



Documentation of Neonatal Resuscitation



Documentation of neonatal resuscitation is a crucial skill for resuscitation team members. Complete, detailed records are important for clinical decision-making, for the coordination of ongoing care among providers, and as a source of quality improvement and research data. However, the sense of urgency surrounding many resuscitations can make accurate, thorough documentation challenging. Preparation can make this essential task easier.

Why is resuscitation documentation important?

Without accurate, complete documentation even the best resuscitation can appear inadequate to those who review the events. Documentation provides critical information for guiding continuing care for the neonate, both during resuscitation and in post-resuscitation care. Resuscitation records are essential for communication among care providers and for reference when discussing events with family members.

Data from the patient record also aids in quality assurance and improvement. Complete documentation enables reviewers to ascertain if resuscitation care meets current standards and helps identify system barriers to the provision of optimal care. In addition, observed trends can serve as a base for determining team education needs.

Aggregate data from resuscitations can be used to describe the population undergoing resuscitation and compare individual institutional outcomes to similar institutions. When data from multiple hospitals is combined, information may be identified that could contribute to research that leads to improved quality of newborn resuscitation care.

Finally, should legal issues arise, detailed records are essential for personnel who depend on documentation to help them re-create resuscitation events, often years after the experience occurred.

What is the best way to document a resuscitation?

Although no single best charting method exists for all settings, exemplary documentation is guided by several principles.

Events during resuscitation should be documented by a dedicated recorder as they occur and supplemented with a retrospective narrative summary. Although individual institutional requirements vary, consider using a resuscitation form, at a minimum, when neonates require chest compressions and/or medication administration.

Documentation of real-time events takes priority over historical or demographic information that can easily and accurately be recorded after the resuscitation. For example, documenting the names of all providers present or noting prenatal information relevant to the neonate's condition is important; however, recording pre-ductal saturation readings and timing of initiation of chest compression should take precedence.

Consider utilizing a single reference for time, usually an Apgar timer in delivery room situations. When team members use various clocks and watches during resuscitation, potential differences in time readings can cause confusion and errors in event documentation.

Finally, a retrospective, narrative description of interventions and their timing should be written following resuscitation. A comprehensive and accurately written narrative note can serve as the basis for objectively re-creating the events that occurred.

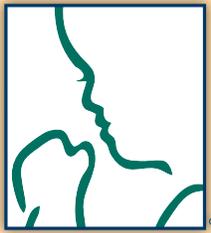
What type of forms should be used for resuscitation documentation?

Whether hand-written or electronic, resuscitation recording forms should be easily accessible and allow rapid data entry. Often a check box-based form, with allowance for brief notes, facilitates real-time recording and helps ensure an accurate and detailed narrative note.

Because adapting adult resuscitation records for neonatal use is often cumbersome, consider utilizing a neonatal specific recording form. Form design should meet the need to capture critical information in an easy-to-record format and avoid the temptation to include too much information that results in a confusing form.

Well designed recording forms that follow the NRP flow-diagram sequence enable rapid data entry when the team adheres to the algorithm. If assessment steps or interventions are skipped by the team, the recorder can quickly detect the variance and guide the team back on track. Specific prompts for interventions, such as increasing oxygen concentration during chest compressions or appropriate dosing for medications, can also be included on the neonatal documentation form.

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NRP® Acknowledgements

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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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The Neonatal Resuscitation Program® (NRP®) Steering Committee offers the *NRP Instructor Update* to all AAP/AHA NRP Instructors.

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Your Provider Course: Managing Differing Levels of Expertise



NRP® provider courses allow for a great degree of flexibility, enabling instructors to provide an interactive learning environment that challenges and stimulates adult learners. While ensuring that the core components are included, instructors may tailor the curriculum of each NRP provider course to meet their learners' objectives.

Successful completion of the NRP provider course requires that the learner pass the NRP online examination (minimum requirement is Lessons 1-4 and 9), successfully complete the objectives of the Integrated Skills Station, and participate in the Simulation and Debriefing component of the course. NRP courses are not of any prescribed length because the length of the course depends on the number of learning objectives and the skill level of the learners.

