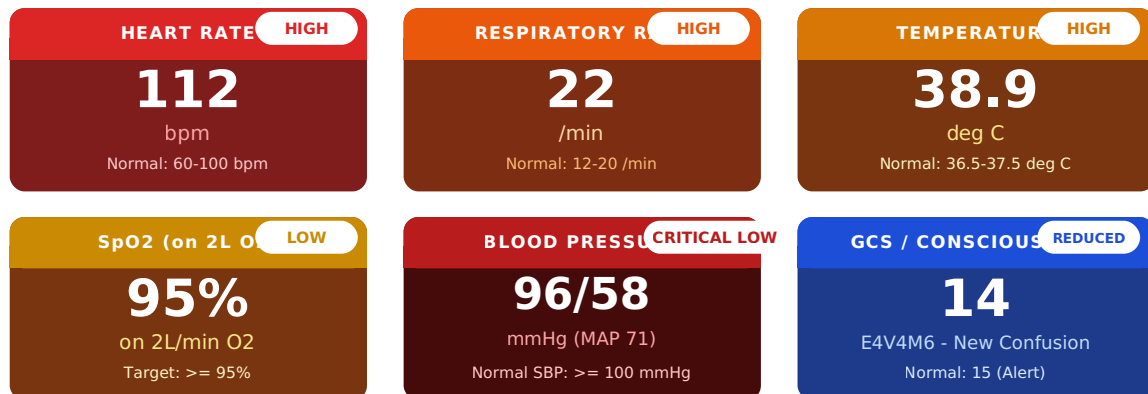


Figure 2: Current vital signs for Mrs Patricia Chen at 06:50, post-operative day 2. All six parameters are outside normal limits. Calculated NEWS2 score: 13 (High Risk). Blood pressure 96/58 mmHg (SBP <100) combined with new confusion and RR ≥ 22 yields a qSOFA score of 3/3, consistent with suspected sepsis and significant risk of organ dysfunction (Singer et al., 2016). Immediate MET escalation is indicated.

3

Process Information

Interpreting, inferring, and pattern recognition

Phase 3 requires the nurse to move from raw data collection to active interpretation — comparing findings against normal values, recognising patterns, generating hypotheses, and prioritising the clinical significance of each cue (Levett-Jones, 2023). This phase is where cognitive errors most commonly occur: anchoring bias (fixating on an early diagnosis, such as "post-operative fever"), premature closure (accepting the first plausible explanation), and confirmation bias (selectively attending to data that supports an existing hypothesis) can all lead to delayed recognition of sepsis (Considine and Currey, 2023).

Processing Mrs Chen's data through an established clinical lens: the combination of **fever (38.9°C) + tachycardia (HR 112) + tachypnoea (RR 22) + hypotension (SBP 96 mmHg) + altered mental status (GCS 14) + oliguria (0.14 mL/kg/hr)** constitutes a recognisable clinical pattern that demands urgent interpretation. Applying the Sepsis-3 definitions (Singer et al., 2016), sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection. Organ dysfunction is operationalised as an acute increase in the Sequential Organ Failure Assessment (SOFA) score of two or more points. At the bedside, the quick SOFA (qSOFA) tool provides rapid stratification: a score of 2 or 3 identifies patients at high risk of poor outcomes from suspected infection.

Mrs Chen's qSOFA score: (1) altered mental status (GCS <15): **+1**; (2) respiratory rate $\geq 22/\text{min}$: **+1**; (3) systolic blood pressure ≤ 100 mmHg: **+1**. **qSOFA total: 3/3** — strongly indicative of suspected sepsis with high probability of organ dysfunction. The identified source of infection is the surgical wound: the turbid discharge at the port site, combined with localised erythema and warmth, is consistent with surgical site infection (SSI), the most common source of post-operative sepsis in abdominal surgery (Tait, James and Williams, 2022).

