

Appendix: Evidence-Based Worksheets

2010 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations and 2010 American Heart Association and American Red Cross International Consensus on First Aid Science With Treatment Recommendations

As outlined in “Part 1: Executive Summary”¹ of this supplement, evidence-based worksheets were used in the development of the articles in this supplement. In the articles themselves,^{2–10} the evidence-based worksheets are indicated with superscripted letters and numbers (eg, Initial Recognition^{BLS-003A, BLS-003B}). These callouts are hyperlinked to their respective evidence-based worksheets. An appendix of each article’s evidence-based worksheets is included with that article.

This “master” appendix of evidence-based worksheets includes the same information as is listed in the supplement articles. As a table in this document, it is arranged by each supplement article (eg, Part 5, Part 6) for ease of use. The table of contents below indicates the page on which each section of the master appendix begins. A URL for each worksheet is included and hyperlinked to its respective evidence-based worksheet, which is in PDF format. All evidence-based worksheets are open access.

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Evidence-Based Worksheets

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 5	BLS	BLS-003A	In adult and pediatric patients with presumed cardiac arrest (prehospital or in-hospital) (P), are there any factors (eg. on clinical exam) (I) as opposed to standard care (C), that increase the likelihood of diagnosing cardiac arrest (as opposed to non-arrest conditions (eg post-seizure, hypoglycemia, intoxication) (O)?	Differentiation of cardiac arrest from other causes of unresponsiveness	Koenraad Monsieurs	http://circ.ahajournals.org/site/C2010/BLS-003A.pdf
Part 5	BLS	BLS-003B	In adult and pediatric patients with presumed cardiac arrest (prehospital or in-hospital) (P), are there any factors (eg. on clinical exam) (I) as opposed to standard care (C), that increase the likelihood of diagnosing cardiac arrest (as opposed to non-arrest conditions (eg post-seizure, hypoglycemia, intoxication) (O)?	Differentiation of cardiac arrest from other causes of unresponsiveness	Tyler F. Vadeboncoeur	http://circ.ahajournals.org/site/C2010/BLS-003B.pdf
Part 5, Part 12	BLS	BLS-004B	In adult and pediatric patients with out-of-hospital cardiac arrest (including residential settings) (P), does implementation of a public access AED program (I) as opposed to traditional EMS response (C), improve successful outcomes (O) (eg. ROSC, survival)?	Public access AED programs	E. Brooke Lerner	http://circ.ahajournals.org/site/C2010/BLS-004B.pdf
Part 5	BLS	BLS-006A	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does any specific compression depth (I) as opposed to standard care (ie. depth specified in treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Compression depth	Ahamed H. Idris	http://circ.ahajournals.org/site/C2010/BLS-006A.pdf
Part 5	BLS	BLS-006B	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does any specific compression depth (I) as opposed to standard care (ie. depth specified in treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Compression depth	Koenraad Monsieurs	http://circ.ahajournals.org/site/C2010/BLS-006B.pdf
Part 5	BLS	BLS-007B	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) and suspected major injury (P), does any different strategy regarding positioning (eg. leaving them in the position they are found) (I) as opposed to standard care (ie. positioning the victim on his or her back) (C), improve outcome (O) (eg. ROSC, survival)?	Positioning of victim with traumatic cardiac arrest	Keiichi Tanaka	http://circ.ahajournals.org/site/C2010/BLS-007B.pdf
Part 5	BLS	BLS-008B	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does the interruption of CPR to check circulation (I) as opposed to no interruption of CPR (C), improve outcome (O) (eg. ROSC, survival)?	Pulse check (risk benefit of interruption of CPR)	Peter Fenici, Ian Jacobs, Andrea Scapigliati	http://circ.ahajournals.org/site/C2010/BLS-008B.pdf
Part 5	BLS	BLS-009A	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) and receiving chest compression only CPR (P), does the addition of any passive ventilation technique (eg positioning the body, opening the airway, passive oxygen administration) (I) as opposed to no addition (C), improve outcome (O) (eg. ROSC, survival)?	Passive ventilation techniques	Douglas Kupas	http://circ.ahajournals.org/site/C2010/BLS-009A.pdf
Part 5	BLS	BLS-010A	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does the provision of dispatch CPR instructions (I) as opposed to no instructions (C), improve outcome (O) (eg. ROSC, survival)?	Dispatch CPR instructions	James V. Dunford	http://circ.ahajournals.org/site/C2010/BLS-010A.pdf
Part 5	BLS	BLS-010B	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does the provision of dispatch CPR instructions (I) as opposed to no instructions (C), improve outcome (O) (eg. ROSC, survival)?	Dispatch CPR instructions	Maaret Castrén	http://circ.ahajournals.org/site/C2010/BLS-010B.pdf
Part 5	BLS	BLS-011A	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does the provision of airway maneuvers by bystanders (I) as opposed to no such maneuvers (C), improve outcome (O) (eg. ROSC, survival)?	Airway maneuvers in bystander CPR	Robert A. Swor	http://circ.ahajournals.org/site/C2010/BLS-011A.pdf
Part 5	BLS	BLS-011B	In adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (P), does the provision of airway maneuvers by bystanders (I) as opposed to no such maneuvers (C), improve outcome (O) (eg. ROSC, survival)?	Airway maneuvers in bystander CPR	Sung Phil Chung	http://circ.ahajournals.org/site/C2010/BLS-011B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 5	BLS	BLS-013A	In adult and pediatric patients with foreign body airway obstruction (out-of-hospital and in-hospital) (P), does the provision of abdominal thrusts, and/or back slaps, and/or chest thrusts, compared with no action (C), improve outcome (O) (eg. clearance of obstruction, ROSC, survival)?	Choking treatment	Anthony J. Handley	http://circ.ahajournals.org/site/C2010/BLS-013A.pdf
Part 5	BLS	BLS-014B	What is the incidence, prevalence, etiology of cardiopulmonary arrest in-hospital and out-of-hospital?	Incidence and etiology cardiac arrest	Jocelyn Berdowski	http://circ.ahajournals.org/site/C2010/BLS-014B.pdf
Part 5	BLS	BLS-017A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of alternative methods of manual CPR (eg. cough CPR, precordial thump, fist-pacing) (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Alternative methods of CPR	Tom P. Aufderheide	http://circ.ahajournals.org/site/C2010/BLS-017A.pdf
Part 5	BLS	BLS-017B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of alternative methods of manual CPR (eg. cough CPR, precordial thump, fist-pacing) (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Alternative methods of CPR	Jan L. Jensen	http://circ.ahajournals.org/site/C2010/BLS-017B.pdf
Part 5	BLS	BLS-017C	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of alternative methods of manual CPR (eg. cough CPR, precordial thump, fist-pacing) (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Alternative methods of CPR	Peter Kohl, Tommaso Pellis	http://circ.ahajournals.org/site/C2010/BLS-017C.pdf
Part 5	BLS	BLS-020A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of feedback regarding the mechanics of CPR quality (eg. rate and depth of compressions and/or ventilations) (I) compared with no feedback (C), improve any outcomes (eg. ROSC, survival) (O)?	Feedback for CPR quality	Diana Cave	http://circ.ahajournals.org/site/C2010/BLS-020A.pdf
Part 5	BLS	BLS-020B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of feedback regarding the mechanics of CPR quality (eg. rate and depth of compressions and/or ventilations) (I) compared with no feedback (C), improve any outcomes (eg. ROSC, survival) (O)?	Feedback for CPR quality	Peter T. Morley	http://circ.ahajournals.org/site/C2010/BLS-020B.pdf
Part 5	BLS	BLS-022A	In adult and pediatric patients with cardiac arrest (prehospital or in-hospital) (P), does the minimization of hands off time after defibrillation for rhythm check (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Rhythm check (risk benefit of interruption of CPR)	Robert A. Berg	http://circ.ahajournals.org/site/C2010/BLS-022A.pdf
Part 5	BLS	BLS-023A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of another specific C:V ratio (I) compared with standard care (30:2) (C), improve outcome (eg. ROSC, survival) (O)?	Compression ventilation ratio	Sung Phil Chung	http://circ.ahajournals.org/site/C2010/BLS-023A.pdf
Part 5	BLS	BLS-023B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of another specific C:V ratio (I) compared with standard care (30:2) (C), improve outcome (eg. ROSC, survival) (O)?	Compression ventilation ratio	Michael Sayre	http://circ.ahajournals.org/site/C2010/BLS-023B.pdf
Part 5	BLS	BLS-025A	In adult and pediatric patients with cardiac arrest (prehospital or in-hospital) (P), does the minimization of hands off time for rhythm analysis including frequency and duration of checks (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Rhythm check (risk benefit of interruption of CPR)	Dana P. Edelson	http://circ.ahajournals.org/site/C2010/BLS-025A.pdf
Part 5	BLS	BLS-025B	In adult and pediatric patients with cardiac arrest (prehospital or in-hospital) (P), does the minimization of hands off time for rhythm analysis including frequency and duration of checks (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Rhythm check (risk benefit of interruption of CPR)	David C. Cone	http://circ.ahajournals.org/site/C2010/BLS-025B.pdf
Part 5	BLS	BLS-026A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of compressions first (30:2) (I) compared with standard care (2:30) (C), improve outcome (eg. ROSC, survival) (O).	Compression first vs ventilation first	Anthony J. Handley	http://circ.ahajournals.org/site/C2010/BLS-026A.pdf
Part 5	BLS	BLS-026B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of compressions first (30:2) (I) compared with standard care (2:30) (C), improve outcome (eg. ROSC, survival) (O).	Compression first vs ventilation first	Diana Cave	http://circ.ahajournals.org/site/C2010/BLS-026B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 5	BLS	BLS-032A	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific placement of hands for external chest compressions (I) compared with standard care (eg. "placement of the rescuer's hands in the middle of the chest") (C), improve outcome (eg. ROSC, survival) (O).	Hand placement	Raina Merchant	http://circ.ahajournals.org/site/C2010/BLS-032A.pdf
Part 5	BLS	BLS-032B	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific placement of hands for external chest compressions (I) compared with standard care (eg. "placement of the rescuer's hands in the middle of the chest") (C), improve outcome (eg. ROSC, survival) (O).	Hand placement	Nigel M. Turner	http://circ.ahajournals.org/site/C2010/BLS-032B.pdf
Part 5	BLS	BLS-033A	In rescuers performing CPR on adult or pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific method for locating recommended hand position (I) compared with standard care (eg. "placement of the rescuer's hands in the middle of the chest") (C), improve outcome (eg. time to commence CPR, decreased hands off time, ROSC, survival) (O).	Hand placement	Anthony J. Handley	http://circ.ahajournals.org/site/C2010/BLS-033A.pdf
Part 5	BLS	BLS-034A	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific rate for external chest compressions (I) compared with standard care (ie. approximately 100/min) (C), improve outcome (eg. ROSC, survival) (O)?	Chest compression rate	Ahamed H. Idris	http://circ.ahajournals.org/site/C2010/BLS-034A.pdf
Part 5	BLS	BLS-034B	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific rate for external chest compressions (I) compared with standard care (ie. approximately 100/min) (C), improve outcome (eg. ROSC, survival) (O)?	Chest compression rate	Barbara Vantroyen	http://circ.ahajournals.org/site/C2010/BLS-034B.pdf
Part 5	BLS	BLS-035A	In adult and pediatric patients with cardiac arrest while on a bed (prehospital [OHCA], in-hospital [IHCA]) (P), does the performance of CPR on a hard surface like backboard or deflatable mattress (I) compared with performance of CPR on a regular mattress (C), improve outcome (eg. ROSC, survival) (O)?	Soft vs hard surface for CPR	Gavin D. Perkins	http://circ.ahajournals.org/site/C2010/BLS-035A.pdf
Part 5	BLS	BLS-035B	In adult and pediatric patients with cardiac arrest while on a bed (prehospital [OHCA], in-hospital [IHCA]) (P), does the performance of CPR on a hard surface like backboard or deflatable mattress (I) compared with performance of CPR on a regular mattress (C), improve outcome (eg. ROSC, survival) (O)?	Soft vs hard surface for CPR	Bo Lofgren	http://circ.ahajournals.org/site/C2010/BLS-035B.pdf
Part 5	BLS	BLS-039	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the analysis of cardiac rhythm during chest compressions (I) compared with standard care (analysis of cardiac rhythm during pauses in chest compressions) (C), optimize the time of appropriate chest compression by avoiding unnecessary interruptions and unnecessary prolongations (O)?	Analysis of rhythm during chest compression	Raúl J. Gazmuri, Michael A. Kuyper	http://circ.ahajournals.org/site/C2010/BLS-039.pdf
Part 5	BLS	BLS-044A	In adult and pediatric patients with cardiac arrest (prehospital [OHCA]) (P), does the description of any specific symptoms to the dispatcher (I) compared with the absence of any specific description (C), improve accuracy of the diagnosis of cardiac arrest (O)?	Rescuer communication with dispatcher for CPR	Manya Charette, Christian Vaillancourt	http://circ.ahajournals.org/site/C2010/BLS-044A.pdf
Part 5	BLS	BLS-044B	In adult and pediatric patients with cardiac arrest (prehospital [OHCA]) (P), does the description of any specific symptoms to the dispatcher (I) compared with the absence of any specific description (C), improve accuracy of the diagnosis of cardiac arrest (O)?	Rescuer communication with dispatcher for CPR	Maaret Castrén	http://circ.ahajournals.org/site/C2010/BLS-044B.pdf
Part 5	BLS	BLS-045A	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does optimizing chest wall recoil (I) compared with standard care (C), improve outcome (eg. ROSC, survival) (O)? In patients with CA (P), does optimizing chest wall recoil (I), improve survival (O)?	Chest wall recoil	Tom P. Aufderheide	http://circ.ahajournals.org/site/C2010/BLS-045A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 5	BLS	BLS-046A	In adult patients suffering from a cardiac arrest (P) does the calling of EMS and the provision of chest compressions (without ventilation) by untrained laypersons, trained laypersons, or professionals (I) compared with calling EMS only (C) improve survival to hospital discharge (O)?	Untrained lay rescuer CC Only vs call EMS	Tetsuo Hatanaka	http://circ.ahajournals.org/site/C2010/BLS-046A.pdf
Part 5	BLS	BLS-046B	In adult patients suffering from a cardiac arrest (P) does the calling of EMS and the provision of chest compressions (without ventilation) by untrained laypersons, trained laypersons, or professionals (I) compared with calling EMS only (C) improve survival to hospital discharge (O)?	Untrained lay rescuer CC Only vs call EMS	Thomas D. Rea	http://circ.ahajournals.org/site/C2010/BLS-046B.pdf
Part 5	BLS	BLS-047A	In adult patients suffering from a cardiac arrest (P) does the provision of chest compressions (without ventilation) from bystanders, both trained and untrained, (I) compared with chest compressions plus mouth-to-mouth breathing (C) improve survival to hospital discharge (O)?	Chest compression only CPR	Csaba Dioszeghy	http://circ.ahajournals.org/site/C2010/BLS-047A.pdf
Part 5	BLS	BLS-047B	In adult patients suffering from a cardiac arrest (P) does the provision of chest compressions (without ventilation) from bystanders, both trained and untrained, (I) compared with chest compressions plus mouth-to-mouth breathing (C) improve survival to hospital discharge (O)?	Chest compression only CPR	Andrew Travers	http://circ.ahajournals.org/site/C2010/BLS-047B.pdf
Part 5	BLS	BLS-049A	In adult patients suffering from a cardiac arrest (P) does provision of chest compressions (without ventilation) by EMS (I) compared with chest compressions plus ventilations (C) improve survival to hospital discharge (O)?	EMS CC only vs standard CPR	Laura S. Gold, Peter J. Kudenchuk	http://circ.ahajournals.org/site/C2010/BLS-049A.pdf
Part 5	BLS	BLS-049B	In adult patients suffering from a cardiac arrest (P) does provision of chest compressions (without ventilation) by EMS (I) compared with chest compressions plus ventilations (C) improve survival to hospital discharge (O)?	EMS CC only vs standard CPR	Andrew Travers	http://circ.ahajournals.org/site/C2010/BLS-049B.pdf
Part 5	BLS	BLS-050A	In adult and pediatric patients with presumed cardiac arrest (prehospital or in-hospital) (P), are there any factors/characteristics (I) that increase the likelihood of differentiating between a sudden cardiac arrest (ie. VF) from other etiologies (eg drowning, acute airway obstruction) (O)?	Differentiating cardiac from non-cardiac etiologies	Anthony J. Handley	http://circ.ahajournals.org/site/C2010/BLS-050A.pdf
Part 5	BLS	BLS-050B	In adult and pediatric patients with presumed cardiac arrest (prehospital or in-hospital) (P), are there any factors/characteristics (I) that increase the likelihood of differentiating between a sudden cardiac arrest (ie. VF) from other etiologies (eg drowning, acute airway obstruction) (O)?	Differentiating cardiac from non-cardiac etiologies	Michael A. Kuiper	http://circ.ahajournals.org/site/C2010/BLS-050B.pdf
Part 5	BLS	BLS-051A	In adults and pediatric patients who are NOT in cardiac arrest (P), how often does provision of chest compressions from lay rescuers (I), lead to harm (eg rib fracture) (O)?	Harm from CPR to victims not in arrest	Anton P.M. Gorgels, Antonius M.W. van Stipdonk	http://circ.ahajournals.org/site/C2010/BLS-051A.pdf
Part 5	BLS	BLS-051B	In adults and pediatric patients who are NOT in cardiac arrest (P), how often does provision of chest compressions from lay rescuers (I), lead to harm (eg rib fracture) (O)?	Harm from CPR to victims not in arrest	Daniel P. Davis	http://circ.ahajournals.org/site/C2010/BLS-051B.pdf
Part 5	BLS	BLS-052B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) who are NOT endotracheally intubated (P), does providing ventilation with a 1 second inspiratory time and tidal volume of about 600 mL (I), compared with other inspiratory times and tidal volume (C), improve any outcomes (including ventilation, oxygenation) (O)?	Ventilation inspiratory time and volume	Colin A. Graham	http://circ.ahajournals.org/site/C2010/BLS-052B.pdf
Part 5	BLS	BLS-053A	In adult patients in cardiac arrest (P), how frequently should chest compressions be paused to re-diagnose accurately the cardiac rhythm (I) to provide the best outcomes (eg ROSC, survival) (O)?	Timing of CPR cycles (2 minutes vs other)	Michael Cudnik	http://circ.ahajournals.org/site/C2010/BLS-053A.pdf
Part 6	ALS	ALS-D&P-015B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a technique for prediction of the likelihood of success of defibrillation (analysis of VF, etc) (I) compared with standard resuscitation (without such prediction) (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O).	Waveform analysis for predicting successful defibrillation	Mark Angelos, Trygve Eftestøl	http://circ.ahajournals.org/site/C2010/ALS-D-P-015B.pdf
Part 6	ALS	ALS-E-030A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific paddle/pad size/orientation and position (I) compared with standard resuscitation or other specific paddle/pad size/orientation and position) (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O).	Paddle size and placement for defibrillation	Michael Baubin, Comilla Sasson	http://circ.ahajournals.org/site/C2010/ALS-E-030A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 6	ALS	ALS-E-031	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of pacing (eg. TV, TC, needle) (I) compared with standard resuscitation (or no pacing) (C), improve outcomes (eg. ROSC, survival) (O).	Pacing for cardiac arrest	M. Fernanda Bellolio, Paul A. Berlin, Erik P. Hess	http://circ.ahajournals.org/site/C2010/ALS-E-031.pdf
Part 6	ALS	ALS-E-032B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of an escalating defibrillation energy protocol (I) when compared with a fixed energy protocol (C) increase outcome (eg. return of spontaneous circulation) (O)?	Escalating vs fixed defibrillation energy	Steven M. Bradley	http://circ.ahajournals.org/site/C2010/ALS-E-032B.pdf
Part 6	ALS	ALS-E-033B	In adult cardiac arrest due to VF or pulseless VT (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific defibrillation strategy (I) compared with standard management (or other defibrillation strategy) (C), improve outcomes (eg. termination of rhythm, ROSC, survival) (O)?	Defibrillation strategies for VF or VT	Steven M. Bradley	http://circ.ahajournals.org/site/C2010/ALS-E-033B.pdf
Part 6	ALS	ALS-E-034B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of an AED or a multifunctional defibrillator in automatic mode (I) compared with standard resuscitation (using manual defibrillation) (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O)?	AED vs manual defibrillator	Giuseppe Ristagno	http://circ.ahajournals.org/site/C2010/ALS-E-034B.pdf
Part 6	ALS	ALS-E-035A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P) requiring defibrillation, does the presence of supplementary oxygen in the immediate vicinity (I) compared with no supplementary oxygen (C), increase the risk of fire with defibrillation attempts (O).	Risk of fire with oxygen and defibrillation	Jerry Nolan	http://circ.ahajournals.org/site/C2010/ALS-E-035A.pdf
Part 6	ALS	ALS-E-035B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P) requiring defibrillation, does the presence of supplementary oxygen in the immediate vicinity (I) compared with no supplementary oxygen (C), increase the risk of fire with defibrillation attempts (O).	Risk of fire with oxygen and defibrillation	Claudia Ranniger	http://circ.ahajournals.org/site/C2010/ALS-E-035B.pdf
Part 6	ALS	ALS-E-036	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific composition of conductive material (I) compared with standard conductive material (C), improve transthoracic impedance (O).	Conductive materials for defibrillation	Saul Drajer, Richard Kerber	http://circ.ahajournals.org/site/C2010/ALS-E-036.pdf
