**Supplementary Table 2. Items that reached consensus in Round 1 feasibility.**

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| --- | --- | --- | --- | --- |
|  | **Content of items** | **Mean value** | **SD** | **CV** |
| Primary items | A Prior to ICU admission | 4.95 | 0.21 | 0.04 |
|  | B Postoperative ICU admission before anaesthesia emergence | 4.68 | 0.89 | 0.19 |
|  | C Postoperative ICU admission after anaesthesia emergence | 4.95 | 0.21 | 0.04 |
|  | D First postoperative day / transfer day | 5.00 | 0.00 | 0.00 |
|  | E Following ICU discharge | 4.95 | 0.21 | 0.04 |
|  | F Family precautions | 4.86 | 0.64 | 0.13 |
| Secondary items | A1 Objectives of ICU | 4.86 | 0.47 | 0.10 |
|  | A2 Description of ICU personnel | 4.91 | 0.29 | 0.06 |
|  | A3 Description of ICU medical devices | 4.73 | 0.55 | 0.12 |
|  | A4 ICU hospitalisation fees | 4.91 | 0.43 | 0.09 |
|  | A5 Supply preparation | 5.00 | 0.00 | 0.00 |
|  | A6 Psychological preparation | 4.73 | 0.55 | 0.12 |
|  | B1 ICU admission handover procedure | 5.00 | 0.00 | 0.00 |
|  | B2 ICU admission handover content | 4.95 | 0.21 | 0.04 |
|  | C1 Clinical condition at postoperative ICU admission | 4.91 | 0.43 | 0.09 |
|  | C2 How to express needs before tracheal extubation | 5.00 | 0.00 | 0.00 |
|  | C3 How to cooperate during tracheal extubation | 4.91 | 0.29 | 0.06 |
|  | C4 How to cooperate after tracheal extubation | 4.95 | 0.21 | 0.04 |
|  | C5 Precautions in the ICU on the night of the surgery | 4.95 | 0.21 | 0.04 |
|  | C6 Common medications administered in the ICU | 4.82 | 0.50 | 0.10 |
|  | D1 Morning nebulisation therapy | 4.91 | 0.29 | 0.06 |
|  | D2 Deep breathing and coughing exercises | 4.91 | 0.29 | 0.06 |
|  | D3 Maintaining fasting after 06:30 | 4.91 | 0.29 | 0.06 |
|  | D4 Obtain arterial and venous blood samples for diagnostic testing | 4.91 | 0.29 | 0.06 |
|  | D5 Replace the drainage container | 4.91 | 0.29 | 0.06 |
|  | D6 The medical and nursing grand rounds | 4.95 | 0.21 | 0.04 |
|  | D7 Wound dressing | 5.00 | 0.00 | 0.00 |
|  | D8 Perform bedside radiography or transport for CT | 4.95 | 0.21 | 0.04 |
|  | D9 Notify family prior to interdepartmental transfer | 5.00 | 0.00 | 0.00 |
|  | D10 Precautions for non-transferred patients | 4.95 | 0.21 | 0.04 |
|  | E1 Adherence to ward treatment protocols | 4.91 | 0.29 | 0.06 |
|  | E2 Ways to express gratitude | 4.68 | 0.57 | 0.12 |
|  | E3 Complaints or suggestions | 4.73 | 0.55 | 0.12 |
|  | E4 Pulmonary maintenance tips | 4.77 | 0.43 | 0.09 |
|  | F1 After the patient is transferred to the operating room | 4.91 | 0.43 | 0.09 |
|  | F2 Following patient transfer to the ICU postoperatively | 4.91 | 0.43 | 0.09 |
| Tertiary items | A1.1 Centralized management of critically ill patients with optimal allocation of human, material, and technical resources; | 4.95 | 0.21 | 0.04 |
|  | A1.2 The ICU is colloquially known as the ‘life-saving’ department, with our primary mission being to preserve life and ensure patient safety. | 4.95 | 0.21 | 0.04 |
|  | A2.1 ICU physicians (in green uniforms): develop treatment plans based on the patient′s condition; | 4.86 | 0.47 | 0.10 |
|  | A2.2 ICU nurses (in blue clothes and floral-patterned caps): 24-h ambulatory blood pressure monitoring and following through with prescribed treatment protocols; | 4.86 | 0.47 | 0.10 |
