Summary of NRP™
6th Edition Materials

The American Academy of Pediatrics 6th Edition NRP materials represent a major shift in the approach to the NRP educational methodology and course structure. The focus of the NRP 6th Edition has changed from a slide and lecture format to a flexible agenda that includes self-study of the textbook and a required online examination prior to the NRP course. Classroom time will focus on hands-on skills training, simulation-based learning, and debriefing exercises with the neonatal resuscitation team.

Textbook of Neonatal Resuscitation & DVD, 6th Edition


The 2010 guidelines were developed by the NRP Steering Committee based on the Consensus on Science and Treatment Recommendations (CoSTR) of the International Liaison Committee on Resuscitation (ILCOR) Neonatal Delegation. The new guidelines were published in Pediatrics last October and are included as a reprint in the 6th Edition textbook. For more information about the 2010 AAP/AHA Guidelines, refer to the article that appeared in the Fall/Winter 2010 edition of NRP Instructor Update.

"THE MOST SIGNIFICANT CONTENT UPDATES INCLUDE THE APPLICATION OF PULSE OXIMETRY TO GUIDE THE USE OF SUPPLEMENTAL OXYGEN DURING NEONATAL RESUSCITATION."

"One of the most significant content updates is the application of pulse oximetry to guide the use of supplemental oxygen during neonatal resuscitation. This topic is covered in detail in Lessons 1-3 in the textbook and probably represents the biggest change in the NRP 6th Edition," explained John Kattwinkel, MD, FAAP, editor of the Textbook of Neonatal Resuscitation, 4th and 5th Editions as well as the 6th edition.

"In the 5th Edition, we recommended the use of 100% oxygen during resuscitation because sufficient evidence to the contrary wasn’t available at the time," said Dr Kattwinkel, Professor of Pediatrics at the University of Virginia in Charlottesville. “However, based on the latest scientific evidence, we now know that increasing a newborn’s oxygen level as fast as possible with 100% supplemental oxygen is probably not the best approach. If we increase the oxygen level too fast, it may cause tissue injury. The latest science tells us we should be very careful of that.”

Guideline recommendations encourage having pulse oximeters and blended oxygen available in delivery areas and pulse oximetry is highly recommended for use whenever supplemental oxygen, positive-pressure ventilation, or continuous positive airway pressure (CPAP) are considered necessary.

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NRP™ Acknowledgements

The Neonatal Resuscitation Program™ (NRP) Steering Committee offers the NRP Instructor Update to all AAP/AHA NRP instructors.

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Statements and opinions expressed in this publication are those of the authors and are not necessarily those of the American Academy of Pediatrics or American Heart Association.

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NRP™ Instructor Requirements

Attention NRP Instructors and instructor candidates!
As the launch of the NRP 6th Edition continues throughout the year, please keep in mind the following new requirements. Use this “at-a-glance” list as a resource and share with your colleagues, post near your computer, on your bulletin board, or in another convenient location within your institution.

Eligibility
In order to qualify as an NRP Hospital-based Instructor and Regional Trainer, you must be a physician, registered nurse (including advanced practice nurse), respiratory care practitioner, or physician assistant who has hospital experience with the care of newborns in the delivery room, newborn nursery, or newborn intensive care setting. Exceptions to these requirements will no longer be granted.

NRP Instructor DVD
All current and future NRP Instructors are required to purchase their own copy of the NRP Instructor DVD: An Interactive Tool for Facilitation of Simulation-based Learning and complete the DVD by January 1, 2012. The DVD is available now for $64.95.

Online Examination
Beginning January 1, 2013, the NRP 6th Edition course format will require current NRP Instructors to complete and pass all nine lessons of the mandatory online examination every two years in accordance with their renewal date.

However, instructors do not need to wait until 2013 or later to take the exam. Beginning in the spring of 2011, NRP Instructors may take the online examination once a year, free of charge. Continuing education credit will be offered only once every two years.

NRP Instructor candidates must take the online examination and pass all nine lessons in the 30 days prior to taking an instructor course. The online examination must be completed within 14 days of beginning the examination, or by the expiration date on your instructor card, whichever date occurs first. The cost for the exam will be $15-$25, depending on your institution’s status and number of people taking the examination at your institution. The written test will no longer be available with the NRP 6th Edition materials.

HAVE QUESTIONS? CONTACT THE AAP LIFE SUPPORT STAFF AT LIFESUPPORT@AAP.ORG.
The launch of the NRP 6th Edition may prompt questions related to the use of a T-piece resuscitator, pressure manometer and oxygen blender. These devices and associated equipment are used during neonatal resuscitation. The following is a summary of common questions NRP Instructors may encounter.

### T-Piece Resuscitator

**Q. Can I reuse the circuit of the T-piece resuscitator and simply change the mask between patients?**

**A.** No. It is recommended that the circuit and mask be changed with every new patient application. Users can retain the gas supply line to the T-piece resuscitator between patients.

**Q. Do I have to use 100% oxygen to drive the T-piece resuscitator?**

**A.** No. The T-piece resuscitator can also be driven with an air/oxygen blender at FiO₂ ranging from 21% to 100%.

**Q. How long should I occlude the aperture when I want to deliver a breath?**

**A.** Occlusion times should match normal inspiratory times for the patient size. Generally, one-half second is adequate. However, longer inspiratory times may be necessary when using a mask to ventilate a patient with high airway resistance or low lung compliance. Improvement in heart rate and chest rise will indicate that manually delivered breaths are effective when administering positive-pressure ventilation (PPV).