Part 6	ALS	ALS-E-037A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of self-adhesive defibrillation pads (I) compared with paddles (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O)?	Adhesive pads vs paddles for defibrillation	Chokoh Genka, Toshihiko Mayumi	http://circ.ahajournals.org/site/C2010/ALS-E-037A.pdf
Part 6	ALS	ALS-E-038	In adult patients in a shockable non-arrest rhythm requiring cardioversion (prehospital or in-hospital) (P), does the any specific cardioversion strategy (I) compared with standard management (or other cardioversion strategy) (C), improve outcomes (eg. termination of rhythm) (O).	Cardioversion strategies	Richard N. Bradley, Shijie Sun	http://circ.ahajournals.org/site/C2010/ALS-E-038.pdf
Part 6	ALS	ALS-E-039B	In adult patients with an ICD or pacemaker and who are in a shockable rhythm requiring defibrillation/cardioversion (prehospital or in-hospital) (P), does the any unique or modified cardioversion/defibrillation strategy (I) compared with standard management (C), improve outcomes (eg. termination of rhythm, ROSC) (O).	Cardioversion strategies with ICD or pacemakers	Saman Nazarian, Mark Peele	http://circ.ahajournals.org/site/C2010/ALS-E-039B.pdf
Part 6	BLS	BLS-024A	In adult and pediatric patients with cardiac arrest due to VF (prehospital or in-hospital) (P), does the use of CPR before defibrillation (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	CPR prior to defibrillation	Ian Jacobs	http://circ.ahajournals.org/site/C2010/BLS-024A.pdf
Part 6	BLS	BLS-024B	In adult and pediatric patients with cardiac arrest due to VF (prehospital or in-hospital) (P), does the use of CPR before defibrillation (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	CPR prior to defibrillation	Rudolph W. Koster	http://circ.ahajournals.org/site/C2010/BLS-024B.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-081A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a ITD (I) compared with no ITD (C), improve any outcomes (eg. ROSC, survival) (O)?	Impedance threshold device	Suzanne R. Davies, Paul M. Middleton	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-081A.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-081B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a ITD (I) compared with no ITD (C), improve any outcomes (eg. ROSC, survival) (O)?	Impedance threshold device	Syed Sameer Ali	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-081B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 7	ALS/BLS	ALS/BLS-CPR&A-082A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of Interposed abdominal compressions-CPR (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Interposed abdominal compression CPR	Michael Holzer, Kjetil Sunde	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-082A.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-083A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a piston CPR device (eg. Thumper) (I) compared with manual CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Piston (thumper) device CPR	Giuseppe Ristagno	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-083A.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-083B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a piston CPR device (eg. Thumper) (I) compared with manual CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Piston (thumper) device CPR	Jim McKendry	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-083B.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-084A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of manual ACD-CPR (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Active compression decompression device (ACD) CPR	Pierre Carli	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-084A.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-085A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of mechanical compression full (eg. Lucas) or partial decompression (eg. US version) (I) compared with manual CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Lucas device CPR	Peter T. Morley	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-085A.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-085B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of mechanical compression full (eg. Lucas) or partial decompression (eg. US version) (I) compared with manual CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Lucas device CPR	Taku Iwami, Chika Nishiyama	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-085B.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-086A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of load distributing band (eg. Autopulse) (I) compared with manual CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Autopulse device CPR	Peter T. Morley	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-086A.pdf
Part 7	ALS/BLS	ALS/BLS-CPR&A-086B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of load distributing band (eg. Autopulse) (I) compared with manual CPR (C), improve any outcomes (eg. ROSC, survival) (O)?	Autopulse device CPR	David G. Beiser	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-086B.pdf
Part 7	ALS	ALS-CPR&A-004A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P) including traumatic arrest, does the use of open-chest CPR (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O).	Open-chest CPR	Sten Rubertsson	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-004A.pdf
Part 7	ALS	ALS-CPR&A-004B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P) including traumatic arrest, does the use of open-chest CPR (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O).	Open-chest CPR	Mark S. Link	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-004B.pdf
Part 8	ALS/BLS	ALS/BLS-CPR&A-079A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a supraglottic airway device (I) vs an endotracheal tube (I), improve any outcomes (O).	Supraglottic devices vs intubation	Lauren Berkow	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-079A.pdf
Part 8	ALS/BLS	ALS/BLS-CPR&A-079B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of a supraglottic airway device (I) vs an endotracheal tube (I), improve any outcomes (O).	Supraglottic devices vs intubation	Michael Shuster	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-079B.pdf
Part 8	ALS/BLS	ALS/BLS-CPR&A-080B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of oropharyngeal airway or nasopharyngeal airway adjuncts (I) compared with no airway adjuncts (C), improve any outcomes (eg. ventilation, oxygenation) (O).	Oropharyngeal and nasopharyngeal adjuncts	Harinder Dhindsa, V. Ramana Feeser, Renee D. Reid	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-080B.pdf
Part 8	ALS/BLS	ALS/BLS-CPR&A-088A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of supraglottic devices (I) compared with bag-valve-mask alone for airway management (C), improve any outcomes (eg. ventilation, oxygenation, reduce hands-off time, allow for continuous compressions and/or improves survival) (O).	Supraglottic devices vs BVM	Suzanne R. Davies, Paul M. Middleton	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-088A.pdf
Part 8	ALS/BLS	ALS/BLS-CPR&A-088B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of supraglottic devices (I) compared with bag-valve-mask alone for airway management (C), improve any outcomes (eg. ventilation, oxygenation, reduce hands-off time, allow for continuous compressions and/or improves survival) (O).	Supraglottic devices vs BVM	Lauren Berkow, Henry R. Halperin	http://circ.ahajournals.org/site/C2010/ALS-BLS-CPR-A-088B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-CPR&A-001A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of physiological feedback regarding CPR quality (eg. End-tidal CO2 monitoring) (I) compared with no feedback (C), improve any outcomes (eg. ROSC, survival) (O)?	Physiological feedback (eg. end tidal CO2) for CPR quality	Blair Bigham	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-001A.pdf
Part 8	ALS	ALS-CPR&A-001B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of physiological feedback regarding CPR quality (eg. End-tidal CO2 monitoring) (I) compared with no feedback (C), improve any outcomes (eg. ROSC, survival) (O)?	Physiological feedback (eg. end tidal CO2) for CPR quality	Marion Leary	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-001B.pdf
Part 8	ALS	ALS-CPR&A-002A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P)—does the use of rapid deployment ECMO, Aortic Balloon Pump or emergency cardiopulmonary bypass (I), compared with standard treatment (C), increase survival to hospital discharge with favorable neurologic outcomes (O)?	ECMO, balloon pump etc for CPR	Tetsuya Sakamoto	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-002A.pdf
Part 8	ALS	ALS-CPR&A-002B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P)—does the use of rapid deployment ECMO, Aortic Balloon Pump or emergency cardiopulmonary bypass (I), compared with standard treatment (C), increase survival to hospital discharge with favorable neurologic outcomes (O)?	ECMO, balloon pump etc for CPR	Michael S. Czekajlo	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-002B.pdf
Part 8	ALS	ALS-CPR&A-003B	In adult in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of ultrasound (including transthoracic and transesophageal echocardiography) during cardiac arrest (I) compared with standard CPR (C), improve any outcomes (eg. ROSC, survival) (O).	Ultrasound during cardiac arrest	Amanda Hanson	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-003B.pdf
Part 8	ALS	ALS-CPR&A-005C	In adult cardiac arrest (out-of-hospital and in-hospital) with either a protected and unprotected airway (P), does the monitoring and control of ventilatory parameters (eg. minute ventilation and/or peak pressures) (I) as opposed to standard care (without ventilatory monitoring) (C), improve outcome (O) (eg. ROSC, survival)?	Monitoring ventilatory parameters during CPR	Kate Crewdson	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-005C.pdf
Part 8	ALS	ALS-CPR&A-006A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of thoracic impedance (I) compared with usual management (C), improve the accuracy of diagnosis of airway placement and adequacy of ventilation (O).	Thoracic impedance to confirm airway placement	F. Javier Garcia-Vega	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-006A.pdf
Part 8	ALS	ALS-CPR&A-006B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of thoracic impedance (I) compared with usual management (C), improve the accuracy of diagnosis of airway placement and adequacy of ventilation (O).	Thoracic impedance to confirm airway placement	Heather Farley	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-006B.pdf
Part 8	ALS	ALS-CPR&A-007B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) requiring ventilation and intubation (P), does the application and maintenance of cricoid pressure (I), compared to no cricoid pressure (C), reduce the incidence of aspiration (O).	Cricoid pressure	Michael Shuster	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-007B.pdf
Part 8	ALS	ALS-CPR&A-008A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of devices (eg. CO2 detection device, CO2 analyzer or esophageal detector device) (I) compared with usual management (C), improve the accuracy of diagnosis of airway placement (O)?	Devices to confirm airway placement	Douglas Kupas	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-008A.pdf
Part 8	ALS	ALS-CPR&A-008B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of devices (eg. CO2 detection device, CO2 analyzer or esophageal detector device) (I) compared with usual management (C), improve the accuracy of diagnosis of airway placement (O)?	Devices to confirm airway placement	Ian L. Cash	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-008B.pdf
Part 8	ALS	ALS-CPR&A-009A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of passive oxygen delivery during CPR (I) compared with oxygen delivery by positive pressure ventilation (C), improve outcome (eg. ROSC, survival) (O).	Passive oxygen vs positive pressure oxygen during CPR	Csaba Dioszeghy	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-009A.pdf
Part 8	ALS	ALS-CPR&A-009B	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of passive oxygen delivery during CPR (I) compared with oxygen delivery by positive pressure ventilation (C), improve outcome (eg. ROSC, survival) (O).	Passive oxygen vs positive pressure oxygen during CPR	Peter Fenici, Andrea Scapigliati	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-009B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-CPR&A-010A	In adult and pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) and who have advanced airways in place (P), does the use of automatic ventilators (I) compared with manual ventilation (C), improve outcome (eg. ventilation, oxygenation, reduce hands-off time, allow for continuous compressions and/or improves survival) (O)?	Automatic ventilators vs manual ventilation during CPR	Charles Otto	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-010A.pdf
Part 8	ALS	ALS-CPR&A-011A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of an FIO2 titrated to oxygenation during cardiac arrest (I) compared with the use of 100% oxygen (C), improve outcome (eg. ROSC, neurologically intact survival) (O)?	Supplemental oxygen: 100% vs titration	Colin A. Graham	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-011A.pdf
Part 8	ALS	ALS-D&P-014A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of end-tidal CO2 (eg. absolute CO2 values or changes in waveform) (I) compared with not using ETCO2 (C), accurately predict outcomes (eg. ROSC, survival) (O).	End-tidal CO2 to predict outcome of cardiac arrest	Sadiq S. Bhayani	http://circ.ahajournals.org/site/C2010/ALS-CPR-A-014A.pdf
Part 8	ALS	ALS-D-016A	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use intravenous fluids (I) compared with not using fluids (or standard resuscitation (C), improve outcomes (eg. ROSC, survival) (O).	IV fluids during cardiac arrest	Jane A. H. Foster, Jasmeet Soar	http://circ.ahajournals.org/site/C2010/ALS-D-016A.pdf
Part 8	ALS	ALS-D-016B	In adult cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use intravenous fluids (I) compared with not using fluids (or standard resuscitation (C), improve outcomes (eg. ROSC, survival) (O).	IV fluids during cardiac arrest	Paul A. Jennings	http://circ.ahajournals.org/site/C2010/ALS-D-016B.pdf
Part 8	ALS	ALS-D-017	In adult patients in atrial fibrillation (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for atrial fibrillation	Steven Kronick, Mark S. Link, Rod S. Passman, Richard Schilling	http://circ.ahajournals.org/site/C2010/ALS-D-017.pdf
Part 8	ALS	ALS-D-018	In adult patients in narrow complex tachycardia (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for narrow complex tachycardia	Steven Kronick, Rod S. Passman, Volker Wenzel	http://circ.ahajournals.org/site/C2010/ALS-D-018.pdf
Part 8	ALS	ALS-D-019-01A	In adult patients in monomorphic (wide complex) tachycardia (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for monomorphic wide complex tachycardia	Tommaso Pellis	http://circ.ahajournals.org/site/C2010/ALS-D-019-01A.pdf
Part 8	ALS	ALS-D-019-01B	In adult patients in monomorphic (wide complex) tachycardia (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for monomorphic wide complex tachycardia	Markus Skrifvars	http://circ.ahajournals.org/site/C2010/ALS-D-019-01B.pdf
Part 8	ALS	ALS-D-019-02	In adult patients with undifferentiated stable wide complex tachycardia (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates)(O)?	Drugs for undifferentiated stable wide complex tachycardia	Steven Kronick	http://circ.ahajournals.org/site/C2010/ALS-D-019-02.pdf
Part 8	ALS	ALS-D-020B	In adult patients in polymorphic (wide complex) tachycardia (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for polymorphic wide complex tachycardia	Peter J. Kudenchuk	http://circ.ahajournals.org/site/C2010/ALS-D-020B.pdf
Part 8	ALS	ALS-D-021A	In adult patients in torsades de pointes (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for torsades de pointes	Eliano Pio Navarese, Andrea Scapigliati	http://circ.ahajournals.org/site/C2010/ALS-D-021A.pdf
Part 8	ALS	ALS-D-022A	In adult patients in significant bradycardia (prehospital and in-hospital) (P), does the use of any drug or combination of drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. reversion rates) (O).	Drugs for bradycardia	Thomas Nguyen	http://circ.ahajournals.org/site/C2010/ALS-D-022A.pdf
Part 8	ALS	ALS-D-023B	In adult patients in cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of vasopressors (epinephrine, norepinephrine, others) or combination of vasopressors (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Vasopressors for cardiac arrest	Todd M. Larabee, Charles M. Little	http://circ.ahajournals.org/site/C2010/ALS-D-023B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-D-024B	In adult patients in cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of atropine or atropine in combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Atropine for cardiac arrest	Swee Han Lim	http://circ.ahajournals.org/site/C2010/ALS-D-024B.pdf
Part 8	ALS	ALS-D-025A	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of antiarrhythmic drugs (lidocaine, procainamide, amiodarone, bretylium, magnesium) or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Antiarrhythmic drugs for cardiac arrest	Marcus Ong	http://circ.ahajournals.org/site/C2010/ALS-D-025A.pdf
Part 8	ALS	ALS-D-025B	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of antiarrhythmic drugs (lidocaine, procainamide, amiodarone, bretylium, magnesium) or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Antiarrhythmic drugs for cardiac arrest	Mark S. Link, Tommaso Pellis	http://circ.ahajournals.org/site/C2010/ALS-D-025B.pdf
Part 8	ALS	ALS-D-026A	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of calcium alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Calcium for cardiac arrest	Fulvio Kette, Sara Tararan	http://circ.ahajournals.org/site/C2010/ALS-D-026A.pdf
Part 8	ALS	ALS-D-026B	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of calcium alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Calcium for cardiac arrest	Jaspinder Ghuman	http://circ.ahajournals.org/site/C2010/ALS-D-026B.pdf
Part 8	ALS	ALS-D-027	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of steroid or hormonal therapy (estrogen, progesterone, hydrocortisone, insulin, growth factor etc) alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Steroids and hormones for cardiac arrest	Michael Cocchi, Michael Donnino, Ian Seppelt	http://circ.ahajournals.org/site/C2010/ALS-D-027.pdf
Part 8	ALS	ALS-D-028A	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of fibrinolytics alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Fibrinolytics for cardiac arrest	Michael Parr	http://circ.ahajournals.org/site/C2010/ALS-D-028A.pdf
Part 8	ALS	ALS-D-028B	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of fibrinolytics alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Fibrinolytics for cardiac arrest	Steven Kronick	http://circ.ahajournals.org/site/C2010/ALS-D-028B.pdf
Part 8	ALS	ALS-D-029A	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of buffering agents alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Buffering agents for cardiac arrest	James J. McCarthy	http://circ.ahajournals.org/site/C2010/ALS-D-029A.pdf
Part 8	ALS	ALS-D-029C	In adult cardiac arrest (asystole, pulseless electrical activity, pulseless VT and VF) (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of buffering agents alone or combination with other drugs (I) compared with not using drugs (or a standard drug regimen) (C), improve outcomes (eg. ROSC, survival) (O).	Buffering agents for cardiac arrest	Edison Ferreira de Paiva	http://circ.ahajournals.org/site/C2010/ALS-D-029C.pdf
Part 8	ALS	ALS-PA-040A	In post-cardiac arrest patients treated with hypothermia (P), can the same prognostication tools that are used in normothermic patients (I) reliably predict outcome (O)?	Hypothermia and prognostication	Hans Friberg, Robert Neumar, Malin Rundgren	http://circ.ahajournals.org/site/C2010/ALS-PA-040A.pdf
Part 8	ALS	ALS-PA-041	In adult and pediatric patients who are comatose after cardiac arrest (prehospital or in-hospital) (P), does the use of the bedside neurological exam (I) as opposed to standard care (C), allow accurate prediction of outcome (O) (eg. survival)?	Bedside neuro exam for prognostication	Romergryo G. Geocadin, Giuseppe La Torre, Claudio Sandroni	http://circ.ahajournals.org/site/C2010/ALS-PA-041.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-PA-042A	In adult and pediatric organ recipients (P), does the use of organs from donors brain dead after cardiac arrest (prehospital or in-hospital) (I) as opposed to the use of donors brain dead not due to cardiac arrest (C), improve outcome (O) (eg. transplant success)?	Organ donation	Claudio Sandroni	http://circ.ahajournals.org/site/C2010/ALS-PA-042A.pdf
Part 8	ALS	ALS-PA-042B	In adult and pediatric organ recipients (P), does the use of organs from donors brain dead after cardiac arrest (prehospital or in-hospital) (I) as opposed to the use of donors brain dead not due to cardiac arrest (C), improve outcome (O) (eg. transplant success)?	Organ donation	Christophe Adrie	http://circ.ahajournals.org/site/C2010/ALS-PA-042B.pdf
Part 8	ALS	ALS-PA-043A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) who have cardiovascular dysfunction (P), does the use of intravenous fluids (I) as opposed to standard care (or other intravenous fluids) (C), improve outcome (O) (eg. survival)?	IV fluids following cardiac arrest	Jane A. H. Foster, Jasmeet Soar	http://circ.ahajournals.org/site/C2010/ALS-PA-043A.pdf
Part 8	ALS	ALS-PA-043C	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) who have cardiovascular dysfunction (P), does the use of intravenous fluids (I) as opposed to standard care (or other intravenous fluids) (C), improve outcome (O) (eg. survival)?	IV fluids following cardiac arrest	Hitoshi Kano, Tomoyuki Sato	http://circ.ahajournals.org/site/C2010/ALS-PA-043C.pdf
Part 8	ALS	ALS-PA-044	In adult patients with ROSC after cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does therapeutic hypothermia (I) compared with usual care (C), improve morbidity or mortality (O)?	Hypothermia following resuscitation	Jerry Nolan, Peter T. Morley	http://circ.ahajournals.org/site/C2010/ALS-PA-044.pdf
Part 8	ALS	ALS-PA-045A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a specific strategy to manage blood glucose (eg. target range) (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Glucose control following resuscitation	Jon Rittenberger	http://circ.ahajournals.org/site/C2010/ALS-PA-045A.pdf