|  | A 2.3 Respiratory therapist (in purple uniforms): managed mechanical ventilation, adjusted ventilator parameters, and provided comprehensive airway care; | 4.86 | 0.47 | 0.10 |
|  | A2.4 Nursing assistants (in blue uniforms and caps): delivered activities of daily living per nursing directives, encompassing toileting aid, laundry handling, and meal assistance; | 4.91 | 0.43 | 0.09 |
|  | A2.5 Cleaning staff (in pink uniforms): performed ICU sanitation duties including waste disposal and environmental disinfection. | 4.91 | 0.43 | 0.09 |
|  | A3.1 Ventilator: providing respiratory support; | 4.95 | 0.21 | 0.04 |
|  | A3.2 ECG monitoring: monitor vital signs; | 4.95 | 0.21 | 0.04 |
|  | A3.3 Blood gas analyser: monitoring critical blood parameters; | 4.95 | 0.21 | 0.04 |
|  | A3.4 Infusion-pump / injection-pump: precise regulation of infusion rate and volume; | 4.95 | 0.21 | 0.04 |
|  | A3.5 Air mattress: preventing pressure injuries in high-risk skin areas; | 4.95 | 0.21 | 0.04 |
|  | A3.6 Additional life-support equipment: defibrillator and manual resuscitator, etc; | 4.91 | 0.29 | 0.06 |
|  | A4.1 In cases of critical instability or ongoing resuscitation, costs may exceed ¥10,000 per day; | 4.95 | 0.21 | 0.04 |
|  | A4.2 ICU costs will be reimbursed by the health insurance; | 4.95 | 0.21 | 0.04 |
|  | A4.3 Surgical procedure costs are not included in ICU treatment expenses. | 4.73 | 0.77 | 0.16 |
|  | A5.1 Daily living supplies preparation: tissue paper, wet wipes, drinking cup with straw, washbasin, towels; | 5.00 | 0.00 | 0.00 |
|  | A5.2 Medical equipment preparation: nebuliser, incentive spirometer, and urinal / bedpan; | 4.91 | 0.43 | 0.09 |
|  | A6.1 Preoperative psychological status: approximately 98% of patients exhibited varying degrees of anxiety and fear before surgery; | 4.77 | 0.69 | 0.14 |
|  | A6.2 Strategies for alleviating preoperative anxiety and stress: deep breathing, listening to soothing music, mindfulness meditation, or engaging in proactive communication with healthcare professionals. | 4.86 | 0.35 | 0.07 |
|  | B1.1 Before patient transfer to the ICU, the critical care team prepares essential resources including bed allocation, equipment calibration, and supply stocking to ensure readiness; | 5.00 | 0.00 | 0.00 |
|  | B1.2 The operating room assistant transports the ICU bed into the operating room in preparation for patient transfer; | 5.00 | 0.00 | 0.00 |
|  | B1.3 During postoperative transfer to the ICU, the patient is accompanied by a multidisciplinary team, which includes the attending surgeon, anaesthesiologist, respiratory therapist, and operating room assistant. | 5.00 | 0.00 | 0.00 |
|  | B2.1 Verify patient identity and complete barcode registration; | 4.91 | 0.43 | 0.09 |
|  | B2.2 Connecting a ventilator and ECG monitor; | 5.00 | 0.00 | 0.00 |
|  | B2.3 The surgical and ICU teams conduct a structured handover, which includes the patient′s medical history and critical perioperative conditions; | 5.00 | 0.00 | 0.00 |
|  | B2.4 The patient′s condition is assessed by physicians and nurses; | 4.95 | 0.21 | 0.04 |
|  | B2.5 The physician performs arterial blood gas analysis and implements corresponding clinical management; | 4.91 | 0.43 | 0.09 |