Not All Learners Need the Basics

When deciding which elements of the NRP course best meet the learners' needs, remember that Performance Skills Stations are optional. NRP novices and learners who have few opportunities to resuscitate newborns often benefit from review and practice of each skill. However, when your learners are leaders in resuscitation and experts at all skills, you may choose to start the hands-on portion of your NRP course with the Integrated Skills Station.

NRP instructors may know the resuscitation capabilities of learners in the course because they participate in newborn resuscitation with these team members on a regular basis. The instructor may also use the Experience Survey tool (page 32 of the *Instructor Manual for Neonatal Resuscitation*, 2011) that enables the learners to self-assess their level of expertise.

It is wise to divide into teams of 3 or 4 learners per instructor whose members share the same experience levels and learning objectives. In that way, the instructor can tailor the skills acquisition portion of the course to meet the needs of each team.

Your Teams May Resemble Groups in These Categories:

Group 1: This team consists of novices, learners who rarely resuscitate newborns, and learners who desire comprehensive review and practice. This group benefits from reviewing and practicing each skill relevant to their learning objectives and participating in an Integrated Skills Station for each team member before moving on to Simulation and Debriefing.

Group 2: This team consists of learners with current skills and fair expertise who desire a quick review of equipment check, initial steps, positive-pressure ventilation with MR SOPA, and chest compressions, but desire more in-depth review and hands-on practice time for intubation, laryngeal mask airway placement, preparing and administering medications, and preparing and placing emergency umbilical venous catheters. A skilled instructor may be able to accomplish the objectives of the Integrated Skills Station while performing short scenarios during Performance Skills Stations (see the *NRP Instructor Update Spring/Summer 2012* at http://www2.aap.org/nrp/docs/IU/2012_SpringSummer_iu.pdf for details about this approach).

Group 3: This team consists of expert newborn resuscitators who require a few warm-up scenarios to assess any unexpected learning needs, a few minutes to ask a couple of questions, and then are ready to perform each learner's Integrated Skills Station. The warm-up scenarios or the Simulation and Debriefing component may serve as learners' Integrated Skills Stations if the instructor is skilled and experienced with this approach; however, even experienced providers may have previously unrecognized deficits in their skills that need correction. If the warm-up scenarios reveal gaps in basic technique or errors in the NRP Flow-Diagram sequence, the instructor supplements the team learning with review and practice of needed elements. This group usually moves quickly through the skills acquisition components of the course and spends most of their course time on simulation and debriefing.

Simulation Reflects Real Life Scenarios

When learners have demonstrated understanding of the how and when of resuscitation interventions by conducting short scenarios using interventions with correct technique and sequence, they are ready for the simulation and debriefing component of the NRP provider course. Simulation and debriefing focuses on developing effective teamwork and communication. Therefore, the participants in these scenarios should reflect the composition of the teams that would perform actual newborn resuscitation in your setting. This usually entails re-grouping your learners into an interprofessional mix of providers (for example, an MD and/or NNP, Respiratory Therapist, and RN) who may have varying levels of expertise. The team members with strong resuscitation skills must help those who may need assistance recalling and implementing everything learned in Performance Skills Stations. This reflects real life, develops teamwork and communication skills, and usually ensures an interesting and useful debriefing.

It may be helpful for the less experienced resuscitators in your course to watch a few scenarios with an expert team in action. This behavioral modeling, first observed and then discussed during debriefing, gives less experienced resuscitators an opportunity to see NRP interventions "put together" so that they can attempt to emulate these skills when it's their turn to participate in scenarios.

The perfect mix of learners on a team – those who share the same level of expertise, similar learning objectives, and reflect the professionals used for resuscitation in your setting – is not always possible. However, assessing the learning needs of your course participants and building your courses so that learners are engaged and challenged at their appropriate skill level will result in the most useful and satisfying experience for both you and your learners.

Planning for the 7th Edition

NRP® Founding Principle: A qualified team for every resuscitation or anticipated resuscitation, and a qualified individual present at every delivery.



Since the release of the last edition, the NRP Steering Committee has been working diligently on planning the program's future direction. Over the past two years, committee members have participated in a strategic planning session, conducted an NRP instructor survey, held a series of instructor focus groups, and implemented an Instructor Development Task Force with the overarching goal of preparing for the 7th Edition and beyond. Below are brief summaries of these activities.

