

Child/Infant

CPR and AED Supplement



**Instructor
Guide
Preview**



Child/Infant CPR and AED Supplement Instructor Guide, *Version 7.0*

Purpose of this Guide

This MEDIC First Aid *Child/Infant CPR and AED Supplement Version 7.0 Instructor Guide* is solely intended to give information on the presentation and administration of MEDIC First Aid Child/Infant CPR and AED Supplement certified training classes. The information in this book is furnished for that purpose and is subject to change without notice.

Notice of Rights

No part of this MEDIC First Aid *Child/Infant Version 7.0 Instructor Guide* may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval system, without written permission from MEDIC FIRST AID International, Inc.

Trademarks

MEDIC First Aid and the MEDIC First Aid logo are registered trademarks of MEDIC FIRST AID International, Inc.

Preview

MEDIC FIRST AID International, Inc.

1450 Westec Drive
Eugene, OR 97402

800-447-3177
541-344-7099

E-mail: response@hsi.com

Visit our website at hsi.com/medicfirstaid

Copyright © 2012 by MEDIC FIRST AID International, Inc.
All rights reserved. Printed in the United States of America.

First Edition—2012



We Make Learning to Save Lives Easy®

MEDIC First Aid is a
member of the HSI family of brands.

ISBN 978-936515-38-7

4376

Acknowledgements

Staff/Technical Consultants/Expert Reviewers

Steve Barnett

VP, Brand Management, Emergency Care
Health & Safety Institute

Ted T. Crites, CHES

Director, Production
Health & Safety Institute

Production Team

Carolyn Daves; John Hambelton; Donna Medina; Dana Midles; Rob Neidig; Elizabeth O’Harra, Carol Perez-Vitier;
Jan Twombly; Jason Williams; Steve Zagar

Medical Director

Greg Ciottone, MD

Technical Consultants

Corey Abraham, MS Ed
Director of Enterprise Sales
Health & Safety Institute

Craig S. Aman, MBA, MICP
Principal, Firehat Consulting
Lieutenant/ Paramedic Seattle Fire Department
Seattle, WA

Christopher J. Le Baudour, MS Ed, EMT
EMT Program Director
San Francisco Paramedic Association
San Francisco, CA

Jeff Lindsey, PhD, PM, CFOD, EFO
Chief Learning Officer
Health & Safety Institute

W. Daniel Rosenthal RN, BS, CCHC
President
Workplace Nurses, LLC
Gretna, LA

William Rowe, FF/EMT-P (Ret.)
VP, Brand Management, Professional Responders
Health & Safety Institute

Zigmund Sawzak, EMT-P
CEO
LifeLine Health & Safety, LLC
Portland, OR

Ralph Shenefelt, FF/EMT-P (ret.)
VP, Strategic Compliance
Health & Safety Institute

Marcy Thobaben, LPN, NREMT-B
501 OSHA Outreach Trainer
President/CEO
Bluegrass Health & Safety, Inc.
Wilmore, KY

HSI Program Advisory Group

Marcy Thobaben, LPN, NREMT-B
501 OSHA Outreach Trainer
President/CEO
Bluegrass Health & Safety, Inc.
Wilmore, KY

Kira Miller, BA, EMT-B
Owner
CPR Training Solutions
San Jose, CA

John Mateus, EMT-B, RN,
MICN, BSN
Owner
Less Stress Instructional Services
Hawthorne, NJ

Kim Dennison, RN, BSN, COHC,
COHN-S, ACLS
Owner
Absolute Learning Success, LLC
Perry, MI

W. Daniel Rosenthal RN, BS, CCHC
President
Workplace Nurses, LLC
Gretna, LA

Howard Main,
CCEMT-P, NREMT-P
Owner
Health Educational Services
Salinas, CA

Tana Sawzak, EMT-B
Education Director
LifeLine Health & Safety
Portland, OR

Bradford A. (Brad) Dykens, EMT-P
Lieutenant (Ret.),
St. Petersburg Fire and Rescue
Owner
Rescuer Education Services
St. Petersburg, FL

Captain Larry Zettwoch, Esq.
EMT-B, DMT
Master Trainer,
ASHI/ MEDIC First Aid
DAN Examiner
Islamorada, FL

Cathy Statham, EMT-B
Owner
Heartline
El Dorado Hills, CA

Mark Register, NREMT-P, BS
EMS Chief
Savannah River Site
Fire Department
Aiken, SC

International Reviewers

Ross N. Drysdale
Chief Executive Officer
EMP New Zealand, Ltd.
New Zealand and Australia

Chikako Uramoto
President
MFA Japan, Ltd.
Japan

John Zenios
Master Trainer
Director
EMP MEDIC First Aid, Ltd.
Cyprus and Greece

Table of Contents

Child/Infant CPR and AED Supplement

February 2012

Instructor Information

Program Standards	2
Core Learning Objectives	3
Knowledge Objectives	3
Skill Objectives	3
Program Overview	4
Flexibility	4
Initial Training	4
Program Segments and Practices	5
Recommended Time to Complete	5
Skills Practice	5
Integration	6
Renewal	6
Challenging the Program	6
Online Blended Training	6
Video Guided Practice	6
Remote Skills Practice and Evaluation	7
Program Materials	7
Class Requirements	8