Part 8	ALS	ALS-PA-045B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a specific strategy to manage blood glucose (eg. target range) (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Glucose control following resuscitation	Janice L. Zimmerman	http://circ.ahajournals.org/site/C2010/ALS-PA-045B.pdf
Part 8	ALS	ALS-PA-046A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P) diagnosed as pulmonary embolism, does the use of early fibrinolytic therapy (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Fibrinolytics for cardiac arrest	Markus Skrifvars	http://circ.ahajournals.org/site/C2010/ALS-PA-046A.pdf
Part 8	ALS	ALS-PA-046B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P) diagnosed as pulmonary embolism, does the use of early fibrinolytic therapy (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Fibrinolytics for cardiac arrest	Rachel Prout	http://circ.ahajournals.org/site/C2010/ALS-PA-046B.pdf
Part 8	ALS	ALS-PA-047A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of comprehensive treatment protocol (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Treatment protocol post resuscitation	Maaret Castrén	http://circ.ahajournals.org/site/C2010/ALS-PA-047A.pdf
Part 8	ALS	ALS-PA-047B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of comprehensive treatment protocol (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Treatment protocol post resuscitation	Mary Ann Peberdy	http://circ.ahajournals.org/site/C2010/ALS-PA-047B.pdf
Part 8	ALS	ALS-PA-048A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does treatment with corticosteroids (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Steroids post resuscitation	Andrew Padkin, Kjetil Sunde	http://circ.ahajournals.org/site/C2010/ALS-PA-048A.pdf
Part 8	ALS	ALS-PA-049A	In adult patients (prehospital or in-hospital) who are comatose after cardiac arrest (P) does treatment of pyrexia (I) compared to no temperature intervention (C) improve outcome (eg. survival).	Fever post resuscitation	Marios Georgiou, Marios Ioannides	http://circ.ahajournals.org/site/C2010/ALS-PA-049A.pdf
Part 8	ALS	ALS-PA-050A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of seizure prophylaxis or effective seizure control (I) as opposed to standard care (no prophylaxis or ineffective seizure control)(C), improve outcome (O) (eg. survival)?	Seizure prophylaxis post resuscitation	Nabil El Sanadi	http://circ.ahajournals.org/site/C2010/ALS-PA-050A.pdf
Part 8	ALS	ALS-PA-050B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of seizure prophylaxis or effective seizure control (I) as opposed to standard care (no prophylaxis or ineffective seizure control)(C), improve outcome (O) (eg. survival)?	Seizure prophylaxis post resuscitation	Maaret Castrén	http://circ.ahajournals.org/site/C2010/ALS-PA-050B.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-PA-051A	In adult patients who are comatose after cardiac arrest (prehospital or in-hospital) (P), does the use of neurological electrophysiological studies (I) as opposed to standard care (C), allow accurate prediction of outcome (O) (eg. survival)?	EEG post resuscitation	Tommaso Sanna	http://circ.ahajournals.org/site/C2010/ALS-PA-051A.pdf
Part 8	ALS	ALS-PA-052A	In adult patients who are comatose after cardiac arrest (prehospital or in-hospital) (P), does the use of biochemical markers (I) as opposed to standard care (C), allow accurate prediction of outcome (O) (eg. survival)?	Biomarkers	Tommaso Sanna	http://circ.ahajournals.org/site/C2010/ALS-PA-052A.pdf
Part 8	ALS	ALS-PA-052B	In adult patients who are comatose after cardiac arrest (prehospital or in-hospital) (P), does the use of biochemical markers (I) as opposed to standard care (C), allow accurate prediction of outcome (O) (eg. survival)?	Biomarkers	Michel Torbey	http://circ.ahajournals.org/site/C2010/ALS-PA-052B.pdf
Part 8	ALS	ALS-PA-053B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a specific ventilation strategy (including specific CO2 goal) (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Ventilation strategy post resuscitation	Clifton Callaway	http://circ.ahajournals.org/site/C2010/ALS-PA-053B.pdf
Part 8	ALS	ALS-PA-054A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a hemofiltration (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Hemofiltration post resuscitation	Wilhelm Behringer	http://circ.ahajournals.org/site/C2010/ALS-PA-054A.pdf
Part 8	ALS	ALS-PA-055A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of neuroprotective drugs (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Neuroprotective drugs	Michael Holzer	http://circ.ahajournals.org/site/C2010/ALS-PA-055A.pdf
Part 8	ALS	ALS-PA-055C	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of neuroprotective drugs (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Neuroprotective drugs	Richard A. Bernstein	http://circ.ahajournals.org/site/C2010/ALS-PA-055C.pdf
Part 8	ALS	ALS-PA-056B	In adult patients (prehospital and in-hospital) with ROSC after cardiac arrest (P), does early hemodynamic optimization (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Hemodynamic support post resuscitation	Michael Fries	http://circ.ahajournals.org/site/C2010/ALS-PA-056B.pdf
Part 8	ALS	ALS-PA-057A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) who have cardiovascular dysfunction (P), does the use of any specific cardioactive drugs (I) as opposed to standard care (or different cardioactive drugs) (C), improve outcome (O) (eg. survival)?	Cardioactive drugs post resuscitation	Karl B. Kern, Sudhakar Sattur	http://circ.ahajournals.org/site/C2010/ALS-PA-057A.pdf
Part 8	ALS	ALS-PA-058A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of prophylactic antiarrhythmic drugs (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Antiarrhythmic drugs post resuscitation	Tommaso Pellis	http://circ.ahajournals.org/site/C2010/ALS-PA-058A.pdf
Part 8	ALS	ALS-PA-058B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of prophylactic antiarrhythmic drugs (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Antiarrhythmic drugs post resuscitation	Mark S. Link	http://circ.ahajournals.org/site/C2010/ALS-PA-058B.pdf
Part 8	ALS	ALS-PA-059	In adult patients who are comatose after cardiac arrest (prehospital or in-hospital) (P), does the use of imaging studies (I) as opposed to standard care (C), allow accurate prediction of outcome (O) (eg. survival)?	Imaging studies post resuscitation	Romergrko G. Geocadin, David M. Greer	http://circ.ahajournals.org/site/C2010/ALS-PA-059.pdf
Part 8	ALS	ALS-PA-060	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) who have cardiovascular dysfunction (P), does the use of mechanical circulatory support (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Mechanical circulatory support post resuscitation	Hitoshi Kano, Sten Rubertsson, Tomoyuki Sato	http://circ.ahajournals.org/site/C2010/ALS-PA-060.pdf
Part 8	ALS	ALS-PA-061A	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a controlled oxygenation strategy (including specific oxygenation goal) (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Supplemental oxygen: 100% vs titration	Robert Neumar	http://circ.ahajournals.org/site/C2010/ALS-PA-061A.pdf
Part 8	ALS	ALS-PA-061B	In adult patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a controlled oxygenation strategy (including specific oxygenation goal) (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?	Supplemental oxygen: 100% vs titration (duplicate with 11a?)	Gregory P. Comadira	http://circ.ahajournals.org/site/C2010/ALS-PA-061B.pdf
Part 8	ALS	ALS-SAM-062A	In adult cardiac arrest (prehospital or in-hospital) (P), does an alternate timing for advanced airway insertion (eg. early or delayed) (I) as opposed to standard care (standard position in algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Advanced airway placement (timing)	Sebastian G. Russo, Christoph H. Wiese, Daniel Wu	http://circ.ahajournals.org/site/C2010/ALS-SAM-062A.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-SAM-063A	In adult cardiac arrest (prehospital or in-hospital) (P), does an alternate timing for drug delivery (eg, early or delayed) (I) as opposed to standard care (standard position in algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Drug delivery (timing)	James J. Menegazzi, Morten Pytte	http://circ.ahajournals.org/site/C2010/ALS-SAM-063A.pdf
Part 8	ALS	ALS-SAM-063B	In adult cardiac arrest (prehospital or in-hospital) (P), does an alternate timing for drug delivery (eg, early or delayed) (I) as opposed to standard care (standard position in algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Drug delivery (timing)	Elizabeth A. Hunt, Michael C. McCrory	http://circ.ahajournals.org/site/C2010/ALS-SAM-063B.pdf
Part 8	ALS	ALS-SAM-064B	In adult cardiac arrest (prehospital or in-hospital) (P), initially with a non-shockable rhythm but who develop a shockable rhythm (prehospital or in-hospital) (P), does any specific alteration in treatment algorithm (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Algorithm for transition from shockable to non-shockable rhythm	Masami Ishikawa, Keiichi Tada, Wanchun Tang	http://circ.ahajournals.org/site/C2010/ALS-SAM-064B.pdf
Part 8	ALS	ALS-SAM-064C	In adult cardiac arrest (prehospital or in-hospital) (P), initially with a non-shockable rhythm but who develop a shockable rhythm (prehospital or in-hospital) (P), does any specific alteration in treatment algorithm (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Algorithm for transition from shockable to non-shockable rhythm	Timothy J. Mader	http://circ.ahajournals.org/site/C2010/ALS-SAM-064C.pdf
Part 8	ALS	ALS-SC-065	In pregnant patients with cardiac arrest (prehospital or in-hospital) (P), do any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Pregnancy and cardiac arrest	Farida M. Jeejeebhoy, Carolyn M. Zelop	http://circ.ahajournals.org/site/C2010/ALS-SC-065.pdf
Part 8	ALS	ALS-SC-066A	In adult cardiac arrest due to anaphylaxis (P), does any modification of treatment (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Anaphylaxis and cardiac arrest	Eric Bruder	http://circ.ahajournals.org/site/C2010/ALS-SC-066A.pdf
Part 8	ALS	ALS-SC-066B	In adult cardiac arrest due to anaphylaxis (P), does any modification of treatment (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Anaphylaxis and cardiac arrest	John Litell	http://circ.ahajournals.org/site/C2010/ALS-SC-066B.pdf
Part 8	ALS	ALS-SC-067B	In adult cardiac arrest due to asthma (P), does any modification of treatment (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Asthma and cardiac arrest	Barry Brenner, Fred A. Severyn	http://circ.ahajournals.org/site/C2010/ALS-SC-067B.pdf
Part 8	ALS	ALS-SC-068B	In adult cardiac arrest during PCI (P), does use of any specific intervention (I) as opposed to standard care (acc to treatment algorithm) (C), improve outcome	Cardiac arrest during PCI	Pavan Battu	http://circ.ahajournals.org/site/C2010/ALS-SC-068B.pdf
Part 8	ALS	ALS-SC-068C	In adult cardiac arrest during PCI (P), does use of any specific intervention (I) as opposed to standard care (acc to treatment algorithm) (C), improve outcome.	Cardiac arrest during PCI	Jonathan Weinstock	http://circ.ahajournals.org/site/C2010/ALS-SC-068C.pdf
Part 8	ALS	ALS-SC-069A	In adult cardiac arrest following open (including heart and lung transplantations) and closed heart surgery (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Post op cardiothoracic surgery cardiac arrest	Joel Dunning	http://circ.ahajournals.org/site/C2010/ALS-SC-069A.pdf
Part 8	ALS	ALS-SC-069B	In adult cardiac arrest following open (including heart and lung transplantations) and closed heart surgery (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Post op cardiothoracic surgery cardiac arrest	David Zideman	http://circ.ahajournals.org/site/C2010/ALS-SC-069B.pdf
Part 8	ALS	ALS-SC-069C	In adult cardiac arrest following open (including heart and lung transplantations) and closed heart surgery (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Post op cardiothoracic surgery cardiac arrest	Peter T. Morley, Will Ross	http://circ.ahajournals.org/site/C2010/ALS-SC-069C.pdf
Part 8	ALS	ALS-SC-070B	In adult cardiac arrest (prehospital or in-hospital) due to a cardiac tamponade (P), does use of specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Cardiac tamponade	Henry R. Halperin	http://circ.ahajournals.org/site/C2010/ALS-SC-070B.pdf
Part 8	ALS	ALS-SC-071B	In adult cardiac arrest (prehospital or in-hospital) (P) due to pulmonary embolus (P), does use of etiology specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg, ROSC, survival)?	Pulmonary embolism cardiac arrest	C. Jessica Dine	http://circ.ahajournals.org/site/C2010/ALS-SC-071B.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-SC-072A	In adult cardiac arrest (prehospital or in-hospital) (P) due to non-cardiac etiology (eg. hemorrhagic shock, hypovolemic shock; septic shock; neurogenic shock) (P), does use of etiology specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Non-cardiac etiology cardiac arrest	Harinder Dhindsa, V. Ramana Feeser, Renee D. Reid	http://circ.ahajournals.org/site/C2010/ALS-SC-072A.pdf
Part 8	ALS	ALS-SC-073-01A	In adult cardiac arrest (prehospital or in-hospital) due to local anesthetic toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Local anesthesia toxicity	Eric J. Lavonas, John J. Picard, Richard D. Shih	http://circ.ahajournals.org/site/C2010/ALS-SC-073-01A.pdf
Part 8	ALS	ALS-SC-073-02A	In adult cardiac arrest (prehospital or in-hospital) due to Benzodiazepine toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Benzodiazepine toxicity	Mohammed Alhelail, Greene Shepherd	http://circ.ahajournals.org/site/C2010/ALS-SC-073-02A.pdf
Part 8	ALS	ALS-SC-073-03B	In adult cardiac arrest (prehospital or in-hospital) due to Beta blockers toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Beta blocker toxicity	Melissa Givens, Greene Shepherd	http://circ.ahajournals.org/site/C2010/ALS-SC-073-03B.pdf
Part 8	ALS	ALS-SC-073-04B	In adult cardiac arrest (prehospital or in-hospital) due to Calcium channel blockers toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Calcium channel blocker toxicity	Melissa Givens, Greene Shepherd	http://circ.ahajournals.org/site/C2010/ALS-SC-073-04B.pdf
Part 8	ALS	ALS-SC-073-05	In adult cardiac arrest (prehospital or in-hospital) due to Carbon monoxide toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Carbon monoxide toxicity	Eric J. Lavonas, David Lobel	http://circ.ahajournals.org/site/C2010/ALS-SC-073-05.pdf
Part 8	ALS	ALS-SC-073-06B	In adult cardiac arrest (prehospital or in-hospital) due to Cocaine toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Cocaine toxicity	Eric J. Lavonas	http://circ.ahajournals.org/site/C2010/ALS-SC-073-06B.pdf
Part 8	ALS	ALS-SC-073-07	In adult cardiac arrest (prehospital or in-hospital) due to Cyanide toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Cyanide toxicity	Eric J. Lavonas, David Lobel	http://circ.ahajournals.org/site/C2010/ALS-SC-073-07.pdf
Part 8	ALS	ALS-SC-073-08B	In adult cardiac arrest (prehospital or in-hospital) due to Cyclic antidepressants toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Tricyclic antidepressant toxicity	Allan R. Mottram	http://circ.ahajournals.org/site/C2010/ALS-SC-073-08B.pdf
Part 8	ALS	ALS-SC-073-09A	In adult cardiac arrest (prehospital or in-hospital) due to Digoxin/etc toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Digoxin toxicity	Richard D. Shih	http://circ.ahajournals.org/site/C2010/ALS-SC-073-09A.pdf
Part 8	ALS	ALS-SC-073-10	In adult cardiac arrest (prehospital or in-hospital) due to opioids toxicity (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Opioid toxicity	Mohammed Alhelail, Allan R. Mottram	http://circ.ahajournals.org/site/C2010/ALS-SC-073-10.pdf
Part 8	ALS	ALS-SC-074A	In morbidly obese adult patients with cardiac arrest (prehospital or in-hospital) (P), does use of any specific interventions (I) as opposed to standard care (according to treatment algorithm) (C), improve outcome (O) (eg. ROSC, survival)?	Morbid obesity	Pavan Battu	http://circ.ahajournals.org/site/C2010/ALS-SC-074A.pdf
Part 8	ALS	ALS-SC-076A	In adult cardiac arrest (out-of-hospital and in-hospital) (P), does the treatment of electrolyte disturbances (eg. hypo or hyperkalemia, hypo or hyper magnesemia, hypo and hyper calcemia) (I) as opposed to standard care (according to treatment algorithm, but without treatment of electrolyte disturbances) (C), improve outcome (O) (eg. ROSC, survival)?	Electrolyte disturbances	William J. Meurer	http://circ.ahajournals.org/site/C2010/ALS-SC-076A.pdf
Part 8	ALS	ALS-SC-076B	In adult cardiac arrest (out-of-hospital and in-hospital) (P), does the treatment of electrolyte disturbances (eg. hypo or hyper kalemia, hypo or hyper magnesemia, hypo and hyper calcemia) (I) as opposed to standard care (according to treatment algorithm, but without treatment of electrolyte disturbances) (C), improve outcome (O) (eg. ROSC, survival)?	Electrolyte disturbances	Deborah Diercks	http://circ.ahajournals.org/site/C2010/ALS-SC-076B.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 8	ALS	ALS-SC-078B	For avalanche victims in out of hospital cardiac arrest (P), what factors when present (I), compared with when absent (C), are associated with/predict an increased survival to hospital discharge (O)?	Avalanche victims	Jeff Boyd, Hermann Brugger	http://circ.ahajournals.org/site/C2010/ALS-SC-078B.pdf
Part 9	ACS	ACS-002	In patients with ACS (P) does the presence of any specific demographic factors (eg. age, sex, race, weight) (I), compared with their absence (C), increase accuracy of prediction of delayed treatment (O)?	Demographic factors	Patrick Meybohm, Aaron Wong	http://circ.ahajournals.org/site/C2010/ACS-002.pdf
Part 9	ACS	ACS-003B	In patients with suspected ACS (P), does dispatcher guided administration of aspirin by bystanders before arrival of EMS (I), compared with later administration of aspirin by paramedic or emergency department staff (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Timing of aspirin administration	Brian J. O'Neil	http://circ.ahajournals.org/site/C2010/ACS-003B.pdf
Part 9	ACS	ACS-004B	In patients with suspected ACS (P), does the presence of any specific factors (eg. history, examination, ECG, and / or biomarkers) or combination into a specific clinical decision rule (I), compared with standard care (C), increase accuracy of prediction of prognosis (eg. decision rule for early discharge) (O)?	Prognosis for discharge vs admission	William J. Brady, Dirk Mueller	http://circ.ahajournals.org/site/C2010/ACS-004B.pdf
Part 9	ACS	ACS-005A	In patients with suspected ACS (P), does the use of chest pain observation units (I), compared with not using them (C), increase accuracy of to safely identify patients who require admission or specific management of CAD (O)?	Chest pain observation units	Chris Ghaemmaghami, Darren L. Walters	http://circ.ahajournals.org/site/C2010/ACS-005A.pdf
Part 9	ACS	ACS-006-1A	In patients with suspected ACS (P), does the use of specific imaging techniques (eg. CT angio/MRI/nuclear testing/ECHO) (I), compared with not using them (C), increase accuracy of diagnosis (eg. of ACS) (O)?	Imaging techniques and diagnosis	Julian J. Owen, Karen Woolfrey	http://circ.ahajournals.org/site/C2010/ACS-006-1A.pdf
Part 9	ACS	ACS-006-1B	In patients with suspected ACS (P), does the use of specific imaging techniques (eg. CT angio/MRI/ nuclear testing/ECHO) (I), compared with not using them (C), increase accuracy of diagnosis (eg. of ACS) (O)?	Imaging techniques and diagnosis	Hiroshi Nonogi	http://circ.ahajournals.org/site/C2010/ACS-006-1B.pdf
Part 9	ACS	ACS-006-2A	In patients with suspected ACS (P), does the use of specific imaging techniques (eg. CT angio/MRI/ nuclear testing/ECHO) (I), compared with not using them (C), improve outcome (eg. size of infarct, LV function, survival) (O)?	Imaging techniques and outcome	Julian J. Owen, Karen Woolfrey	http://circ.ahajournals.org/site/C2010/ACS-006-2A.pdf
Part 9	ACS	ACS-006-2B	In patients with suspected ACS (P), does the use of specific imaging techniques (eg. CT angio/MRI/nuclear testing/ECHO) (I), compared with not using them (C), improve outcome (eg. size of infarct, LV function, survival) (O)?	Imaging techniques and outcome	Hiroshi Nonogi	http://circ.ahajournals.org/site/C2010/ACS-006-2B.pdf
Part 9	ACS	ACS-007B	In patients with suspected ACS in the prehospital, emergency department or in-hospital settings (P), can non-physicians (eg. paramedics and nurses) (I) accurately diagnose STEMI (O), when compared to physicians (C)?	Diagnosis of STEMI by non-physicians	Alan M. Craig	http://circ.ahajournals.org/site/C2010/ACS-007B.pdf
Part 9	ACS	ACS-008A	In patients with suspected ACS (P), does the use of computer-assisted ECG interpretation (I), compared with standard diagnostic techniques (emergency physicians) (C), increase accuracy of diagnosis (eg. of NSTEMI/STEMI) (O)?	Computer-assisted ECG interpretation	Judith Finn	http://circ.ahajournals.org/site/C2010/ACS-008A.pdf
Part 9	ACS	ACS-009A	In patients with suspected ACS (P), do any specific techniques (I), improve ACS/MI system or process of care compared with standard management (C), to improve time to treatment and clinical outcome (O)?	Improving systems of care for ACS	Teresa R. Camp-Rogers, Michael C. Kurz	http://circ.ahajournals.org/site/C2010/ACS-009A.pdf
Part 9	ACS	ACS-010A	In patients with ROSC after cardiac arrest (P), does the routine use of PCI (I), compared with standard management (without PCI) (C), improve outcomes (eg. TBD survival/re-arrest/etc) (O)?	PCI following ROSC	Terry Vanden Hoek	http://circ.ahajournals.org/site/C2010/ACS-010A.pdf
Part 9	ACS	ACS-010B	In patients with ROSC after cardiac arrest (P), does the routine use of PCI (I), compared with standard management (without PCI) (C), improve outcomes (eg. TBD survival/re-arrest/etc) (O)?	PCI following ROSC	Darren L. Walters	http://circ.ahajournals.org/site/C2010/ACS-010B.pdf
Part 9	ACS	ACS-011	In patients with suspected ACS in various settings (eg. prehospital, emergency or in-hospital) (P), do specific historical factors, physical examination findings and test results (I), compared with normal (C), increase the accuracy of diagnosis ACS and MI (O)?	Accuracy history and PE for diagnosing ACS and MI	Hans-Richard Arntz, Peter T. Morley, Darren L. Walters	http://circ.ahajournals.org/site/C2010/ACS-011.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 9	ACS	ACS-013B	In patients with suspected ACS in various settings (eg. prehospital, emergency or in-hospital) (P), do abnormal protein markers, compared with normal levels (C) allow the clinician to accurately diagnose acute coronary ischemia? (O)?	Protein makers of coronary ischemia	Steve Lin, Hiroyuki Yokoyama	http://circ.ahajournals.org/site/C2010/ACS-013B.pdf