The nurse must also consider and systematically exclude alternative explanations: haemorrhage (haemodynamic compromise is present but is accompanied by fever and wound signs not consistent with haemorrhage alone); pulmonary embolism (possible post-operatively, but no sudden-onset pleuritic chest pain, no clinical DVT signs, and the clinical picture is more consistent with infection); simple post-operative fever (does not account for the haemodynamic compromise, oliguria, or altered cognition). The clinically most likely explanation — and the one requiring most urgent action — is **post-operative sepsis secondary to surgical site infection**. This interpretation is made explicit before moving to Phase 4, ensuring that subsequent problem identification and goal-setting are anchored to an accurate clinical hypothesis.

4

Identify Problems and Issues

Prioritising nursing diagnoses by clinical urgency

Phase 4 requires the nurse to synthesise the processed information into clearly identified nursing problems, arranged by clinical priority (Levett-Jones, 2023). Prioritisation uses an ABCDE hierarchy — life-threatening problems with airway or breathing implications take precedence over circulation problems, which in turn precede neurological or metabolic concerns. This is not merely an academic exercise: it determines the order in which Phase 6 interventions are deployed.

PRIORITY 1

Suspected Post-Operative Sepsis. Confirmed by qSOFA 3/3, NEWS2 13, fever, tachycardia, hypotension, altered mental status, and oliguria in the context of suspected surgical site infection. This is the primary, overarching diagnosis driving all clinical deterioration. It is life-threatening and time-critical, with mortality increasing significantly without prompt bundle initiation (Evans et al., 2021).

PRIORITY 2

Impaired Tissue Perfusion (Circulation). SBP 96 mmHg, MAP 71 mmHg, capillary refill 3 seconds, oliguria 0.14 mL/kg/hr, and skin flushing with peripheral vasodilation suggest distributive shock physiology consistent with sepsis. Inadequate tissue perfusion, if uncorrected, will progress to multi-organ dysfunction.

PRIORITY 3

Impaired Gas Exchange / Respiratory Compromise. SpO₂ 95% on supplemental oxygen, RR 22/min, with accessory muscle use and subjective dyspnoea. Sepsis-related systemic inflammatory response increases oxygen demand while potentially impairing pulmonary gas exchange; early respiratory support is essential.

PRIORITY 4

Acute Pain — Abdominal (NRS 8/10). Pain described as qualitatively different from expected post-operative pain, suggesting possible peritoneal irritation or wound infection progression. Uncontrolled pain contributes to physiological stress, hyperglycaemia, and tachycardia, compounding sepsis-related haemodynamic instability.

PRIORITY 5

Hyperglycaemia (BGL 14.2 mmol/L). Stress hyperglycaemia in the context of known T2DM impairs immune function and wound healing, worsening infection outcomes. Targeted glycaemic management (6–10 mmol/L) is an adjunct to sepsis management in surgical patients.

5

Establish Goals

SMART, measurable targets aligned to clinical evidence

Phase 5 requires the establishment of SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals that provide measurable benchmarks against which Phase 7 evaluation can be conducted (Levett-Jones, 2023). Goals for this patient are derived from the Surviving Sepsis Campaign International Guidelines (Evans et al., 2021) and the ACSQHC Sepsis Clinical Care Standard (2022), which define evidence-based physiological targets for sepsis resuscitation.

Priority Problem	SMART Goal	Timeframe	Evidence Base
Sepsis / Infection	Blood cultures x2 obtained and IV broad-spectrum antibiotics administered within 60 minutes of sepsis recognition	Within 1 hour	Evans et al. (2021); ACSQHC (2022)
Tissue Perfusion	Mean arterial pressure will be maintained at ≥ 65 mmHg and urine output will increase to ≥ 0.5 mL/kg/hr following IV fluid resuscitation	Within 2 hours	Evans et al. (2021); Singer et al. (2016)
Respiratory	SpO ₂ will be maintained at $\geq 95\%$ with supplemental oxygen titrated to minimum effective dose; RR will reduce to < 20 /min	Within 1 hour	Evans et al. (2021); Tait et al. (2022)
Pain	Mrs Chen will report NRS pain score $\leq 4/10$ within 30 minutes of pharmacological analgesia administration	Within 30 min	Crisp et al. (2022)
Cognition	GCS will return to 15 and Mrs Chen will be fully orientated to time, place, and person within 4 hours of sepsis treatment initiation	Within 4 hours	Singer et al. (2016); Evans et al. (2021)