|  | B2.6 Nurses perform monitoring procedures and document clinical care. | 4.91 | 0.43 | 0.09 |
|  | C1.1 Endotracheal intubation: orotracheal intubation connected to a mechanical ventilator for assisted ventilation; | 4.95 | 0.21 | 0.04 |
|  | C1.2 Invasive arterial catheterisation: placement of an intra-arterial catheter for continuous blood pressure monitoring and arterial blood sampling to facilitate blood gas analysis; | 4.95 | 0.21 | 0.04 |
|  | C1.3 Closed thoracic drainage tube: for drainage of pleural effusion and air / pneumothorax; | 4.95 | 0.21 | 0.04 |
|  | C1.4 Indwelling urinary catheter: facilitates urinary drainage while potentially causing sensations of frequent urination; | 4.95 | 0.21 | 0.04 |
|  | C1.5 Electrode: connected for 24-h continuous ECG monitoring of heart rate and rhythm; | 4.95 | 0.21 | 0.04 |
|  | C1.6 Pulse oximetry sensor: continuously connected to the cardiac monitoring system for 24-h real-time SpO2 monitoring; | 4.95 | 0.21 | 0.04 |
|  | C1.7 Sensory: promptly report any pain or cold sensation to healthcare staff; | 4.95 | 0.21 | 0.04 |
|  | C1.8 Air mattress: automatic cyclic inflation was performed according to pre-set parameters. | 4.95 | 0.21 | 0.04 |
|  | C2.1 Clinical needs were identified using the bedside ‘One-Glance’ checklist; | 4.95 | 0.21 | 0.04 |
|  | C2.2 Light bedrail tapping; | 5.00 | 0.00 | 0.00 |
|  | C2.3 Head nodding / head shaking; | 5.00 | 0.00 | 0.00 |
|  | C2.4 Write when clinically necessary. | 4.95 | 0.21 | 0.04 |
|  | C3.1 Avoid fighting the ventilator; synchronize with its respiratory cycle and maintain normal breathing; | 4.82 | 0.40 | 0.09 |
|  | C3.2 Avoid tubing tension to prevent accidental extubation; | 4.91 | 0.30 | 0.06 |
|  | C3.3 Maintain quiet rest and avoid agitation. | 4.86 | 0.35 | 0.07 |
|  | C4.1 Maintain semi-recumbent position; | 4.95 | 0.21 | 0.04 |
|  | C4.2 Regulate the respiratory frequency with deep and slow breathing; | 4.91 | 0.30 | 0.06 |
|  | C4.3 Ensure proper positioning of oxygen tubes; | 4.91 | 0.30 | 0.06 |
|  | C4.4 Undertake respiratory muscle training by a breathing trainer; | 4.91 | 0.30 | 0.06 |
|  | C4.5 Perform coughing exercises; | 4.95 | 0.21 | 0.04 |
|  | C4.6 Engage in appropriate bed-based exercises, particularly involving the affected limb; | 4.91 | 0.30 | 0.06 |
|  | C4.7 Report pain level to the medical staff using a 0–10 NRS. | 4.91 | 0.30 | 0.06 |
|  | C5.1 Lighting: ICU night-time lighting is minimized to promote patient rest, with retained task lighting for clinical observation and interventions; | 4.95 | 0.21 | 0.04 |
|  | C5.2 Voice: ICU equipment is highly sensitive, and frequently produces alert tones and alarm sounds. Healthcare professionals generate sounds during night-time medical procedures; | 4.95 | 0.21 | 0.04 |
|  | C5.3 Comfort: promptly communicate comfort-related needs (e.g., ‘I feel too cold’ or ‘feel overheated’) to nurses for timely interventions such as blanket adjustment; | 4.95 | 0.21 | 0.04 |
|  | C5.4 ICU staffing ensures continuous care by healthcare professionals around the clock, though night-time nursing resources are frequently limited. If a nurse is not present at a given bedside, they are likely providing urgent care to another patient; | 4.95 | 0.21 | 0.04 |