**Q. How much flow should I use to drive the T-piece resuscitator?**

**A.** Based on manufacturer recommendations, flow rates for most devices should fall between 5 and 15 LPM. A good starting point is 10 LPM. Flow can be adjusted depending upon need. If you are having difficulty reaching your desired PIP with normal occlusion times, you may have to increase the flow rate. On the other hand, if you are reaching PIP too quickly, you may be using excessive flows. As always, watch chest rise and adjust for normal inflation patterns. Contact the manufacturer of your T-piece resuscitator to verify specific guidelines and recommendations.

### Pressure Manometers

**Q. When I use our flow-inflating bag during resuscitations, the pressure manometer never seems to work. What am I doing wrong?**

**A.** You must create a good seal with your resuscitation mask before any pressure will be generated or measured. If you have a good seal, check that you have a pressure line attached to your resuscitation device and the manometer. Also, be aware that some disposable bags have additional ports built into them that may be open when you prepare to use a bag for the first time. Leaks in the system will not only render your manometer useless, but will interfere with your ability to ventilate optimally.

If the manometer continues to malfunction, there may be a problem with the manometer. Manometers are rated for certain pressures. Ensure that the one you are using has a range from 0 to +60 cmH₂O or -60 to +60 cmH₂O. Otherwise, the manometer may be functional, but designed for different applications.

**Q. My employer just purchased a case of disposable manometers. Do these things really work?**

**A.** Yes. They fit snugly into the open port on the elbow of the resuscitation device. They are spring loaded and rated to operate at the pressure range used during manual ventilation. Your product may be equipped with a color-coded adjustable ring around the base of your disposable manometer. Set the pressure level at the point where you intend on limiting your ventilation. This serves as a visual reminder and has no mechanical function. It will not prevent excessive pressures during ventilation.
Occasionally, I hear a loud high-pitch noise when I attach our blender to wall outlets. Is this normal?

Yes. Most commercial blenders are equipped with a Reed valve. The Reed valve is designed to alert users when there is an imbalance of gas pressures coming from the two gas hoses, such as when the oxygen hose is attached incorrectly to the outlet.

The alarm shuts off once the gas hoses are properly attached and is designed as a safety feature in the event one of the gas sources you are using fails. If that happens, the gas mixture (FiO₂) will be affected and the concentration delivered to the patient will be different from the dial setting. If this alarm occurs during periods of use, check to make sure that both hoses are securely attached to the gas sources.

How can I be sure I am delivering the FiO₂ that I have set on the air/oxygen blender?

Ask someone from the clinical engineering department at your institution (if you have one) to perform routine maintenance on each of your blenders, including checking the calibration. Make sure they have affixed a label on the blender indicating most recent date of service and your next scheduled date of service.

If you don’t have a clinical engineering department, check the output of the blender to ensure it’s delivering the desired concentration. Attach a single length of oxygen supply tubing to the blender’s output and feed into a T-piece connector. At the “t” port, insert a standard oxygen analyzer that has been previously calibrated. A single length of corrugated tubing on the opposite end can serve as a distal reservoir. With the flow of gas from the blender running through this setup, turn on the analyzer. Confirm that the analyzed value is close to the set FiO₂. Note that the blender and analyzer have a tolerance built into their design, so values are rarely exact.

Our blender has two oxygen flow meters coming off it. Does this mean I can only deliver 100% oxygen with this device?

No. Most institutions use flow meters typically designed for oxygen delivery. If you have both air and oxygen entering the flow meter, the oxygen concentration set on the blender is the concentration that will be delivered to the patient. For example, you may see the blender output hose connected to an oxygen flow meter, but if the blender is set at a concentration of 0.21, you will be delivering “room air” through the flow meter.

If I have two oxygen flow meters coming off of the blender, can I use both of them at the same time to operate two different devices?

Yes. The 50 psi pressure is sufficient to drive multiple ports on a single blender.

The diagrams in the textbook show a blender with a green and a yellow hose attached. Ours doesn’t look like that. Ours has two white hoses plugged into the wall. Is this right?

Yes. Most blenders use a green/yellow set of hoses to easily distinguish which gas they are supplying (green for oxygen, yellow for air.) However, some hoses aren’t color coded and may be black or white. In this case, check the connectors that fit into the wall or tank. Each medical gas tank has its own unique pin configuration on its connectors. As long as one is suitable for oxygen and the other for air, the color of the hoses will not matter.

Again, be sure to have your oxygen blender checked regularly to ensure your blender is operating correctly.

Please note that the equipment and procedures detailed above do not represent an exclusive course of treatment. Differences in local protocols, equipment, and setup are likely, and variations due to individual circumstances and nature of medical oversight may be appropriate. Readers are advised to review the manufacturer’s directions for the actual therapeutic equipment utilized within their institution and to consult with the respiratory therapist at their institution about specific questions.