Part 9	ACS	ACS-014	In patients with suspected ACS in various settings (eg. prehospital or emergency) (P), does the use of prehospital or emergency 12 lead ECG (I), compared with other diagnostic techniques (C), increase sensitivity and specificity of diagnosis of ACS/MI (O)?	12 lead ECG	Marc J. Claeys, Dirk Mueller	http://circ.ahajournals.org/site/C2010/ACS-014.pdf
Part 9	ACS	ACS-015	In patients with suspected ACS in various settings (eg. prehospital, emergency or in-hospital) and normal oxygen saturations (P), does the use of supplemental oxygen (I), compared with room air (C), improve outcomes (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Supplemental oxygen	Kimberly A. Skelding, Nico R. Van de Veire	http://circ.ahajournals.org/site/C2010/ACS-015.pdf
Part 9	ACS	ACS-017-1	In patients with suspected ST-elevation myocardial infarction in the prehospital and emergency department setting (P) treated with fibrinolysis, does the use of new anticoagulants i.e. pentasaccharide, enoxaparin, bivalirudin (I), compared with standard management (unfractionated heparin) (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Anticoagulants and STEMI	Hans-Richard Arntz, Michelle Welsford	http://circ.ahajournals.org/site/C2010/ACS-017-1.pdf
Part 9	ACS	ACS-017-2	In patients with suspected ST-elevation myocardial infarction in the prehospital and emergency department setting (P) to be treated with primary PCI, does the use of new anticoagulants i.e. pentasaccharide, enoxaparin, bivalirudin (I), compared with standard management (unfractionated heparin) (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Anticoagulants plus PCI	Hans-Richard Arntz, Michelle Welsford	http://circ.ahajournals.org/site/C2010/ACS-017-2.pdf
Part 9	ACS	ACS-017-3	In patients with suspected non ST-elevation ACS in prehospital and emergency department settings (P), does the use of new anticoagulants i.e. pentasaccharide, enoxaparin, bivalirudin (I), compared with standard management (unfractionated heparin or other anticoagulant) (C), improve outcome (eg. mortality, reinfarction, bleeding) (O)?	Anticoagulants and non ST-elevation ACS	Hans-Richard Arntz, Michelle Welsford	http://circ.ahajournals.org/site/C2010/ACS-017-3.pdf
Part 9	ACS	ACS-018B	In patients with STEMI in the prehospital setting (P), does the use of prehospital fibrinolytics (I), compared with inhospital fibrinolytics (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Prehospital fibrinolytics for STEMI	Dirk Mueller, Valeria Rac	http://circ.ahajournals.org/site/C2010/ACS-018B.pdf
Part 9	ACS	ACS-019A	In patients with non-ST elevation ACS/ STEMI and fibrinolysis/ suspected STEMI and PCI in prehospital and emergency department settings (P), does the use of clopidogrel (I) compared with standard management (ie. no prehospital or ED use of clopidogrel) (C) or new thienopyridines prasugrel (I) compared to clopidogrel (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Clopidogrel (and similar drugs) and non-ST elevation ACS	Michelle Welsford	http://circ.ahajournals.org/site/C2010/ACS-019A.pdf
Part 9	ACS	ACS-019B	In patients with non-ST elevation ACS/ STEMI and fibrinolysis/ suspected STEMI and PCI in prehospital and emergency department settings (P), does the use of clopidogrel (I) compared with standard management (ie. no prehospital or ED use of clopidogrel) (C) or new thienopyridines, prasugrel (I) compared to clopidogrel (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Clopidogrel (and similar drugs) and non-ST elevation ACS	Ian Jacobs, Christian Spaulding	http://circ.ahajournals.org/site/C2010/ACS-019B.pdf
Part 9	ACS	ACS-020	In patients with suspected ACS/MI in prehospital and emergency department settings (P), does the use of IIB IIIA Inhibitors (I), compared with standard management (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	IIB IIIA inhibitors	Hans-Richard Arntz, Venu Menon	http://circ.ahajournals.org/site/C2010/ACS-020.pdf
Part 9	ACS	ACS-021A	In patients with suspected ACS/MI in prehospital and emergency department settings (P), does the use of Prophylactic Antiarrhythmics (I), compared with standard management (ie. no Prophylactic Antiarrhythmics) (C), improve outcome (eg. arrhythmias, survival to discharge, 30/60 days mortality) (O)?	Prophylactic Antiarrhythmics	Joseph P. Ornato, Peter T. Morley	http://circ.ahajournals.org/site/C2010/ACS-021A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 9	ACS	ACS-021B	In patients with suspected ACS/MI in prehospital and emergency department settings (P), does the use of Prophylactic Antiarrhythmics (I), compared with standard management (ie. no Prophylactic Antiarrhythmics) (C), improve outcome (eg. arrhythmias, survival to discharge, 30/60 days mortality) (O)?	Prophylactic Antiarrhythmics	Russell Denman	http://circ.ahajournals.org/site/C2010/ACS-021B.pdf
Part 9	ACS	ACS-022A	In patients with suspected ACS/MI in prehospital and emergency department settings (P), does the use of ACE inhibitors (I), compared with standard management (ie. no prehospital and emergency department use of ACE inhibitors) (C), improve outcome (eg. infarct size, survival to discharge, 30/60 days mortality) (O)?	ACE inhibitors	Deborah Diercks	http://circ.ahajournals.org/site/C2010/ACS-022A.pdf
Part 9	ACS	ACS-023A	In patients with suspected ACS/MI in prehospital and emergency department settings (P), does the use of beta-blockers (I), compared with standard management (ie. no prehospital and emergency department use of beta-blockers) (C), improve outcome (eg. arrhythmias, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Beta-blockers	Gilson Feitosa Filho, Dawn Yin Lim	http://circ.ahajournals.org/site/C2010/ACS-023A.pdf
Part 9	ACS	ACS-024B	In patients with suspected ACS/MI in prehospital and emergency department settings (P), does the use of statins (I), compared with standard management (ie. no prehospital and emergency department use of statins) (C), improve outcome (eg. infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Statins	Hans-Richard Arntz, Gilson Feitosa Filho	http://circ.ahajournals.org/site/C2010/ACS-024B.pdf
Part 9	ACS	ACS-025B	In patients with suspected STEMI in the emergency department setting (P), does the use of PTCA (I), compared with fibrinolytic therapy (C), improve outcome (eg. arrhythmias, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	PTCA vs fibrinolytic therapy for STEMI	Marc J. Claeys, Michael C. Kurz	http://circ.ahajournals.org/site/C2010/ACS-025B.pdf
Part 9	ACS	ACS-026B	In patients with suspected ACS/MI in prehospital setting (P), does the use of prehospital ECG and advance ED notification (I), compared with no prehospital ECG (C), improve outcome (eg. arrhythmias, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Prehospital ECGs	Steven C. Brooks, Michael C. Kurz	http://circ.ahajournals.org/site/C2010/ACS-026B.pdf
Part 9	ACS	ACS-027A	In patients with suspected STEMI in the prehospital setting (P), does the use of direct transport to a centre for PTCA (I), compared with transportation to the closest hospital with any other reperfusion strategy (prehospital fibrinolysis, in-hospital fibrinolysis, interhospital transfer for PTCA) (C) improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 mortality) (O)?	PTCA centers closest hospital	Steven C. Brooks	http://circ.ahajournals.org/site/C2010/ACS-027A.pdf
Part 9	ACS	ACS-027B	In patients with suspected STEMI in the prehospital setting (P), does the use of direct transport to a centre for PTCA (I), compared with transportation to the closest hospital with any other reperfusion strategy (prehospital fibrinolysis, in-hospital fibrinolysis, interhospital transfer for PTCA) (C) improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 mortality) (O)?	PTCA centers closest hospital	Darren L. Walters	http://circ.ahajournals.org/site/C2010/ACS-027B.pdf
Part 9	ACS	ACS-028A	In patients with suspected STEMI in the ED and prehospital settings (P), does the use of fibrinolytics and immediate PTCA (I), compared with immediate PTCA (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Fibrinolytics and immediate PTCA vs immediate PTCA	Hans-Richard Arntz	http://circ.ahajournals.org/site/C2010/ACS-028A.pdf
Part 9	ACS	ACS-028B	In patients with suspected STEMI in the ED and prehospital settings (P), does the use of fibrinolytics and immediate PTCA (I), compared with immediate PTCA (C), improve outcome (eg. chest pain resolution, infarct size, ECG resolution, survival to discharge, 30/60 days mortality) (O)?	Fibrinolytics and immediate PTCA vs immediate PTCA	Hiroimi Seo	http://circ.ahajournals.org/site/C2010/ACS-028B.pdf
Part 9	ACS	ACS-030A-1	In patients with suspected ACS/STEMI in the ED and prehospital settings (P), does the use of nitroglycerin (I), compared with no nitroglycerin (C), improve diagnosis of ACS/MI (O)? (diagnosis)	ACS and nitroglycerin (diagnosis)	Deborah Diercks	http://circ.ahajournals.org/site/C2010/ACS-030A-1.pdf
Part 9	ACS	ACS-030A-2	In patients with suspected ACS/STEMI in the ED and prehospital settings (P), does the use of nitroglycerin (I), compared with no nitroglycerin (C), improve diagnosis of ACS/MI (O)? (treatment)	ACS and nitroglycerin (treatment)	Deborah Diercks	http://circ.ahajournals.org/site/C2010/ACS-030A-2.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 10	Peds	Peds-001A	In infants (<1 year, not including newly born) in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of AEDs (I) compared with standard management (which does not include use of AEDs) (C), improve outcomes (eg, termination of rhythm, ROSC, survival) (O)?	AEDs in children less than 1 year	Reylon A. Meeks	http://circ.ahajournals.org/site/C2010/Peds-001A.pdf
Part 10	Peds	Peds-001B	In infants (<1 year, not including newly born) in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of AEDs (I) compared with standard management (which does not include use of AEDs) (C), improve outcomes (eg, termination of rhythm, ROSC, survival) (O)?	AEDs in children less than 1 year	Antonio Rodriguez-Nunez	http://circ.ahajournals.org/site/C2010/Peds-001B.pdf
Part 10	Peds	Peds-002A	For infants and children in cardiac arrest, does the use of a pulse check (I) vs assessment for signs of life (C) improve the accuracy of diagnosis of pediatric CPA (O)?	Pulse check accuracy	Aaron Donoghue, James Tibballs	http://circ.ahajournals.org/site/C2010/Peds-002A.pdf
Part 10	Peds	Peds-003	During cardiac arrest in infants or children (P), does the presence of family members during the resuscitation (I) compared to their absence (C) improve patient or family outcome measures (O)?	Family presence	Douglas S. Diekema	http://circ.ahajournals.org/site/C2010/Peds-003.pdf
Part 10	Peds	Peds-004	In infants and children with respiratory failure who undergo endotracheal intubation (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of devices (eg, CO2 detection device, CO2 analyzer or esophageal detector device) (I) compared with usual management (C), improve the accuracy of diagnosis of airway placement (O)?	Verification of airway placement	Diana G. Fendya, Monica Kleinman	http://circ.ahajournals.org/site/C2010/Peds-004.pdf
Part 10	Peds	Peds-005A	In pediatric patients with cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) (P), does the use of end-tidal CO2 (I), compared with clinical assessment (C), improve accuracy of diagnosis of a perfusing rhythm (O)?	End-tidal CO2 to diagnose perfusing rhythm	Arno Zaritsky	http://circ.ahajournals.org/site/C2010/Peds-005A.pdf
Part 10	Peds	Peds-005B	In pediatric patients with cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) (P), does the use of end-tidal CO2 (I), compared with clinical assessment (C), improve accuracy of diagnosis of a perfusing rhythm (O)?	End-tidal CO2 to diagnose perfusing rhythm	Anne-Marie Guerguerian	http://circ.ahajournals.org/site/C2010/Peds-005B.pdf
Part 10	Peds	Peds-006B	In pediatric patients in clinical cardiac arrest (prehospital [OHCA] or in hospital [IHCA]) (P), does the use of a focused echocardiogram (I) compared with standard assessment, assist in the diagnosis of reversible causes of cardiac arrest?	Methods to diagnose perfusing rhythm	Christoph B. Eich, Faiqa A. Qureshi	http://circ.ahajournals.org/site/C2010/Peds-006B.pdf
Part 10	Peds	Peds-007	In children requiring emergent intubation (prehospital, in-hospital) (P), does the use of cuffed ETTs (I) compared with uncuffed ETTs (C) improve therapeutic endpoints (eg, oxygenation and ventilation) or reduce morbidity or risk of complications (eg, need for tube change, airway injury, aspiration) (O)?	Cuffed vs uncuffed ETTs	Ashraf Coovadia	http://circ.ahajournals.org/site/C2010/Peds-007.pdf
Part 10	Peds	Peds-008	In children requiring assisted ventilation (prehospital, in-hospital) (P), does the use of bag-valve-mask (I) compared with endotracheal intubation (C) improve therapeutic endpoints (oxygenation and ventilation), reduce morbidity or risk of complications (eg, aspiration), or improve survival (O)?	BVM vs intubation	Dominique Biarent	http://circ.ahajournals.org/site/C2010/Peds-008.pdf
Part 10	Peds	Peds-009	In pediatric patients in cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) (P), does the use of supraglottic airway devices (I) compared with bag-valve-mask alone (C), improve therapeutic endpoints (eg, ventilation and oxygenation), improve quality of resuscitation (eg, reduce hands-off time, allow for continuous compressions), reduce morbidity or risk of complications (eg, aspiration) or improve survival (O)?	Supraglottic airway devices	Robert Bingham	http://circ.ahajournals.org/site/C2010/Peds-009.pdf
Part 10	Peds	Peds-010A	For infants and children who have ROSC after cardiac arrest (P), does the use of induced hypothermia (I) compared with normothermia (C) improve outcome (survival to discharge, survival with good neurologic outcome) (O)?	Induced hypothermia during CPR	Robert Hickey	http://circ.ahajournals.org/site/C2010/Peds-010A.pdf
Part 10	Peds	Peds-010B	For infants and children who have ROSC after cardiac arrest (P), does the use of induced hypothermia (I) compared with normothermia (C) improve outcome (survival to discharge, survival with good neurologic outcome) (O)?	Induced hypothermia during CPR	James S. Hutchison	http://circ.ahajournals.org/site/C2010/Peds-010B.pdf
Part 10	Peds	Peds-011B	In infants and children with cardiac arrest from a non-asphyxial or asphyxial cause (excluding newborns) (prehospital [OHCA] or in-hospital [IHCA]) (P), does the use of another specific C:V ratio by laypersons and HCPs (I) compared with standard care (15:2) (C), improve outcome (eg, ROSC, survival) (O)?	Compression ventilation ratio	Robert Bingham, Robert Hickey	http://circ.ahajournals.org/site/C2010/Peds-011B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 10	Peds	Peds-012A	In infants and children (not including newborns) with cardiac arrest (out-of-hospital and in-hospital) (P), does the use of compression-only CPR (I) as opposed to standard CPR (ventilations and compressions) (C), improve outcome (O) (eg, ROSC, survival)?	Compression only CPR	Robert A. Berg, Dominique Biarent	http://circ.ahajournals.org/site/C2010/Peds-012A.pdf
Part 10	Peds	Peds-013A	In pediatric patients with cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) and a secure airway (P), does the use of a specific minute ventilation (combination of respiratory rate and tidal volume) depending on the etiology of the arrest (I) as opposed to standard care (8–10 asynchronous breaths per minute) (C), improve outcome (O) (eg, ROSC, survival)?	Etiology specific minute ventilation	Monica Kleinman	http://circ.ahajournals.org/site/C2010/Peds-013A.pdf
Part 10	Peds	Peds-014	In pediatric patients in cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) (P) does the use of rapid deployment ECMO or emergency cardiopulmonary bypass (I), compared with standard treatment (C), improve outcome (ROSC, survival to hospital discharge, survival with favorable neurologic outcomes) (O)?	ECMO	Marilyn Morris	http://circ.ahajournals.org/site/C2010/Peds-014.pdf
Part 10	Peds	Peds-014B	In pediatric patients in cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) (P) does the use of rapid deployment ECMO or emergency cardiopulmonary bypass (I), compared with standard treatment (C), improve outcome (ROSC, survival to hospital discharge, survival with favorable neurologic outcomes) (O)?	ECMO	Kate L. Brown	http://circ.ahajournals.org/site/C2010/Peds-014B.pdf
Part 10	Peds	Peds-015	In pediatric patients in cardiac arrest, associated with or without asphyxia (prehospital [OHCA] or in-hospital [IHCA]) (P) does ventilation with a specific oxygen concentration (room air or a titrated concentration between 0.21 and 1.0) (I), compared with standard treatment (100% oxygen) (C), improve outcome (ROSC, survival to hospital discharge, survival with favorable neurologic outcome) (O)?	Titrated oxygen vs 100% oxygen	Robert Hickey	http://circ.ahajournals.org/site/C2010/Peds-015.pdf
Part 10	Peds	Peds-016	In infants and children with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of a specific strategy to manage blood glucose (eg, target range) (I) as opposed to standard care (C), improve outcome (O) (eg, survival)?	Glucose control following resuscitation	Duncan Macrae, Vijay Srinivasan	http://circ.ahajournals.org/site/C2010/Peds-016.pdf
Part 10	Peds	Peds-017B	In pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of any specific alternative method for calculating drug dosages (I) compared with standard weight-based dosing (C), improve outcome (eg, achieving expected drug effect, ROSC, survival, avoidance of toxicity) (O)?	Methods for calculating drug dosages	Ian Maconochie, Vijay Srinivasan	http://circ.ahajournals.org/site/C2010/Peds-017B.pdf
Part 10	Peds	Peds-018	In adult and pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of any specific alternative dosing regimen for epinephrine (I) compared with standard recommendations (C), improve outcome (eg, ROSC, survival to hospital discharge, survival with favorable neurologic outcome) (O)?	Epinephrine dose	Amelia Reis	http://circ.ahajournals.org/site/C2010/Peds-018.pdf
Part 10	Peds	Peds-019	In pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) due to VF/pulseless VT (P), does the use of amiodarone (I) compared with lidocaine (C), improve outcome (eg, ROSC, survival to hospital discharge, survival with favorable neurologic outcome) (O)?	Amiodarone vs lidocaine for VF/VT	Dianne L. Atkins	http://circ.ahajournals.org/site/C2010/Peds-019.pdf
Part 10	Peds	Peds-020A	In adult and pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of vasopressin or vasopressin+epinephrine (I) compared with standard treatment recommendations (C), improve outcome (eg, ROSC, survival to hospital discharge, or survival with favorable neurologic outcome) (O)?	Vasopressin	Elise W. van der Jagt	http://circ.ahajournals.org/site/C2010/Peds-020A.pdf
Part 10	Peds	Peds-020B	In adult and pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of vasopressin or vasopressin+epinephrine (I) compared with standard treatment recommendations (C), improve outcome (eg, ROSC, survival to hospital discharge, or survival with favorable neurologic outcome) (O)?	Vasopressin	Dominique Biarent	http://circ.ahajournals.org/site/C2010/Peds-020B.pdf
Part 10	Peds	Peds-021A	In pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of calcium (I) compared with no calcium (C), improve outcome (O) (eg, ROSC, survival to hospital discharge, survival with favorable neurologic outcome)?	Calcium	Allan de Caen	http://circ.ahajournals.org/site/C2010/Peds-021A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 10	Peds	Peds-021B	In pediatric patients with cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of calcium (I) compared with no calcium (C), improve outcome (O) (eg, ROSC, survival to hospital discharge, survival with favorable neurologic outcome)?	Calcium	Felipe Martinez, Sergio Pesutic, Sergio Rendich	http://circ.ahajournals.org/site/C2010/Peds-021B.pdf
Part 10	Peds	Peds-022A	In pediatric patients with cardiac arrest due to primary or secondary VF or pulseless VT (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of more than one shock for the initial or subsequent defibrillation attempt(s) (I), compared with standard management (C), improve outcome (eg, termination of rhythm, ROSC, survival to hospital discharge, survival with favorable neurologic outcome) (O)?	Single or stacked shocks	Marc Berg	http://circ.ahajournals.org/site/C2010/Peds-022A.pdf
Part 10	Peds	Peds-023A	In pediatric patients with cardiac arrest due to primary or secondary VF or pulseless VT (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of a specific energy dose or regimen of energy doses for the initial or subsequent defibrillation attempt(s) (I), compared with standard management (C), improve outcome (eg, termination of rhythm, ROSC, survival to hospital discharge, survival with favorable neurologic outcome) (O)?	Energy doses	Jonathan R. Egan	http://circ.ahajournals.org/site/C2010/Peds-023A.pdf
Part 10	Peds	Peds-023B	In pediatric patients with cardiac arrest due to primary or secondary VF or pulseless VT (pre-hospital [OHCA] or in-hospital [IHCA]) (P), does the use of a specific energy dose or regimen of energy doses for the initial or subsequent defibrillation attempt(s) (I), compared with standard management (C), improve outcome (eg, termination of rhythm, ROSC, survival to hospital discharge, survival with favorable neurologic outcome) (O)?	Energy doses	Dianne L. Atkins	http://circ.ahajournals.org/site/C2010/Peds-023B.pdf
Part 10	Peds	Peds-024A	In pediatric patients with ROSC after cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) who have signs of cardiovascular dysfunction (P), does the use of any specific cardioactive drugs (I) as opposed to standard care (or different cardioactive drugs) (C), improve physiological endpoints (oxygen delivery, hemodynamics) or patient outcome (eg, survival to discharge or survival with favorable neurologic outcome) (O)?	Cardioactive drugs post resuscitation	Allan de Caen	http://circ.ahajournals.org/site/C2010/Peds-024A.pdf
Part 10	Peds	Peds-024B	In pediatric patients with ROSC after cardiac arrest (pre-hospital [OHCA] or in-hospital [IHCA]) who have signs of cardiovascular dysfunction (P), does the use of any specific cardioactive drugs (I) as opposed to standard care (or different cardioactive drugs) (C), improve physiological endpoints (oxygen delivery, hemodynamics) or patient outcome (eg, survival to discharge or survival with favorable neurologic outcome) (O)?	Cardioactive drugs post resuscitation	Mark G. Coulthard	http://circ.ahajournals.org/site/C2010/Peds-024B.pdf