In March 2012, the committee attended a two-day strategic planning meeting to lay the groundwork for the future of NRP. The committee divided into three major subgroups, (1) science and research, (2) instructor development, and (3) ongoing (episodic) learning. Each subgroup was asked to focus on key issues and challenges, and share findings with the group. This helped create goals and objectives for the new Strategic Plan and identify an implementation plan. Additionally, the committee revised the program's founding principle to state, "a *qualified team* for every resuscitation or anticipated resuscitation, and a qualified individual present at every delivery."

The committee acknowledges that as NRP evolves into the 7th edition, so too, do the needs of NRP instructors. In February 2013, approximately 10% of NRP instructors responded to a survey and affirmed their successful transition to simulation-based learning and indicated the need for additional resources for networking and ongoing instructor development. In April and May 2013, more than 25 instructors – including hospital-based nurse and physician instructors and regional trainers from academic institutions and hospitals throughout the United States – participated in a series of telephone focus group to share thoughts and opinions related to key issues. Focus group participants indicated they would like additional guidance on preparing scenarios and debriefing, as well as standardized teaching tools for the classroom.

An inaugural Instructor Development Task Force (IDTF) meeting was held in January 2014. The IDTF consists of NRP Steering Committee members, liaisons, consultants, and active NRP Instructors recruited from the spring 2013 instructor focus groups. IDTF members spent considerable time analyzing data from the instructor survey and focus groups, with the goal of identifying helpful new resources and clarifying the roles and responsibilities of NRP instructors.

THE 7TH EDITION WILL FOCUS ON TEAMWORK AND COMMUNICATION WHILE PROVIDING MORE GUIDANCE FOR ONGOING INSTRUCTOR DEVELOPMENT AND QUALITY LEARNING FOR COURSE PARTICIPANTS.

As we move toward the 7th edition, the NRP Steering Committee is using the strategic plan and results from the instructor surveys, focus groups, and Instructor Development Task Force recommendations as a roadmap to develop instructor education and resources. Jeanette Zaichkin, RN, MN, NNP-BC, Editor of the Instructor Manual, noted, "Throughout the strategic planning process, it was exciting to see the next edition coming together. The 7th edition will focus on teamwork and communication while providing more guidance for ongoing instructor development and quality learning for course participants."

DEVELOPMENT TASK FORCE (IDTF) MEMBERS SPENT CONSIDERABLE TIME ANALYZING DATA FROM THE INSTRUCTOR SURVEY AND FOCUS GROUPS, WITH THE GOAL OF IDENTIFYING HELPFUL NEW RESOURCES AND CLARIFYING THE ROLES AND RESPONSIBILITIES OF NRP INSTRUCTORS.

Introducing Congenital Anomalies into Your Delivery Room Simulations

Neonates with congenital anomalies, even when prenatally diagnosed, add more stress to the resuscitation environment. Basic NRP principles still hold for the resuscitation of these newborns, but how do these anomalies affect the way we manage them in the delivery room? Simulation is ideal for working through the issues of resuscitating newborns with congenital defects and reinforcing the NRP Key Behavioral Skills.

Before presenting learners with a scenario that involves a congenital defect, be sure that the scenario meets the learning objectives of your team. Is this the team that would resuscitate this newborn? For example, mother-baby nurses who do not attend births would not benefit from this type of scenario. However, the delivery room resuscitation team that has demonstrated proficiency with the NRP flow-diagram may be ready for the challenge of more complex scenarios involving congenital defects.

Many management aspects of resuscitation that include a congenital defect are institution specific. You may wish to precede the resuscitation scenario with information about the supplies, equipment, and resources necessary for the expected infant. Where are the supplies for protecting the bowel complicated by gastroschisis, how is the omphalocele sac protected, how is the baby with a myelomeningocele positioned, and how will your team activate additional resources and stabilize the newborn with Transposition of the Great Arteries? After the supplies are located and technical skills for resuscitation and stabilization of the congenital defect have been mastered, the scenario can focus on

the critical aspects of teamwork and communication necessary when team members bring differing areas of expertise to meet the special needs of the infant.

