

Table S1 Evidence Search

Category	Name and Link
Cross-database search platform	<ul style="list-style-type: none"> • ACP Smart Medicine: https://www.acponline.org/clinical-information/guidelines • Best Practice: https://bestpractice.bmj.com/ • DynaMed: https://www.dynamed.com/ • Clinical Key: https://www.clinicalkey.com/ • Medscape Reference: https://reference.medscape.com/ • World Health Organization (WHO): https://www.who.int/ • Ulowa Csomay Gero Resources: http://www.uiowacsomaygeroresources.com/default.asp • Google Scholar: https://scholar.google.com
Databases	<ul style="list-style-type: none"> • Guidelines International Network (GIN): https://g-i-n.net/ • Scottish Intercollegiate Guidelines Network (SIGN): https://www.sign.ac.uk/ • National Institute for Clinical Excellence (NICE): https://www.nice.org.uk/ • Institute for Clinical Systems Improvement (ICSI): https://www.icsi.org/guidelines/ • Registered Nurses' Association of Ontario (RNAO): https://rnao.ca/ • Canadian Task Force on Preventive Healthcare (CTFPHC): https://www.canadiantaskforce.ca/ • Joanna Briggs Institute (JBI) • The Cochrane library • EMBASE • PubMed • Web of Science • Cumulative Index to Nursing and Allied Health Literature (CINAHL) • PsycInfo • Psyc Articles • Psychology and Behavioral Science Collection • China National Knowledge Infrastructure (CNKI, For Chinese) • SinoMed (For Chinese) • WANFANG DATA (For Chinese)
Professional associations	<ul style="list-style-type: none"> • World Federation of Critical Care Nurses (WFCCN): https://wfccn.org/clinical-guidelines/ • Society of Critical Care Medicine (SCCM): https://www.sccm.org/Research/Guidelines • European Society of Intensive Care Medicine (ESICM): https://www.esicm.org/resources/guidelines-consensus-statements/ • British Association of Critical Care Nurses (BACCN): https://www.baccn.org/ • New Zealand Nurses Organization (NZNO): https://www.nzno.org.nz/resources/medicines_-_guidelines_and_information • Chinese Nursing Association (CNA): http://www.zhhlxh.org.cn/cnaWebcn/ • The Hong Kong Society of Critical Care Medicine (HKSCCM): https://www.hkscm.org/index.php/professional/useful-resources