Part 10	Peds	Peds-025A	In pediatric patients with in-hospital cardiac or respiratory arrest (P), does use of EWSS/response teams/MET systems (I) compared with no such responses (C), improve outcome (eg, reduce rate of cardiac and respiratory arrests and in-hospital mortality) (O)?	METs	Elise W. van der Jagt	http://circ.ahajournals.org/site/C2010/Peds-025A.pdf
Part 10	Peds	Peds-025B	In pediatric patients with in-hospital cardiac or respiratory arrest (P), does use of EWSS/response teams/MET systems (I) compared with no such responses (C), improve outcome (eg, reduce rate of cardiac and respiratory arrests and in-hospital mortality) (O)?	METs	James Tibballs	http://circ.ahajournals.org/site/C2010/Peds-025B.pdf
Part 10	Peds	Peds-026A	For intubated newborns within the first month of life (beyond the delivery room) who are receiving chest compressions (P), does the use of continuous chest compressions (without pause for ventilation) (I) vs chest compressions with interruptions for ventilation (C) improve outcome (time to sustained heart rate >100, survival to ICU admission, survival to discharge, survival with favorable neurologic status) (O)?	CC only CPR for intubated neonates outside of DR	Monica Kleinman	http://circ.ahajournals.org/site/C2010/Peds-026A.pdf
Part 10	Peds	Peds-027A	For newborns within the first month of life (beyond the delivery room) who are not intubated and who are receiving CPR (P), does the use of a 3:1 compression to ventilation ratio (I), compared with a 15:2 compression to ventilation ratio (C) improve outcome (time to sustained heart rate >100, survival to ICU admission, survival to discharge, discharge with favorable neurologic status) (O)?	3:1 vs 15:2 ratio for neonates outside of DR	Leon Chameides	http://circ.ahajournals.org/site/C2010/Peds-027A.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 10	Peds	Peds-028	In pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (including prolonged arrest states) (P), does the use of NaHCO ₃ (I) compared with no NaHCO ₃ (C), improve outcome (O) (eg. ROSC, survival)?	Sodium bicarbonate	Stephen M. Schexnayder	http://circ.ahajournals.org/site/C2010/Peds-028.pdf
Part 10	Peds	Peds-029	In infants and children in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of any specific paddle/pad size/orientation and position (I) compared with standard resuscitation or other specific paddle/pad size/orientation and position (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O)?	Paddle size and placement for defibrillation	Dianne L. Atkins	http://circ.ahajournals.org/site/C2010/Peds-029.pdf
Part 10	Peds	Peds-030	In infants and children with unstable ventricular tachycardia (pre-hospital and in-hospital) (P), does the use of any drug/ combination of drugs/ intervention (eg. cardioversion) (I) compared with no drugs/ intervention (C) improve outcome (eg, termination of rhythm, survival) (O)?	Drugs for unstable tachycardia	Jeffrey M. Berman, Bradford D. Harris	http://circ.ahajournals.org/site/C2010/Peds-030.pdf
Part 10	Peds	Peds-031	In infants and children with supraventricular tachycardia with a pulse (P), does the use of any drug or combination of drugs (I), compared with adenosine (C), result in improved outcomes (termination of rhythm, survival)?	Drugs for SVT	Ricardo A. Samson	http://circ.ahajournals.org/site/C2010/Peds-031.pdf
Part 10	Peds	Peds-032	In infants and children with hemorrhagic shock following trauma (P), does the use of graded volume resuscitation (I) as opposed to standard care (C), improve outcome (hemodynamics, survival) (O)?	Graded volume resuscitation for traumatic shock	Jesús Lopez-Herce	http://circ.ahajournals.org/site/C2010/Peds-032.pdf
Part 10	Peds	Peds-033	In pediatric patients in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of one hand chest compressions (I) compared with two hand chest compressions (C) improve outcomes (eg. ROSC, rescuer performance) (O)?	One hand vs two hand compressions	Sharon B. Kinney	http://circ.ahajournals.org/site/C2010/Peds-033.pdf
Part 10	Peds	Peds-034	In infants with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of two-thumb chest compression without circumferential squeeze (I) compared to two-thumb chest compression with circumferential squeeze (C) improve outcome (eg. ROSC, rescuer performance) (O)?	Two thumb vs two finger	James Tibballs	http://circ.ahajournals.org/site/C2010/Peds-034.pdf
Part 10	Peds	Peds-035	In infants and children with cardiac arrest (P), does establishing intraosseous access (I) compared to establishing conventional (non-intraosseous) venous access (C) improve patient outcome (eg. ROSC, survival to hospital discharge) (O)?	IO vs IV	Jonathan Duff	http://circ.ahajournals.org/site/C2010/Peds-035.pdf
Part 10	Peds	Peds-036	In infants and children with cardiac arrest (P), does the use of tracheal drug delivery (I) compared to intravenous drug delivery (C) worsen patient outcome (eg. ROSC, survival to hospital discharge) (O)?	ET vs IV drugs	Mioara D. Manole	http://circ.ahajournals.org/site/C2010/Peds-036.pdf
Part 10	Peds	Peds-038B	In infants and children in shock, does early intubation and assisted ventilation compared to the use of these interventions only for associated respiratory failure lead to improved patient outcome (hemodynamics, survival)?	Intubation for shock (timing)	Amelia Reis	http://circ.ahajournals.org/site/C2010/Peds-038B.pdf
Part 10	Peds	Peds-039A	In infants and children with respiratory failure who require emergent endotracheal intubation (P), does the use of cricoid pressure or laryngeal manipulation (I), when compared with standard practice (C), improve or worsen outcome (eg. success of intubation, aspiration risk, side effects, etc) (O)?	Cricoid pressure and laryngeal manipulation	Lester T. Proctor	http://circ.ahajournals.org/site/C2010/Peds-039A.pdf
Part 10	Peds	Peds-039B	In infants and children with respiratory failure who require emergent endotracheal intubation (P), does the use of cricoid pressure or laryngeal manipulation (I), when compared with standard practice (C), improve or worsen outcome (eg. success of intubation, aspiration risk, side effects, etc) (O)?	Cricoid pressure and laryngeal manipulation	Ian Maconochie	http://circ.ahajournals.org/site/C2010/Peds-039B.pdf
Part 10	Peds	Peds-040A	In infants and children in cardiac arrest (out-of-hospital and in-hospital) (P), does any specific compression depth (I) as opposed to standard care (ie. depth specified in treatment algorithm) (C), improve outcome (O) (eg. Blood pressure, ROSC, survival)? Note: BLS is doing their own worksheet.	Compression depth	Robert M. Sutton	http://circ.ahajournals.org/site/C2010/Peds-040A.pdf
Part 10	Peds	Peds-040B	In infants and children in cardiac arrest (out-of-hospital and in-hospital) (P), does any specific compression depth (I) as opposed to standard care (ie. depth specified in treatment algorithm) (C), improve outcome (O) (eg. Blood pressure, ROSC, survival)? Note: BLS is doing their own worksheet.	Compression depth	David Zideman	http://circ.ahajournals.org/site/C2010/Peds-040B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 10	Peds	Peds-041A	In children and infants with cardiac arrest due to major (blunt or penetrating) injury (out-of-hospital and in-hospital) (P), does the use of any specific modifications to standard resuscitation (I) compared with standard resuscitation (C), improve outcome (O) (eg. ROSC, survival)? eg. open vs closed chest CPR, other examples.	Traumatic arrest	Kenneth Sartorelli	http://circ.ahajournals.org/site/C2010/Peds-041A.pdf
Part 10	Peds	Peds-041B	In children and infants with cardiac arrest due to major (blunt or penetrating) injury (out-of-hospital and in-hospital) (P), does the use of any specific modifications to standard resuscitation (I) compared with standard resuscitation (C), improve outcome (O) (eg. ROSC, survival)? eg. open vs closed chest CPR, other examples.	Traumatic arrest	Jesús Lopez-Herce	http://circ.ahajournals.org/site/C2010/Peds-041B.pdf
Part 10	Peds	Peds-043A	In infants and children in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of self-adhesive defibrillation pads (I) compared with paddles (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O)?	Hands off defibrillation vs paddles	Mark Terry	http://circ.ahajournals.org/site/C2010/Peds-043A.pdf
Part 10	Peds	Peds-043B	In infants and children in cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does the use of self-adhesive defibrillation pads (I) compared with paddles (C), improve outcomes (eg. successful defibrillation, ROSC, survival) (O)?	Hands off defibrillation vs paddles	Farhan Bhanji	http://circ.ahajournals.org/site/C2010/Peds-043B.pdf
Part 10	Peds	Peds-044A	In infants and children with any type of shock (P), does the use of any specific resuscitation fluid or combination of fluids [eg: isotonic crystalloid, colloid, hypertonic saline, blood products] (I) when compared with standard care (C) improve patient outcome (hemodynamics, survival) (O)?	Resuscitation fluids	Sharon E. Mace	http://circ.ahajournals.org/site/C2010/Peds-044A.pdf
Part 10	Peds	Peds-044B	In infants and children with any type of shock (P), does the use of any specific resuscitation fluid or combination of fluids [eg: isotonic crystalloid, colloid, hypertonic saline, blood products] (I) when compared with standard care (C) improve patient outcome (hemodynamics, survival) (O)?	Resuscitation fluids	Richard P. Aickin	http://circ.ahajournals.org/site/C2010/Peds-044B.pdf
Part 10	Peds	Peds-045A	In infants and children with distributive shock with and without myocardial dysfunction (P), does the use of any specific inotropic agent (I) when compared to standard care (C), improve patient outcome (hemodynamics, survival) (O)?	Distributive shock and inotropes	Erica L. Fink, Alfredo Misraji	http://circ.ahajournals.org/site/C2010/Peds-045A.pdf
Part 10	Peds	Peds-045B	In infants and children with distributive shock with and without myocardial dysfunction (P), does the use of any specific inotropic agent (I) when compared to standard care (C), improve patient outcome (hemodynamics, survival) (O)?	Distributive shock and inotropes	Loh Tsee Foong	http://circ.ahajournals.org/site/C2010/Peds-045B.pdf
Part 10	Peds	Peds-046A	In infants and children with cardiogenic shock (P), does the use of any specific inotropic agent (I) when compared with standard care (C), improve patient outcome (hemodynamics, survival) (O)?	Cardiogenic shock and inotropes	Akira Nishisaki	http://circ.ahajournals.org/site/C2010/Peds-046A.pdf
Part 10	Peds	Peds-047A	In infants and children with hypotensive septic shock (P), does the use of etomidate as an induction agent to facilitate intubation (I) compared with a standard technique without etomidate (C) improve patient outcome (hemodynamics, survival) (O)?	Etomidate and septic shock	Stephen M. Schexnayder	http://circ.ahajournals.org/site/C2010/Peds-047A.pdf
Part 10	Peds	Peds-047B	In infants and children with hypotensive septic shock (P), does the use of etomidate as an induction agent to facilitate intubation (I) compared with a standard technique without etomidate (C) improve patient outcome (hemodynamics, survival) (O)?	Etomidate and septic shock	Jonathan Duff	http://circ.ahajournals.org/site/C2010/Peds-047B.pdf
Part 10	Peds	Peds-048A	In infants and children who are undergoing resuscitation from cardiac arrest (P), does consideration of a channelopathy as the etiology of the arrest (I), as compared with standard management (C), improve outcome (ROSC, survival to discharge, survival with favorable neurologic outcome) (O)?	Channelopathies	Robert Hickey	http://circ.ahajournals.org/site/C2010/Peds-048A.pdf
Part 10	Peds	Peds-048B	In infants and children who are undergoing resuscitation from cardiac arrest (P), does consideration of a channelopathy as the etiology of the arrest (I), as compared with standard management (C), improve outcome (ROSC, survival to discharge, survival with favorable neurologic outcome) (O)?	Channelopathies	William Scott	http://circ.ahajournals.org/site/C2010/Peds-048B.pdf
Part 10	Peds	Peds-049A	In infants and children with hypotensive septic shock (P), does the use of corticosteroids in addition to standard care (I) when compared with standard care without the use of corticosteroids (C), improve patient outcome (eg. Hemodynamics or survival) (O)?	Corticosteroids and septic shock	Arno Zaritsky	http://circ.ahajournals.org/site/C2010/Peds-049A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 10	Peds	Peds-049B	In infants and children with hypotensive septic shock (P), does the use of corticosteroids in addition to standard care (I) when compare with standard care without the use of corticosteroids (C), improve patient outcome (eg. Hemodynamics or survival) (O)?	Corticosteroids and septic shock	Mark G. Coulthard	http://circ.ahajournals.org/site/C2010/Peds-049B.pdf
Part 10	Peds	Peds-050A	In infants and children with acute illness or injury (P), do specific diagnostic tests (laboratory data [mixed venous oxygen saturation, pH, lactate], (I) as opposed to clinical data (vital signs, capillary refill, mental status, end-organ function [urine output]) (C), increase the accuracy of diagnosis of shock (O)?	Diagnostic tests for shock	Alexis Topjian	http://circ.ahajournals.org/site/C2010/Peds-050A.pdf
Part 10	Peds	Peds-050B	In infants and children with acute illness or injury (P), do specific diagnostic tests (laboratory data [mixed venous oxygen saturation, pH, lactate], (I) as opposed to clinical data (vital signs, capillary refill, mental status, end-organ function [urine output]) (C), increase the accuracy of diagnosis of shock (O)?	Diagnostic tests for shock	Sharon B. Kinney	http://circ.ahajournals.org/site/C2010/Peds-050B.pdf
Part 10	Peds	Peds-052A	In infants and children with cardiac arrest (out-of-hospital and in-hospital) or symptomatic bradycardia (P), does the use of atropine (I) compared with standard care without atropine, improve outcome (O) (eg. ROSC, survival)?	Atropine vs epinephrine for bradycardia	Susan Fuchs, Sasa Kurosawa, Masahiko Nitta	http://circ.ahajournals.org/site/C2010/Peds-052A.pdf
Part 10	Peds	Peds-055B	For infants and children with Fontan or hemi-Fontan circulation who require resuscitation from cardiac arrest or pre-arrest states (prehospital [OHCA] or in-hospital [IHCA]) (P), does any specific modification to standard practice (I) compared with standard resuscitation practice (C) improve outcome (eg. ROSC, survival to discharge, survival with good neurologic outcome)(O)?	Resuscitation for Fontan circulation.	Desmond Bohn, Bradley S. Marino	http://circ.ahajournals.org/site/C2010/Peds-055B.pdf
Part 10	Peds	Peds-056A	For infants and children in cardiac arrest with pulmonary hypertension (prehospital [OHCA] or in-hospital [IHCA]) (P), do any specific modifications to resuscitation techniques (I) compared with standard resuscitation techniques (C), improve outcome (ROSC, survival to discharge, favorable neurologic survival) (O)?	Resuscitation of the patient with pulmonary hypertension	Ian Adatia, John Berger, David Wessel	http://circ.ahajournals.org/site/C2010/Peds-056A.pdf
Part 10	Peds	Peds-057A	For infants and children who require endotracheal intubation (prehospital or in hospital) (P) does the use of a specific formula to guide cuffed endotracheal tube size (I), as opposed to the use of the existing formula of 3+age/4 (C), achieve better outcomes (eg. successful tube placement) (O)?	Formulas for predicting ET tube size	Robert Bingham	http://circ.ahajournals.org/site/C2010/Peds-057A.pdf
Part 10	Peds	Peds-057B	For infants and children who require endotracheal intubation (prehospital or in hospital) (P) does the use of a specific formula to guide cuffed endotracheal tube size (I), as opposed to the use of the existing formula of 3+age/4 (C), achieve better outcomes (eg. successful tube placement) (O)?	Formulas for predicting ET tube size	Eugene B. Freid	http://circ.ahajournals.org/site/C2010/Peds-057B.pdf
Part 10	Peds	Peds-058B	In pediatric patients with cardiac arrest (prehospital [OHCA] or in-hospital [IHCA]) (P), does the use of invasive monitoring (I) compared with clinical assessment (C), improve accuracy of diagnosis of a perfusing rhythm (O)?	Invasive monitoring for diagnosing perfusing rhythm	Antonio Rodriguez-Nunez	http://circ.ahajournals.org/site/C2010/Peds-058B.pdf
Part 10	Peds	Peds-059	For infants and children with single ventricle, s/p stage I repair who require resuscitation from cardiac arrest or pre-arrest states (prehospital [OHCA] or in-hospital [IHCA]) (P), does any specific modification to standard practice (I) compared with standard resuscitation practice (C) improve outcome (eg. ROSC, survival to discharge, survival with good neurologic outcome) (O)?	Resuscitation of the patient with single ventricle	George M. Hoffman, Shane Tibby	http://circ.ahajournals.org/site/C2010/Peds-059.pdf
Part 10	Peds	Peds-060	For pediatric patients (in any setting) (P), is there a clinical decision rule (I) that enables reliable prediction of ROSC (or futile resuscitation efforts)? (PROGNOSIS).	Clinical decision rules to predict ROSC	Gabrielle Nuthall	http://circ.ahajournals.org/site/C2010/Peds-060.pdf
Part 11	NRP	NRP-001A	For neonates requiring resuscitation (P), is any adjunct measure (eg.CO2 detection, pulse oximeter) as effective as the usual clinical findings (eg., heart rate, chest movement) effective to improve outcome (O)?	Adjuncts: CO2 detection, pulse oximeter	John Kattwinkel	http://circ.ahajournals.org/site/C2010/NRP-001A.pdf
Part 11	NRP	NRP-001B	For neonates requiring resuscitation (P), is any adjunct measure (eg.CO2 detection, pulse oximeter) as effective as the usual clinical findings (eg., heart rate, chest movement) effective to improve outcome (O)?	Adjuncts: CO2 detection, pulse oximeter	Yacov Rabi	http://circ.ahajournals.org/site/C2010/NRP-001B.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 11	NRP	NRP-002A	In the neonates infant (preterm and term) receiving respiratory support (P), does the use of CPAP(I) vs no-CPAP or IPPV(C) improve outcome -specify (O)?	CPAP and IPPV	Colm O'Donnell	http://circ.ahajournals.org/site/C2010/NRP-002A.pdf
Part 11	NRP	NRP-002B	In the neonates infant (preterm and term) receiving respiratory support (P), does the use of CPAP(I) vs no-CPAP or IPPV(C) improve outcome -specify (O)?	CPAP and IPPV	Douglas D. McMillan	http://circ.ahajournals.org/site/C2010/NRP-002B.pdf
Part 11	NRP	NRP-003A	In neonates receiving respiratory support (P) does the use of face mask interface (I) vs CPAP, NPCPAP, NC (C) (excluding intubation improve outcome) (O)?	Face mask interface vs CPAP etc	Colin Morley	http://circ.ahajournals.org/site/C2010/NRP-003A.pdf
Part 11	NRP	NRP-003B	In neonates receiving respiratory support (P) does the use of face mask interface (I) vs CPAP, NPCPAP, NC (C) (excluding intubation) improve outcome (O)?	Face mask interface vs CPAP etc	Yacov Rabi	http://circ.ahajournals.org/site/C2010/NRP-003B.pdf
Part 11	NRP	NRP-004A	In neonates receiving resuscitation (P) does the use of mouth-to-mouth, mouth-to-mask, mouth tube to mask (I) as compared to a self-inflating bag (C) give equivalent outcomes (stable spontaneous breathing) (O), when devices for delivering PPV are not available?	Self-inflating bag vs mouth techniques	Nalini Singhal	http://circ.ahajournals.org/site/C2010/NRP-004A.pdf
Part 11	NRP	NRP-004B	In neonates receiving resuscitation (P) does the use of mouth-to-mouth, mouth-to-mask, mouth tube to mask (I) as compared to a self-inflating bag (C) give equivalent outcomes (stable spontaneous breathing) (O), when devices for delivering PPV are not available?	Self-inflating bag vs mouth techniques	Maria Fernanda de Almeida	http://circ.ahajournals.org/site/C2010/NRP-004B.pdf
Part 11	NRP	NRP-005A	In neonates receiving positive pressure ventilation (P) does the use of gas volume monitoring (I) vs clinical assessment with or without pressure monitoring (C) improve clinical outcome (O)?	Ventilation volume monitoring	Steven A. Ringer	http://circ.ahajournals.org/site/C2010/NRP-005A.pdf
Part 11	NRP	NRP-005B	In neonates receiving positive pressure ventilation (P) does the use of gas volume monitoring (I) vs clinical assessment with or without pressure monitoring (C) improve clinical outcome (O)?	Ventilation volume monitoring	Khalid Aziz	http://circ.ahajournals.org/site/C2010/NRP-005B.pdf
Part 11	NRP	NRP-005C	In neonates receiving positive pressure ventilation (P) does the use of gas volume monitoring (I) vs clinical assessment with or without pressure monitoring (C) improve clinical outcome (O)?	Ventilation volume monitoring	Jane E. McGowan	http://circ.ahajournals.org/site/C2010/NRP-005C.pdf
Part 11	NRP	NRP-006A	In neonates receiving chest compressions (P) do other ratios (5:1,15:2) (I) vs a 3:1 (C) improve outcomes (O)?	Compression ventilation ratio	Lindsay Mildenhall	http://circ.ahajournals.org/site/C2010/NRP-006A.pdf
Part 11	NRP	NRP-006B	In neonates receiving chest compressions (P) do other ratios (5:1,15:2) (I) vs a 3:1 (C) improve outcomes (O)?	Compression ventilation ratio	Myra H. Wyckoff	http://circ.ahajournals.org/site/C2010/NRP-006B.pdf
Part 11	NRP	NRP-007A	In neonates (P) receiving chest compressions does the two thumb (I) vs two finger (C) method of administration improve outcome (O)?	Two thumb vs two finger	Lindsay Mildenhall	http://circ.ahajournals.org/site/C2010/NRP-007A.pdf
Part 11	NRP	NRP-007B	In neonates (P) receiving chest compressions does the two thumb (I) vs two finger (C) method of administration improve outcome (O)?	Two thumb vs two finger	Myra H. Wyckoff	http://circ.ahajournals.org/site/C2010/NRP-007B.pdf
Part 11	NRP	NRP-008A	Among neonates (<=28 days) with a HR <60 bpm despite adequate ventilation and chest compressions, does the IV route compared with the ET route of epinephrine administration: 1. Increase heart rate >100 bpm faster,2. Increase ROSC, or 3. Increase survival to discharge?	IV vs ET epinephrine	Jonathan Wyllie	http://circ.ahajournals.org/site/C2010/NRP-008A.pdf
Part 11	NRP	NRP-008B	Among neonates (<=28 days) with a HR <60 bpm despite adequate ventilation and chest compressions, does the IV route compared with the ET route of epinephrine administration: 1. Increase heart rate >100 bpm faster,2. Increase ROSC, or 3. Increase survival to discharge?	IV vs ET epinephrine	Gary M. Weiner	http://circ.ahajournals.org/site/C2010/NRP-008B.pdf
Part 11	NRP	NRP-009A	Among neonates (<=28 days) with HR <60 bpm does HDE (IV >0.03 mg/kg or ET >0.1 mg/kg) compared with SDE:1. Increase HR >100 bpm faster2. Increase ROSC, or 3. Increase survival to discharge?	Epinephrine dose	Jonathan Wyllie	http://circ.ahajournals.org/site/C2010/NRP-009A.pdf
Part 11	NRP	NRP-009B	Among neonates (<=28 days) with HR <60 bpm does HDE (IV >0.03 mg/kg or ET >0.1 mg/kg) compared with SDE:1. Increase HR >100 bpm faster2. Increase ROSC, or 3. Increase survival to discharge?	Epinephrine dose	Gary M. Weiner	http://circ.ahajournals.org/site/C2010/NRP-009B.pdf
