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Medical Specialty Training in the United States

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Overview

- Specialty programs
- Who defines curriculum?
- Who creates the curriculum
- Examples
 - “locally-developed” training courses
 - “Standard” training courses (AHA courses)
- Summary

Specialty Training Programs

American Medical Association (AMA) recognizes 26 medical specialties in the United States.

Allergy & Immunology
Dermatology
Medical Genetics
Internal Medicine
Nuclear Medicine
Orthopaedic Surgery
Pediatrics
Psychiatry
Surgery

Anesthesiology
Emergency Medicine
Thoracic Surgery
Neurological Surgery
Obstetrics & Gynecology
Otolaryngology
Plastic Surgery
Diagnostic Radiology
Physical Medicine & Rehabilitation

Colon & Rectal Surgery
Family Medicine
Urology
Neurology
Ophthalmology
Pathology
Preventive Medicine
Radiation Oncology

<http://www.ama-assn.org/go/freida>

Subspecialty Training Programs under Internal Medicine

American Medical Association (AMA) recognizes 100 medical subspecialties in the United States:

Cardiology

Intensive care medicine

Endocrinology

Gastroenterology

Hematology

Hepatology

Infectious diseases

Nephrology

Proctology

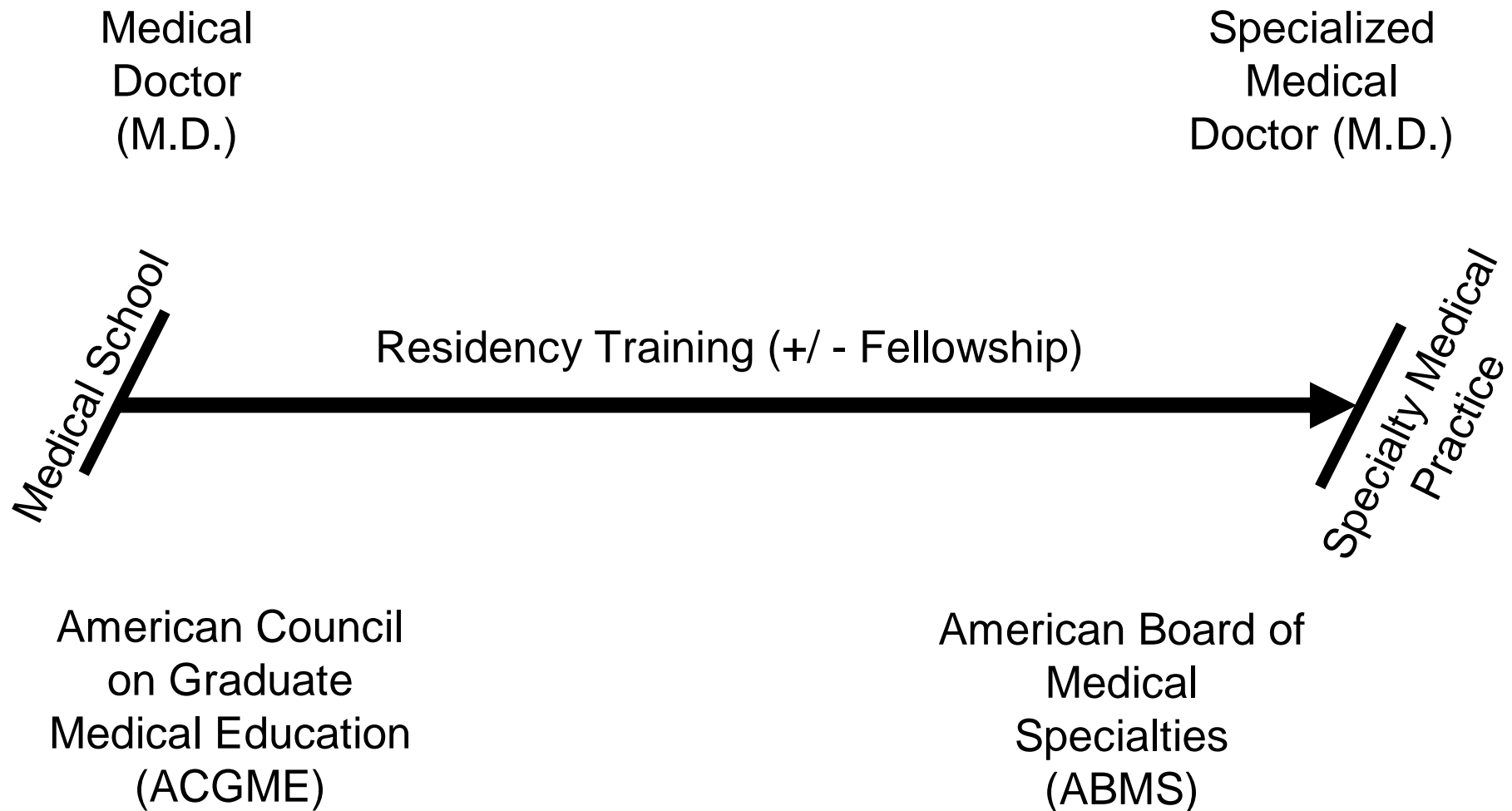
Hepatology

Rheumatology

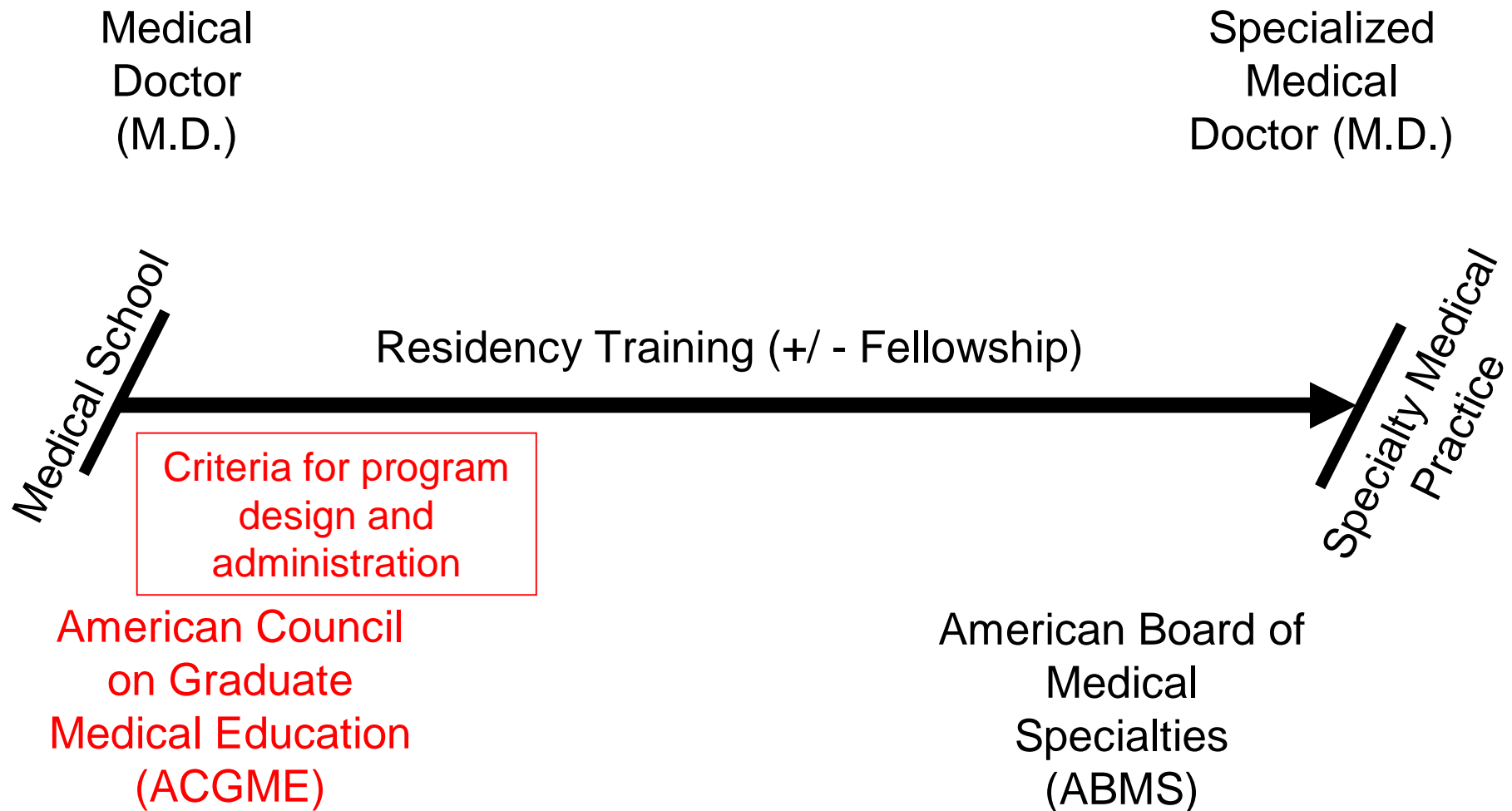
Pulmonology

Geriatrics

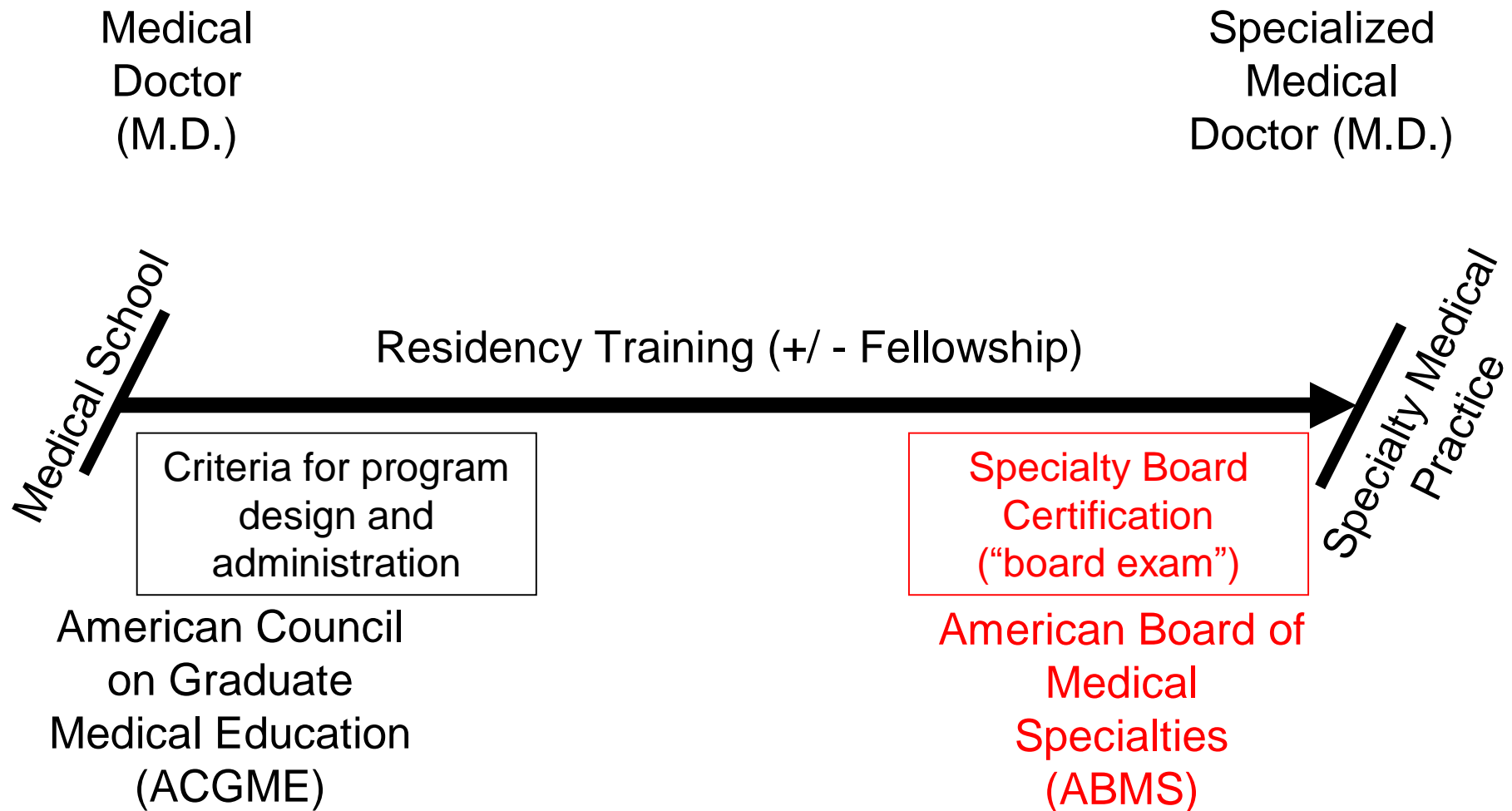
Who defines the curriculum?



