EMS agencies implemented the 2005 AHA guidelines for CPR and ECC an average of 416 days after their release.

Blair Bigham, *University of Toronto*
Kent M Koprowicz, *University of Washington*
John Stouffer
Tom P Aufderheide
Stuart Donn, et al.
EMS agencies implemented the 2005 AHA guidelines for CPR and ECC an average of 416 days after their release.

Authors: Blair Bigham (1), Kent Koprowicz (2), John Stouffer (3), Tom P. Aufderheide (4), Stuart Donn (5), Judy Powell (2), Dan Davis (6), Sarah Nafziger (7), Brian Suffoletto (8), Ahamed Idris (9), Mike Helbock (10) and Laurie J. Morrison (1)

(1) University of Toronto, Toronto Ontario Canada
(2) University of Washington, Seattle Washington
(3) Gresham Fire and Emergency Services, Gresham Oregon
(4) Medical College of Wisconsin, Milwaukee Wisconsin
(5) British Columbia Ambulance Service, Vancouver British Columbia Canada
(6) University of California San Diego, San Diego California
(7) University of Alabama, Birmingham Alabama
(8) University of Pittsburgh, Pittsburgh Pennsylvania
(9) University of Texas Southwestern, Dallas Texas
(10) King County Medic One, King County, Washington


Introduction: In 2005, the AHA released guidelines to improve survival rates from out-of-hospital cardiac arrest (OHCA). We sought to determine if, and when, EMS agencies participating in the Resuscitation Outcomes Consortium (ROC) implemented these guidelines. We hypothesized that EMS agencies implemented the guidelines after variable time periods. Methods: We contacted 176 EMS agencies at 9 of 11 ROC sites and completed structured telephone interviews with 174 agencies. Two ROC sites were excluded because they implemented modified guidelines. The survey collected data on specific treatment protocols before and after adoption of the 2005 guidelines. The survey also determined the date each agency implemented the 2005 guidelines (“crossover”). The crossover date was then linked to a database describing the size, type and structure of each agency. Descriptive statistics and regression were used to examine patterns in time-to-crossover. Results: All 174 EMS agencies surveyed implemented the 2005 guidelines. The number of days from guideline release to implementation was: mean 416±172, median 415 (range 49 to 749). Fire based agencies took longer to implement than non-fire municipal and private agencies (mean 432, 365, and 389 days, respectively, p=0.31). Agencies not providing transport took longer to implement than agencies that transported patients (463 vs 384 days, p=0.004). Agencies providing only BLS care took longer to implement than agencies who provided ALS care (mean 462 vs 397 days, p=0.03). Larger agencies (>10 vehicles) were able to implement the guidelines more quickly than smaller agencies (mean 386 vs 442 days, p=0.03). On average, it took 8.9 fewer days to implement the guidelines for every 50% increase in EMS-treated runs/year an agency responded to and 1.9 fewer days for every 50% increase in the number of staff at an agency (p=0.01, p=0.70). Conclusion: ROC EMS agencies required an average of 416 days to implement the 2005 AHA guidelines for OHCA. Small EMS agencies, BLS-only agencies, non-transport agencies and fire-based agencies took longer than large agencies, agencies providing ALS care, transport agencies and non-fire agencies to implement the guidelines. Causes of delays to guideline implementation deserve investigation.