Part 11	NRP	NRP-010A	For infants delivered at >=34 weeks gestation (P), is delivery by elective c-section under regional anesthesia (I) in comparison with unassisted vertex vaginal deliveries (C) associated with an increased risk of requirement for intubation during resuscitation (O)?	Prenatal prediction of respiratory compromise	Marilyn B. Escobedo	http://circ.ahajournals.org/site/C2010/NRP-010A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 11	NRP	NRP-010B	For infants delivered at ≥ 34 weeks gestation (P), is delivery by elective c-section under regional anesthesia (I) in comparison with unassisted vertex vaginal deliveries (C) associated with an increased risk of requirement for intubation during resuscitation (O)?	Prenatal prediction of respiratory compromise	Benjamin J. Stenson	http://circ.ahajournals.org/site/C2010/NRP-010B.pdf
Part 11	NRP	NRP-010C	For infants delivered at ≥ 34 weeks gestation (P), is delivery by elective c-section under regional anesthesia (I) in comparison with unassisted vertex vaginal deliveries (C) associated with an increased risk of requirement for intubation during resuscitation (O)?	Prenatal prediction of respiratory compromise	Dianne L. Atkins, Edgardo Szyld	http://circ.ahajournals.org/site/C2010/NRP-010C.pdf
Part 11	NRP	NRP-011A	In depressed neonates with clear amniotic fluid (P) does suctioning of the mouth and nose(I) vs none(C) improve outcome (O).	Clear amniotic fluid	Sithembiso Velaphi, Dharmapuri Vidyasagar	http://circ.ahajournals.org/site/C2010/NRP-011A.pdf
Part 11	NRP	NRP-012A	In depressed neonates born through meconium stained amniotic fluid (P), does endotracheal suctioning (I) vs no suctioning (C) improve outcome (O)?	Stained amniotic fluid	Sithembiso Velaphi, Dharmapuri Vidyasagar	http://circ.ahajournals.org/site/C2010/NRP-012A.pdf
Part 11	NRP	NRP-013A	When resuscitating or stabilizing newborns at birth (P), is there an oxygen administration strategy (I) that is superior to any other (C) in improving outcome (O)?	Oxygen administration	Jay Goldsmith	http://circ.ahajournals.org/site/C2010/NRP-013A.pdf
Part 11	NRP	NRP-013B	When resuscitating or stabilizing newborns at birth (P), is there an oxygen administration strategy (I) that is superior to any other (C) in improving outcome (O)?	Oxygen administration	Sam Richmond	http://circ.ahajournals.org/site/C2010/NRP-013B.pdf
Part 11	NRP	NRP-014A	In neonates receiving resuscitation or stabilization (P), is the saturation demonstrated during normal birth (I) preferable to some other target (C), when considering outcome for premature and term neonates (O)?	Oxygen saturation target	John Kattwinkel	http://circ.ahajournals.org/site/C2010/NRP-014A.pdf
Part 11	NRP	NRP-014B	In neonates receiving resuscitation or stabilization (P), is the saturation demonstrated during normal birth (I) preferable to some other target (C), when considering outcome for premature and term neonates (O)?	Oxygen saturation target	Colin Morley	http://circ.ahajournals.org/site/C2010/NRP-014B.pdf
Part 11	NRP	NRP-015A	In neonates (P) receiving positive pressure during resuscitation, is positive pressure ventilation by T-piece resuscitator (I) superior to bag ventilation (C) for improving outcome-specify (O)?	T-piece resuscitator	David Boyle	http://circ.ahajournals.org/site/C2010/NRP-015A.pdf
Part 11	NRP	NRP-015B	In neonates (P) receiving positive pressure during resuscitation, is positive pressure ventilation by T-piece resuscitator (I) superior to bag ventilation (C) for improving outcome-specify (O)?	T-piece resuscitator	Benjamin J. Stenson	http://circ.ahajournals.org/site/C2010/NRP-015B.pdf
Part 11	NRP	NRP-015C	In neonates (P) receiving positive pressure during resuscitation, is positive pressure ventilation by T-piece resuscitator (I) superior to bag ventilation (C) for improving outcome-specify (O)?	T-piece resuscitator	David Field	http://circ.ahajournals.org/site/C2010/NRP-015C.pdf
Part 11	NRP	NRP-016A	For neonates (P) following attempted endotracheal intubation, is CO2 detection (I) superior to clinical assessment (C) for confirming endotracheal location (O)?	CO2 detection	Jonathan Wyllie	http://circ.ahajournals.org/site/C2010/NRP-016A.pdf
Part 11	NRP	NRP-017A	For neonates requiring positive pressure ventilation (P), is LMA (I) an effective alternative to mask or endotracheal ventilation (C) for improving outcome (O)? (achieving stable vital signs and reducing the need for subsequent endotracheal intubation)?	LMA	Gary M. Weiner	http://circ.ahajournals.org/site/C2010/NRP-017A.pdf
Part 11	NRP	NRP-017B	For neonates requiring positive pressure ventilation (P), is LMA (I) an effective alternative to mask or endotracheal ventilation (C) for improving outcome (O)? (achieving stable vital signs and reducing the need for subsequent endotracheal intubation)?	LMA	Enrique Udaeta	http://circ.ahajournals.org/site/C2010/NRP-017B.pdf
Part 11	NRP	NRP-018A	For non intubated bradycardic neonates (P) requiring positive pressure ventilation, is the CO2 monitoring device (I) more effective than chest rise, color (C) for assessing adequate ventilation (O)?	Bradycardia and CO2 monitoring	Colm O'Donnell	http://circ.ahajournals.org/site/C2010/NRP-018A.pdf
Part 11	NRP	NRP-018B	For non intubated bradycardic neonates (P) requiring positive pressure ventilation, is the CO2 monitoring device (I) more effective than chest rise, color (C) for assessing adequate ventilation (O)?	Bradycardia and CO2 monitoring	Masanori Tamura	http://circ.ahajournals.org/site/C2010/NRP-018B.pdf
Part 11	NRP	NRP-018C	For non intubated bradycardic neonates (P) requiring positive pressure ventilation, is the CO2 monitoring device (I) more effective than chest rise, color (C) for assessing adequate ventilation (O)?	Bradycardia and CO2 monitoring	Steven A. Ringer	http://circ.ahajournals.org/site/C2010/NRP-018C.pdf
Part 11	NRP	NRP-019A	In neonates requiring resuscitation, (P) will the early use of supplemental glucose (I) during and/or following delivery room resuscitation, vs none (C) improve outcome (ie. avoidance of hypoglycemia, reduced long-term neurologic morbidity) (O)?	Supplemental glucose	Jane E. McGowan	http://circ.ahajournals.org/site/C2010/NRP-019A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 11	NRP	NRP-019B	In neonates requiring resuscitation, (P) will the early use of supplemental glucose (I) during and/or following delivery room resuscitation, vs none (C) improve outcome (ie. avoidance of hypoglycemia, reduced long-term neurologic morbidity) (O)?	Supplemental glucose	Jeffrey Perlman	http://circ.ahajournals.org/site/C2010/NRP-019B.pdf
Part 11	NRP	NRP-020A	In neonates requiring resuscitation, does the administration of emergency medications (P) by intraosseous infusion (I) vs the intravenous route improve outcome (O)?	IO vs IV	William A. Engle	http://circ.ahajournals.org/site/C2010/NRP-020A.pdf
Part 11	NRP	NRP-021A	In neonates requiring resuscitation and not responding to CPR (P), does the administration of sodium bicarbonate (I) vs no bicarbonate (C) improve outcome (O)?	Sodium bicarbonate	Jeffrey Perlman	http://circ.ahajournals.org/site/C2010/NRP-021A.pdf
Part 11	NRP	NRP-021B	In neonates requiring resuscitation and not responding to CPR (P), does the administration of sodium bicarbonate (I) vs no bicarbonate (C) improve outcome (O)?	Sodium bicarbonate	Dianne L. Atkins, Sam Richmond	http://circ.ahajournals.org/site/C2010/NRP-021B.pdf
Part 11	NRP	NRP-022A	In apneic neonates suspected of narcotic depression (P), does naloxone (I) when compared to effective ventilation without naloxone (C) improve outcome (O)?	Naloxone	Ruth Guinsburg	http://circ.ahajournals.org/site/C2010/NRP-022A.pdf
Part 11	NRP	NRP-022B	In apneic neonates suspected of narcotic depression (P), does naloxone (I) when compared to effective ventilation without naloxone (C) improve outcome (O)?	Naloxone	Myra H. Wyckoff	http://circ.ahajournals.org/site/C2010/NRP-022B.pdf
Part 11	NRP	NRP-023A	In preterm neonates under radiant warmers (P), does increased room temperature, thermal mattress, or other intervention (I) as compared to plastic wraps alone (C) improve outcome (O)?	Warming adjuncts	Marilyn B. Escobedo, Michael Watkinson	http://circ.ahajournals.org/site/C2010/NRP-023A.pdf
Part 11	NRP	NRP-024A	In term neonates at risk for hypoxic-ischemic encephalopathy secondary to intra-partum hypoxia (P) does selective /whole body cooling (I) vs standard therapy (C), result in improved outcome (O)?	Hypothermia (induced)	Jeffrey Perlman	http://circ.ahajournals.org/site/C2010/NRP-024A.pdf
Part 11	NRP	NRP-024B	In term neonates at risk for hypoxic-ischemic encephalopathy secondary to intra-partum hypoxia (P) does selective /whole body cooling (I) vs standard therapy (C), result in improved outcome (O)?	Hypothermia (induced)	Peter Davis	http://circ.ahajournals.org/site/C2010/NRP-024B.pdf
Part 11	NRP	NRP-025A	In term neonates without a detectable heart rate and no other signs of life (P) is ten minutes (I) as opposed to 15 minutes or longer (C) of effective resuscitation a reliable measure of outcome (abnormal neurologic examination and/or death) (O)?	Duration of CPR with asystole and outcome	Steve Byrne	http://circ.ahajournals.org/site/C2010/NRP-025A.pdf
Part 11	NRP	NRP-025B	In term neonates without a detectable heart rate and no other signs of life (P) is ten minutes (I) as opposed to 15 minutes or longer (C) of effective resuscitation a reliable measure of outcome (abnormal neurologic examination and/or death) (O)?	Duration of CPR with asystole and outcome	Jay Goldsmith	http://circ.ahajournals.org/site/C2010/NRP-025B.pdf
Part 11	NRP	NRP-025C	In term neonates without a detectable heart rate and no other signs of life (P) is ten minutes (I) as opposed to 15 minutes or longer (C) of effective resuscitation a reliable measure of outcome (abnormal neurologic examination and/or death) (O)?	Duration of CPR with asystole and outcome	Ruth Guinsburg	http://circ.ahajournals.org/site/C2010/NRP-025C.pdf
Part 11	NRP	NRP-026A	In term neonates with a heart rate <60 and no other signs of life (P), is ten minutes (I) as opposed to 15 minutes or longer (C) of effective resuscitation a reliable measure of outcome (abnormal neurologic examination and/or death) (O)?	Duration of CPR with bradycardia and outcome	Steve Byrne	http://circ.ahajournals.org/site/C2010/NRP-026A.pdf
Part 11	NRP	NRP-026B	In term neonates with a heart rate <60 and no other signs of life (P), is ten minutes (I) as opposed to 15 minutes or longer (C) of effective resuscitation a reliable measure of outcome (abnormal neurologic examination and/or death) (O)?	Duration of CPR with bradycardia and outcome	Jay Goldsmith	http://circ.ahajournals.org/site/C2010/NRP-026B.pdf
Part 11	NRP	NRP-026C	In term neonates with a heart rate <60 and no other signs of life (P), is ten minutes (I) as opposed to 15 minutes or longer (C) of effective resuscitation a reliable measure of outcome (abnormal neurologic examination and/or death) (O)?	Duration of CPR with bradycardia and outcome	Ruth Guinsburg	http://circ.ahajournals.org/site/C2010/NRP-026C.pdf
Part 11	NRP	NRP-027A	In neonates at the limits of viability or anomalies associated with lethal outcomes (P) does the non initiation (I) vs initiation (C) of resuscitation result in an outcome that is ethically justified (O).	Futile resuscitation rules	Steve Byrne	http://circ.ahajournals.org/site/C2010/NRP-027A.pdf
Part 11	NRP	NRP-027B	In neonates at the limits of viability or anomalies associated with lethal outcomes (P) does the non initiation (I) vs initiation (C) of resuscitation result in an outcome that is ethically justified (O).	Futile resuscitation rules	Jay Goldsmith	http://circ.ahajournals.org/site/C2010/NRP-027B.pdf
Part 11	NRP	NRP-028A	In depressed neonates requiring positive pressure ventilation (P) does the administration of longer inspiratory times, higher inflation pressures, use of PEEP (I) as compared to standard management (C) improve outcome (O)?	Ventilation times and pressures	David Boyle	http://circ.ahajournals.org/site/C2010/NRP-028A.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 11	NRP	NRP-028B	In depressed neonates requiring positive pressure ventilation (P) does the administration of longer inspiratory times, higher inflation pressures, use of PEEP (I) as compared to standard management (C) improve outcome (O)?	Ventilation times and pressures	Benjamin J. Stenson	http://circ.ahajournals.org/site/C2010/NRP-028B.pdf
Part 11	NRP	NRP-029A	In neonates requiring resuscitation and unresponsive to chest compressions/epinephrine (P) does the administration of volume (I) vs no volume (C) improve outcome (O).	Volume resuscitation with CPR	Susan Niermeyer	http://circ.ahajournals.org/site/C2010/NRP-029A.pdf
Part 11	NRP	NRP-029B	In neonates requiring resuscitation and unresponsive to chest compressions/epinephrine (P) does the administration of volume (I) vs no volume (C) improve outcome (O).	Volume resuscitation with CPR	Douglas D. McMillan	http://circ.ahajournals.org/site/C2010/NRP-029B.pdf
Part 11	NRP	NRP-029C	In neonates requiring resuscitation and unresponsive to chest compressions/epinephrine (P) does the administration of volume (I) vs no volume (C) improve outcome (O).	Volume resuscitation with CPR	Masanori Tamura	http://circ.ahajournals.org/site/C2010/NRP-029C.pdf
Part 11	NRP	NRP-030A	In neonates (P), does delayed cord clamping cord or milking of the cord (I) vs standard management (C), improve outcome (O).	Umbilical cord clamping and milking	Susan Niermeyer	http://circ.ahajournals.org/site/C2010/NRP-030A.pdf
Part 11	NRP	NRP-030B	In neonates (P), does delayed cord clamping cord or milking of the cord (I) vs standard management (C), improve outcome (O).	Umbilical cord clamping and milking	Dianne L. Atkins, Nalini Singhal	http://circ.ahajournals.org/site/C2010/NRP-030B.pdf
Part 11	NRP	NRP-030C	In neonates (P), does delayed cord clamping cord or milking of the cord (I) vs standard management (C), improve outcome (O) (milking of the cord)	Umbilical cord clamping and milking	Gary M. Weiner	http://circ.ahajournals.org/site/C2010/NRP-030C.pdf
Part 11	NRP	NRP-030D	In neonates (P), does delayed cord clamping cord or milking of the cord (I) vs standard management (C), improve outcome (O)?	Umbilical cord clamping and milking	Rintaro Mori	http://circ.ahajournals.org/site/C2010/NRP-030D.pdf
Part 11	NRP	NRP-031A	In neonates born to febrile mothers (P) does intervention to normalize temperature (I), compared to standard care (C) improve outcome (O)?	Maternal fever	Jeffrey Perlman	http://circ.ahajournals.org/site/C2010/NRP-031A.pdf
Part 11	NRP	NRP-031B	In neonates born to febrile mothers (P) does intervention to normalize temperature (I), compared to standard care (C) improve outcome (O).	Maternal fever	Steven A. Ringer	http://circ.ahajournals.org/site/C2010/NRP-031B.pdf
Part 11	NRP	NRP-032A	In participants undergoing resuscitation courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance) (O).	Impact of realistic training on skills performance	Jane E. McGowan	http://circ.ahajournals.org/site/C2010/NRP-032A.pdf
Part 11	NRP	NRP-032B	In participants undergoing resuscitation courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance) (O).	Impact of realistic training on skills performance	Louis P. Halamek	http://circ.ahajournals.org/site/C2010/NRP-032B.pdf
Part 11	NRP	NRP-032C	In participants undergoing resuscitation courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance) (O).	Impact of realistic training on skills performance	Khalid Aziz	http://circ.ahajournals.org/site/C2010/NRP-032C.pdf
Part 11, Part 12	EIT	EIT-001A	For resuscitation teams (P), do briefings/debriefings (I), when compared to no briefings/debriefings (C), improve performance or outcomes (O)? (INTERVENTION).	Debriefing of CPR performance	Dana P. Edelson, Trevor Yuen	http://circ.ahajournals.org/site/C2010/EIT-001A.pdf
Part 11, Part 12	EIT	EIT-001B	For resuscitation teams (P), do briefings/debriefings (I), when compared to no briefings/debriefings (C), improve performance or outcomes (O)? (INTERVENTION).	Debriefing of CPR performance	Jasmeet Soar	http://circ.ahajournals.org/site/C2010/EIT-001B.pdf
Part 11, Part 12	EIT	EIT-019A	In participants undergoing BLS/ALS courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance on manikins, skills performance in real arrests, willingness to perform etc.) (O)?	High fidelity training	Jordan Duval-Arnould, Elizabeth A. Hunt	http://circ.ahajournals.org/site/C2010/EIT-019A.pdf
Part 11, Part 12	EIT	EIT-019B	In participants undergoing BLS/ALS courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance on manikins, skills performance in real arrests, willingness to perform etc.) (O)?	High fidelity training	Judith Finn	http://circ.ahajournals.org/site/C2010/EIT-019B.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 11, Part 12	NRP	NRP-033A	For hospital resuscitation teams (P), do team briefings/debriefings (I), when compared to no briefings/debriefings (C), improve team performance (O)? (INTERVENTION).	Impact of debriefing on team performance	Dianne L. Atkins, Nalini Singhal	http://circ.ahajournals.org/site/C2010/NRP-033A.pdf
Part 11, Part 12	NRP	NRP-033B	For hospital resuscitation teams (P), do team briefings/debriefings (I), when compared to no briefings/debriefings (C), improve team performance (O)? (INTERVENTION).	Impact of debriefing on team performance	Louis P. Halamek	http://circ.ahajournals.org/site/C2010/NRP-033B.pdf
Part 12	ALS	ALS-SC-077	In adult cardiac arrest (prehospital) (P), does the performance of ALS procedures by experienced physicians (I) as opposed to standard care (without physicians) (C), improve outcome (O) (eg. ROSC, survival)?	ALS procedures	Michael Bernhard, Bernd W. Böttiger, Clifton Callaway, Joseph P. Ornato	http://circ.ahajournals.org/site/C2010/ALS-SC-077.pdf
Part 12	BLS	BLS-002A	In rescuers (P), does performing CPR on adult and pediatric patients with cardiac arrest (out-of-hospital and in-hospital) (I) as opposed to not performing CPR (ventilations and compressions) (C), increase the likelihood of harm (O) (eg. infection)?	Harm to rescuers from CPR	Sung Oh Hwang	http://circ.ahajournals.org/site/C2010/BLS-002A.pdf
Part 5, Part 12	BLS	BLS-004B	In adult and pediatric patients with out-of-hospital cardiac arrest (including residential settings) (P), does implementation of a public access AED program (I) as opposed to traditional EMS response (C), improve successful outcomes (O) (eg. ROSC, survival)?	Public access AED programs	E. Brooke Lerner	http://circ.ahajournals.org/site/C2010/BLS-004B.pdf
Part 12	BLS	BLS-005A	In rescuers performing CPR on adult or pediatric patients (P), does compression only CPR (I) when compared with traditional CPR (C) result in an increase in adverse outcomes (eg. fatigue) (O)?	Rescuer fatigue in CC Only CPR	Michael Baubin, Anthony J. Handley	http://circ.ahajournals.org/site/C2010/BLS-005A.pdf
Part 12	BLS	BLS-012A	In rescuers performing CPR on adult or pediatric patients (out-of-hospital and in-hospital) (P), does the use of barrier devices (I) as opposed to no such use (C), improve outcome (O) (eg. lower infection risk)?	Barrier devices	E. Brooke Lerner	http://circ.ahajournals.org/site/C2010/BLS-012A.pdf
Part 11, Part 12	EIT	EIT-001A	For resuscitation teams (P), do briefings/debriefings (I), when compared to no briefings/debriefings (C), improve performance or outcomes (O)? (INTERVENTION).	Debriefing of CPR performance	Dana P. Edelson, Trevor Yuen	http://circ.ahajournals.org/site/C2010/EIT-001A.pdf
Part 11, Part 12	EIT	EIT-001B	For resuscitation teams (P), do briefings/debriefings (I), when compared to no briefings/debriefings (C), improve performance or outcomes (O)? (INTERVENTION).	Debriefing of CPR performance	Jasmeet Soar	http://circ.ahajournals.org/site/C2010/EIT-001B.pdf
Part 12	EIT	EIT-002A	For LAY PROVIDERS and HCPs(P), does the use of specific instructional methods (video/computer self instructions) (I), when compared with traditional instructor-led courses (C) improve skill acquisition and retention (O)? (INTERVENTION).	CPR instruction methods (self-instruction vs traditional)	Anthony J. Handley	http://circ.ahajournals.org/site/C2010/EIT-002A.pdf
Part 12	EIT	EIT-002B	For LAY PROVIDERS and HCPs(P), does the use of specific instructional methods (video/computer self instructions) (I), when compared with traditional instructor-led courses (C) improve skill acquisition and retention (O)? (INTERVENTION).	CPR instruction methods (self-instruction vs traditional)	Linda Denke, Mary Mancini	http://circ.ahajournals.org/site/C2010/EIT-002B.pdf
Part 12	EIT	EIT-003A	For adult (in any setting) (P), is there a clinical decision rule (I) that enables reliable prediction of ROSC (or futile resuscitation efforts)? (DIAGNOSIS).	Futile resuscitation rules	Jennifer Dennett	http://circ.ahajournals.org/site/C2010/EIT-003A.pdf
Part 12	EIT	EIT-004	For students of advanced level resuscitation courses (such as ACLS and PALS) (P), does success in the written examination (I) when compared with lack of success (C), predict success in completing the practical skills testing associated with the course or in resuscitation management performance in actual or simulated resuscitation events (O)? (PROGNOSIS).	Written exam for advanced resuscitation courses	Farhan Bhanji, David L. Rodgers	http://circ.ahajournals.org/site/C2010/EIT-004.pdf
Part 12	EIT	EIT-005A	In laypersons and HCPs performing CPR, does the use of CPR feedback devices when compared to no device improves CPR skill acquisition, retention, and real life performance? (INTERVENTION).	CPR feedback devices during training	Gavin D. Perkins, Joyce Yeung	http://circ.ahajournals.org/site/C2010/EIT-005A.pdf
Part 12	EIT	EIT-005B	In laypersons and HCPs performing CPR, does the use of CPR feedback devices when compared to no device improves CPR skill acquisition, retention, and real life performance? (INTERVENTION).	CPR feedback devices during training	Reylon A. Meeks	http://circ.ahajournals.org/site/C2010/EIT-005B.pdf
Part 12	EIT	EIT-006	In cardiac arrest patients (in-hospital and prehospital) [P] does resuscitation [I] produce a good Quality of Life (QoL) for survivors after discharge from the hospital. [O]? Prognosis.	Quality of life after resuscitation	Stephen J. Brett, Vanessa Elliott, David L. Rodgers	http://circ.ahajournals.org/site/C2010/EIT-006.pdf
Part 12	EIT	EIT-007	In apparently healthy children and young adults (P), does the presence of any warning signs available to the lay person or health care professional (eg. syncope, family history) (I), as opposed to their absence (C), predict an increased risk of sudden death (O)? (Exclude screening in sportsmen and patients with known ischemic heart disease).	Warning signs predict increased risk of sudden death	Rani Robson, Jonathan Skinner	http://circ.ahajournals.org/site/C2010/EIT-007.pdf