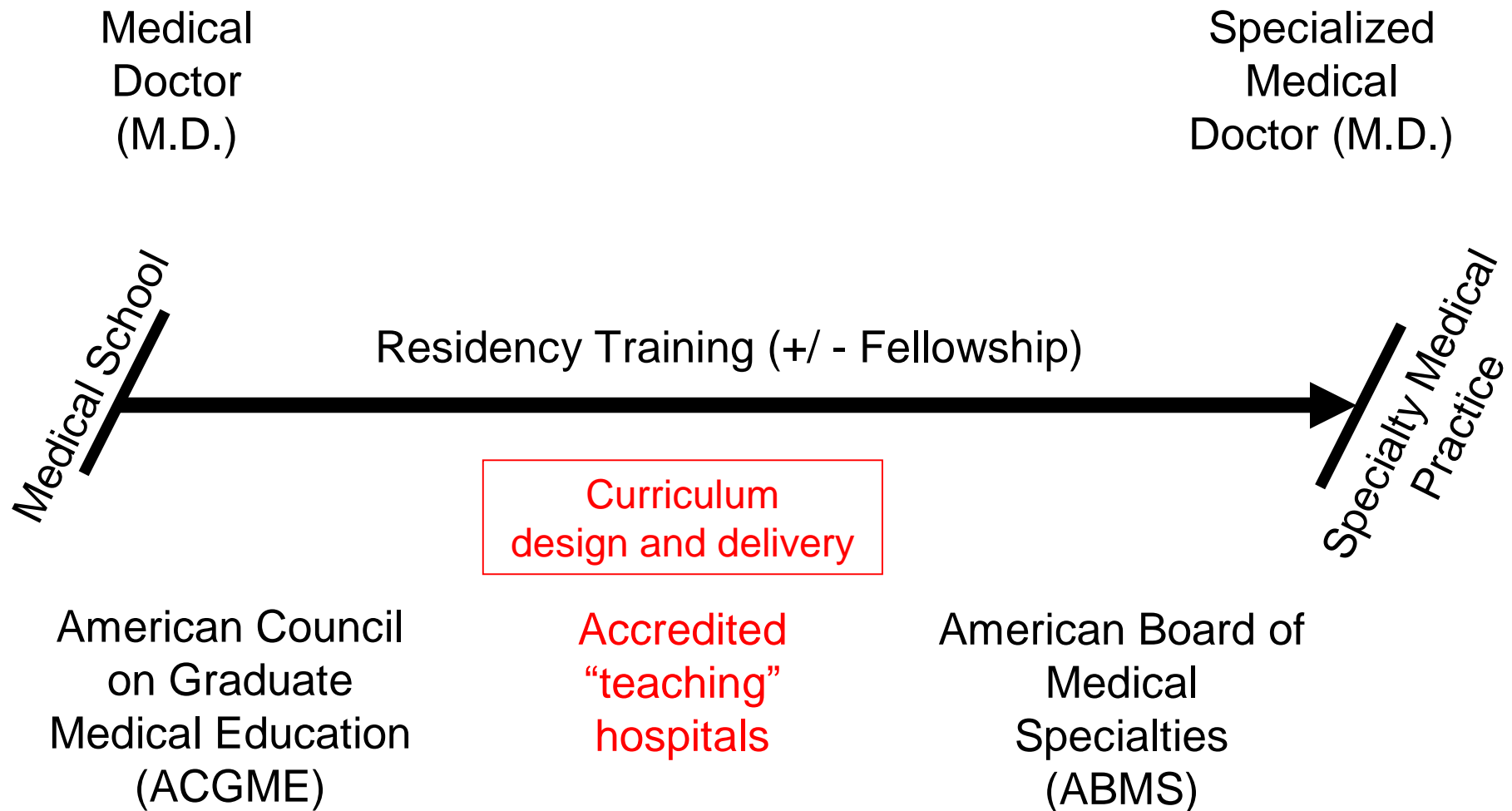
Who defines the curriculum?



Who defines the curriculum?



Who creates the curriculum?



“locally-developed” training

- Rotations through relevant medical services
(cardiology, radiology, surgery, etc.)
- Procedure labs
(high-fidelity simulation, such as Laerdal Sim-Man)
- Conferences
(interdepartmental meetings, journal club, grand rounds, etc.)
- other educational activities