Sudden Cardiac Arrest

Sudden Cardiac Arrest and Chain of Survival for Children	12
---	----

Basic CPR Skills

Chest Compressions	16
Chest Compressions Small Group Practice	18
Rescue Breaths	20
Rescue Breaths Small Group Practice	24
Primary Assessment — Unresponsive Child	26
Primary Assessment — Unresponsive Child Small Group Practice	28

Basic Life Support Care

Unresponsive and Breathing	30
Unresponsive and Breathing — Recovery Position Optional Small Group Practice	32
Unresponsive and Not Breathing	34
Unresponsive and Not Breathing Small Group Practice	38
Basic AED Operation	40
Using an AED Small Group Practice	44

Foreign Body Airway Obstruction

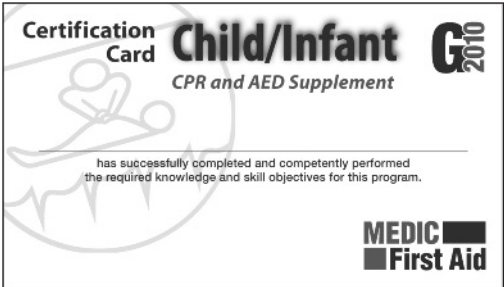
Choking	46
Choking Optional Small Group Practice	50

Wrapping Up a Training Class

52

Program Standards

Child/Infant CPR and AED Supplement

Child/Infant CPR and AED	
Intended Audience	Individuals who are not healthcare providers or professional rescuers but desire or are required to be certified in Child and Infant CPR and AED.
Instructor Requirement	A current and properly authorized MEDIC First Aid Instructor in good standing.
Participant Prerequisites	CPR and AED for Adults (Either prior certification or in conjunction with this class) or in conjunction with an Medic First Aid Basic Plus course
Required Training Materials	<ul style="list-style-type: none"> ■ MEDIC First Aid Child/Infant CPR and AED Supplement Student Pack (one per participant) ■ MEDIC First Aid Child/Infant CPR and AED Supplement Instructor Guide (one per Instructor) ■ MEDIC First Aid Child/Infant CPR and AED Supplement presentation media (DVD or Blended)
Course Length	<ul style="list-style-type: none"> ■ Varies by class type (initial, refresher) and method (classroom, blended, challenge) ■ Initial class, about 1.5–2 hrs ■ Successful completion is based on achievement of the core learning objectives rather than a prescribed instruction time.
Student-to-Instructor Ratio Skill Session Maximum	12:1 (6:1 recommended)
Certification Requirements	<ul style="list-style-type: none"> ■ Skills Evaluation — Students must perform the following skills competently without assistance. Skill performance can be documented individually on the Class Roster/Student Record or by using Performance Evaluations. <ul style="list-style-type: none"> – External chest compressions (for a child and an infant) – Rescue breaths using a CPR mask or shield (for a child and an infant) – Primary assessment for an unresponsive child/infant – CPR as a single provider (for a child and an infant) ■ Written Evaluation — Required when specified by organizational, local, or state regulation. It is recommended for designated responders with a duty or employer expectation to respond in an emergency and provide first aid care. Successful completion requires a correct score of 70% or better.
Card Issued	
Certification Period	May not exceed 24 months from class completion date. More frequent reinforcement of skills is recommended.

Instructor Information

Child/Infant CPR and AED Supplement

Core Learning Objectives

MEDIC First Aid *Child/Infant CPR and AED Supplement* is an objectives-driven, skills-based training program. To receive certification, students are required to demonstrate the following knowledge and skill objectives to a currently authorized MEDIC First Aid Instructor.

Knowledge Objectives

Upon completion of this training program, a student will be able to (for all age groups):

1. Describe how to recognize and provide first aid treatment for sudden cardiac arrest.
2. Explain how to perform effective chest compressions.
3. Describe how to perform effective rescue breaths using a CPR mask or shield.
4. Describe the steps of a primary assessment for an unresponsive person.
5. Explain how to protect the airway of an unresponsive, breathing victim.
6. Describe the steps of performing CPR as a single provider.
7. Describe the steps for safely and correctly attaching and operating an automated external defibrillator (AED).
8. Describe how to recognize and provide first aid treatment for choking.

Skill Objectives

Upon completion of this training program, a student will be able to:

1. Correctly demonstrate external chest compressions for a child and infant.
2. Correctly demonstrate rescue breaths for a child and an infant using a CPR mask or shield.
3. Correctly perform a primary assessment for an unresponsive child/infant.
4. Correctly demonstrate CPR for a child and an infant as a single provider.

Instructor Information

Child/Infant CPR and AED Supplement

Program Overview

The MEDIC First Aid *Child/Infant CPR and AED Supplement* training program provides training in CPR and AED. The goal of this training is to help students develop the knowledge, skills, and confidence to respond in a medical emergency.