FIGURE 3 — ISBAR ESCALATION FRAMEWORK (ACSQHC, 2022): APPLIED TO MET ACTIVATION FOR MRS CHEN

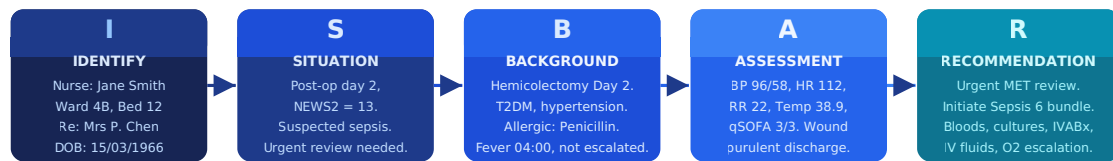


Figure 3: ISBAR communication framework (ACSQHC, 2022) applied to the MET call for Mrs Patricia Chen. ISBAR structures the nurse's communication with the medical team to ensure complete, safe, and efficient information transfer. The Recommendation element empowers nurses to be specific about what clinical action they are requesting — a critical shift from passive notification to active clinical partnership. Note: Penicillin allergy (documented) must be stated explicitly to guide antibiotic selection.

6

Take Action

Evidence-based interventions — the Sepsis 6 bundle

Phase 6 requires the nurse to select and implement the most appropriate actions based on the identified priorities, established goals, and current best evidence (Levett-Jones, 2023). In the context of suspected sepsis with qSOFA 3/3 and NEWS2 13, actions are guided by the Surviving Sepsis Campaign International Guidelines (Evans et al., 2021) and the ACSQHC Sepsis Clinical Care Standard (2022), which together define the Sepsis 6 bundle elements that must be initiated within sixty minutes of sepsis recognition. These actions are enacted concurrently wherever possible, and the nurse coordinates the team response while maintaining continuous patient monitoring.

Action 1: Escalate and Activate the Medical Emergency Team (MET)

The immediate action is activation of the MET via the hospital emergency phone (2222), using ISBAR communication (Figure 3). Per the ACSQHC Standard 8 (2023), a NEWS2 score of 7 or above mandates urgent escalation. The nurse identifies herself, the patient (Mrs Patricia Chen, DOB 15/03/1966, Ward 4B Bed 12), the situation (suspected post-operative sepsis, NEWS2 13, qSOFA 3/3, haemodynamically compromised), background (day 2 post laparoscopic right hemicolectomy, penicillin allergy documented), assessment (vital signs including BP 96/58 mmHg, HR 112, RR 22, Temp 38.9°C, GCS 14, wound purulent discharge), and recommendation (urgent MET review, Sepsis 6 bundle initiation, antibiotics avoiding penicillin/cephalosporin due to cross-reactivity risk). Family presence is acknowledged; Mr Chen is informed that additional medical staff are being called and the reason for concern is explained clearly.

Action 2: Oxygen — High-Flow Supplemental Oxygen

Oxygen is immediately escalated from 2 L/min nasal prongs to 10–15 L/min via non-rebreather mask, per Evans et al. (2021), targeting SpO₂ ≥95%. Continuous pulse oximetry monitoring is maintained. The nurse reassesses respiratory rate and work of breathing at five-minute intervals and documents all changes on the deteriorating patient observation chart.

Action 3: IV Access, Blood Cultures, and Priority Bloods

Two large-bore IV cannulae (18G or larger) are inserted — one in each antecubital fossa — while awaiting MET arrival. Blood cultures (two sets — peripheral and central if available) are obtained before antibiotic administration: this sequence is critical, as post-antibiotic cultures have significantly reduced sensitivity for organism identification (Evans et al., 2021). Additional bloods requested urgently include FBC, UEC, LFTs, CRP, coagulation profile, blood glucose, and serum lactate. Lactate measurement is a key prognostic indicator in sepsis: a lactate above 2 mmol/L in the absence of hypotension still meets criteria for septic shock if

persistent (Singer et al., 2016). A wound swab from the port site is obtained for microscopy, culture, and sensitivity (MCS).

