STUDY GUIDE

2025 Korean Guidelines for Cardiopulmonary Resuscitation: Part 1. The update process and highlights.

Korean Association of Cardiopulmonary Resuscitation · 2026

2025 Korean Guidelines for Cardiopulmonary Resuscitation: Study Guide

This study guide provides a comprehensive overview of the 2025 Korean Guidelines for Cardiopulmonary Resuscitation (CPR), focusing on the update process, epidemiological background, and major clinical highlights. It is designed to assist healthcare professionals and students in understanding the evolving standards of resuscitation medicine in Korea.

Section 1: Background and Epidemiology

The 2025 Korean CPR guidelines represent a significant update to the 2020 version, driven by an expanding body of research and updates from the International Liaison Committee on Resuscitation (ILCOR).

Key Statistics in Korea (2024 Data)

- **Out-of-Hospital Cardiac Arrest (OHCA) Incidence:** Increased from 21,905 in 2008 to 33,034 in 2024.
- **Overall Survival Rate:** 9.2%.
- **Favorable Neurological Recovery Rate:** 6.3%.
- **Incidence per Population:** 64.7 per 100,000 population.

Critical Concepts

- **Irreversible Death Delay:** CPR aims to delay death by maintaining circulation and ventilation, providing oxygen to vital organs.
- **The 4–5 Minute Window:** Hypoxic-ischemic brain injury begins approximately 4 to 5 minutes after cardiac arrest onset, making early bystander intervention critical.

- **Global Context:** Korea's survival rates have improved (from 4.8% in 2013) but remain lower than countries like the US, Australia, and parts of Europe where survival often exceeds 10%.

Section 2: The Update Process

The 2025 revision was led by the Korea Disease Control and Prevention Agency (KDCA) and involved a rigorous evidence-based approach.

Methodology

- **Task Forces:** Seven expert committees were established (Basic Life Support, Advanced Life Support, Post-Cardiac Arrest Care, Pediatric Life Support, Neonatal Resuscitation, Education and Implementation, and First Aid).
- **Evidence Review:** Used the **GRADE** (Grading of Recommendations, Assessment, Development, and Evaluation) methodology and **GRADE-ADOLOPMENT** to minimize duplication of international efforts.
- **PICO Questions:** A total of 64 specific clinical questions (Population, Intervention, Comparator, and Outcome) were formulated to guide systematic literature reviews.

Recommendation Strength

- **Strong Recommendation:** Interventions that should be followed in most clinical situations ("should/should not be performed").
- **Weak/Conditional Recommendation:** Interventions applied selectively based on context ("we suggest" or "may be considered").
- **Expert Consensus:** Recommendations based on clinical experience when direct evidence is limited.
- **Good Practice Statement:** Interventions considered self-evidently beneficial.

Section 3: Major Clinical Highlights and Updates

1. The Revised Chain of Survival

The 2025 guidelines integrated adult and pediatric, as well as in-hospital and out-of-hospital, chains into a single five-link simplified chain:

1. Recognition of cardiac arrest and activation of EMS.
2. Bystander CPR.
3. Defibrillation.
4. Advanced life support and post-cardiac arrest care (combined).

5. **Rehabilitation and recovery** (New link added).

2. Basic Life Support (BLS)

- **Dispatcher Guidance:** Dispatchers should now guide callers to locate and apply an Automated External Defibrillator (AED).
- **Drowning:** Trained rescuers are advised to provide rescue breaths.
- **Chest Compression Technique:** Place the dominant hand in the lower position.
- **Chest Compression Fraction (CCF):** Should be maintained at least 60% and as high as possible.
- **Ventilation Rate:** Simplified to one breath every 6 seconds (10 breaths/min).

3. Advanced Life Support (ALS)

- **Refractory Ventricular Fibrillation:** Suggestion of double sequential defibrillation or vector-change defibrillation if equipment is available.
- **Drug Restrictions:** Routine use of vasopressin, corticosteroids, sodium bicarbonate (buffers), or calcium during resuscitation is **not** recommended.
- **Consciousness During CPR:** If a patient regains consciousness during compressions, minimum effective doses of sedatives or analgesics may be used.
- **Prone CPR:** Suggested if a patient is in the prone position with an advanced airway and immediate repositioning is not feasible.