A special thanks to John T. Gallagher, RRT-NPS, Critical Care Coordinator, Pediatric Respiratory Care at Rainbow Babies & Children’s Hospital in Cleveland, Ohio for providing answers to these questions. Gallagher serves as the American Association of Respiratory Care (AARC) liaison to the NRP Steering Committee.
The NRP Steering Committee spent the last several years developing this DVD to help NRP Instructors transition from the 5th Edition format to the 6th Edition’s new educational methodology and course structure. As you move forward with the NRP 6th Edition, consider the following tips to help you navigate the NRP Instructor DVD and maximize all that it has to offer.

Tip #1: Keep an open mind. The DVD was designed to illustrate the basics of scenario design and debriefing for NRP Instructors. Even if you consider yourself to be more experienced as a simulation instructor, open your mind to the possibilities. You may still pick up some useful tips while watching the DVD.

“The DVD was designed for the novice, but we also tried to include some things for NRP instructors who are considered to have more advanced neonatal resuscitation performance skills and previous exposure to simulation-based learning and debriefing strategies,” said Lou Halamek, MD, FAAP, Associate Professor, Division of Neonatal and Developmental Medicine, at Stanford University in Palo Alto and Cochair of the NRP Steering Committee. “The Instructor DVD is a drastic departure from what the NRP has ever done before.”

Tip #2: Realize the purpose of the DVD is to present effective and ineffective examples of performance. Some of the scenario errors illustrated on the Instructor DVD (portrayed by actors) may seem very obvious and exaggerated. However, these scenarios were selected because they demonstrate common mistakes made by inexperienced simulation instructors.

Tip #3: Do not watch the DVD in one sitting. Rather, it’s to be considered an ongoing resource and a guide for simulation-based learning. Plan to spend several weeks or even months watching the DVD. Observe, reflect, and consider what could have been done to improve the educational experience.

“Realistically, you cannot watch the Instructor DVD once during the day, from start to finish, and expect to reap all of the benefits,” explained Dr Halamek. “We want NRP Instructors to watch the DVD often, videotape their own debriefings, and use the tools presented in the DVD to improve their skills.”

Tip #4: Explore the flexibility of the Instructor DVD. Don’t expect to simply watch the DVD from beginning to end. NRP Instructors can review sections of the DVD multiple times and return to previous segments to clarify content. “NRP Instructors can decide what they want to watch. They can queue up any segment on the DVD and work through a variety of scenarios,” Dr Halamek said.

Tip #5: Think big picture. When watching the DVD, don’t consider each scenario or debriefing as an isolated experience. Instead, take a step back, look at the bigger picture and ask yourself questions that will help make your simulations an even better experience.

- What factors lead to poor conduct of a scenario?
- How can I facilitate a good debriefing after a poorly run scenario?
- How can I use video to enhance learning during debriefing?
- What tools are available at my institution that can enhance the learner’s experience?

Tip #6: Be patient. It will take time, practice, and even a little bit of patience to learn the principles of scenario design and debriefing. “Once you feel that you have a solid understanding of the basics, start incorporating them into your programs,” Dr Halamek said. “This is just the beginning of what’s to come. This methodology represents a career-long educational opportunity.”

Tip #7: Observe other people in action and “model” their approach to creating a scenario and debriefing. “Expert modeling represents what can be done when you have the luxury of time, expertise, and resources to devote to planning a complex scenario and debriefing exercise with a small group of people,” explained Dr Halamek. “Although this may not be a frequent occurrence in a typical NRP session, it’s worthwhile to consider what is possible to accomplish when time and additional resources allow.”

Once the unique code has been entered and activated, the Instructor DVD will only function on the computer on which it was registered.
For nearly a year, NRP Instructors have had the option of purchasing an electronic “eBook” version of the Textbook of Neonatal Resuscitation, 5th Edition.

Now that the launch of the 6th Edition materials is well underway, an electronic version of the 6th Edition textbook is available with a Spanish edition to follow this summer. Additionally, the Instructor Manual for Neonatal Resuscitation will also be available as an eBook.

Users can access the 6th Edition eBook through a dedicated Web site, www.aapebooks.org, from any computer linked to the Internet. Interactive resuscitation skills video clips from the 6th Edition textbook DVD demonstrating a variety of resuscitation interventions are integrated into the text via video icons. Other features, including graphics, photos, charts, diagrams, and algorithms that appear in the printed textbook, are accessible in the eBook version.

The electronic platform allows users to read full text on individual pages or in a two-page spread, quickly search for a particular topic or lesson, add notes and highlight specific sections of the textbook, and bookmark sections for later reference. The eBook version also includes an interactive table of contents so users can easily and quickly access any section of the textbook.

User flexibility is a key component of the eBook. Information from the electronic textbook is downloadable for offline viewing anytime, and users have the option of adjusting the size of each page (by zooming in and out) and printing pages as needed.

Still not sure? Users can preview the 6th Edition textbook to test drive the variety of features the eBook has to offer. Visit www.aapebooks.org and search for the NRP 6th Edition textbook. Click on the “View Inside” link and give it a try!

And there’s even more. Later this summer, the 6th Edition eBook will be available on the iPad™ as an AAP eBooks application (app) and as a downloadable electronic publication (epub) file for use on a variety of electronic devices such as the Kindle™ and Nook™ e-book readers.

Currently, the electronic version of the 6th Edition textbook is available for purchase individually or at a bulk institution rate. Pricing for individual and institutional subscriptions varies; individual pricing is $55.95 (the same as the printed version of the 6th Edition textbook) and institutional pricing begins at $90, depending on the number of users. Materials can be ordered through the AAP online bookstore, www.aap.org/bookstore or via e-mail at ebooks@aap.org.