MEDIC First Aid training programs use a proven seeing, hearing, speaking, feeling, and doing approach to make learning easier and more enjoyable. Varied ways of exposing the student to the information helps create better retention. As a result, students develop more confidence in their ability to respond to an actual emergency.

MEDIC First Aid training programs are divided into specific conceptual, skill or sequence segments. Each segment uses some combination of video, print, demonstration, and practice to present information to a student. Segments build on each other, reinforcing the core skills, and then gradually come together to show how those skills can be integrated into the overall care process.

Two vital components of the instructional system are the program video and the small group practices. The required video uses short, scenario-based video pieces to relay essential cognitive information and to give students real-life demonstrations of skill technique and application.

For hands-on practice, students are arranged in small groups and take turns assuming the roles of first aid provider, patient, and coach. This multifaceted approach exposes students to the same information from different perspectives.

Overall, the instructional system fosters more self-discovery on the part of the student. Instructors assume more of a facilitator role during class, spending less time talking or lecturing and spending most of the class time creating and maintaining an effective learning environment for students.

Flexibility

The program is intended to be flexible in content. It can be customized to meet the teaching styles of the instructor, the learning needs of the student, and the regulatory needs of an employer.

In the United States, Canada, and most other industrialized countries, workplace safety regulations and occupational licensing requirements may call for specific training content to be covered. Instructors must be familiar with the regulations and licensing requirements of the students they offer training and certification to.

This MEDIC First Aid *Child/Infant CPR and AED Supplement* training program has listed core learning objectives that must be covered in order to issue certification cards. Instructors bear the responsibility of ensuring that each student meets the learning objectives for successful completion.

Initial Training

Students are required to meet the knowledge and skill objectives listed in this program to receive an initial certification card. These core learning objectives represent the minimum content a student needs to understand in order to manage a medical emergency.

Flexibility is desirable; individual students may request specific content, and employers may require specific content to be covered. Occupational regulatory or licensing agencies may also require additional content, hours of instruction, or other practices.

Instructor Information

Child/Infant CPR and AED Supplement

Program Segments and Practices

The following table provides an overview of the required segments and practices found within the MEDIC First Aid *Child/Infant CPR and AED Supplement* training program. Optional segments and practices are noted.

Segments	Demonstration and Practice
<i>Sudden Cardiac Arrest</i>	
Sudden Cardiac Arrest and Chain of Survival for Children	
<i>Basic CPR Skills</i>	
Chest Compressions — Children and Infants	Chest Compressions — Children and Infants
Rescue Breaths — Children and Infants	Rescue Breaths — CPR Mask and/or Rescue Breaths — CPR Shield
Primary Assessment — Unresponsive Child/Infant	Primary Assessment — Unresponsive Child/Infant
<i>Basic Life Support Care</i>	
Unresponsive and Breathing — Recovery Position	Unresponsive and Breathing — Recovery Position — Children (optional)
Unresponsive and Not Breathing — CPR	Unresponsive and Not Breathing — CPR Children and Infants
Basic AED Operation	Using an AED — Children (optional)
<i>Foreign Body Airway Obstruction</i>	
Choking	Choking — Children and Infants (optional)

Recommended Time to Complete

There are many factors affecting classroom time, including the varying nature of learning, the number of students, the amount and quality of previous training, the amount of equipment available, and the experience level of the Instructor. Because of these factors, a time range is recommended instead of a fixed number of hours.

- *CPR and AED for Children and Infants* — 1.5–2 hours

Allow for additional time when adding optional training components such as Optional Topics, Talk-through Scenarios, or Performance Evaluations.

Skills Practice

Students taking a MEDIC First Aid *Child/Infant CPR and AED Supplement* training class must get enough hands-on skill practice to be able to demonstrate competent performance in the skill objectives. Competent performance is required to receive a certification card. An adequate portion of class time should be dedicated to developing competent skills. Small Group Practices are located throughout the MEDIC First Aid *Child/Infant CPR and AED*

Supplement training program for this purpose. Instructors can extend or include additional practice sessions as needed or desired.

Conducting Small Group Practices

MEDIC First Aid training programs utilize a proven seeing, hearing, speaking, feeling, and doing approach to skills practice. To maximize student participation and the retention of skills, always consider the following when conducting Small Group Practices:

- Small Group Practices are student exercises designed to help students learn a particular skill or emergency sequence. These hands-on practice sessions are essential to each student's understanding and retention of the material in the program.
- Students are arranged in pairs or small groups depending on the skill or sequence being practiced. Instructors are encouraged to create as small a group as possible.
- During the practice session, students will rotate through the roles of coach, provider, and ill or injured person.
- Students will play the role of the ill or injured person unless a manikin is required due to the physical nature of the skills.