Table S2 Search strategy about physical restraints

Database/Platform	Strategy
PubMed	<p>#1 Restraint, Physical [MeSH Major Topic]</p> <p>#2 (((physical restraint*[Title/Abstract]) OR (physical constraint*[Title/Abstract])) OR (mechanical restraint*[Title/Abstract])) OR (mechanical constraint*[Title/Abstract])</p> <p>#3 (((disallow* movement*[Title/Abstract]) OR (limit* movement*[Title/Abstract])) OR (restrict* movement*[Title/Abstract])) OR (stop* movement*[Title/Abstract])</p> <p>#4 (ankle*[Title/Abstract] OR appendage*[Title/Abstract] OR arm*[Title/Abstract] OR body[Title/Abstract] OR bodies[Title/Abstract] OR foot[Title/Abstract] OR feet[Title/Abstract] OR hand*[Title/Abstract] OR leg*[Title/Abstract] OR limb*[Title/Abstract] OR patient*[Title/Abstract] OR wrist*[Title/Abstract]) AND (tie*[Title/Abstract] OR bedrail*[Title/Abstract] OR belt*[Title/Abstract] OR strap*[Title/Abstract] OR mitten*[Title/Abstract] OR jacket*[Title/Abstract])</p> <p>#5 Airway Extubation [MeSH Major Topic]</p> <p>#6 Ventilators, Mechanical [MeSH Major Topic]</p> <p>#7 Respiration, Artificial [MeSH Major Topic]</p> <p>#8 (((((((unplanned extubat*[Title/Abstract]) OR (unplanned reintubat*[Title/Abstract])) OR (self extubat*[Title/Abstract])) OR (self reintubat*[Title/Abstract])) OR (accidental extubat*[Title/Abstract])) OR (accidental reintubat*[Title/Abstract])) OR (ventilat* extubat*[Title/Abstract])) OR (ventilat* reintubat*[Title/Abstract])</p> <p>#9 (((((((mechanic* ventilat*[Title/Abstract]) OR (mechanic* respirat*[Title/Abstract])) OR (mechanic* breathing [Title/Abstract])) OR (artificial respirat*[Title/Abstract])) OR (artificial breathing [Title/Abstract])) OR (Ventilator wean*[Title/Abstract])) OR (Ventilator liberat*[Title/Abstract])) OR (Positive-Pressure Respiration [Title/Abstract])</p> <p>#10 Aggression [MeSH Major Topic]</p> <p>#11 Psychomotor Agitation [MeSH Major Topic]</p> <p>#12 Conscious Sedation [MeSH Major Topic]</p> <p>#13 Behavior Control [MeSH Major Topic]</p> <p>#14 (((((((((((abusive behav*[Title/Abstract]) OR (challenging behav*[Title/Abstract])) OR (disturbed behav*[Title/Abstract])) OR (disruptive behav*[Title/Abstract])) OR (aggression behav*[Title/Abstract])) OR (agonistic behav*[Title/Abstract])) OR (restless* behav*[Title/Abstract])) OR (anger behav*[Title/Abstract])) OR (angry behav*[Title/Abstract])) OR (assault behav*[Title/Abstract])) OR (rage* behav*[Title/Abstract])) OR (hostil* behav*[Title/Abstract])) OR (threat* behav*[Title/Abstract])) OR (violen* behav*[Title/Abstract])</p> <p>#15 (daily sedation interruption [Title/Abstract]) OR (crisis intervention [Title/Abstract])</p> <p>#16 Delirium [MeSH Major Topic]</p> <p>#17 Emergence Delirium [MeSH Major Topic]</p> <p>#18 Neurocognitive Disorders [MeSH Major Topic]</p> <p>#19 Delirious [Title/Abstract]</p> <p>#20 (abnormal*[Title/Abstract] OR change*[Title/Abstract] OR dysfunction*[Title/Abstract] OR decline [Title/Abstract] OR deterioration [Title/Abstract] OR diminish*[Title/Abstract] OR disorders [Title/Abstract] OR mental*[Title/Abstract] OR disturbed*[Title/Abstract]) AND (attention [Title/Abstract] OR cognitive [Title/Abstract] OR consciousness [Title/Abstract] OR perception [Title/Abstract] OR neurocognitive [Title/Abstract])</p> <p>#21 (acute brain syndrome [Title/Abstract]) OR (acute cerebral insufficiency [Title/Abstract])</p> <p>#22 Pain, Procedural [MeSH Major Topic]</p> <p>#23 Pain, Postoperative [MeSH Major Topic]</p> <p>#24 Pain Management [MeSH Major Topic]</p> <p>#25 Pain Measurement [MeSH Major Topic]</p> <p>#26 Analgesics, Non-Narcotic [MeSH Major Topic]</p> <p>#27 (((((((procedural discomfort [Title/Abstract]) OR (procedural ache*[Title/Abstract])) OR (postoperative discomfort [Title/Abstract])) OR (postoperative ache*[Title/Abstract])) OR (management discomfort [Title/Abstract])) OR (management ache*[Title/Abstract])) OR (measurement discomfort [Title/Abstract])) OR (measurement ache*[Title/Abstract])</p> <p>#28 Decision Making, Shared [MeSH Major Topic]</p> <p>#29 Family Separation [MeSH Major Topic]</p> <p>#30 (((((((open visitation [Title/Abstract]) OR (open visiting [Title/Abstract])) OR (flexible visitation [Title/Abstract])) OR (flexible visiting [Title/Abstract])) OR (restrictive visitation [Title/Abstract])) OR (restrictive visiting [Title/Abstract])) OR (family visitation [Title/Abstract])) OR (family visiting [Title/Abstract])</p> <p>#31 (((((((patient-centred care [Title/Abstract]) OR (patient-centred nursing [Title/Abstract])) OR (patient-centered care [Title/Abstract])) OR (patient-centered nursing [Title/Abstract])) OR (family-centred care [Title/Abstract])) OR (family-centred nursing [Title/Abstract])) OR (family-centered care [Title/Abstract])) OR (family-centered nursing [Title/Abstract])</p> <p>#32 ((shared decision making [Title/Abstract]) OR (sharing decision making [Title/Abstract])) OR (SDM [Title/Abstract])</p> <p>#33 Intensive Care Units [MeSH Major Topic]</p> <p>#34 Critical Care [MeSH Major Topic]</p> <p>#35 Critical Care Nursing [MeSH Major Topic]</p> <p>#36 ((intensive care [Title/Abstract]) OR (critical care [Title/Abstract])) OR (acute care [Title/Abstract])</p> <p>#37 (cardiac[Title/Abstract] OR coronary[Title/Abstract] OR heart[Title/Abstract] OR burn[Title/Abstract] OR respiratory[Title/Abstract] OR surgical[Title/Abstract] OR surger*[Title/Abstract] OR high dependency[Title/Abstract] OR stepdown[Title/Abstract] OR step-down[Title/Abstract] OR speciali#ed weaning[Title/Abstract] OR postoperati*[Title/Abstract] OR post-operati*[Title/Abstract] OR postsurg*[Title/Abstract] OR post-surg*[Title/Abstract]) AND (unit*[Title/Abstract] OR centre*[Title/Abstract] OR center*[Title/Abstract])</p> <p>#38 ICU*[Title/Abstract] OR SICU*[Title/Abstract] OR CCU*[Title/Abstract] OR EICU*[Title/Abstract] OR HDU*[Title/Abstract] OR SDU*[Title/Abstract] OR EDSDU*[Title/Abstract]</p> <p>#39 OR #1-#32</p> <p>#40 OR #33-#38</p> <p>#41 #39 AND #40</p> <p>#42 Filters: Guideline, Practice Guideline, Humans, Chinese, English, from 2011-2020</p> <p>#43 Filters: Meta-Analysis, Systematic Review, Humans, Chinese, English, from 2016-2020</p>
Clinical Key	<p>Step1: The search type was selected as "Guidelines"</p> <p>Step2: Search by the single key concept one by one: Physical restraints; Unplanned extubation; Mechanical Ventilation in ICU; Agitation in ICU; Delirium in ICU; Pain in ICU</p>