Finally, 6th Edition eBook licensing options are available to hospitals and other institutions. This allows the institution to post NRP materials electronically on its internal network, such as a library or other internal resource portal, thus providing users with unlimited access to the materials anytime, 24/7, via a specific IP address and Web site.

Have you used the eBook platform? Would you like to share your experiences with other NRP Instructors? Send your feedback to the AAP Life Support staff at lifesupport@aap.org. Perhaps your story will appear in a future edition of the NRP Instructor Update!
The NRP Steering Committee is presenting this event to instructors via a streaming webinar. An unlimited number of participants can listen at each site with only one registration fee. (Note: Continuing Education Credit for more than five attendees requires an additional fee.)

This unique and informative program is being offered on two different dates to give as many instructors as possible the opportunity to participate in this exciting and timely program. You will be able to ask questions of the faculty during the question-and-answer sessions and participate in audience polling with immediate results.

Webinar Objectives:
- Describe the ILCOR evidence-based evaluation process, and discuss implications of the new guidelines on the NRP algorithm.
- State scientific changes to the 6th Edition NRP textbook, and discuss why there are differences between NRP, PALS, and APLS.
- Recommend strategies for implementing the new recommendations, such as how to keep ELBW babies warm, how to manage oxygen if your nursery isn’t equipped with oximeters and compressed air, and how to establish IV access while still ventilating and giving chest compressions.

Faculty:
John Kattwinkel, MD, FAAP
Jeffrey Perlman, MB, ChB, FAAP
Myra Wyckoff, MD, FAAP
Jeanette Zaichkin, RN, MN, NNP-BC

Webinar Credit:
This program has been submitted to the American Academy of Pediatrics for continuing education credit.
This program has been submitted to the Illinois Nurses Association for continuing education credit.
This program has been submitted to the American Association for Respiratory Care for continuing education credit.

To receive credit, registrants will be required to complete and return an evaluation form to verify participation.

Be prepared for the exciting changes coming to the NRP! Join other NRP instructors from around the globe as members of the NRP Steering Committee introduce new NRP scientific updates for instructors.
Times will be the same for all webinars
1:00 PM-3:00 PM Eastern
12:00 PM-2:00 PM Central
11:00 AM-1:00 PM Mountain
10:00 AM-12:00 PM Pacific

June 7 & June 21, 2011

Convenient and Time-Saving:
Webinars allow you to avoid traffic and parking challenges. In fact, there is no travel expense or time at all. Participants can call from a hospital, office, home, or anywhere there is a telephone. With the site license pricing, registrants can invite other participants to join in, discuss these important issues, and save money. Each session lasts only two hours. If you are not able to attend, you may purchase access to an On Demand streaming archive of the presentation.

Interactive and Fast-Paced:
The faculty’s interaction with you, the listener, will make this program enjoyable to listen to, and you can ask questions wherever you are. This feature is very much like participating in a talk radio program.

What You Will Need:
For video & audio: An Internet connection is required to view the visual information. No special hardware is needed – a dial-up connection will work fine. You will be able to watch the presentation while the speakers annotate their slides. Consider using a large monitor or a projection unit to allow a group to view the information.

For audio only: A phone is all that is needed, but a speakerphone is required for the audio if several people want to “attend” the program.

What We Will Send You:
Several days before the webinar(s), registrants will receive:

- Instructions on how to attend this webinar, including a toll-free number, course code, and PIN numbers to access the program.

- Either a URL to obtain the handouts via e-mail or a hard copy of the materials via FedEx. Registrants will need to duplicate the materials for others attending the webinar at your location.

- A link to a roster form and evaluations to be completed and returned for credit verification.

Program:

**Spring Science Webinar Series**

**Jeffrey Perlman, MB, ChB, FAAP**
- ILCOR evidence evaluation process
- Questions considered by CoSTR
- Strategies for managing Extremely Low Birth Weight (ELBW) newborns

**John Kattwinkel, MD, FAAP**
- Review of the updated treatment algorithm
- New oxygenation and ventilation strategies
- Implications of new guidelines for equipment and staffing

**Myra Wyckoff, MD, FAAP**
- Compressions: Changes & Non-Changes
- Instructor development and the NRP 6th Edition

“This unique and informative program is being offered on two different dates to give as many instructors as possible the opportunity to participate in this exciting and timely program.”
The site fee for this program is $79 per location. This site fee includes one Internet connection, one telephone connection at one location, one master set of handouts (with permission to make additional copies for the participants at your location), an unlimited number of participants from your organization in one listening room and Continuing Education credit for up to five participants. Credit for additional participants is available for an additional fee. Remember there is no limit to the number of listeners at any one site, but there is an additional charge to issue credit for more than five attendees.* You will be asked to submit names of all participants requesting CE credit to the AAP at the completion of the teleconference.

Select Program Date:

- June 7, 2011
- June 21, 2011

Times will be the same for all seminars:

1:00 PM-3:00 PM Eastern
12:00 PM-2:00 PM Central
11:00 AM-1:00 PM Mountain
10:00 AM-12:00 PM Pacific

Can’t view the live webinar? Watch the On Demand Presentation instead for just $60.

Special Note: Individuals who register for the webinar can purchase the streaming presentation for only $30.