|  | C5.5 Please speak softly or lightly tap your bed if you require help; | 4.95 | 0.21 | 0.04 |
|  | C5.6 Adequate rest during the first postoperative night is essential to maintain the next-day respiratory function, particularly for effective coughing and expectoration; | 4.86 | 0.47 | 0.10 |
|  | C5.7 Should insomnia occur, promptly notify healthcare professionals for evaluation of the need for potential pharmacological interventions; | 4.95 | 0.21 | 0.04 |
|  | C6.1 Anti-inflammatory; | 4.95 | 0.21 | 0.04 |
|  | C6.2 Phlegm-reducing medications; | 4.95 | 0.21 | 0.04 |
|  | C6.3 Haemostatic / pain medications; | 4.95 | 0.21 | 0.04 |
|  | C6.4 Gastroprotective agents and antiemetics. | 4.95 | 0.21 | 0.04 |
|  | D1.1 Close your lips securely around the nebuliser mouthpiece; | 4.86 | 0.35 | 0.07 |
|  | D1.2 Require 15–20 minutes. | 4.86 | 0.35 | 0.07 |
|  | D2.1 Practice diaphragmatic breathing; | 4.86 | 0.35 | 0.07 |
|  | D2.2 Practice coughing and expectoration techniques | 4.86 | 0.35 | 0.07 |
|  | D3.1 After 6:30 AM the following morning, maintain NPO status; | 4.95 | 0.21 | 0.04 |
|  | D3.2 Wait for the physician′s morning assessment. | 4.91 | 0.30 | 0.06 |
|  | D4.1 The on-duty physician will collect venous blood samples for re-evaluation of postoperative parameters; | 4.95 | 0.21 | 0.04 |
|  | D4.2 Arterial blood sampling for gas analysis by physician. | 4.95 | 0.21 | 0.04 |
|  | D5.1 Nurses assessed drainage-tube patency and effluent characteristics; | 4.95 | 0.21 | 0.04 |
|  | D5.2 Replace the chest-drainage bottle when clinically indicated. | 4.95 | 0.21 | 0.04 |
|  | D6.1 The surgeon assessed postoperative recovery, including vital signs, drainage characteristics / volume, results of blood gas analysis, and cough effectiveness; | 4.95 | 0.21 | 0.04 |
|  | D6.2 Bronchoscopic secretion clearance was performed when clinically indicated, based on assessments during ward rounds. | 4.95 | 0.21 | 0.04 |
|  | D7.1 Wound assessment was performed by nurses; | 5.00 | 0.00 | 0.00 |
|  | D7.2 Wound dressings were aseptically changed in case of moisture penetration. | 5.00 | 0.00 | 0.00 |
|  | D8.1 Healthcare professionals temporarily vacated the bedside during portable radiography; | 4.95 | 0.21 | 0.04 |
|  | D8.2 CT scans may be performed externally when necessary. | 4.95 | 0.21 | 0.04 |
|  | D9.1 Routine therapeutic interventions were administered, including intravenous therapy; | 4.95 | 0.21 | 0.04 |
|  | D9.2 Contact for general ward bed allocation; | 4.95 | 0.21 | 0.04 |
|  | D9.3 Contact patient′s family members: one designated caregiver is permitted to continuously accompany the patient; | 4.95 | 0.21 | 0.04 |
|  | D9.4 Healthcare professionals completed inter-unit transfer procedures; | 5.00 | 0.00 | 0.00 |
|  | D9.5 Nursing assistants organize patient belongings; | 5.00 | 0.00 | 0.00 |
|  | D9.6 The patient was transferred to the general ward through a collaborative effort that involved nurses, patient′s family members, and nursing assistants. | 5.00 | 0.00 | 0.00 |
|  | D10.1 Nursing assistants contact the patient′s family members to provide high-protein, easily digestible meals; | 4.95 | 0.21 | 0.04 |
|  | D10.2 Scheduled visitation conducted from 14:00 to 14:30 daily; | 5.00 | 0.00 | 0.00 |