Instructor Information

Child/Infant CPR and AED Supplement

- Coaches are responsible for helping the provider remember and perform the skills indicated. Coaches will refer to the corresponding Student Guide page during the practice. Only coaches will use this page. Others in the groups will observe the performance.
- Based on the Student Guide, the coach will provide corrective feedback on the provider's performance.
- Instructors will roam through groups looking for inadequate performance. Positive coaching and gentle correction can be used to improve skills.
- It is important for Instructors to refrain from over-controlling the instructional process. This will maximize the use of student self-discovery to increase understanding and retention.

Integration

The MEDIC First Aid *Child/Infant CPR and AED Supplement* training program is designed to be integrated with MEDIC First Aid BasicPlus CPR, AED, and First Aid for Adults. It may also be integrated with other MEDIC First Aid programs where necessary or desired.

Other programs that can be integrated include the MEDIC First Aid Bloodborne Pathogens in the Workplace and Oxygen First Aid for Emergencies programs.

Renewal

Students returning before the end of their certification period can renew their certification in a training class using Talk-through Scenarios that focus on achieving the listed core skills objectives through scenario-based skills practice and evaluation. As the training progresses, instructors need to constantly evaluate the level of cognitive understanding within the group being trained and review core knowledge objectives as needed.

Renewal training is typically shorter than initial training. However, the amount of reduced time is dependent on the level to which the group still understands the cognitive information within the program. Frequent refreshers during the certification period can help improve this.

Renewal training can also be accomplished by repeating an initial training class.

Challenging the Program

Experienced students can challenge the MEDIC First Aid *Child/Infant CPR and AED Supplement* training program using performance evaluations. Participants must arrive prepared for skill testing and must perform competently without assistance on all performance evaluations. A warm-up or skills review session may be conducted before

the challenge, but must be clearly separated from the challenge itself. Students who cannot perform competently without assistance have not successfully completed the challenge. If unsuccessful, students still seeking certification must attend and complete a training class.

Online Blended Training

Blended training combines the convenience of online learning with a shortened practical skills session in order to meet both knowledge and skill objectives.

The online learning platform used for MEDIC First Aid blended training classes is MEDIC University. This specially designed, web-based learning system allows for a variety of sensory interactions to provide users with a low-stress, easy-to-use, and convenient way to learn cognitive information.

It is important to note that students must successfully complete both the online and skills portions of blended training. Completion of the online portion alone will not result in certification.

The entire administrative process for blended training is done through Training Center Manager. A Training Center purchases blended training credits, which include a student seat in an online class and a Student Guide.

Training Centers schedule classes and add students. Students are notified by email of enrollment in the online class. Student progress can be monitored online.

To successfully complete the online class, students complete all of the lessons. Check marks will indicate which lessons have been completed. When all of the lessons are finished, the student will have the capability of printing a completion certificate for the online portion. If a class exam is included in the class, a student will have to achieve a passing score in order to complete the online class.

Skill practice and evaluation is done face-to-face in a classroom setting. Instructors must conduct and document student skill performance for the core skill objectives listed for the class being taught. Skill practice is accomplished using the same approaches available for non-blended classroom training. Sessions can be conducted for groups or for individuals. Individuals can also challenge the skills session in order to receive certification.

Video Guided Practice

Having students practice CPR skills along with a video demonstration has been shown to be an effective means of acquiring CPR skills. A video guided practice is included with the MEDIC First Aid *Child/Infant CPR and AED Supplement* Program Video for child and infant CPR.

Instructor Information

Child/Infant CPR and AED Supplement

Instructors have a choice to use this option when practicing CPR skills. Regardless of the method used to practice, instructors must still evaluate for the competent performance of skills to issue a certification card. Video guided practice can be used either in the classroom or within the online blended class for this program.

To use video guided practice in a classroom, make sure each student has an appropriate CPR manikin and, if used in practice, a barrier device for giving rescue breaths. Arrange students in a manner that allows for clear viewing of the video presentation.

Each age group (child, infant, and adult) has a guided practice video that progresses through CPR skill learning. First, students will learn how to perform external chest compressions and then rescue breaths. Next, they will learn the steps of primary assessment for an unresponsive person, and then they will put everything together to practice performing the entire sequence of CPR.

Roam through the class and watch for the competent performance of skills. Replay segments of the video if additional practice is required for that segment. Record competent skill performance on the student record.

Video guided practice is also included in the online blended version of this program. Students will first go through the cognitive information regarding CPR and then go through the video guided practice segments. Students using the online class must have access to an appropriate CPR manikin and, if used, a barrier device for giving rescue breaths.

Students must also have the ability to practice on the floor with clear viewing of the computer monitor they are using. Instructor evaluation for reasonable performance can be done at a separately scheduled face-to-face session or can be accomplished through remote skills evaluation.

Remote Skills Practice and Evaluation

Students can practice and be evaluated on their skills remotely through the use of internet video technology. Both the instructor and the student will need an appropriate computer and computer video camera that are hooked up to the internet. Adequate internet bandwidth is essential to make sure accurate timing can be measured.

Skills evaluation can be recorded or can be done live. A competent performance of skills is required for acceptance.