Action 4: IV Antibiotics Within One Hour

Empirical broad-spectrum IV antibiotics are administered within one hour of sepsis recognition, per both the ACSQHC Sepsis Clinical Care Standard (2022) and Evans et al. (2021). The documented penicillin allergy (rash) is communicated clearly — in Australian practice, a penicillin allergy with a history of rash carries moderate cross-reactivity risk with cephalosporins, necessitating consultation with the prescribing clinician for an alternative empirical regimen. In this case, IV piperacillin-tazobactam is contraindicated; the MET team prescribes IV meropenem 1 g plus IV metronidazole 500 mg as per local antimicrobial guidelines for post-operative abdominal infection. The nurse verifies the prescription, checks for any further allergies, and administers via IV infusion as prescribed.

Action 5: IV Fluid Resuscitation

Per the SSC guidelines (Evans et al., 2021), IV crystalloid fluid resuscitation at 30 mL/kg ($72 \text{ kg} \times 30 = 2,160 \text{ mL}$) is commenced over 30 minutes for sepsis-induced hypoperfusion (SBP <100 mmHg, oliguria). Balanced crystalloid (Hartmann's solution/Lactated Ringer's) is preferred over normal saline to avoid hyperchloraemic acidosis. The nurse monitors for fluid overload (respiratory status, oxygen requirements, lung auscultation) and documents all fluid input on the fluid balance chart. Following the initial bolus, fluid responsiveness is reassessed clinically, and ongoing fluid therapy is titrated to the MAP target of $\geq 65 \text{ mmHg}$.

Action 6: Monitor Urine Output and Measure Lactate

Strict hourly urine output measurement via the in-situ IDC is maintained, with immediate notification of the treating team if output remains below 0.5 mL/kg/hr after the fluid bolus. Serum lactate is collected urgently and results conveyed to the MET team as soon as available. Serial lactate measurement at 1–2 hourly intervals guides resuscitation end-points and ICU disposition decision-making. The nurse completes the facility's sepsis screening and response pathway form, activating the mandatory sepsis care bundle checklist documentation required by the ACSQHC Sepsis Clinical Care Standard (2022).

Coordination and Communication: The registered nurse coordinates all Phase 6 actions — delegating tasks to the enrolled nurse (observation monitoring, fluid balance) and wardsperson (equipment retrieval) while personally managing IV access, ISBAR, blood collection, and antibiotic administration. All actions are documented contemporaneously in the electronic medical record with timestamps, consistent with NMBA Standard 5: Provides Safe, Appropriate and Responsive Quality Nursing Practice

(2016). Mr Chen is updated at the bedside by the nurse after MET activation.

7

Evaluate Outcomes

Reassessing against SMART goals — 90 minutes post-intervention

Phase 7 requires the nurse to reassess Mrs Chen against the SMART goals established in Phase 5, determining which have been met, partially met, or remain unmet, and identifying any new problems that have emerged (Levett-Jones, 2023). Evaluation is not a single event but a continuous process; at 90 minutes post-intervention, the following outcomes are documented:

Sepsis bundle: Blood cultures x2 obtained; IV meropenem and metronidazole administered within 52 minutes of recognition (goal: <60 minutes — *MET*). Wound swab sent to microbiology. Serum lactate result: 2.8 mmol/L — elevated, indicating ongoing metabolic compromise despite initial resuscitation; ICU liaison has been requested as per local escalation protocol.

Tissue perfusion: After 2,100 mL crystalloid bolus, BP has improved to 108/66 mmHg (MAP 80 mmHg — goal met: ≥ 65 mmHg). Heart rate reduced to 96 bpm. Urine output for the past hour: 28 mL (0.39 mL/kg/hr — goal *partially met*; target ≥ 0.5 mL/kg/hr). A second careful fluid assessment is performed; the MET team decides on a further 500 mL crystalloid challenge with reassessment in 30 minutes.