Adding simulations of neonates with congenital anomalies to your simulation curriculum does not need to be complicated. For most of these anomalies, an approximation made with objects easy to find in any craft store is enough to engage learners and help suspend disbelief. Instructions using simple materials for creating an omphalocele and myelomeningocele are in Appendix F of the *Instructor Manual for Neonatal Resuscitation* (2011). For defects that are more difficult to add to the manikin, such as craniofacial defects, hanging a picture on the radiant warmer of how the infant looks in real life may also help.

Simulating resuscitation of an infant with a congenital defect presents challenges for your learners. For the best simulation experience, be sure that learners have mastered basic NRP skills. Then prepare the setting to resemble the actual clinical setting as closely as possible, ensure that learners have the supplies and resources necessary to cover the special needs of the infant, and focus on teamwork and communication. The scenario may surprise you with gaps in hospital systems or processes, present unexpected learning opportunities, and uncover additional education needs. The experienced NRP instructor understands that these discoveries are at the heart of simulation-based learning. Corrections will result in a more highly skilled team and better quality of care for the newborn with special needs.

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Who is best suited to document during a resuscitation?

Often the role of resuscitation recorder is perceived as undesirable or insignificant, and the least experienced team member may be assigned this duty. If this person is unfamiliar with resuscitation steps, the recording form, or what data is important to record, documentation can be incomplete. The recorder does not need to have expert hands-on skills, but must know guidelines of neonatal resuscitation well enough to understand what information is important to record. Without experience, the recorder may have difficulty determining what is most important to write down.

Although accurate and thorough documentation is sometimes a neglected task, it is an essential one and warrants the same preparation as any other skill in neonatal resuscitation. At a minimum the recorder should be familiar with the documentation record, the data required, and when to record that data. For this reason, it is important to include the recorder role during simulation at provider courses and during unit mock codes. Ideally, a select group of trained individuals should serve as recorders and become integral members of the resuscitation team.

Documentation accuracy depends on the recorder's ability to observe and record simultaneous tasks performed by multiple individuals in a confined space. Because multi-tasking can disrupt observation and communication, the recorder should not be responsible for other roles in the resuscitation.

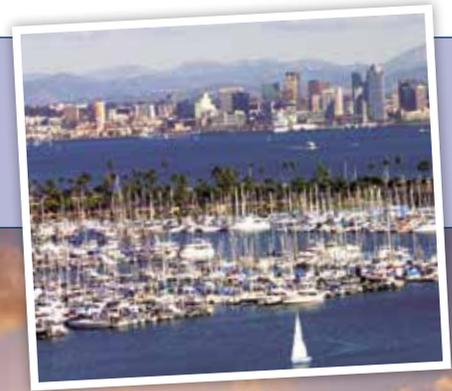
To help ensure documentation of essential information, team members should remember to direct announcements of interventions and assessments to the recorder, particularly if multiple interventions are occurring simultaneously and the recorder is on periphery of the resuscitation space.

In addition to recording resuscitation events, a skilled recorder can serve as a prompter for the resuscitation team leader, in particular when assessment data is missing, interventions are indicated, or time intervals expire. For example, the recorder may note the need to increase to 100% oxygen as the team initiates chest compressions. Or, when the infant's heart rate remains less than 60 beats per minute after 60 seconds of effective ventilation and chest compressions, the recorder may prompt the team to give epinephrine. Used in this way, a well designed resuscitation record becomes a living document used by the recorder to help manage the resuscitation.

A skilled resuscitation team includes a skilled and valued recorder. The role of the recorder, combined with a useful documentation form, ensures that the sequence of interventions and the newborn's response are accurately documented. This information is useful for communicating the plan of care to others, quality improvement and research, and accurately recalling events if needed in the future.