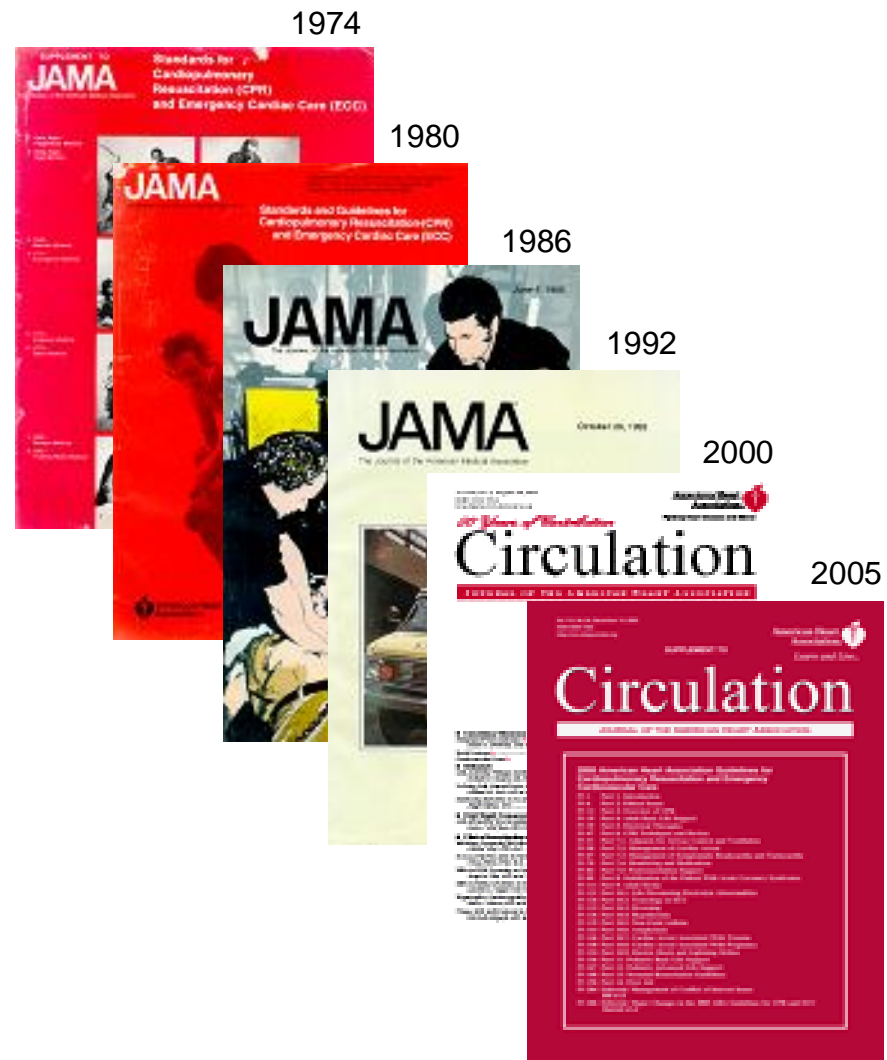
“Standard” training

- AHA Basic Life Support (BLS) – 4 hours
(required of all physicians)
- AHA Advanced Cardiovascular Life Support (ACLS) – 13.5 hours
(required prior to starting most specialty training programs,
especially Emergency Med., Intensive Care, Anesthesiology)
- AHA Pediatric Advanced Life Support (PALS) – 14 hours
(required for Pediatricians)
- AAP/AHA Neonatal Resuscitation Program (NRP) – 4 hours
(required for Pediatric intensive care specialists)

NOTE: all courses are renewed every 2 years. Renewal courses usually ~½ the length of initial training courses.

Advantages of using “standard” training courses from the American Heart Association

- Content is derived from the science-based AHA Guidelines



Advantages of using “standard” training courses from the American Heart Association

- Content is derived from the science-based AHA Guidelines
- Content is updated continually as new science emerges

ILCOR Advisory Statement

**Use of Automated External Defibrillators for Children:
An Update**
An Advisory Statement From the Pediatric Advanced Life Support Task Force, International Liaison Committee on Resuscitation

D. Barent, MD¹
G. Nichol, MD

ILCOR
On the basis of
Pediatric Advanced
Life Support (PALS
COR) has made the
2002):

- Automated external defibrillators (AEDs) should be used on children 1 to 8 years of age. The initial dose should be shockable rhythm shock for nonshockable rhythm.

In addition:
• Currently there is no recommendation for <1 year of age.
• For a lone rescuer, the activation of 1 minute of CPR is preferred to the activation of 2 minutes of CPR.

The American Heart Association is pleased to complete and submit this statement to you. It is available by calling 755-211-4596. Ask for more copies, call 41 Copyright Clearance Center, Inc. From the American Heart Association of Canada, Australia and New Zealand. This statement has been approved by the American Heart Association. Circulation is available.

ILCOR Advisory Statement

Therapeutic Hypothermia After Cardiac Arrest
An Advisory Statement by the Advanced Life Support Task Force of the International Liaison Committee on Resuscitation

J.P.

W.C.J. Kluwer
J.P. Nolan, MD

ILCOR
On the basis of the
Advanced Life Support (ALS)
Committee on the
recommendations:

- Therapeutic hypothermia (32°C to 34°C) is recommended for comatose survivors of out-of-hospital cardiac arrest.
- Active cooling should be initiated as soon as possible.

In addition, it is recommended that:
• The use of mild hypothermia (32°C to 34°C) is preferred to normothermia (36°C to 37°C) for comatose survivors of out-of-hospital cardiac arrest.