If the skills evaluation is recorded and is not acceptable, the instructor must have a live (phone or online) conversation with the student to remediate skill performance. If the

skills evaluation is live, remediation can be done immediately. In either case, the student must be allowed some additional practice time before being evaluated again.

Program Materials

Supplement Instructor Guide

The MEDIC First Aid *Child/Infant CPR and AED Supplement Instructor Guide* provides organized instructional guidance on how to conduct a training class. It is integrated with the Student Guide and Program Video.

Information regarding the details of the training program and how to prepare for a class are provided in the front of the guide. The majority of the guide follows a topic-by-topic approach to training that provides required instructor activities and small-group practices. Instructions on completing the required class administration are also included.

Student Guide

The MEDIC First Aid *Child/Infant CPR and AED Supplement Student Guide* contains the content and skill references a student needs to meet the core learning objectives. Students must have access to skill training reference materials during the class. The Student Guide provides a convenient way to provide this information. It is required to provide each student a personal printed copy of the Student Guide to take home or access to a digital version they can download online.

Program Video

The MEDIC First Aid *Child/Infant CPR and AED Supplement Program Video* is a scenario-based presentation that provides a visual learning tool to accomplish the learning objectives. It is available on DVD and is also streamed online as a component of the online blended class.

Using the DVD, instructors can play the entire video or select individual topics as desired. Supplemental segments on Specific First Aid Topics, Optional Topics, and Video guided practices are also included.

Talk-through Scenarios

Talk-through Scenarios allow students to practice making realistic decisions in a simulated setting. This alternative small-group practice approach is suited for more experienced students or as supplemental practice to initial training.

Talk-through Scenarios can be found online in the document section of Training Center Manager or your Instructor Portal.

Instructor Information

Child/Infant CPR and AED Supplement

Class Roster/Student Record

The *Child/Infant CPR and AED Supplement Class Roster/Student Record* is the primary paperwork for documenting the completion of a MEDIC First Aid *Child/Infant CPR and AED Supplement* training class. It can be found online in the document section of Training Center Manager or your Instructor Portal.

A Class Roster is required for every training class. Completely and accurately fill out the class information. Have students legibly fill out personal information.

A Student Record is required when Performance Evaluations are not used to document competent skills. Using the Class Roster/Student Record, check off students who are performing competently without assistance as the class progresses through skills practice.

If a Written Exam is used, document each student's successful completion on the Class Roster/Student Record.

When finished with a training class, sign and return the completed Class Roster/Student Record to the Training Center responsible for the class.

Performance Evaluations

The competent performance of the listed skill objectives without assistance is required for certification. Performance evaluation is required when individual skill performance is not documented on the Student Record or when specified by organizational, local, or state requirement.

Performance Evaluations can be found online in the document section of Training Center Manager or your Instructor Portal.

When finished, score students as outstanding (competent), adequate (competent), or inadequate (not competent) on each Performance Evaluation. Inadequate (not competent) scores require remediation and re-evaluation. Depending on logistics, this may require individually checking off skills using the Student Record or completing another class.

Students who have not had skills checked off on the Student Record or have been scored incompetent on the Performance Evaluations have not successfully completed the class.

Sign and return all Performance Evaluations to the Training Center responsible for the class.

When conducting Performance Evaluations:

- Students must perform and not verbalize skills.
- Students do not have to perform skills perfectly, just reasonably to achieve the desired outcome.
- Evaluate consistently between students.
- Avoid excessive communication.
- Do not coach students.

Written Exams

Written evaluation may be necessary when specified by organizational, local, or state requirement. It is recommended for designated responders with a duty or employer expectation to respond in an emergency and provide first aid care.

Written Exams for this class can be found online in the document section of Training Center Manager or your Instructor Portal.

Successful completion of a Written Exam requires a correct score of 70% or better. Document the successful completion of the written exam (when used), on the Class Roster/Student Record. When conducting written evaluation, take precautions to prevent cheating and allow adequate time to complete the exam.

Rate Your Program Class Evaluation

Encouraging students to provide feedback and then using that feedback to improve instruction is an essential aspect of any quality educational effort. All students are required to fill out the Rate Your Program class evaluation in order to get a certification card.

Tear-out Rate Your Program class evaluations are found in the back of each Student Guide. They can also be found online in the document section of Training Center Manager or your Instructor Portal.

The evaluation allows students the opportunity to comment on the program materials and on the Instructor's presentation style and effectiveness.

Collect and return the completed Rate Your Program class evaluations to the Training Center responsible for the class.

Class Requirements

The following requirements are necessary to help ensure all students and Instructors experience a safe, enjoyable, and satisfying MEDIC First Aid *Child/Infant CPR and AED Supplement* training class.

Administration

- Instructors must teach in accordance with the most recent administrative policies and procedures as described in the Training Center Administrative Manual (TCAM).
- An Instructor must be authorized to teach the MEDIC First Aid *Child/Infant CPR and AED Supplement* training program in order to issue certification cards.