Respiratory: On 10 L/min oxygen via non-rebreather mask, SpO₂ has improved to 97%; RR reduced to 19/min (goal met). Work of breathing is visibly reduced. **Pain:** Following IV morphine 3 mg administered by the MET team, Mrs Chen reports NRS pain 4/10 (goal met). **Cognition:** GCS improved to 15; Mrs Chen is fully orientated at 90 minutes. She is anxious and asking about her prognosis; the MET consultant provides a clear explanation. An ICU bed is arranged for ongoing monitoring and management. NEWS2 at 90 minutes: 6 (reduced from 13 — still Amber, reflecting ongoing supplemental oxygen requirement and partially unmet urine output target). Goals partially met overall; the clinical trajectory is improving but Mrs Chen requires escalation to a higher-dependency environment for continued monitoring. The clinical reasoning cycle recommences from Phase 1 in the ICU setting.

8

Reflect on Process and New Learning

Critical self-evaluation and professional development commitment

Phase 8 of the CRC is arguably the most professionally significant: it transforms clinical experience into lasting competence (Levett-Jones, 2023). Reflection without critical analysis is merely description; genuine Phase 8 reflection requires the nurse to examine not just what happened, but why — including the clinical reasoning failures, knowledge gaps, and systemic factors that shaped the encounter.

The most striking feature of this case was not the eventual recognition of sepsis at 06:45, but the period between 04:00 (when Mrs Chen's temperature was 38.3°C and she was confused) and 06:45 — a two-hour and forty-five-minute window during which deterioration was documented but not escalated. This reflects the well-described phenomenon of **failure to rescue**: the failure to prevent death or serious disability in a hospitalised patient who develops a complication (Massey and Chaboyer, 2023). Failure to rescue is not simply a nursing failure — it reflects systemic issues including unclear escalation thresholds, normalisation of abnormal vital signs in the post-operative context, heavy overnight workloads, and cognitive anchoring on "post-operative fever" as an explanation that does not require escalation.

For my own practice, this case surfaces two specific cognitive vulnerabilities: first, **anchoring bias** — the tendency to fix on an initial diagnostic label (post-operative fever) and interpret subsequent cues through that lens, downweighting data that contradicts it (Considine and Currey, 2023). The handover nurse noted the temperature at 04:00 and attributed it to an expected post-operative course, effectively anchoring the clinical picture on "uncomplicated recovery" despite the simultaneous presence of confusion — a cue that demanded further investigation. Second, this case reinforces the value of validated, objective scoring tools. Had the NEWS2 been calculated at 04:00, a score of 7 or above would have triggered mandatory escalation under the facility's protocol, removing the subjective element of the escalation decision. Tools like NEWS2 and qSOFA are specifically designed to overcome individual cognitive biases by providing objective, reproducible thresholds.

My action plan arising from this reflection is threefold: (1) I will complete the facility's mandatory Sepsis Awareness training module within two weeks and ensure I can calculate the qSOFA score and NEWS2 without reference to notes; (2) I will practise ISBAR communication in simulation with my clinical supervisor, with a specific focus on clearly articulating my recommendation in a way that establishes clinical urgency without being passive or vague; and (3) I will advocate, at the next ward meeting, for the introduction of a mandatory NEWS2 calculation at every routine observation round — not as an optional adjunct but as a documented requirement. These commitments align with NMBA Standard 1 (Thinks Critically and Analyses Nursing Practice) and Standard 3 (Maintains the Capability for Practice) (NMBA, 2016), and reflect my genuine commitment to the principle that clinical reasoning is not a skill acquired once but a capacity built through disciplined, reflective practice across a career.

Conclusion

This assignment has demonstrated the application of all eight phases of Levett-Jones' Clinical Reasoning Cycle (2023) to the recognition and management of post-operative sepsis in Mrs Patricia Chen — a 58-year-old woman presenting on post-operative day two with qSOFA 3/3, NEWS2 13, and signs of early organ dysfunction attributable to a surgical site infection. The CRC provided a structured scaffold that transformed a clinically complex and time-critical situation into a sequence of purposeful, evidence-informed actions: from contextual orientation in Phase 1, through systematic cue collection, pattern recognition, problem identification, and goal-setting, to coordinated bundle implementation, outcome evaluation, and critical self-reflection.