Every effort should be made to provide the best possible care to the patient. This statement was prepared by the International Liaison Committee on Resuscitation (ILCOR) and the American Heart Association (AHA). For more information, contact the American Heart Association, 520 North Dearborn Street, Dallas, TX 75226. Telephone: 214-761-5000. Fax: 214-761-5001. Copyright © 2002 by the American Heart Association, Dallas, TX. All rights reserved.

ILCOR Advisory Statement

Hands-Only (Compression-Only) Cardiopulmonary Resuscitation: A Call to Action for Bystander Response to Adults Who Experience Out-of-Hospital Sudden Cardiac Arrest
A Science Advisory for the Public From the American Heart Association Emergency Cardiovascular Care Committee

Michael R. Sayre, MD; Robert A. Berg, MD, FAHA; Diana M. Cave, RN, MSN; Richard L. Page, MD, FAHA; Jerald Potts, PhD, FAHA; Roger D. White, MD

Bystanders who witness the sudden collapse of an adult should activate the emergency medical services (EMS) system and provide high-quality chest compressions by pushing hard and fast in the middle of the victim's chest, with minimal interruptions. This recommendation is based on evaluation of recent scientific studies and consensus of the American Heart Association Emergency Cardiovascular Care (ECC) Committee. This science advisory is published to amend and clarify the "2005 American Heart Association (AHA) Guidelines for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC)" for bystanders who witness an adult out-of-hospital sudden cardiac arrest.

Ten years ago, the AHA commissioned a working group of resuscitation scientists to reassess the Association's inclusion of ventilations in the recommended sequence for bystander cardiopulmonary resuscitation (CPR). The working group evaluated peer-reviewed reports of laboratory and human research and summarized their findings in a 1997 statement.¹ The key conclusion of the statement was that "Current guidelines for performing mouth-to-mouth ventilation during CPR should not be changed at this time."¹

In the animal studies cited in the 1997 statement, when ventricular fibrillation arrest was of short (under 6 minutes) duration, the addition of rescue ventilations to chest compressions did not improve outcome compared with chest compressions alone (LOE 6*)²⁻⁴ Analysis of human data from a national out-of-hospital CPR registry documented no survival advantage to ventilations plus compressions compared with

the provision of chest compressions alone during bystander resuscitation (LOE 4*)^{5,6} Although these studies were not deemed sufficient to justify the elimination of ventilations from the bystander CPR sequence, the 1997 statement strongly encouraged further research that would focus on "...the timing, rate, and depth [of ventilations] as well as conditions under which respiratory assistance should be used." The statement also recommended "...more research on real-world obstacles to learning, remembering, and actually performing CPR..." In addition, the statement contained a secondary conclusion that "...provision of chest compression without mouth-to-mouth ventilation is far better than not attempting resuscitation at all."¹

The AHA's recent Guidelines for CPR and ECC have reflected the primary and secondary conclusions of the 1997 statement: "Laypersons should be encouraged to do compression-only CPR if they are unable or unwilling to provide rescue breaths (Class IIa), although the best method of CPR is compressions coordinated with ventilations."^{1,12} In addition, the Guidelines have recommended compression-only CPR for dispatcher-assisted instructions for untrained bystanders.^{10,12}

The 2005 AHA Guidelines for CPR and ECC noted the need to increase the prevalence and quality of bystander CPR. The Guidelines and training materials emphasized the importance of the delivery of high-quality chest compressions, that is, compressions of adequate rate and depth with full-chest recoil and minimal interruptions.¹² To limit the frequency of

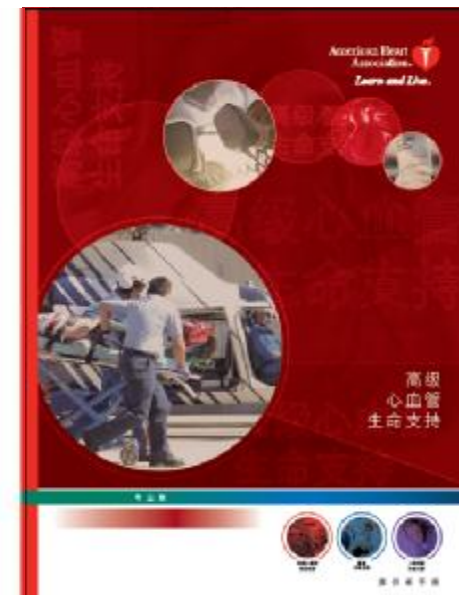
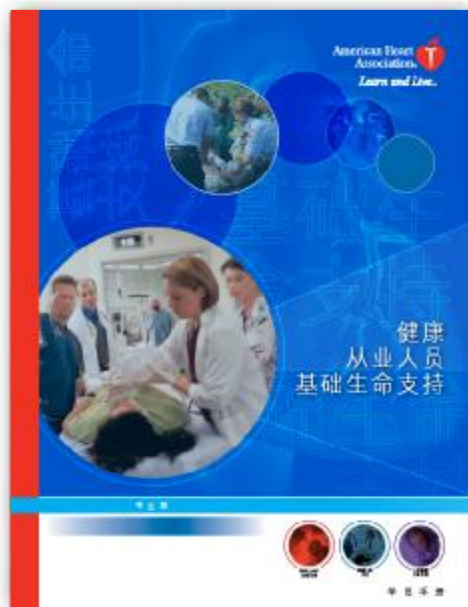
Advantages of using “standard” training courses from the American Heart Association