*CE Credit is available only to those participating in the live event.

Registrant Name: ____________________________________________________________

Professional Designation: ______________________________________________________

Organization Name: ___________________________________________________________

Street Address (no P.O. Box): __________________________________________________

City/State/Zip: _________________________________________________________________

Business Telephone & Extension: _______________________________________________

Fax Number: _______________________________ E-mail Address: * _______________________

* We will e-mail you instructions for the program as well as the URL for accessing your conference materials. You will need Acrobat Reader, available free at www.adobe.com.

☐ Please check here if you are unable to receive your materials via the Web. We will ship a hard copy to you.

See reverse side for payment info.
Four Easy Ways to Register

Note: Payment Must Accompany Registration

1.) Phone: Call KRM’s customer service line with your credit card information at 800/775-7654.

2.) Fax: Complete form with credit card information and fax to 800/676-0734.

3.) Mail: KRM Information Services, Inc.
P.O. Box 1187
Eau Claire, WI 54702-1187

4.) Online: www.krm.com/aap

Registration Fee $79 per location
(including credit for up to 5 participants)

Additional Credit Fee

- 6-10 participants. . . . . . . add $40
- 11-15 participants. . . . . . . add $75
- 16-20 participants. . . . . . . add $100
- 21-49 participants. . . . . . . add $200
- 50 or more participants . . . . add $500

$_________________

On Demand Streaming Presentation

- $30 each (with webinar registration)
- $60 each (without webinar registration)

$_________________

Phone Charges

- Within the U.S. – no charge
- Outside the U.S., U.S. Virgin Islands, and Puerto Rico – add $23

$_________________

Cancelation Policy
To cancel your registration for this event and receive a full refund, you must contact KRM customer service at 800/775-7654 no later than 48-hours prior to the scheduled start of the webinar. Any cancellations received after access information and supplemental materials have been sent (48 hours prior to the start of the webinar) will receive access to the On Demand presentation or a transfer to one of the other webinar dates.

Refund Policy
Full refunds will be given before:
- June 5th for the June 7th Webinar
- June 19th for the June 21st Webinar

There will be no refunds after these dates.
Mark your calendars for Friday, October 14, 2011 and plan to participate in the NRP Current Issues Seminar to be held in conjunction with the 2011 American Academy of Pediatrics (AAP) National Conference and Exhibition (NCE) in Boston. This seminar will be appropriate for any NRP instructors or health care professionals interested in neonatal resuscitation. This seminar will focus on instructor development and skills for effective debriefing and interactive learning. (Please note: This is NOT an NRP course.)

Plenary sessions include:
- Oxygen Use in the Delivery Room
- Neonatal Chest Compressions

Breakout sessions include:
- NRP Classes 2011 and Beyond
- Recommended Practice Changes
- Case Based Discussions

Objectives:
After participation in this program, attendees should be able to:
- State the evidentiary basis for changes to the NRP resuscitation algorithm
- Identify at least two strategies to enhance the efficacy of simulation and debriefing
- Describe how instructor development directly impacts the NRP course experience

Seminar Credit
This program has been submitted to the American Academy of Pediatrics for continuing education credit.
This program has been submitted to the Illinois Nurses Association for continuing education credit.
This program has been submitted to the American Association for Respiratory Care for continuing education credit.

Don't Wait! Register NOW!
To participate in the NRP Seminar, you must register for the AAP National Conference and Exhibition (NCE). The NRP seminar fee is an additional $75, which includes a luncheon and syllabus on CD. The 2011 NCE will be held October 15-18, at the Convention and Exhibition Center, Boston. Consider staying to participate in the NCE! Your advance registration to the full NCE includes admission to all general sessions, section meetings, and committee events.

Please note: The NCE exhibit floor does not open until Saturday, October 15th.

Interested individuals can obtain AAP National Conference and Exhibition registration materials in one of three ways:
Fax: 847/228-1281
Phone: 888/227-1770
Online: www.aap.org/nce

Registration opens the first week of June.