Instructor Information

Child/Infant CPR and AED Supplement

- There are no minimum age requirements for participation in a MEDIC First Aid *Child/Infant CPR and AED Supplement* class. However, regardless of age, students must be able to competently perform the required skill objectives to receive a certification card.
- The maximum allowed ratio is 12 students to 1 Instructor. A ratio of 6 students per Instructor is recommended.
- The student-to-Instructor ratio for lecture and discussion may be exceeded when organizational realities make small class size unachievable. However, additional MEDIC First Aid-authorized Instructors must be available to maintain the student-to-Instructor ratio for skill practice and evaluation.
- Instructors must provide access to the most current MEDIC First Aid training materials to students for use during and after the course. This is especially important in skill practice sessions. Appropriate training materials include video segments, print handbooks and skill sheets, talk-through scenarios, and projected or mobile computer-based MEDIC First Aid training materials. Each course participant must also be provided a print or digital version of the Student Guide.
- As part of an initial training class, Instructors must conduct all required segments and practices as outlined in this *MEDIC First Aid Child/Infant CPR and AED Supplement Instructor Guide*.
- As part of an initial training class, Instructors must show all required Program Video segments as outlined in this *MEDIC First Aid Child/Infant CPR and AED Supplement Instructor Guide*. The online blended training class may be used as an alternative approach. Use of these training tools is highly recommended for renewal training.
- During a class, Instructors must provide informal evaluation and prompt feedback to students about their skill performance. This will allow students to evaluate their skills and correct deficiencies.
- An Instructor must verify that each student has met the required knowledge and skill objectives before issuing a certification card. The Instructor must include their registry number and Training Center ID on the card to validate it.
- Each student must fill out and return to the Instructor the Rate Your Program class evaluation. Completed evaluations must be returned to the Training Center responsible for the class.
- Instructors must complete a Class Roster/Student Record and return it to the Training Center that is responsible for the class.

Equipment

- Required Equipment
 - Visual presentation equipment (television, monitor, projector)
 - Child CPR training manikins (6:1 maximum student-to-manikin ratio; 2:1 recommended)
 - Infant CPR training manikins (6:1 maximum student-to-manikin ratio; 2:1 recommended)
- Optional Equipment
 - AED training devices and training pads (6:1 maximum student-to-device ratio; 2:1 recommended)

Materials

- Required Instructional Materials
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Instructor Guide* (printed or digital)
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Program Video*
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Class Roster/Student Record*
- Optional Instructional Materials
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Talk-through Scenarios*
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Performance Evaluations*
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Written Exam*
- Required Student Materials (for each student)
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Student Guide* (printed or digital)
 - *MEDIC First Aid Child/Infant CPR and AED Supplement Certification Card*
 - CPR mask, shield, or both (disposable mouthpieces are okay)
 - Pair of disposable barrier gloves

Instructor Information

Child/Infant CPR and AED Supplement

Health and Safety

- Screen students for health or physical conditions that require modifications of skill practice.
- Follow the manufacturer recommendations for the decontamination of manikins before, during, and after training.
- When using disposable gloves in skills practice, Instructors must take necessary steps to be aware of students with latex allergies and provide suitable, non-latex barrier products for their use in class.
- Caution students to avoid awkward or extreme postures of the body.
- Caution students to avoid certain skills during student-on-student practice, including chest compressions, rescue breaths, and abdominal or chest thrusts. These skills are not appropriate for student-on-student practice and must be performed on training manikins designed for that purpose.
- Students must be informed to use proper lifting and moving techniques during a student-on-student practice in which a simulated ill or injured person is moved. Students should not participate in these practices if they have a history of back problems.

Classroom

- Classes need to be conducted in a safe and comfortable environment conducive to learning.
- A carpeted floor is preferred. However, blankets or mats may be used for practice sessions.
- Comfortable seating is important and a table or work area is quite useful.
- A monitor stand can help ensure the monitor is easily visible to all students.
- An erasable white board, blackboard, or easel and paper can be very helpful.

Classroom Safety

- All Instructors must ensure a physically safe learning environment for their students.
- Make sure there are no obvious hazards in the classroom, such as extension cords that can be tripped over.
- In addition, Instructors should be aware of the location of the nearest phone, first aid kit, AED, fire alarm pull station, and fire extinguisher.
- Instructors should have an emergency response plan in case of serious injury or illness, including evacuation routes from the classroom.
- Students should be discouraged from smoking, eating, or engaging in disruptive or inappropriate behavior.

Sudden Cardiac Arrest and Chain of Survival for Children

Sudden Cardiac Arrest

Overview

Rapid response to collapse from sudden cardiac arrest increases the likelihood of survival.

Instructor Activity

- **Video** (*segment duration 2:05*)
 - Introduce and show video segment.
 - Ask for and briefly answer any questions.
- **Student Guide**
 - To review “**Sudden Cardiac Arrest and Early Defibrillation**” refer to page 2 of the *Supplement Student Guide*.