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Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 12	EIT	EIT-008A	In bystanders (lay or HCP) (P), are there any specific factors (I) compared with standard interventions (C) that increase outcomes (eg. willingness to provide or the actual performance of CPR (standard or chest compression only) on adult or pediatric patients with cardiac arrest (prehospital [OHCA]) (O)?	Willingness to provide CPR	Judy Young	http://circ.ahajournals.org/site/C2010/EIT-008A.pdf
Part 12	EIT	EIT-008B	In bystanders (lay or HCP) (P), are there any specific factors (I) compared with standard interventions (C) that increase outcomes (eg. willingness to provide or the actual performance of CPR (standard or chest compression only) on adult or pediatric patients with cardiac arrest (prehospital [OHCA]) (O)?	Willingness to provide CPR	Tetsuo Hatanaka, Masami Ishikawa, Keiichi Tada	http://circ.ahajournals.org/site/C2010/EIT-008B.pdf
Part 12	EIT	EIT-009A	In ALS/ PALS providers (P), are there any specific training interventions (eg. duration of session, interactive computer programs/e-learning, video self-instruction etc) (I) compared with traditional lecture/practice sessions (C) that increase outcomes (eg. skill acquisition and retention) (O)?	Comparison of training methods	Alessandro Barelli, Farhan Bhanji	http://circ.ahajournals.org/site/C2010/EIT-009A.pdf
Part 12	EIT	EIT-010	In BLS providers (lay and HCP) (P), are any specific intervals for update/retraining (I) compared with standard practice (ie. 12 or 24 monthly) (C) that increase outcomes (eg. skill acquisition and retention) (O)?	Timing for BLS retraining	Maaret Castrén, Barbara Furry	http://circ.ahajournals.org/site/C2010/EIT-010.pdf
Part 12	EIT	EIT-011A	In ALS and PALS providers (P), are any specific intervals for update/retraining (I) compared with standard practice (ie. 12 or 24 monthly) (C) that increase outcomes (eg. skill acquisition and retention) (O)?	Timing for advanced resuscitation retraining	Jane E. McGowan	http://circ.ahajournals.org/site/C2010/EIT-011A.pdf
Part 12	EIT	EIT-011B	In ALS and PALS providers (P), are any specific intervals for update/retraining (I) compared with standard practice (ie. 12 or 24 monthly) (C) that increase outcomes (eg. skill acquisition and retention) (O)?	Timing for advanced resuscitation retraining	Matthew Heui-Ming Ma, Chih-Wei Yang, Zui-Shen Yen	http://circ.ahajournals.org/site/C2010/EIT-011B.pdf
Part 12	EIT	EIT-012A	In lay providers requiring BLS training (P), does focusing training on high risk populations (I) compared with no such targeting (C) increase outcomes (eg. bystander CPR, survival etc.) (O)?	BLS training for high risk populations	Elaine Gilfoyle	http://circ.ahajournals.org/site/C2010/EIT-012A.pdf
Part 12	EIT	EIT-012B	In lay providers requiring BLS training (P), does focusing training on high risk populations (I) compared with no such targeting (C) increase outcomes (eg. bystander CPR, survival etc.) (O)?	BLS training for high risk populations	Cassandra L. Williams	http://circ.ahajournals.org/site/C2010/EIT-012B.pdf
Part 12	EIT	EIT-013A	In BLS providers (lay or HCP) requiring AED training (P), are there any specific training interventions (I) compared with traditional lecture/practice sessions (C) that increase outcomes (eg. skill acquisition and retention, actual AED use, etc.) (O)?	AED training methods	Deems Okamoto	http://circ.ahajournals.org/site/C2010/EIT-013A.pdf
Part 12	EIT	EIT-013B	In BLS providers (lay or HCP) requiring AED training (P), are there any specific training interventions (I) compared with traditional lecture/practice sessions (C) that increase outcomes (eg. skill acquisition and retention, actual AED use, etc.) (O)?	AED training methods	Gavin D. Perkins, Joyce Yeung	http://circ.ahajournals.org/site/C2010/EIT-013B.pdf
Part 12	EIT	EIT-014A	In providers (lay or HCP)(P), does undertaking training/perform actual CPR or use of defibrillator (manual or AED) (I) compared with no such training/performance(C) increase harm (eg. infection or other adverse events)(O)?-include electrical safety of defibrillation.	CPR training and harm to rescuer	Franklin H.G. Bridgewater	http://circ.ahajournals.org/site/C2010/EIT-014A.pdf
Part 12	EIT	EIT-015	In AED programs (P), does the inclusion of any specific factors (eg. linkage to 911 registries, location of program [including home]) (I) compared with not including those factors (C) improve the outcome of the program (O)?	AED training content	David C. Parish, Andrea Scapigliati, Antoine Trammell	http://circ.ahajournals.org/site/C2010/EIT-015.pdf
Part 12	EIT	EIT-016	In adult and pediatric patients with cardiac arrest (prehospital [OHCA], in-hospital [IHCA]) (P), does existence and use of advanced directives (eg. "living wills" and "do not resuscitate" orders) (I) compared with no such directives (C), improve outcome (eg. appropriate resuscitation efforts) (O)?	Advanced directives	Jennifer Dennett, Terri Schmidt	http://circ.ahajournals.org/site/C2010/EIT-016.pdf
Part 12	EIT	EIT-017A	In ALS providers undergoing ALS courses (P), does the inclusion of specific leadership/team training (I), as opposed to no such specific training (C), improve outcomes (eg. performance during cardiac arrests) (O)?	Team and leadership training	Robin P. Davies, Dana P. Edelson, Trevor Yuen	http://circ.ahajournals.org/site/C2010/EIT-017A.pdf
Part 12	EIT	EIT-018A	In ALS providers undergoing ALS courses (P), does the inclusion of specific pre-course preparation (eg. e-learning and pre-testing) (I), as opposed to no such preparation (C), improve outcomes (eg. same skill assessment, but with less face to face (instructor hands on training) (O)?	Precourse preparation for advanced courses	Andrew S. Lockey, David L. Rodgers	http://circ.ahajournals.org/site/C2010/EIT-018A.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 11, Part 12	EIT	EIT-019A	In participants undergoing BLS/ALS courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance on manikins, skills performance in real arrests, willingness to perform etc.) (O)?	High fidelity training	Jordan Duval-Arnould, Elizabeth A. Hunt	http://circ.ahajournals.org/site/C2010/EIT-019A.pdf
Part 11, Part 12	EIT	EIT-019B	In participants undergoing BLS/ALS courses (P), does the inclusion of more realistic techniques (eg. high fidelity manikins, in-situ training) (I), as opposed to standard training (eg. low fidelity, education centre) (C), improve outcomes (eg. skills performance on manikins, skills performance in real arrests, willingness to perform etc.) (O)?	High fidelity training	Judith Finn	http://circ.ahajournals.org/site/C2010/EIT-019B.pdf
Part 12	EIT	EIT-020	In participants undergoing ALS courses (P), does the use of random scheduling (introducing station cases in a random manner) (I), as opposed to block scheduling (grouping the agenda around specific station activities such as VF or bradycardias) (C), improve outcomes (eg. skills performance etc.) (O)? Other outcomes may need to be determined after review of the literature, include USE OF MODULAR COURSES.	ALS scenarios: random vs block	Ian Bullock, David L. Rodgers	http://circ.ahajournals.org/site/C2010/EIT-020.pdf
Part 12	EIT	EIT-021A	In participants undergoing BLS/ALS courses (P), does end of course testing (I), as opposed to continuous assessment and feedback (C), improve outcomes (eg. improve learning/performance) (O)?	End of course testing vs continuous feedback	Farhan Bhanji, Gavin D. Perkins	http://circ.ahajournals.org/site/C2010/EIT-021A.pdf
Part 12	EIT	EIT-022	In communities where processes/guidelines are being implemented (P), does the use of any specific factors (I), compared with no such use (C), improve outcomes (eg. success of implementation) (O)?	Implementation of community guidelines	John E. Billi, R. Van Harrison	http://circ.ahajournals.org/site/C2010/EIT-022.pdf
Part 12	EIT	EIT-022B	In communities where processes/guidelines are being implemented (P), does the use of any specific factors (I), compared with no such use (C), improve outcomes (eg. success of implementation) (O)?	Implementation of community guidelines	Patrick Chow-In Ko	http://circ.ahajournals.org/site/C2010/EIT-022B.pdf
Part 12	EIT	EIT-023B	For resuscitation systems (pre-hospital and in-hospital) (P), does the use of a performance measurement systems (eg Utstein) improve and/or allow for comparison of system outcomes (patient level and system level variables) (O)?	Measuring performance of resuscitation systems	Judith Finn, Satoshi Takeda	http://circ.ahajournals.org/site/C2010/EIT-023B.pdf
Part 12	EIT	EIT-024	In adult patients admitted to hospital (P), does use of EWSS/response teams/MET systems (I) compared with no such responses (C), improve outcome (eg. reduce cardiac and respiratory arrests) (O)?	METs	Michael DeVita, Mary Beth Mancini, Nicola Poplett, Gary Smith, Jasmeet Soar	http://circ.ahajournals.org/site/C2010/EIT-024.pdf
Part 12	EIT	EIT-025	In hospital in-patients (adult) (P), does the presence of any specific factors (I) compared with no such factors (C), predict occurrence of cardiac arrest (or other outcome) (O)?	Predicting in-hospital cardiac arrest	Erga Cerchiari, Michael DeVita	http://circ.ahajournals.org/site/C2010/EIT-025.pdf
Part 12	EIT	EIT-026A	In hospital staff (P), does the use of any specific educational strategies (I) compare with no such strategies (C) improve outcomes (eg. early recognition and rescue of the deteriorating patient (at risk of cardiac/respiratory arrest)) (O)?	Training strategies for hospital staff (to predict arrest?)	Geoffrey K. Lighthall, Anne Lippert	http://circ.ahajournals.org/site/C2010/EIT-026A.pdf
Part 12	EIT	EIT-027	In adult and pediatric patients with out-of-hospital cardiac arrests (P), does transport to a specialist cardiac arrest centre (I) compared with no such directed transport (C), improve outcome (eg. survival) (O)?	Cardiac arrest centers	Graham Nichol, Jasmeet Soar	http://circ.ahajournals.org/site/C2010/EIT-027.pdf
Part 12	EIT	EIT-028A	What resuscitation training interventions are practical, feasible and effective in low income countries?	Resuscitation training in low income countries	Martin Botha	http://circ.ahajournals.org/site/C2010/EIT-028A.pdf
Part 12	EIT	EIT-028B	What resuscitation training interventions are practical, feasible and effective in low income countries?	Resuscitation training in low income countries	Peter A. Meaney	http://circ.ahajournals.org/site/C2010/EIT-028B.pdf
Part 12	EIT	EIT-029A	For BLS providers (lay or HCP) (P), does a longer-duration instructor-based course (I), compared with a shorter course (C), improve skill acquisition and retention (O)?	Duration of BLS courses	Anthony J. Handley	http://circ.ahajournals.org/site/C2010/EIT-029A.pdf
Part 12	EIT	EIT-029B	For BLS providers (lay or HCP) (P), does a longer-duration instructor-based course (I), compared with a shorter course (C), improve skill acquisition and retention (O)?	Duration of BLS courses	Yasuhiro Kuroda	http://circ.ahajournals.org/site/C2010/EIT-029B.pdf
Part 12	EIT	EIT-030A	For lay and HCP (P) does the use of assessment (I) as opposed to no such assessment (C) improve knowledge, skills and learning/retention (O)?	Impact of assessment on knowledge, skills and learning/retention	Farhan Bhanji, Gavin D. Perkins	http://circ.ahajournals.org/site/C2010/EIT-030A.pdf
Part 12	EIT	EIT-031A	Does the use of a checklist during adult and pediatric advanced life support as opposed to no checklist improve outcomes (eg compliance with guidelines, other outcomes)?	Use of checklist during ACLS or PALS	Nicholas Brennan	http://circ.ahajournals.org/site/C2010/EIT-031A.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 12	EIT	EIT-031B	Does the use of a checklist during adult and pediatric advanced life support as opposed to no checklist improve outcomes (eg compliance with guidelines, other outcomes)?	Use of checklist during ACLS or PALS	Farhan Bhanji, Matthew Weiss	http://circ.ahajournals.org/site/C2010/EIT-031B.pdf
Part 12	EIT	EIT-032	(P) In adult patients receiving chest compressions I-is there a method to teach chest compressions(C) compared with current teaching.	Methods to teach chest compressions	Tom P. Aufderheide	http://circ.ahajournals.org/site/C2010/EIT-032.pdf
Part 11, Part 12	NRP	NRP-033A	For hospital resuscitation teams (P), do team briefings/debriefings (I), when compared to no briefings/debriefings (C), improve team performance (O)? (INTERVENTION).	Impact of debriefing on team performance	Dianne L. Atkins, Nalini Singhal	http://circ.ahajournals.org/site/C2010/NRP-033A.pdf
Part 11, Part 12	NRP	NRP-033B	For hospital resuscitation teams (P), do team briefings/debriefings (I), when compared to no briefings/debriefings (C), improve team performance (O)? (INTERVENTION).	Impact of debriefing on team performance	Louis P. Halamek	http://circ.ahajournals.org/site/C2010/NRP-033B.pdf
Part 13	First Aid	FA-1001A	In victims of a venomous snakebite (P) does pressure immobilization (I) of an extremity, when compared to no therapy (C), improve outcome (O)?	Compression wrapping in snakebites	Christopher P. Holstege	http://circ.ahajournals.org/site/C2010/FA-1001A.pdf
Part 13	First Aid	FA-1002A	In victims of a venomous snakebite (P) does application of suction (I) to the envenomation site, when compared to no therapy (C), improve outcome (O)?	Suction for snake bite	Christopher P. Holstege	http://circ.ahajournals.org/site/C2010/FA-1002A.pdf
Part 13	First Aid	FA-101C	Does the use of cooling (I) improve healing and pain control (O) in patients after thermal injuries (P)?	Cooling of thermal burn	Adam J. Singer, Jeff Guy	http://circ.ahajournals.org/site/C2010/FA-101C.pdf
Part 13	First Aid	FA-103A	In patients with burns (P), does leaving the burn blister intact (I), compared with removing the blister (C), improve healing and pain control (O)?	Burn blister treatment	Adam J. Singer	http://circ.ahajournals.org/site/C2010/FA-103A.pdf
Part 13	First Aid	FA-104C	Does the use of wet dressings (I) compared with dry dressings (C) improve healing and pain control (O) in patients after thermal injuries (P)?	Application of dressing for thermal burn	Adam J. Singer, Jeff Guy	http://circ.ahajournals.org/site/C2010/FA-104C.pdf
Part 13	First Aid	FA-1201A	In a patient (P) experiencing difficulty breathing, does administration of a bronchodilator (I) compared with not administration (C) improve outcome (O)?	Bronchodilator administration	Rita Herrington, Jeff Woodin	http://circ.ahajournals.org/site/C2010/FA-1201A.pdf
Part 13	First Aid	FA-1204A	In patients with chest pain (P), does helping administer aspirin (I), compared with not administering aspirin (C), improve outcomes (O)?	Lay rescuer medication administration	Rita Herrington	http://circ.ahajournals.org/site/C2010/FA-1204A.pdf
Part 13	First Aid	FA-1204B	In patients with chest pain (P), does helping administer aspirin (I), compared with not administering aspirin (C), improve outcomes (O)?	Lay rescuer medication administration	Adam J. Singer	http://circ.ahajournals.org/site/C2010/FA-1204B.pdf
Part 13	First Aid	FA-1301B	Does irrigation of eyes exposed to a toxin with water compared to other substances improve outcome?	Irrigation of eyes	Ralph Shenefelt	http://circ.ahajournals.org/site/C2010/FA-1301B.pdf
Part 13	First Aid	FA-1401B	In persons with acute skin exposure to potentially toxic substances, does irrigation with ambient temperature, not specifically sterilized water compared with no irrigation lead to less morbidity and/or mortality?	Irrigation of skin for toxic substance exposure	Kristian L. Arnold	http://circ.ahajournals.org/site/C2010/FA-1401B.pdf
Part 13	First Aid	FA-1601A	What is the optimal position for a person in shock? Does elevating the legs improve outcome?	Optimal position for shock victim	Jonathan L. Epstein	http://circ.ahajournals.org/site/C2010/FA-1601A.pdf
Part 13	First Aid	FA-1601C	What is the optimal position for a person in shock? Does elevating the legs improve outcome?	Optimal position for shock victim	Susanne Schunder-Tatzber	http://circ.ahajournals.org/site/C2010/FA-1601C.pdf
Part 13	First Aid	FA-1705A	In hypohydrated individuals (P) does providing fluids (I) as compared to providing no fluids (C) decrease symptoms (O)? In hypohydrated individuals (P) does a carbohydrate-electrolyte beverage (I) compared to water (C) rehydrate individuals (O)?	Carbohydrate-electrolyte vs water in dehydration	Susan W. Yeargin	http://circ.ahajournals.org/site/C2010/FA-1705A.pdf
Part 13	First Aid	FA-1706A	In victims with heat exhaustion or heat syncope (P) what treatment (I) as opposed to no treatment (C) decreases/resolves symptoms (O)?	Best fluid for oral rehydration	Susan W. Yeargin	http://circ.ahajournals.org/site/C2010/FA-1706A.pdf
Part 13	First Aid	FA-1801A	Is there a treatment for human or animal bites that improves outcome?	First aid for human and animal bites	Jeffrey D. Ferguson	http://circ.ahajournals.org/site/C2010/FA-1801A.pdf
Part 13	First Aid	FA-1806-1B	In individuals who have received a jellyfish sting (P), does the application of heat or cold (I) decrease pain or prevent worsening (O) as compared to not applying heat or cold (C)?	Temperature treatment for jellyfish sting	Neal Pollock, Jeanette Previdi, Karyl Reid, Rick Caissie	http://circ.ahajournals.org/site/C2010/FA-1806-1B.pdf
Part 13	First Aid	FA-1806-2B	In individuals who have received a jellyfish sting (P), does the application of a topical (ie. vinegar, baking soda, meat tenderizer, or commercial product) (I) decrease pain or prevent worsening (O) as compared to not applying a topical (C)?	Topical application for jellyfish sting	Neal Pollock, Jeanette Previdi, Karyl Reid, Rick Caissie	http://circ.ahajournals.org/site/C2010/FA-1806-2B.pdf
Part 13	First Aid	FA-1806-3B	In individuals who have received a jellyfish sting (P), does the application of a pressure immobilization bandage (I) decrease pain or prevent worsening (O) as compared to not applying a pressure immobilization bandage (C)?	Pressure immobilization bandage for jellyfish sting	Neal Pollock, Jeanette Previdi, Karyl Reid, Rick Caissie	http://circ.ahajournals.org/site/C2010/FA-1806-3B.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 13	First Aid	FA-2001A	In breathing but unresponsive victims (P), does positioning the victim in a lateral, side-lying, recovery position (ie. lateral recumbent or modified HAINES) (I) decrease complications (O) as compared to leaving them in a supine position (C)?	Positioning breathing but unresponsive victim	Jeanette Previdi, Karyl Reid	http://circ.ahajournals.org/site/C2010/FA-2001A.pdf
Part 13	First Aid	FA-201B	In a patient who ingests a potentially poisonous substance (P), does the administration of activated charcoal (I), when compared to no administration (C), improve that patient's outcome (O)?		Christopher P. Holstege, Jeffrey D. Ferguson	http://circ.ahajournals.org/site/C2010/FA-201B.pdf
Part 13	First Aid	FA-202A	In victims with oral caustic substance poisoning, does the early administration of milk or water as compared to nothing by mouth, improve outcome?	Use of milk or water for oral caustic poisoning	Christopher P. Holstege	http://circ.ahajournals.org/site/C2010/FA-202A.pdf
Part 13	First Aid	FA-203B	In victims with oral poisoning does the administration of syrup of ipecac by lay public improve outcome?	Early ipecac administration in oral poisoning	Sue O. Kell, Christopher P. Holstege	http://circ.ahajournals.org/site/C2010/FA-203B.pdf
Part 13	First Aid	FA-2101A	In First Aid Training (P), does the use of simulation (I) when compared with not using simulation (C) improve the participant effectiveness (O)?	Simulated patients in First Aid training	Pascal Cassan, Sue O. Kell, Daniel Meyran, Vincent Hubert, Cara B. Doughty	http://circ.ahajournals.org/site/C2010/FA-2101A.pdf
Part 13	First Aid	FA-2101B	In First Aid Training (P), does the use of simulation (I) when compared with not using simulation (C) improve the participant effectiveness (O)?	Simulated patients in First Aid training	Sue O. Kell	http://circ.ahajournals.org/site/C2010/FA-2101B.pdf
Part 13	First Aid	FA-2102A	In First Aid Training, which techniques of monitoring and evaluation of progress and performance is able to show the improvement of the participant skills?	Monitoring and evaluation of First Aid performance	Pascal Cassan, Daniel Meyran, Vincent Hubert	http://circ.ahajournals.org/site/C2010/FA-2102A.pdf
Part 13	First Aid	FA-2103A	In First Aid Training (P) how frequently are retraining/update sessions required (I) in order to maintain the participant's skills (O).	First Aid retraining	Pascal Cassan, Daniel Meyran, Vincent Hubert	http://circ.ahajournals.org/site/C2010/FA-2103A.pdf
Part 13	First Aid	FA-2201A	Helmet removal after motorcycle accident—When? How? One-helper/two helper techniques?	Motorcycle helmet removal	David Berry	http://circ.ahajournals.org/site/C2010/FA-2201A.pdf
Part 13	First Aid	FA-2301B	Which position might be the best for victims of possible head injury if they are unconsciousness?	Positioning possible head injury	Hong Shen	http://circ.ahajournals.org/site/C2010/FA-2301B.pdf
Part 13	First Aid	FA-2401A	What is the best first aid treatment of an open chest wound?	First aid treatment for open chest wound	Hong Shen	http://circ.ahajournals.org/site/C2010/FA-2401A.pdf
Part 13	First Aid	FA-302A	Does the administration of a second dose of injectable epinephrine improve outcome from a severe allergic reaction?	Second dose of injectable epinephrine	Kristian L. Arnold	http://circ.ahajournals.org/site/C2010/FA-302A.pdf
Part 13	First Aid	FA-302B	Does the administration of a second dose of injectable epinephrine improve outcome from a severe allergic reaction?	Second dose of injectable epinephrine	Brad Yeargin	http://circ.ahajournals.org/site/C2010/FA-302B.pdf
Part 13	First Aid	FA-303B	Can the first aid provider appropriately recognize the signs and symptoms of anaphylaxis?	Recognition of anaphylaxis	Jonathan L. Epstein, Norda Ratcliff	http://circ.ahajournals.org/site/C2010/FA-303B.pdf
Part 13	First Aid	FA-401C	In a bleeding victim do direct pressure, indirect pressure (pressure points), or elevation of the bleeding part help control bleeding as compared to doing nothing?	Control of bleeding	Leon Chameides, Jeff Guy, Jeffrey L. Pellegrino	http://circ.ahajournals.org/site/C2010/FA-401C.pdf
Part 13	First Aid	FA-402C	When direct pressure fails to stop bleeding does the administration of a tourniquet improve outcome?	Tourniquet if direct pressure fails	Leon Chameides, Jeff Guy, Jeffrey L. Pellegrino	http://circ.ahajournals.org/site/C2010/FA-402C.pdf
Part 13	First Aid	FA-402D	When direct pressure fails to stop bleeding does the administration of a tourniquet improve outcome?	Tourniquet if direct pressure fails	Susanne Schunder-Tatzber	http://circ.ahajournals.org/site/C2010/FA-402D.pdf
Part 13	First Aid	FA-403A	In which circumstances are the application of a tourniquet appropriate?	Appropriate circumstances for tourniquet	Jeffrey S. Guy, Jeffrey L. Pellegrino	http://circ.ahajournals.org/site/C2010/FA-403A.pdf
Part 13	First Aid	FA-403C	In which circumstances are the application of a tourniquet appropriate?	Appropriate circumstances for tourniquet	Leon Chameides	http://circ.ahajournals.org/site/C2010/FA-403C.pdf
Part 13	First Aid	FA-404B	In patients with severe external bleeding (P), does the application of topical haemostatic agents (I) when compared with usual care (C) improve outcome? (O).	Topical hemostatic agents if direct pressure fails	Barbara Caracci	http://circ.ahajournals.org/site/C2010/FA-404B.pdf
Part 13	First Aid	FA-404C	In patients with severe external bleeding (P), does the application of topical haemostatic agents (I) when compared with usual care (C) improve outcome? (O).	Topical hemostatic agents if direct pressure fails	Richard N. Bradley	http://circ.ahajournals.org/site/C2010/FA-404C.pdf
Part 13	First Aid	FA-404D	In patients with severe external bleeding (P), does the application of topical haemostatic agents (I) when compared with usual care (C) improve outcome? (O).	Topical hemostatic agents if direct pressure fails	Pascal Cassan	http://circ.ahajournals.org/site/C2010/FA-404D.pdf
Part 13	First Aid	FA-501A	In victims with suspected cervical spinal injury does spinal immobilization benefit the patient over doing nothing in outcome?	Spine immobilization	William Smith, Juan Acosta, Arthur Cooper, Paul Satterlee	http://circ.ahajournals.org/site/C2010/FA-501A.pdf
Part 13	First Aid	FA-501D	In victims with suspected cervical spinal injury does spinal immobilization benefit the patient over doing nothing in outcome?	Spine immobilization	Paul Satterlee, William Smith, Arthur Cooper, Juan Acosta	http://circ.ahajournals.org/site/C2010/FA-501D.pdf