4. Post-Cardiac Arrest Care

- **Targeted Temperature Management (TTM):** Revised target range of **33–37.5 °C** (previously 32–36 °C) for at least 24 hours.
- **Hemodynamic Targets:** Mean arterial pressure of at least 60–65 mmHg; oxygen saturation of 94%–98%.
- **Coronary Angiography:** Recommended only for patients with ST-segment elevation (STE) or cardiogenic shock.

5. Pediatric and Neonatal Updates

- **Infant Compressions:** Two-thumb encircling technique is recommended regardless of the number of rescuers.
- **Infant Choking:** Use the heel of one hand for chest thrusts (instead of two fingers).
- **Public Access Defibrillation:** Now recommended for children aged 1 year and older.
- **Neonatal Airway:** Supraglottic airway devices and video laryngoscopy are suggested if resources allow.

6. First Aid (New Section)

The 2025 guidelines introduced a first aid section for lay responders:

- **Chest Pain:** Assist with prescribed nitroglycerin.
- **Stroke:** Use validated screening tools for early recognition.
- **Anaphylaxis:** Assist with epinephrine autoinjectors.

Section 4: Short-Answer Practice Quiz

Q1: What is the target temperature range for post-resuscitation temperature management in the 2025 guidelines? *Answer:* 33–37.5 °C.

Q2: What new link was added to the 2025 Korean Chain of Survival? *Answer:* Rehabilitation and recovery.

Q3: What is the recommended chest compression fraction (CCF) percentage? *Answer:* At least 60%.

Q4: For which specific cardiac arrest scenario are trained rescuers advised to initiate resuscitation with rescue breaths? *Answer:* Drowning-related cardiac arrest.

Q5: What is the recommended ventilation rate for an adult patient during CPR? *Answer:* One breath every 6 seconds (10 breaths/min).

Q6: What technique is recommended for infant chest compressions regardless of the number of rescuers? *Answer:* The two-thumb encircling technique.

Q7: Under what specific circumstances is emergency coronary angiography recommended post-ROSC? *Answer:* Only for patients with ST-segment elevation on ECG or evidence of cardiogenic shock.

Q8: Why is the routine use of online-only asynchronous learning no longer recommended as a standard for CPR training? *Answer:* It was widely adopted during pandemic-era social distancing but is no longer considered a standard substitute for traditional training in the 2025 guidelines.

Section 5: Essay Questions for Deeper Exploration

Prompt 1: Analyzing the Evolution of the Korean Guidelines Discuss the rationale behind the 2025 revision of the Korean CPR guidelines. In your answer, address the epidemiological trends of OHCA in Korea, the role of international collaboration through ILCOR, and how the expanding body of research (including randomized controlled trials) necessitated these changes.

Prompt 2: The Role of the Lay Bystander and Dispatcher Evaluate the major updates in the 2025 guidelines that specifically target the "community response" to cardiac arrest. How do the new recommendations regarding dispatcher-assisted AED use, simplified ventilation rates, and the addition of a First Aid section aim to improve survival rates in Korea?

Prompt 3: Specialized Resuscitation Techniques The 2025 guidelines introduce specific interventions for "refractory" or "special" circumstances, such as double sequential defibrillation and prone CPR. Explain the clinical context in which these techniques are suggested and discuss the importance of resource availability and training in their implementation.

Section 4: Glossary of Important Terms

Term	Definition
AED	Automated External Defibrillator; a device used to provide defibrillation to patients with shockable rhythms.
CCF	Chest Compression Fraction; the proportion of total CPR time spent performing chest compressions.
CoSTR	International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations.
ECPR	Extracorporeal Cardiopulmonary Resuscitation; the use of extracorporeal membrane oxygenation during cardiac arrest.
EMS	Emergency Medical Services (in Korea, the 119 ambulance system).
GRADE	Grading of Recommendations, Assessment, Development, and Evaluation; a methodology for rating the certainty of evidence and strength of recommendations.
ILCOR	International Liaison Committee on Resuscitation; the global body coordinating resuscitation science reviews.
OHCA	Out-of-Hospital Cardiac Arrest.
PICO	A framework for clinical questions: Population, Intervention, Comparator, and Outcome.
ROSC	Return of Spontaneous Circulation.
TTM	Targeted Temperature Management; a treatment used to maintain a specific body temperature in comatose survivors after ROSC.