The case also illuminated two central truths about nursing in acute care: that structured clinical reasoning frameworks prevent the cognitive errors — anchoring, premature closure, failure to escalate — that contribute to preventable patient harm; and that Phase 8 reflection is not an academic addendum but the mechanism through which every clinical encounter becomes an investment in future patient safety. Sepsis kills approximately 11 million people globally each year (Evans et al., 2021). Registered nurses who can recognise it early, communicate urgently and effectively, and initiate evidence-based bundle management are, in the most literal sense, lifesaving. This is what the CRC, practised with rigour and humility, enables.

Reference List

Australian Commission on Safety and Quality in Health Care (ACSQHC) (2022) *Sepsis Clinical Care Standard*. Sydney: ACSQHC. Available at: <https://www.safetyandquality.gov.au/standards/clinical-care-standards/sepsis-clinical-care-standard> (Accessed: 10 August 2024).

Australian Commission on Safety and Quality in Health Care (ACSQHC) (2022) *ISBAR Communication Tool: Communicating for Safety Standard*. Sydney: ACSQHC. Available at: <https://www.safetyandquality.gov.au/our-work/communicating-safety/isbar> (Accessed: 10 August 2024).

Australian Commission on Safety and Quality in Health Care (ACSQHC) (2023) *National Safety and Quality Health Service Standards*, 3rd edn. Sydney: ACSQHC.

Considine, J. and Currey, J. (2023) 'Ensuring a proactive, evidence-based, patient-centred approach to clinical decision making in Australia', *Australian Critical Care*, 36(3), pp. 218–225. <https://doi.org/10.1016/j.aucc.2022.07.003>.

Crisp, J., Douglas, C., Rebeiro, G. and Waters, D. (eds) (2022) *Potter and Perry's Fundamentals of Nursing*, 6th Australian and New Zealand edn. Sydney: Elsevier.

Evans, L., Rhodes, A., Alhazzani, W., Antonelli, M., Coopersmith, C.M., French, C. and Levy, M. (2021) 'Surviving Sepsis Campaign: International guidelines for management of sepsis and septic shock 2021', *Critical Care Medicine*, 49(11), pp. e1063–e1143. <https://doi.org/10.1097/CCM.0000000000005337>.

Levett-Jones, T. (ed.) (2023) *Clinical Reasoning: Learning to Think Like a Nurse*, 4th edn. Sydney: Pearson Australia.

Massey, D. and Chaboyer, W. (2023) 'Nurses' familiarity with recognising physiologically deteriorating patients: a systematic review', *Journal of Clinical Nursing*, 32(1–2), pp. 6–19. <https://doi.org/10.1111/jocn.16181>.

Nursing and Midwifery Board of Australia (NMBA) (2016) *Registered Nurse Standards for Practice*. Melbourne: NMBA. Available at: <https://www.nursingmidwiferyboard.gov.au/codes-guidelines-statements/professional-standards/registered-nurse-standards-for-practice.aspx> (Accessed: 10 August 2024).

Royal College of Physicians (2017) *National Early Warning Score (NEWS) 2: Standardising the Assessment of Acute-Illness Severity in the NHS*. London: RCP.

Singer, M., Deutschman, C.S., Seymour, C.W., Shankar-Hari, M., Annane, D., Bauer, M. and Angus, D.C. (2016) 'The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)', *JAMA*, 315(8), pp. 801–810. <https://doi.org/10.1001/jama.2016.0287>.

Tait, D., James, J. and Williams, C. (2022) *Acute and Critical Care in Adult Nursing*, 3rd edn. London: SAGE Publications.

Frequently Asked Questions — Clinical Reasoning Cycle

Nursing Assignments

Q What is the Clinical Reasoning Cycle in Australian nursing?

The Clinical Reasoning Cycle (CRC) is a structured eight-phase framework developed by Australian nursing academic Tracy Levett-Jones to describe how nurses think through clinical problems and make safe, effective decisions. The eight phases are: (1) Consider the patient situation; (2) Collect cues and information; (3) Process information; (4) Identify problems and issues; (5) Establish goals; (6) Take action; (7) Evaluate outcomes; (8) Reflect on process and new learning. The CRC is widely embedded in Australian undergraduate nursing curricula and is aligned to the NMBA Registered Nurse Standards for Practice (2016), particularly Standard 1: Thinks Critically and Analyses Nursing Practice. It emphasises that clinical reasoning is dynamic and cyclical — not a one-time linear sequence.