- Training programs are administered consistently, worldwide

Ø Program Administration Manual



Ø Textbooks and videos



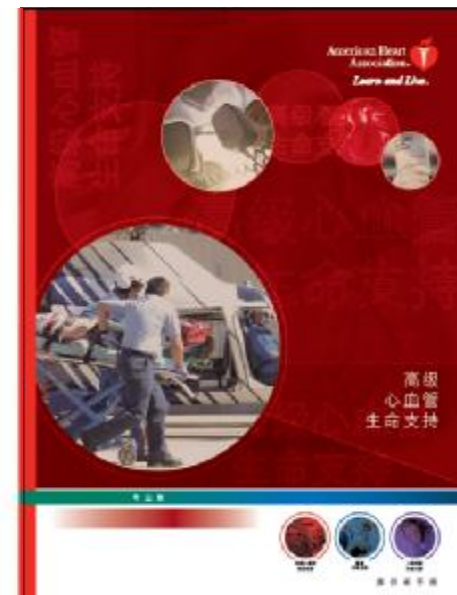
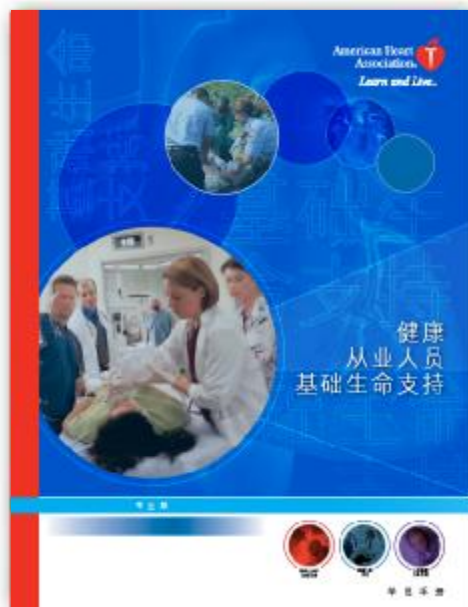
Advantages of using “standard” training courses from the American Heart Association

- Training programs are administered consistently, worldwide
- AHA credential is recognized, worldwide

Ø Program Administration Manual



Ø Textbooks and videos



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专业版

提供手册

Advantages of using "standard" training courses from the American Heart Association

- Educational design of courses is also science-based

ILCOR Advisory Statement

Education in Resuscitation An ILCOR Symposium



Resuscitation 87 (2006) 31–43



www.elsevier.com/locate/resuscitation

Effectiveness of a 30-min CPR self-instruction program for lay responders: a controlled randomized study[☆]

CONTINUING EDUCATION

Phyllis Berryman, RN, MBA, COHN-S/CM, FAOHN
Eileen Lukes, PhD, RN, COHN-S, CCM, FAOHN

Dough
On behalf of
Stroke Found
Zeal

The value of bystander CPR has been well documented. Resuscitation in this setting and the benefit conferred published before time^{1,2} suggest the victims of collapse fatally by someone successful in cardiac resuscitation. However, if services are well and not receive bystander CPR, but also is generally far from both skills are shown to be poor hypervisors. The 1-chomotor skills for ing, an issue of

The American Heart Association's relationship or a grant to complete and submit. This statement was prepared as available by 75231-4595. Ask for or more copies, call Copyright Clearance European Research and Innovation, MD, PhD Tom Andriantsaholain, MD, PhD Situmoran, MD, Research Resuscitation Center, MD, PhD, Center for (Lancet Foundation) Center. (Keywords: 1 This article is been (Circulation) 2005 © 2005 by the American Heart Association

