

Supplementary Table 1.

Internationally representative guidance guidelines		
Methodology	Working group direction	The specific role in the development of this guideline
Working Group		
WHO handbook for guideline development	Guideline formulation	Provide a systematic approach and framework for developing high-quality guidelines.
RIGHT	Guideline report	Provide a structured checklist for a systematic and comprehensive reporting guide, and the development of the guide with reference to the RIGHT reporting norms ensures greater regularity and transparency in reporting.
Guideline 2.0	Guideline formulation	A comprehensive checklist systematically developed for the successful development of guidelines. Careful consideration of the entries in the checklist will assist in the development, implementation and evaluation of the guidelines.
AGREE II	Evaluation of the methodological quality of the guidelines	AGREE II serves as a methodological quality assessment tool for guidelines, with results reflecting the rigor and scientific validity of the development process. To ensure that the guidelines we reference and develop meet high standards of development and reporting.
GRADE	Grading the quality of guideline evidence and strength of recommendation	Provides a clear, comprehensive grading and summarization methodology for quality grading the evidence on which it relies to support its recommendations.

Supplementary Table 2.

The composition and responsibilities of the guideline working groups

Group	Composition	Responsibility
Steering committee	one clinical chairman, one methodology chairman, one government representative, two experienced ICU nursing specialists, two experienced ICU clinical specialists, and two respiratory therapists with rich respiratory care experience.	(I) determine the theme and scope of the guideline and construct key issues according to PICO format (II) establish the guideline consensus expert group, guideline secretariat, evidence evaluation group, and external audit expert group (III) assess conflicts of interest and address any conflicts as needed (IV) chair the guideline working meetings (V) review and approval the plan (VI) approve recommendations and the full guideline (VII) revise and update the guideline
Consensus expert group	consists of 25 to 30 experts in the fields of critical care, respiratory, pediatrics, neonatology, and respiratory therapists.	(I) identify key issues for the guideline and prioritize topics for assessment (II) formulate recommendations on some issues (III) reach consensus on the recommendations (IV) modify the full text of the guideline based on feedback (V) publish and promote the guideline

Group	Composition	Responsibility
Secretary Group	3 to 5 staff members from sponsors and supporting organizations.	(I) complete the guideline registration and draft the guideline plan (II) investigate the clinical questions related to the guideline, design a questionnaire according to the initial clinical question list, collect questions and rank the importance of these questions (III) coordinate the work of other working groups (IV) organize the recommendation consensus meeting (V) facilitate the external review process for the entire guideline (VI) record the entire guideline development process in detail (VII) draft the guideline (VIII) submit the guideline for approval
Evidence evaluation group	3 to 10 individuals with a background in evidence-based medicine and experience in evidence retrieval.	(I) complete the literature search, screening, evidence extraction, risk of bias evaluation, and GRADE evidence rating for the guideline (II) complete the quality evaluation of the published systematic evaluation/meta analysis related to the guideline topic (III) update and produce meta-analysis (IV) create the evidence summary table and the recommendation decision table
External audit expert	5 to 10 experts in related fields who do not directly participate in the formulation of the guideline.	(I) evaluate and review the questions and scope of the clinical practice guidelines

Group	Composition	Responsibility
group		(II) review the final recommendations (III) provide specific amendments for the full text of the guideline

Note: "Rich experience in the ICU work" is defined: (1) Years of working experience: at least five years of full-time work in an ICU. (2) Education level: a bachelor's degree or higher. (3) Professional title: intermediate or senior level.

Supplementary Table 3

Document types and evaluations tools			
Steps	Research type	Methodological assessment tools	quality
Evidence production	Randomized controlled trial	Cochrane risk of bias assessment tool	
	Non-randomized experimental study	MINORS items	
	Cohort study	NOS scale	
	Case-control study	NOS scale	
	Animal experiment	STAIR list	
Evidence synthesis	Systematic review/Meta-analysis	AMSTAR 2 tool	
		OQAQ scale	
		SQAC scale	
	Overviews of systematic reviews	AMSTAR 2 tool	
Creating guidelines and conducting health	Clinical practice guidelines	AGREEII tool	
	Health technology assessment	Checklist for HTA report	
	Health policy research	Experimental study: Cochrane EPOC evaluation method Observational research: quality evaluation criteria for Hilton's effective public health policy project development	
Dissemination of evidence	Clinical practice guidelines	AGREEII tool	
	Health technology assessment	Checklist for HTA report	
Applied evidence	Decision support system		
Assessment and improvement practices	Real-world study		

Supplementary file

Search Strategy for PubMed

#1 "Airway Extubation"[Mesh] OR "Airway Extubation*"[Title/Abstract] OR "Tracheal Extubation*"[Title/Abstract] OR "High-Frequency Ventilation"[Title/Abstract] OR "Endotracheal Extubation*"[Title/Abstract] OR "post-extubation"[Title/Abstract] OR "Ventilator Weaning"[Mesh] OR "Weaning, Ventilator"[Title/Abstract] OR "Respirator Weaning"[Title/Abstract] OR "Mechanical Ventilator Weaning"[Title/Abstract]

#2 "Respiratory Support"[Title/Abstract] OR "high flow nasal cannula"[Title/Abstract] OR "high flow nasal oxygen"[Title/Abstract] OR "HFNC"[Title/Abstract] OR "HHFNC"[Title/Abstract] OR "HHFN"[Title/Abstract] OR "NHF*"[Title/Abstract]

#3 ("high flow"[Title/Abstract] AND ("Cannula"[Mesh] OR "Nasal Cannula*"[Title/Abstract])) OR ("high flow"[Title/Abstract] AND ("oxygen inhalation therapy"[MeSH] OR "oxygen inhalation therap*"[Title/Abstract]))

#4 "Positive Pressure Respiration"[Mesh] OR "Noninvasive Ventilation"[Mesh] OR "Noninvasive Ventilation*"[Title/Abstract] OR "Non-Invasive Ventilation*"[Title/Abstract] OR "non-invasive positive pressure ventilation*"[Title/Abstract] OR "noninvasive positive pressure ventilation*"[Title/Abstract] OR "NIPPV"[Title/Abstract] OR "NPPV"[Title/Abstract] OR "conventional oxygen therapy"[Title/Abstract] OR "COT"[Title/Abstract] OR "standard oxygen therapy"[Title/Abstract] OR "SOT"[Title/Abstract] OR "venturi mask"[Title/Abstract] OR "face mask"[Title/Abstract] OR "bag valve mask"[Title/Abstract]

#5 #1 AND (#2 OR #3 OR #4)