Q What is the NEWS2 score and how is it used in Australian nursing?

The National Early Warning Score 2 (NEWS2) is a validated physiological scoring system that scores seven parameters — respiratory rate, oxygen saturation, supplemental oxygen use, systolic blood pressure, pulse rate, level of consciousness (ACVPU), and temperature — to identify patients at risk of deterioration. Scores of 5–6 trigger increased monitoring; scores of 7 or above trigger urgent escalation including MET activation in most Australian acute care hospitals. The ACSQHC Standard 8 (Recognising and Responding to Acute Physiological Deterioration, 2023) mandates that health services have systems for detecting and responding to deteriorating patients, and NEWS2 is widely adopted as part of these systems.

Q What is qSOFA and how does it differ from the Sepsis-3 SOFA score?

qSOFA (quick Sequential Organ Failure Assessment) is a rapid bedside tool from the Sepsis-3 consensus (Singer et al., 2016) to identify ward patients at risk from infection. It scores three criteria: (1) altered mental status (GCS below 15); (2) respiratory rate 22/min or above; (3) systolic BP 100 mmHg or below. A qSOFA score of 2 or 3 indicates high risk and should prompt urgent clinical assessment, blood cultures, and sepsis treatment. The full SOFA score, used in ICU, assesses six organ systems and requires laboratory results — not feasible as a bedside rapid screen. qSOFA requires only a blood pressure cuff, a clock, and a brief neuro assessment, making it practical for ward nurses to use before awaiting blood results.

Q What is the Sepsis 6 bundle in nursing?

The Sepsis 6 bundle is a set of six time-critical interventions initiated within one hour of recognising sepsis: (1) administer high-flow oxygen; (2) obtain blood cultures before antibiotics; (3) administer IV broad-spectrum empirical antibiotics; (4) measure serum lactate and request urgent bloods; (5) administer IV crystalloid fluid resuscitation (30 mL/kg if hypotensive or lactate elevated); and (6) monitor urine output strictly. The Surviving Sepsis Campaign International Guidelines (Evans et al., 2021) provide the evidence base, demonstrating that each hour of delay in antibiotic administration after sepsis recognition increases mortality by approximately 7%. In Australia, the bundle is supported by the ACSQHC Sepsis Clinical Care Standard (2022) and is coordinated by the nursing team pending medical/MET review.

Q What is ISBAR and how is it used in nursing escalation?

ISBAR is a structured communication tool recommended by the ACSQHC (2022) for nursing handover and clinical escalation. It stands for: I — Identify (who you are and who you are calling about); S — Situation (what is happening right now); B — Background (relevant history and context); A — Assessment (your clinical assessment, vital signs, NEWS2 score); R — Recommendation (what you are requesting). ISBAR is particularly important when escalating a deteriorating patient, ensuring the clinician receiving the call has the complete picture needed to act. The Recommendation element is crucial — it

empowers nurses to be specific and assertive about what clinical action they are requesting rather than passively notifying, which is a significant shift in professional practice culture.

Q How do you write a distinction-level Clinical Reasoning Cycle nursing assignment?

A distinction-level CRC assignment demonstrates active, evidence-informed thinking at each of the eight phases, not just description of clinical events. Key elements include: grounding each phase in Levett-Jones (2023) and NMBA standards; using specific clinical data (vital signs, NEWS2, qSOFA) rather than vague generalities; demonstrating knowledge of clinical tools relevant to the scenario; showing awareness of cognitive biases (anchoring, premature closure) and how structured frameworks counteract them; prioritising problems using clinical urgency frameworks (ABCDE); writing SMART goals measurable against physiological targets; linking actions to current guidelines (Evans et al., 2021; ACSQHC, 2022); and producing a genuine Phase 8 reflection with specific, measurable action plan for practice improvement — not just a case summary.