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**NRP Current Issues Seminar: New NRP “Pops” in Boston • October 14th, 2011**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-7:45AM</td>
<td>Registration will open at 7:30AM</td>
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<tr>
<td>8:30-8:45AM</td>
<td>Welcome &amp; Overview</td>
<td>“Oh What a Beautiful Morning…”</td>
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<tr>
<td></td>
<td></td>
<td>Christopher Colby, MD, FAAP</td>
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<td></td>
<td></td>
<td>Myra Wyckoff, MD, FAAP</td>
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<tr>
<td>8:45-9:15AM</td>
<td>NRP 6th Edition Hot Topics</td>
<td>Jane McGowan, MD, FAAP (NRP Cochair)</td>
</tr>
<tr>
<td>9:15-9:45AM</td>
<td>Oxygen Use in the Delivery Room – Current Knowledge and Unanswered Questions</td>
<td>“So Long, Farewell, Auf Wiedersehen, Goodbye…”</td>
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<td></td>
<td>John Kattwinkel, MD, FAAP</td>
</tr>
<tr>
<td>9:45-10:00AM</td>
<td>Young Investigator Grant Award Recipient #1</td>
<td>“You’ve Got to be Carefully Taught…” NRP</td>
</tr>
<tr>
<td>10:00-10:15AM</td>
<td>Break</td>
<td>“Getting to Know You…”</td>
</tr>
<tr>
<td>10:15-10:45AM</td>
<td>Neonatal Chest Compressions – Why is the Newborn Unique?</td>
<td>“I Got Rhythm…” “With 3 Compressions to 1 Breath”</td>
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<td></td>
<td></td>
<td>Myra Wyckoff, MD, FAAP</td>
</tr>
<tr>
<td>10:45-11:00AM</td>
<td>Young Investigator Grant Award Recipient #2</td>
<td>“Baby it’s Cold Outside…” “And Even Worse in the Delivery Room”</td>
</tr>
<tr>
<td>11:00-11:30AM</td>
<td>Special Considerations in Neonatal Airway Management</td>
<td>“There is Nothing Like a… LMA…Nothing in the World!”</td>
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<td>Gary Weiner, MD, FAAP</td>
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<tr>
<td>11:30AM-12:00PM</td>
<td>Ethical Considerations in Neonatal Resuscitation</td>
<td>“Maybe…” We Should or Maybe We Shouldn’t</td>
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<td>Jeffrey Perlman, MB, ChB, FAAP</td>
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<tr>
<td>12:00-12:15PM</td>
<td>Lunch</td>
<td>“We’ve Got a Lot of Livin’ Left to Do…”</td>
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<tr>
<td></td>
<td></td>
<td>George Little, MD, FAAP</td>
</tr>
<tr>
<td>12:15-1:00PM</td>
<td>Lunch</td>
<td>“Put on a Happy Face…”</td>
</tr>
<tr>
<td>1:00-2:30PM</td>
<td>Concurrent Sessions</td>
<td>“Shall We Dance…”</td>
</tr>
<tr>
<td>2:30-2:45PM</td>
<td>Break</td>
<td>“Happy Talk…”</td>
</tr>
<tr>
<td>2:45-4:15PM</td>
<td>Repeat of Concurrent Sessions</td>
<td>“Shall We Dance…Reprise”</td>
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<tr>
<td>4:15PM</td>
<td>Adjourn</td>
<td>“I Could Have Danced All Night…”</td>
</tr>
<tr>
<td>4:15-4:45PM</td>
<td>Debriefing (Optional)</td>
<td>“All That Jazz…”</td>
</tr>
</tbody>
</table>

**Going Green!**

The 2011 NRP Current Issues Seminar utilizes an online syllabus, and participants will not be provided paper handouts. Participants are encouraged to bring a laptop or print handouts in advance. Attendees will receive a web link to view the handouts prior to the 2011 NRP Current Issues Seminar, and upon registration at the NCE will receive a CD-ROM containing digital copies.
For years, the aviation industry and the military have integrated simulation-based learning and teamwork exercises into training to help minimize human error. Now, these models are also being used in medical environments. The American Academy of Pediatrics (AAP) Neonatal Resuscitation Program (NRP) has incorporated simulation and debriefing exercises as well as teambuilding methodologies into its 6th Edition curriculum to teach neonatal resuscitation techniques in the classroom. To assist in this transition, Eduardo Salas, PhD, from the Institute for Simulation and Training at the University of Central Florida in Orlando, shared his expertise in teambuilding and simulation training with NRP Instructors during the NRP’s 2010 Current Issues Seminar at the AAP National Conference and Exhibition in San Francisco last October.

During his presentation, titled Team Training: Turning a Team of Experts into an Expert Team, Dr Salas explained that there’s been an “explosion” over the last several decades in the amount of research being conducted by organizations and institutions regarding the concept of teambuilding. Research has involved the study of team training, advanced training technology, decision-making under stressful situations, learning methodologies, and performance assessment.

“Research has found that teams with clearly defined roles and responsibilities perform better,” said Dr Salas, Pegasus Professor of Psychology and University Trustee Chair, Department of Psychology, at the University of Central Florida. “We know more about what contributes to skill acquisition, how to design, deliver, and evaluate team training, and how to diagnose strengths and weaknesses within a team.”

Dr Salas shared what he calls the “Six Cs” of teamwork: Cooperation, Coordination, Communication, Cognition, Coaching, and Conflict. “Essentially, team competency is organized around the ‘Six Cs,’” said Dr Salas.

The “Six Cs” of Teamwork:

**Cooperation** focuses on the attitudes and beliefs, or “motivational drivers,” of a team. According to Dr Salas, this involves team orientation, collective efficacy, and mutual trust. “This aspect prompts the ‘I like to be part of the team’ concept”.

**Coordination** involves behavioral mechanisms that a team puts in place in order to execute a task. “When members of a team step up, they tend to be more supportive, flexible, and can adapt to a situation,” explained Dr Salas.

**Communication** is all about information protocol. “Are members of the team delivering key information in a timely manner and using the appropriate terminology to accurately describe the situation? Is the information clear and concise? These are activities teams can practice to make perfect,” said Dr Salas.

**Cognition** is a shared understanding of a team’s core mission. “Research suggests that effective teams possess shared mental models. Essentially, they collectively have an understanding of the situation, familiarity with their teammates and of the task at hand,” explained Dr Salas. “It’s a shared understanding of knowing when to get involved, when to jump in and help, and when to resolve conflict.”

**Coaching** translates into team leadership and can take on different scenarios depending on the situation. “Your team may have a designated leader, but sometimes a situation may change the dynamics and another teammate may need to take over. At this point the leader becomes the coach. Team leadership promotes teamwork, cares about each team member, and sets ground rules,” said Dr Salas.