2014 NRP® Current Issues Seminar

Registration Opens the First Week of June

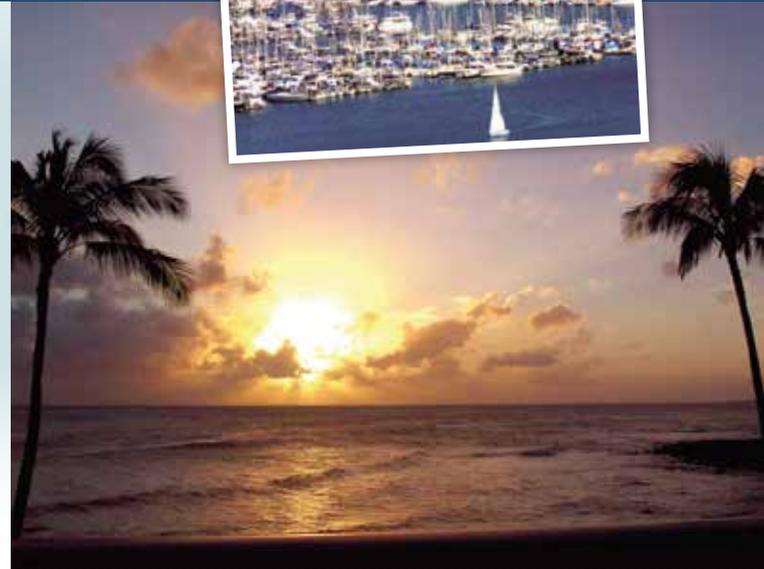


AAP experience

National Conference & Exhibition

October 11 – 14, 2014 | San Diego

EXPLORE NEW
HORIZONS



Save the date now for Friday, October 10, 2014 and plan to participate in the **NRP Current Issues Seminar** to be held in conjunction with the 2014 American Academy of Pediatrics (AAP) National Conference and Exhibition (NCE) in San Diego, CA.

This seminar will be appropriate for any NRP instructors and healthcare professionals interested and clinically involved with neonatal resuscitation. Topics this year will focus on instructor development, effective debriefing skills, and learner engagement.

PLEASE NOTE: THIS IS NOT AN NRP COURSE.

Plenary Sessions Include:

- How We Are Impacted by Human Factors
- Communication in Patient Safety
- An Update on ILCOR
- NRP of 2050 – Where the Strategic Plan is Taking Us
- Successful Strategies for Debriefing Simulated and Real Neonatal Resuscitations
- Technology and the Delivery Room

Breakout Sessions Include:

- Top NRP Questions Posed by You
- MicroSimulation Demonstration
- Using Team Training to Engage Learners
- Influential Articles in Resuscitation

Seminar Objectives:

After participation in this seminar, attendees should be able to:

- Identify examples of how we are impacted by human factors
- Examine how communication can affect patient safety
- Review the International Liaison Committee on Resuscitation (ILCOR) science updates that are the foundation for NRP practices
- Explain where the NRP's strategic plan is taking the program in the future
- Recognize successful strategies for debriefing simulated and real neonatal resuscitations
- Describe the future technological innovations in the Delivery Room
- Explain microsimulation and future applications within NRP
- Review team training techniques to engage learners
- Evaluate influential articles in resuscitation

To participate in this NRP Current Issues Seminar, you must register for the AAP National Conference and Exhibition. **The NRP seminar fee is an additional \$85**, which will include a box lunch.

The 2014 National Conference and Exhibition will be held at the San Diego Convention Center **October 11-14, 2014 in San Diego, CA**. Once you attend the NRP Current Issues Seminar, consider staying to participate in the NCE! Your registration to the full NCE includes admission to all general sessions, section meetings, and committee events.

Please note: The NCE exhibit floor will not open until Saturday, October 11th.

AAP NATIONAL CONFERENCE AND EXHIBITION REGISTRATION CAN BE FOUND AT WWW.AAP.ORG/NCE.

The 2014 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 two weeks prior to the 2014 NRP Current Issues Seminar.