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Evidence-Based Worksheets *Continued*

Part	Task Force	Worksheet ID	PICO Title	Short Title	Authors	URL
Part 13	First Aid	FA-502E	In victims with trauma, when should one suspect cervical spinal injury?	Cervical spine injury prognostication	Jonathan I. Groner, William Smith	http://circ.ahajournals.org/site/C2010/FA-502E.pdf
Part 13	First Aid	FA-503A	In victims suspected to have spinal injury, what method(s) should be used for spinal motion restriction by the first aid provider? Which are effective methods of spinal motion restriction in persons with suspected cervical spinal injury?	Spinal motion restriction methods in suspected cervical spine injury	William Smith, William Raynovich, Juan Acosta, Arthur Cooper	http://circ.ahajournals.org/site/C2010/FA-503A.pdf
Part 13	First Aid	FA-601A	In a patient with a closed joint injury (P), does the application of a compression bandage by a lay rescuer (I) decrease pain and swelling as compared to not applying a compression bandage (O)?	Compression bandage	Rick Caissie	http://circ.ahajournals.org/site/C2010/FA-601A.pdf
Part 13	First Aid	FA-601B	In a patient with a closed joint injury (P), does the application of a compression bandage by a lay rescuer (I) decrease pain and swelling as compared to not applying a compression bandage (O)?	Compression bandage	Rita Herrington	http://circ.ahajournals.org/site/C2010/FA-601B.pdf
Part 13	First Aid	FA-602A	Does straightening angulated suspected long bone fractures when compared with immobilizing in found position, improve the (management of pain; safer transport; prognosis)?	Suspected long bone fracture	Jeffrey L. Pellegrino	http://circ.ahajournals.org/site/C2010/FA-602A.pdf
Part 13	First Aid	FA-602B	Does straightening angulated suspected long bone fractures when compared with immobilizing in found position, improve the (management of pain; safer transport; prognosis)?	Suspected long bone fracture	Kristian L. Arnold	http://circ.ahajournals.org/site/C2010/FA-602B.pdf
Part 13	First Aid	FA-603C	Does cooling of a musculoskeletal injury improve outcome? And if so, what is the optimal method of cooling?	Cooling musculoskeletal injury	Keiichi Ikegami, Cara B. Doughty	http://circ.ahajournals.org/site/C2010/FA-603C.pdf
Part 13	First Aid	FA-604A	In individuals with musculoskeletal injury (P) does heat application (I) as opposed to no treatment (C) improve tissue healing? In individuals with musculoskeletal injury (P) which type of heat application (I) compared to other methods is more effective (C) and improves healing better (O)?	Heating musculoskeletal injury	Blaine C. Long	http://circ.ahajournals.org/site/C2010/FA-604A.pdf
Part 13	First Aid	FA-604B	In individuals with musculoskeletal injury (P) does heat application (I) as opposed to no treatment (C) improve tissue healing? In individuals with musculoskeletal injury (P) which type of heat application (I) compared to other methods is more effective (C) and improves healing better (O)?	Heating musculoskeletal injury	Lisa S. Jutte	http://circ.ahajournals.org/site/C2010/FA-604B.pdf
Part 13	First Aid	FA-605A	In patients with suspected extremity fractures (P), does stabilization (I) compared to no stabilization (C) reduce pain and lead to better functional recovery (O)?	Stabilizing extremity	Richard N. Bradley	http://circ.ahajournals.org/site/C2010/FA-605C.pdf
Part 13	First Aid	FA-606B	What is the appropriate method of preservation of the amputated part?	Preservation of amputated body part	Andrew MacPherson	http://circ.ahajournals.org/site/C2010/FA-606B.pdf
Part 13	First Aid	FA-701A	In patients with difficulty breathing or complaints of chest pain, does administration of oxygen improve outcome?	Oxygen administration	Louis Gonzales	http://circ.ahajournals.org/site/C2010/FA-701A.pdf
Part 13	First Aid	FA-801B	Does the use of a topical agent and/or dressing (I) for superficial wounds (I) improve healing (O) when compared to no topical therapy (C)?	Topical agent or dressing	Adam J. Singer, Cara B. Doughty, Samantha Roberts	http://circ.ahajournals.org/site/C2010/FA-801B.pdf
Part 13	First Aid	FA-802B	Does the use of irrigation (I) compared with no irrigation (C) improve healing (O) in patients with superficial wounds (P)?	Irrigation of a superficial wound	Adam J. Singer	http://circ.ahajournals.org/site/C2010/FA-802B.pdf
Part 13	First Aid	FA-901B	Does rewarming of a localized cold injury (frostbite) improve outcome?	Rewarming frostbite	Eunice M. Singletary, Olav Aasland	http://circ.ahajournals.org/site/C2010/FA-901B.pdf
Part 13	First Aid	FA-902B	In patients with frostbite, does the use of an anti-inflammatory, when compared with usual care, improve outcome?	Anti-inflammatory and frostbite	Eunice M. Singletary, Olav Aasland	http://circ.ahajournals.org/site/C2010/FA-902B.pdf

**Appendix: Evidence-Based Worksheets: 2010 International Consensus on
Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With
Treatment Recommendations and 2010 American Heart Association and American Red
Cross International Consensus on First Aid Science With Treatment Recommendations**

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Correction

In the article “Appendix: Evidence-Based Worksheets: 2010 International Consensus on Cardio-pulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations and 2010 American Heart Association and American Red Cross International Consensus on First Aid Science With Treatment Recommendations” which published online October 18, 2010, and appeared with the October 19, 2010, issue of the journal (*Circulation*. 2010;122[suppl 2]:S606–S638), several corrections were needed in the worksheet by Holstege, No. FA-1001A:

1. On page 4, first paragraph, line 5: “. . . (i.e. German 2004, LOE 5) . . .” has been changed to “. . . (i.e. German 2005, LOE 5). . .”
2. On page 4, second paragraph, line 3: “. . . (German 2005, LOE 5; Bush 2004, LOE 5) . . .” has been changed to “. . . (Bush 2004, LOE 5). . .”

The worksheet is listed in the table on page S636 of the article.

These corrections have been made to the current online version of the worksheet, which is available at <http://circ.ahajournals.org/site/C2010/FA-1001A.pdf>.