Emphasize Key Points as needed

Key Points

1. Sudden cardiac arrest, or SCA, can occur without warning, at any time. Mostly affecting adults, SCA occurs when the normal electrical activity in the heart unexpectedly becomes disorganized. The normally coordinated mechanical contraction of the heart muscle is lost, and a chaotic, quivering condition known as ventricular fibrillation can occur. Blood flow to the brain and body abruptly stops.
2. This lack of blood and oxygen to the brain causes a person to quickly lose consciousness, collapse, and stop breathing. Brain tissue is especially sensitive to a lack of oxygen. When oxygen is cut off, brain death can occur quickly, within a matter of minutes.
3. Without early recognition and care from a bystander, a person will not survive.
4. Cardiopulmonary resuscitation, or CPR, allows a bystander to restore some oxygen to the brain through a combination of chest compressions and rescue breaths. By itself, CPR is only a temporary measure that can buy time until more advanced care can be provided.
5. The most effective treatment for ventricular fibrillation is defibrillation. To defibrillate, electrode pads are applied to the chest and an electrical shock is sent between the pads through the heart. This shock stops ventricular fibrillation, so the heart's normal electrical activity can return and restore blood flow.
6. Successful defibrillation is often dependent on how quickly someone is defibrillated. For each minute a person is in cardiac arrest, his chance of surviving decreases by about 10 percent. After as little as 10 minutes, defibrillation is rarely successful. The amount of time it takes to recognize a problem, activate EMS, and have EMS respond and defibrillate is usually longer than 10 minutes. In most cases, it's too late.
7. An automated external defibrillator, or AED, is a small, portable, computerized device that is simple for a minimally-trained bystander to operate. Turning on an AED is as simple as opening a lid, or pushing a button. Once it is on, an AED will provide voice instructions to guide a provider through its use.
8. An AED automatically analyzes the heart rhythm, determines if a shock is needed, and charges itself to be ready to defibrillate. An operator simply pushes a button to deliver the shock when prompted by the AED.
9. In many cases of sudden cardiac arrest, if defibrillation could be delivered sooner, before EMS arrives, more people would survive. Immediate, high quality CPR and defibrillation with an AED from a bystander can double or even triple the chance for survival.

10. The Chain of Survival is used to describe the most effective approach for treating sudden cardiac arrest in adults. It consists of five interdependent links.
11. If any one of the links is weak or missing, the chances for survival are greatly reduced. The greatest chance for survival exists when all links are working together.
12. Cardiac arrest in children is often the result of the loss of an open airway or breathing, such as in drowning, choking, or a severe breathing problem. Without oxygen, the heart weakens and slows. A child can appear to be in cardiac arrest.
13. Early CPR with effective rescue breaths may be the only treatment required to stimulate the heart and prevent an actual cardiac arrest from occurring. However, conditions can occur that result in ventricular fibrillation and for which defibrillation of a child or infant is warranted.
14. When treating a child or infant suspected of being in cardiac arrest, ensure an open airway and effective rescue breaths when doing CPR. When available, always attach an AED.
15. Due to the nature of pediatric cardiac arrest, the Chain of Survival is slightly modified for children. It includes the following links:
 - Effective prevention of the typical causes for airway and breathing emergencies,
 - Early CPR and defibrillation with an AED,

- Prompt activation of EMS to quickly get professional care,
- Rapid pediatric advanced life support procedures and medications used by paramedics, nurses, or doctors to help sustain the chance for recovery and survival, and
- Integrated post-cardiac arrest care to increase the likelihood for long-term survival.

Supplemental Key Points

1. Sudden Cardiac Arrest in Children - Sudden cardiac arrest is much less likely to occur in a child, but can be caused by things such as existing heart conditions, electrical shock, or blunt blows to the chest.
2. Sudden Infant Death Syndrome (SIDS) - Sudden Infant Death Syndrome or SIDS is the sudden and unexplained death of a baby under one year of age. Because many SIDS babies are found in their cribs, it is often referred to as “crib death.” The exact cause of SIDS is not yet known, but it is the leading cause of death in babies after one month of age. Most deaths occur in babies who are between 2 and 4 months old. Babies placed on their stomachs to sleep are much more likely to die of SIDS than babies placed on their backs. For more information about SIDS and the National Institute of Child Health and Human Development’s Back to Sleep campaign, visit <http://www.nichd.nih.gov/sids>

Sudden Cardiac Arrest in Children

Cardiac arrest in children is often the result of the loss of an open airway or breathing, such as in drowning, choking, or a severe breathing problem. Without oxygen, the heart weakens and slows. A child can appear to be in cardiac arrest.

When describing treatment guidelines for children:

- Someone younger than 1 year of age is referred to as an infant.
- Someone between 1 year and the onset of puberty is referred to as a child. The onset of puberty can be indicated by breast development in females and the presence of armpit hair in males.
- Anyone at or beyond puberty is considered an adult.

Early CPR with effective rescue breaths may be the only treatment required to stimulate the heart and prevent an actual cardiac arrest from occurring. However, conditions can occur that result in ventricular fibrillation and for which defibrillation of a child or infant is warranted.

When treating a child or infant suspected of being in cardiac arrest, ensure an open airway and effective rescue breaths when doing CPR. When available, always attach an AED.