**Conflict** is inevitable and unavoidable. It’s imperative for the team to implement procedures to help resolve conflict when it occurs. “The key is to have mutual trust. Without trust, people will not speak up and will not feel psychologically safe,” Dr Salas said. “Teams need to develop solutions to resolve conflict. The team leader can do this by setting up a scenario followed by a debriefing exercise.”

All six of the components in the “Six Cs’ of teamwork” are essential to a team attaining its goal, whether it's a successful rocket launch or a successful resuscitation.

For more information on Dr Salas’ presentation, visit the NRP Website at [www.aap.org/nrp](http://www.aap.org/nrp). On the homepage, click on the NRP Current Issues Presentations link and scroll down to Team Training: Turning a Team of Experts into an Expert Team presentation.
The Helping Babies Breathe (HBB) initiative was launched in June 2010 and since then has taken the world – literally – by storm. The HBB initiative is an off-shoot of the American Academy of Pediatrics (AAP) Neonatal Resuscitation Program (NRP). Although both programs follow the Consensus on Science and Treatment Recommendations from the International Liaison Committee on Resuscitation (ILCOR), HBB has a few differences that set it apart.

“The NRP has a very different emphasis. The NRP’s primary focus is on advanced resuscitation techniques within the first few minutes of birth, with an emphasis on administering positive-pressure ventilation during neonatal resuscitation,” explained Susan Niermeyer, MD, MPH, FAAP, lead editor of HBB. “The emphasis of action for HBB is centered on The Golden Minute® after birth in resource-limited areas of the world.”

According to the HBB Web site, HBB was developed on the premise that every baby deserves assessment at birth and simple newborn care. The emphasis is on having a skilled attendant at every birth, rapid assessment of each baby, with temperature support, stimulation to breathe, and assisted ventilation, if needed, provided for all newborns within The Golden Minute, i.e., the first minute after birth.

The Golden Minute refers to the concept that within one minute of birth, a baby should be breathing on its own or should be ventilated with a bag and mask. The HBB Action Plan identifies the steps that a birth attendant must take immediately after birth to evaluate the baby and stimulate breathing.

The program is based on the initial steps of neonatal resuscitation, with less emphasis placed on team building and communication. “Oftentimes, there is no team,” explained Dr Niermeyer. “There may be a single birth attendant caring for the mother and baby at home or at a district hospital. People are so excited when they get their hands on the HBB program because it is so easy to use,” Dr Niermeyer said. “It’s a very new style of learning, but once people get the hang of it, you can see their eyes light up because you know they get it, they own it, and they can replicate it.”

HBB is an initiative of the AAP in collaboration with the U.S. Agency for International Development (USAID), Saving Newborn Lives/Save the Children, the National Institute of Child Health and Development (NICHD), Laerdal Global Health, and a number of other global health stakeholders.

“The emphasis of action for helping babies breathe is centered on the golden minute after birth in resource-limited areas of the world.”
The Instructor Manual for Neonatal Resuscitation has been totally revamped to reflect the changes in the new NRP education methodology and follows the material in the NRP 6th Edition textbook. Ten chapters (versus eight in the 5th Edition instructor manual) cover course information relevant to NRP instructors at all experience levels. Every chapter features an NRP instructor self-assessment, which is a list of questions reviewing the key points outlined in each chapter. “The self-assessment is a new addition to the instructor manual. It provides NRP instructors and instructor candidates with the opportunity to double-check their knowledge of NRP materials, the course curriculum, and instructor responsibilities prior to attending an instructor course,” said Jeanette Zaichkin, RN, MN, NNP-BC, editor of the instructor manual.

Chapters include details on the changing role of the NRP Instructor and learner, an explanation of NRP course format changes, and information on the new requirements for NRP Provider and Instructor courses. Tips on how to set up a classroom and organize supplies and equipment for a typical hospital-based training program are included in the manual. The instructor manual features a chapter solely dedicated to explaining the new online examination.

The online examination replaces the written test and has been completely revised to match the corresponding lessons in the textbook. “The online examination represents just one component in the way we’re changing the educational approach to the NRP,” explained Steven A. Ringer, MD, PhD, FAAP, Chief, Division of Newborn Medicine at Brigham & Women’s Hospital in Boston and member of the NRP Steering Committee. “We are shifting the NRP away from the traditional ‘schoolroom’ slide and lecture format and written exam. Just passing the test isn’t the goal,” Dr Ringer said. “We also want the learners to (master) the material so they’re ready to apply the knowledge, including cognitive, technical, and behavioral components, when the need arises to resuscitate a newborn.” “Completing the NRP online examination before attending the course will save at least two hours of time in the classroom,” Zaichkin said. “This time can be spent reviewing neonatal resuscitation skills and practicing simulation and debriefing exercises.”

Beginning January 1, 2013, the NRP 6th Edition course format also requires current NRP Instructors to complete and pass all nine lessons of the mandatory online examination every two years according to their renewal date. Although NRP instructors may take the online exam once per year free of charge beginning in the spring of 2011, continuing education credit for instructors who pass the exam will be offered only once every two years. NRP instructor candidates must take the online examination and pass all nine lessons in the 30 days prior to taking an instructor course. The online examination must be completed within 14 days of beginning the examination, or by the expiration date on your instructor card, whichever date occurs first. HealthStream has been selected as the provider for the NRP 6th Edition evaluation.