Abstract

Background: 1 training. The of method with ok are underepro audio prompting to that of custom **Method:** Two to an intrate and by a senior **Results:** The p tition, proper controls. VSI is **Conclusions:** C type of training © 2005 Elsevier

Keywords: Aq;

1. Introduction

Increasing cardiopulmonary of the American organizations

[☆] A Spanish in Appendix at 10.1 [☆] Corresponding **Email address:**

0300-8572/\$ – see else 10.1016/j.res

Improving Workplace Safety Training Using a Self-Directed CPR-AED Learning Program

by Mary E. Man and Carolyn L. C

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Innovations in Basic Life Support Education for Healthcare Providers

Improve Cardiopulmonary Through

Carolyn L. Susan Kara Mary Cozza Deborah B. Mary Eliaz



journal homepage: www.elsevier.com/locate/resuscitation

Providing cardiopulmonary resuscitation is an essential competency for nurses. Nurse educators involved in staff development and continuing education spend numerous hours offering basic life support courses and conducting performance improvement activities such as mock codes. This study provides evidence that cardiopulmonary

Author's personal copy

Resuscitation 80 (2009) 304–308

Contents lists available at ScienceDirect

Resuscitation



Adequate training 1 important component includes time and instructors who between employee instructor-led course traditional instructor comes many of the attempting resuscit

Sudden cardiac heart function of death in t mately 310,000 An outside the hospital more than 166,000 (American Heart However, SCA is n pulmonary resuscit 2005; Cummins, O Although the a workplace is in Administration (O

ABOUT THE AUTHOR Dr. Mary E. Man, Professor, and the Meyer P doctoral student and grant and Associate Chair, School of Nursing, Dr. K. Washington State Univ

Ms. Berryman is Senior Ability Management Dip at Health Services Unit Mass, AZ

High-quality car particularly e lations, can impro (Gallagher, Lombard et al., 1993; Wik, 30 effectively and effica a cardiac arrest is an care providers (HCP of Nursing, 2007; A 2005; Joint Commis Organizations, 2007 personnel, who try healthcare settings

Simulation and education

Feasibility and reliability of remote assessment of PALS psychomotor skills via interactive videoconferencing[☆]

Douglas L. Weeks^{a,b,*}, Dianne M. Molaberry^c

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Keywords: Adult; Simulation; Assessment; Association; Cardiorespiratory; Resuscitation; Emergency; Medication; Resuscitation; Cardiac

ABSTRACT

AIM: This study determined inter-rater agreement between skill assessments provided by on-site PALS evaluators with ratings from evaluations at a remote site viewing the same skill performance via videoconferenced networks. **Subjects:** Subjects about feasibility of remote evaluation were also obtained from the evaluators and PALS course participants. **Methods:** Two remote and two on-site resuscitation independently used performance of 27 course participants who performed cardiac and shock/ventilatory emergency care cases. **Inter-rater reliability** was assessed with the intraclass correlation coefficient (ICC). **Reliability** was assessed with kappa of evaluators and course participants. **Case cases** were under the direction of the remote evaluators. **Results:** The ICC for overall agreement on parts/total decisions was 0.897 for the cardiac cases and 0.868 for the shock/ventilatory cases. **Perfect agreement** was reached on 52 of 54 parts/total decisions. **Across all evaluations**, all case cases, and all participants, 2584 ratings of individual skill criteria were provided.

Advantages of using “standard” training courses from the American Heart Association

- Educational design of courses is also science-based

- Instructor development is extensive

- Ø Certified Provider

- Ø Core Instructor Training

- Ø Course-specific instructor training

- Ø Supervised Teaching

Advantages of using “standard” training courses from the American Heart Association

- Educational design of courses is also science-based
- Instructor development is extensive
- Instructor support materials



BLS



PALS



Advantages of using “standard” training courses from the American Heart Association

- Educational design of courses is also science-based

- Instructor development is extensive

- Instructor support materials

- **Quality assurance program for AHA training network**

- Ø **Random monitoring of instructors**

- Ø **Ongoing training center guidance**

AHA Training Worldwide

- Over 7 million healthcare providers trained each year, worldwide
- More than *2000 locations in over 100 countries* are authorized providers of AHA training programs
- This easily makes the AHA the largest single provider of medical education programs in the world





Summary

- Criteria for medical specialty programs are developed by the ACGME
- Specific curricula are developed “locally” but do include some standard training programs from the organizations like the AHA (for example, BLS, ACLS or PALS)
- AHA training programs provide many advantages, including:
 - Ø evidence-based treatment recommendations
 - Ø current science
 - Ø science-based educational design
 - Ø student and instructor support materials
 - Ø quality assurance
 - Ø international recognition

Thanks!

Questions?

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