Chain of Survival for Children

Due to the nature of pediatric cardiac arrest, the Chain of Survival is slightly modified for children. It includes the following links:

- Effective prevention of the typical causes for airway and breathing emergencies
- Early CPR and defibrillation with an AED
- Prompt activation of EMS to quickly get professional care
- Rapid pediatric advanced life support procedures and medications used by paramedics, nurses, or doctors to help sustain the chance for recovery and survival
- Integrated post-cardiac arrest care to increase the likelihood of long-term survival.



Chest Compressions

Basic CPR Skills

Overview

Effective chest compressions are a vital part of high-quality CPR.

Instructor Activity

- **Video** (*segment duration 3:02*)
 - Introduce and show video segment.
 - Ask for and briefly answer any questions.
- **Student Guide**
 - To review “**Chest Compressions**” refer to page 3 of the *Supplement Student Guide*.
- **Demonstration**
 - Perform Real-time Demonstration of “**Chest Compressions.**”
 - Ask for and briefly answer any questions. If necessary, demonstrate again with explanation.
- **Small Group Practice**
 - Conduct the practice session on page 18.

Emphasize Key Points as needed

Key Points

1. If the heart stops, it is possible to restore at least some blood flow through the circulatory system by way of external chest compressions. The most effective chest compressions occur with the rhythmic application of downward pressure on the center of the chest.
2. External compressions increase pressure inside the chest and directly compress the heart, forcing blood to move from the heart to the brain and other organs.
3. Always compress fast and deep when performing compressions. Without losing contact, allow the chest to fully rebound at the top of each compression.
4. Blood pressure and flow is created and maintained with well-performed compressions. If compressions stop, blood pressure is quickly lost and has to be built up again. Minimize any interruptions when doing compressions.
5. When compressing properly, a provider may hear and feel changes in the chest wall. This is normal. Forceful external chest compression is critical if the person is to survive.

Chest Compressions — Children and Infants

Skill Sheet 1



Child

- Place heel of one hand on lower half of breastbone, just above the point where the ribs meet.
- Push hard, straight down at least $\frac{1}{3}$ the diameter of the chest, or about 2 inches. Lift hand and allow chest to fully rebound.
- Without interruption, push fast at a rate of at least 100 times per minute. Keep up the force and speed of compressions.
- Compressions can be tiring. If desired, use two hands, as with adults.



Infant

- Place tips of two fingers on the breastbone just below the nipple line.
- Push hard, straight down at least $\frac{1}{3}$ the diameter of the chest, or about $1\frac{1}{2}$ inches. Lift fingers and allow chest to fully rebound.
- Without interruption, push fast at a rate of at least 100 times per minute. Keep up the force and speed of compressions.

Small Group Practice

Chest Compressions

Overview

Small Group Practices are student exercises designed to help students learn a particular skill or emergency sequence. These hands-on practice sessions are essential to a student's understanding and retention of the material in the program.

Instructor Activity

■ Small Group Practice

- Conduct a practice session emphasizing the skill of "**Chest Compressions.**"
- Coaches will talk providers through "**Chest Compressions**" using *Supplement Student Guide* page 3.

■ Video Guided Practice

- Instructors can elect to use a video guided instructional technique for this practice. The *Program Video* contains specific segments for this approach.

Emphasize Key Points as needed

Key Points

1. Students are arranged in pairs or small groups depending on the skill or sequence to practice.
2. Instructors are encouraged to create as small a group as possible. Individual training programs will state the minimum and maximum allowed size for each group.
3. During the practice session, students should rotate through the roles of coach, provider, and ill or injured person. This seeing, hearing, speaking, feeling, doing approach maximizes sensory input and learning.
4. A Coach for each group is responsible for controlling the practice session. Each student should play the role of the Coach during the practice.
5. Providers are prompted through the practice steps by their Coaches. Each student should play the role of the Provider during the practice.
6. Unless a manikin is required, a student from each group will play the role of the ill or injured person. Each student should play the role of the ill or injured person during the practice.
7. Coaches will refer to a Supplement Student Guide page or student handout for the practice. Only Coaches should use this guide or handout.
8. Based on the Supplement Student Guide or handout, Coaches need to provide corrective feedback on the Providers' performances.
9. Instructors should roam through groups looking for inadequate performance and use positive coaching and gentle correction to improve students' skill performances.
10. It is important for Instructors to maximize the students' use of self-discovery to increase understanding and retention.



MEDIC FIRST AID International, Inc.

1450 Westec Drive
Eugene, OR 97402

800-447-3177 ■ 541-344-7099 ■ 541-344-7429 fax

hsi.com/medicfirstaid

Copyright © 2012 by MEDIC FIRST AID, International, Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted by any means, electronic, photocopying, or otherwise, without prior written permission from MEDIC FIRST AID International, Inc.

Health & Safety Institute — *We Make Learning to Save Lives Easy*[®]
MEDIC First Aid is a member of the HSI family of brands.

Printed in the United States of America.

ISBN 978-936515-38-7

4376