

# Cardiopulmonary Resuscitation in Adults Over 80: Outcome and the Perception of Appropriateness by Clinicians

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## Abstract

### OBJECTIVES

To determine the prevalence of clinician perception of inappropriate cardiopulmonary resuscitation (CPR) regarding the last out-of-hospital cardiac arrest (OHCA) encountered in an adult 80 years or older and its relationship to patient outcome.

### DESIGN

Subanalysis of an international multicenter cross-sectional survey (REAPPROPRIATE).

### SETTING

Out-of-hospital CPR attempts registered in Europe, Israel, Japan, and the United States in adults 80 years or older.

### PARTICIPANTS

A total of 611 clinicians of whom 176 (28.8%) were doctors, 123 (20.1%) were nurses, and 312 (51.1%) were emergency medical technicians/paramedics.

### RESULTS AND MEASUREMENTS

The last CPR attempt among patients 80 years or older was perceived as appropriate by 320 (52.4%) of the clinicians; 178 (29.1%) were uncertain about the appropriateness, and 113 (18.5%) perceived the CPR attempt as inappropriate. The survival to hospital discharge for the “appropriate” subgroup was 8 of 265 (3.0%), 1 of 164 (.6%) in the “uncertain” subgroup, and 2 of 107 (1.9%) in the “inappropriate” subgroup ( $P = .23$ ); 503 of 564 (89.2%) CPR attempts involved non-shockable rhythms.

CPR attempts in nursing homes accounted for 124 of 590 (21.0%) of the patients and were perceived as appropriate by 44 (35.5%) of the clinicians; 45 (36.3%) were uncertain about the appropriateness; and 35 (28.2%) perceived the CPR attempt as inappropriate. The survival to hospital discharge for the nursing home patients was 0 of 107 (0%); 104 of 111 (93.7%) CPR attempts involved non-shockable rhythms.

Overall, 36 of 543 (6.6%) CPR attempts were undertaken despite a known written do not attempt resuscitation decision; 14 of 36 (38.9%) clinicians considered this appropriate, 9 of 36 (25.0%) were uncertain about its

appropriateness, and 13 of 36 (36.1%) considered this inappropriate.

## CONCLUSION

Our findings show that despite generally poor outcomes for older patients undergoing CPR, many emergency clinicians do not consider these attempts at resuscitation to be inappropriate. A professional and societal debate is urgently needed to ensure that first we do not harm older patients by futile CPR attempts. **J Am Geriatr Soc 68:39–45, 2019**



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