NRP Current Issues Seminar: Friday, October 10th, 2014

7:30-8:30AM	Registration
8:30-8:40AM	Welcome <i>Eric C. Eichenwald, MD, FAAP, Program Chair</i> <i>Anne Ades, MD, FAAP, Program Chair</i>
8:40-9:00AM	How We Are Impacted By Human Factors <i>Gary Hamill, EdD</i>
9:00-9:20AM	NRP Grant Research Presentation 1 <i>Heather French, MD</i>
9:20-9:50AM	Communication in Patient Safety <i>EJ Thomas, MD, MPH</i>
9:50-10:10AM	BREAK
10:10-10:20AM	Update on International Liaison Committee on Resuscitation (ILCOR) <i>Myra Wyckoff, MD, FAAP</i>
10:20-10:40AM	NRP of 2050 – Where the Strategic Plan is Taking Us <i>Steven Ringer, MD, PhD, FAAP</i> <i>Myra Wyckoff, MD, FAAP</i>
10:40-11:00AM	NRP Grant Research Presentation 2 <i>Nicole Yamada, MD</i>
11:00-11:30AM	Successful Strategies for Debriefing Simulated and Real Neonatal Resuscitations <i>Louis Halamek, MD, FAAP</i>
11:30AM-12:00PM	Technology and the DR <i>Jeffrey Perlman, MB, ChB, FAAP</i>
12:00-1:00PM	LUNCH
1:00-2:30PM	Concurrent Breakout Sessions Breakout 1: Top NRP Questions Posed by You <i>Eric C. Eichenwald, MD, FAAP – Moderator</i> <i>Gary Weiner, MD, FAAP – Responder</i> <i>Jeanette Zaichkin, RN, MN, NNP-BC – Responder</i> Breakout 2: MicroSimulation Demonstration <i>Kimberly Ernst, MD, MSMI, FAAP</i> <i>Anne Ades, MD, FAAP</i> Breakout 3: Using Team Training to Engage Learners <i>Taylor Sawyer, DO, MEd</i> Breakout 4: Influential Articles in Resuscitation <i>Steven Ringer, MD, PhD, FAAP</i> <i>Henry Lee, MD, FAAP</i>
2:30-2:45PM	BREAK
2:45-4:15PM	Repeat of Concurrent Sessions
4:15PM	Adjourn
4:15-4:45PM	Optional Debrief Session With Faculty



Seminar Credit

The American Academy of Pediatrics is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. This activity was planned and implemented in accordance with the ACCME Essentials.

The AAP designates this educational activity for a maximum of 6.0 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This activity is acceptable for a maximum of 6.0 AAP credits. These credits can be applied toward the AAP CME/CPD award available to Fellows and Candidate Members of the AAP.

The American Academy of Physician Assistants accepts *AMA PRA Category 1 Credits™* from organizations accredited by the ACCME.

This program is approved for 6.0 NAPNAP contact hours which 0 contain pharmacology (Rx) content per the National Association of Pediatric Nurse Practitioners Continuing Education Guidelines.

This activity has been submitted to the Ohio Nurses Association (OBN-001-91) for approval to award contact hours. The Ohio Nurses Association is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

Application has been made to the American Association for Respiratory Care (AARC) for continuing education contact hours for respiratory therapists.

NRP® Database: Questions & Answers

The following Q&A is a compilation of some of the more common questions received by Life Support Support staff. It is intended to serve as a resource for instructors, providing responses to technical and logistical responses for the frequently raised issues regarding maintaining instructor status.

Q *How do I access my instructor profile?*

A Go to www2.aap.org/nrp. In the middle of the page, click where you see a green icon with a magnifying glass that says “Instructors Click Here” for NRP Course Database. The ID is your Instructor ID number without the dash. If it is your first time logging in, the password is your last name in all lowercase letters.

Q *I don't know how to find my expiration date, how many courses I have taught, when I last took the NRP online exam, and the contact information listed for me.*

A Once you log in to your instructor profile using the steps provided above, you will see an information summary with your current renewal period, courses taught, roster submitted, rosters approved, courses required, and rosters rejected. If you still need to take the online exam for your instructor renewal, you will see a pink reminder box that says “Hospital-based instructors and regional trainers are required to complete the NRP online examination every 2 years, beginning in 2013, based on their renewal date.” If you do not see the pink reminder box, you can view the last time you took the online exam by selecting the “Update Info” heading at the top of the page. The date will be listed next to “Online Eval Completion Date.” If this is blank, you still need to complete the exam before your instructor renewal. To see all previous exam completion dates, please refer back to the NRP exam website: www.healthstream.com/hlc/aap.