Table S3 Guideline content analysis and assessment matrix

Guideline content analysis and assessment matrix		
Basic information		
Title of the Guideline		
Publication Associations		
Publication Year		
Type of the Guideline		
Methodology of Guideline Development		
Criteria for Quality of Evidence and Strength of Recommendations		
The Timeliness of Evidence	Search time	
	The comprehensiveness of Search	
Quality of the Guideline		
Appraisal of Guidelines for Research & Evaluation II (AGREE II)	Domain 1. Scope and Purpose	
	Domain 2. Stakeholder Involvement	
	Domain 3. Rigour of Development	
	Domain 4. Clarity of Presentation	
	Domain 5. Applicability	
	Domain 6. Editorial Independence	
	Overall Guideline Assessment	<input type="checkbox"/> Recommend <input type="checkbox"/> Recommend with Modifications <input type="checkbox"/> Not Recommend
Quality of Guideline Recommendations		
Clinical Questions		
Recommendations		
Grades of Recommendation		
Appraisal of Guidelines Research and Evaluation-Recommendations Excellence (AGREE-REX)	Domain 1. Clinical Applicability	
	Domain 2. Values and Preferences	
	Domain 3. Implementability	
	Overall Assessment Statements	<input type="checkbox"/> Recommend <input type="checkbox"/> Recommend with Modifications <input type="checkbox"/> Not Recommend

Table S4 Systematic review/meta-analysis content analysis and assessment matrix

Title	Studies Included (participants)	Interventions	Control	AMSTAR2 Rating	Outcomes	GRADE
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AMSTAR2: A Measurement Tool to Assess Systematic Reviews; GRADE: Grading of Recommendations Assessment, Development and Evaluation

Table S5 Recommendations matrix

Recommendations matrix						
Outline Specific Recommendation						
Source of Evidence						
Quality of Evidence						
Patient Values and Preferences						
Acceptability of Practitioners						
Acceptability of Policy-makers						
Judgement						
Benefits&Harms	Quality of Evidence	Resources Required	Equity	Feasibility	Values and Preferences	Acceptability
<input type="checkbox"/> Harms more than benefits	<input type="checkbox"/> Very low	<input type="checkbox"/> Large costs	<input type="checkbox"/> Reduced	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
<input type="checkbox"/> Probably harms more than benefits	<input type="checkbox"/> Low	<input type="checkbox"/> Moderate costs	<input type="checkbox"/> Probably reduced	<input type="checkbox"/> Probably no	<input type="checkbox"/> Probably no	<input type="checkbox"/> Probably no
<input type="checkbox"/> Harms equal to benefits	<input type="checkbox"/> Moderate	<input type="checkbox"/> Negligible costs	<input type="checkbox"/> Probably no impact	<input type="checkbox"/> Probably yes	<input type="checkbox"/> Probably yes	<input type="checkbox"/> Probably
<input type="checkbox"/> Probably benefits more than harms	<input type="checkbox"/> High	and saving	<input type="checkbox"/> Probably increased	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	yes
<input type="checkbox"/> Benefits more than harms		<input type="checkbox"/> Moderate saving	<input type="checkbox"/> Increased			<input type="checkbox"/> Yes
		<input type="checkbox"/> Large saving				
Strength of Recommendation		<input type="checkbox"/> Strong Recommendation		<input type="checkbox"/> Conditional Recommendation		
The Feedback and Changes						