|  | D10.3 In the afternoon free time, respiratory training, coughing and expectoration, and bed exercises are conducted; | 4.91 | 0.30 | 0.06 |
|  | E1.1 Comply with the unit regulations; | 4.95 | 0.21 | 0.04 |
|  | E1.2 Perform pulmonary exercises at scheduled intervals. | 4.95 | 0.21 | 0.04 |
|  | E2.1 Complete the ‘Role Model Recommendation Portfolio’ form at the entrance to the ICU; | 4.86 | 0.35 | 0.07 |
|  | E2.2 Complete a letter of appreciation; | 4.77 | 0.53 | 0.11 |
|  | E2.3 West China Hospital WeChat official account - additional services - commendation letters - submit commendation; | 4.82 | 0.50 | 0.10 |
|  | E3.1 Complete the ‘Feedback and Suggestions’ form at the entrance to the ICU; | 4.86 | 0.35 | 0.07 |
|  | E3.2 Provide feedback to the head nurse. | 4.91 | 0.29 | 0.06 |
|  | E4.1 Quit smoking completely and stay away from second-hand smoke; | 4.95 | 0.21 | 0.04 |
|  | E4.2 Get routine vaccinations, including the pneumococcal vaccine, every 5 years; | 5.00 | 0.00 | 0.00 |
|  | E4.3 Ensure proper ventilation and comfortable room temperature; | 4.95 | 0.21 | 0.04 |
|  | E4.4 Scientific and reasonable exercise and diet. | 5.00 | 0.00 | 0.00 |
|  | F1.1 Prepare the supplies; | 4.95 | 0.21 | 0.04 |
|  | F1.2 Proceed with the supplies to the family waiting area adjacent to the operating room and remain there until the surgical procedure concludes. | 4.95 | 0.21 | 0.04 |
|  | F2.1 After the surgery, the surgeon will come to the entrance of the ICU to brief the patient′s family members about the patient′s surgical condition; | 5.00 | 0.00 | 0.00 |
|  | F2.2 The postoperative condition was communicated to the patient′s family members by the ICU physicians, accompanied by the completion of the physician–patient communication form; | 5.00 | 0.00 | 0.00 |
|  | F2.3 The nurse–patient communication form was completed by the ICU nursing staff along with the patient′s family members; | 5.00 | 0.00 | 0.00 |
|  | F2.4 Patient′s family members labelled the prepared items with the bed number and patient′s name before handing them to the ICU nursing assistants and signing the material transfer form; | 5.00 | 0.00 | 0.00 |
|  | F2.5 Ensure 24-h telephonic availability; | 5.00 | 0.00 | 0.00 |
|  | F2.6 No patient′s family members visits or meal deliveries are required on the day of surgery; | 5.00 | 0.00 | 0.00 |
|  | F2.7 Patient′s family members should prepare nutritionally adequate meals (high-protein, bland, and easily digestible) in containers that are properly identified with the patient′s bed number and name; | 5.00 | 0.00 | 0.00 |
|  | F2.8 Safeguard valuables appropriately; | 5.00 | 0.00 | 0.00 |
|  | F2.9 To ensure patient safety, the hospital′s policy generally prohibits the administration of externally procured medications; | 5.00 | 0.00 | 0.00 |
|  | F2.10 For assistance, please knock gently at the visitation entrance. Owing to high patient-care demands in the ICU, we appreciate your patience during waiting periods. | 5.00 | 0.00 | 0.00 |

Abbreviations: SD, standard deviation; CV, coefficient of variation; ICU, intensive care unit; CT, computed tomography; ECG, electrocardiogram; SpO2, pulse oxygen saturation; NRS, Numeric Rating Scale; NPO, nil per os.

1 USD ≈ 6.73 RMB.