ALTHOUGH NRP INSTRUCTORS MAY TAKE THE ONLINE EXAM ONCE PER YEAR FREE OF CHARGE BEGINNING IN THE SPRING OF 2011, CONTINUING EDUCATION CREDIT FOR INSTRUCTORS WHO PASS THE EXAM WILL BE OFFERED ONLY ONCE EVERY TWO YEARS.
The **NRP Instructor DVD: An Interactive Tool for Facilitation of Simulation-based Learning** is a completely new learning tool added to the lineup of NRP 6th Edition materials. It is designed to illustrate the basics of simulation-based learning, including scenario design and debriefing.

The DVD compares different types of scenarios, conducted effectively and ineffectively, with sophisticated technology and traditional manikins, and with and without video for debriefing. (See article on tips for using the *NRP Instructor DVD* on page 6 of this newsletter.)

The DVD also features resuscitation skills videos that demonstrate how to perform a variety of neonatal resuscitation procedures, including use of a pulse oximeter and laryngeal mask airway, how to draw up epinephrine, and how to prepare and insert an emergency umbilical venous catheter. Examples of simulation-based learning techniques, segments on how to facilitate effective debriefings with the neonatal resuscitation team, and tips for creating scenarios in a classroom setting are also included in the DVD.

*We are aware that many NRP instructors have experience with advanced neonatal resuscitation performance skills, simulation techniques, and debriefing strategies. The Instructor DVD will serve as a very good review for those who already possess these skills."

“We are aware that many NRP instructors have experience with advanced neonatal resuscitation performance skills, simulation techniques, and debriefing strategies. The Instructor DVD will serve as a very good review for those who already possess these skills,” said Zaichkin. “The DVD will also provide NRP instructors who are less experienced with simulation and debriefing with an excellent foundation for improving their skills.”

All current and future NRP instructors are required to purchase their own copy of the **NRP Instructor DVD: An Interactive Tool for Facilitation of Simulation-based Learning** and complete the DVD by January 1, 2012. The same requirement will apply to individuals planning to take the instructor course for the first time after January 1, 2012.

**Simply NRP™, 2nd Edition**

An optional learning tool available to NRP Instructors is the **Simply NRP DVD, 2nd Edition**. This self-directed educational video and equipment are designed to provide hands-on practice opportunities in a flexible learning environment, such as the learner’s home or office. The 40-minute DVD focuses on the technical skills of Lessons 1-4 from the *Textbook of Neonatal Resuscitation, 6th Edition*.

The kit also includes a segment that advises instructors how to utilize the features of the *NeoNatalie™* simulator, which is now included in the kit. The *NeoNatalie* includes squeeze bulbs to simulate breathing, crying and a palpable umbilical response. The kit also includes a simulated equipment control panel, a bulb syringe, oxygen tubing, bag-and-mask, pulse oximeter probe, stethoscope, 20-mL syringe and feeding tube, and a blanket.

For more information about the **NRP 6th Edition**, contact AAP Life Support staff at lifesupport@aap.org. To order NRP 6th Edition materials, visit the AAP Bookstore at www.aap.org/bookstore.
NRP™ Research Grants Awarded

Congratulations to the following individuals who received 2010 NRP Grant Awards

Research Grant Award:
Sharda Udassi, MD, FAAP
University of Florida
Gainesville, FL
“Alternative Chest Compression and Decompression Techniques in Neonatal Piglet Model of Cardiac Arrest.”

Young Investigator Awards:
Sara K. Berkelhamer, MD, FAAP
Children’s Memorial Hospital Northwestern University
Chicago, IL
“Hyperoxia-Induced Oxidative Stress in the Developing Lung.”

Ahmed Moussa, MD
CHU Sainte-Justine
Montreal, QC, Canada
“Teaching Neonatal Endotracheal Intubation with the Videolaryngoscope, a Randomized Controlled Trial.”

John Eric Sparks, MD
University of Texas Southwestern Medical Center
Dallas, TX
“Randomized, Controlled Pilot Study of Asynchronous Compression and Ventilation Cycles vs Standard NRP CPR for Resuscitation in a Neonatal Swine Asphyxia Model.”

Congratulations to our research grant awardees!

The Fall/Winter issue of the NRP Instructor Update will include information about the 2012 NRP Research Grant Program and Young Investigator Award opportunities.

NRP™ 6th Edition Implementation Date

Attention NRP Instructors! This is a friendly reminder that as of January 1, 2012, instructors must use the new 6th Edition NRP materials for all courses taught in 2012 and thereafter. This timeline allows institutions more than 8 months to purchase the new materials and provides NRP Instructors adequate time to familiarize themselves with the new guidelines and materials. Thank you for your continued support of the NRP!

NRP® Instructor DVD Third-Party Purchase Disclaimer

The American Academy of Pediatrics (AAP) cannot guarantee the functionality of NRP Instructor DVDs purchased through third-party sites, such as eBay. Each DVD carries a unique activation code required for registration purposes. Once the unique code has been entered and activated, the DVD will only function on the computer on which it was registered. To ensure a secure transaction, we encourage you to purchase your DVD through the AAP. The AAP cannot replace DVDs purchased through third-party sites.