Q *How do I access the exam as an instructor?*

A An account has been created for every active instructor and the exam is available free of charge once per calendar year. To access the exam:

1. Go to www.healthstream.com/hlc/aap and login with your User ID and Password.
2. The User ID is your NRP Instructor ID number (do not include the dash or any spaces).
3. The Password is your last name in all lower case letters (for example, if your last name is Smith, your password is smith).
4. Go to the My Profile tab and select Manage Discipline and License Information.
5. Click on Add Discipline/License and enter any pertinent information and Save.
6. Go to the My Learning tab and click on the course title: NRP Online Examination, 6th Edition.
7. Begin!

If you are unsure of your instructor ID number, please contact the Life Support staff by emailing lifesupport@aap.org or calling 800/433-9016 ext 4798.

Q *What is my deadline to complete the exam and how does NRP know that I completed the exam?*

A All Hospital-based Instructors and Regional Trainers are required to complete the NRP online examination once every two year timeframe, before the renewal date listed on your card. It is strongly encouraged that you complete the test at least 3 months prior to your expiration to ensure you receive your updated card in a timely manner.

If you access the test using the account information set up by the AAP, it takes about one week for the completion date to link with your instructor profile. If you complete the exam through your hospital or on your own, it will not automatically link with your instructor profile and you should email a copy of the certificate showing you passed all 9 lessons to lifesupport@aap.org or fax it to 847/228-1350.

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NRP® Database: Q&A

Q *What do I do if I do not pass exam?*

A Instructors may take the online examination once a year, free of charge. If you do not pass the online examination, you will be required to retake it and will be responsible for covering any costs incurred for retaking the exam.

Q *As an instructor, do I have to meet with another instructor for the hands-on skills portion of the course?*

A No. The exam requirement for instructors is only to successfully pass all 9 lessons, every two years. You do not have to demonstrate the skills.

Q *I am having a technical issue with the exam, i.e., accessing the exam, meeting system requirements, printing my certificate, unexpectedly logged off the test, etc.*

A HealthStream Customer Service will provide technical support and help troubleshoot. Support is available from 7:00am to 7:00pm CST, Monday through Friday (except major holidays) by calling 800/521-0574, option 3 on the menu or emailing customer.service@healthstream.com.

Q *Does the exam offer CEUs and how do I print the certificate?*

A The NRP 6th edition online exam offers one credit hour for each lesson completed. There are 9 lessons on the exam, so Instructors will receive 9 CEUs. Here are the steps to print the continuing education credit certificate:

1. Log into your HealthStream account.
2. Click on My Transcript.
3. Select the NRP Online Examination, 6th Edition link.
4. Scroll down to the bottom of the page where you see Continuing Education Credit Information. As long as you filled out the license and discipline information, you will see the CEU certificate to open and print.
5. If not, Go to the My Profile tab and select Manage Discipline and License Information.
6. Click on Add Discipline/License and enter any pertinent information and Save.
7. Go back under My Transcript.
8. Select the NRP Online Examination, 6th Edition link.
9. Scroll down to the bottom and click on Refresh Credits located at the bottom right of the screen.
10. The certificate should be there this time.

If you are having difficulty retrieving the certificate, please contact HealthStream.

Q *I did not complete the exam by the expiration date listed on my card. Can I have an extension or grace period?*

A In order to maintain NRP instructor status, instructors are required to teach two NRP courses every two years and complete the online examination every two years, based upon renewal date. If any of these criteria are not met, your NRP instructor status will not be renewed.

Q *I have met all of my requirements for instructor renewal. When will I receive my updated card?*

A If you meet all your requirements for renewal two months prior to your expiration date, you will automatically receive a new card one month before your card expires. Requirements met closer to your expiration date require manual processing, so it will take a bit longer to receive your card.

Q *Why am I unable to see the questions I answered incorrectly when failing the exam?*

A The NRP Steering Committee intends for the online examination to be a learning experience. The Committee decided against implementing a time limit for each lesson within the exam and encourages learners to refer to the Textbook of Neonatal Resuscitation, 6th Edition while completing the exam. After thoughtful consideration, the Committee decided against offering a rationale when learners do not successfully pass the exam, since learners have unlimited time and resources. Additionally, those learners with repeated failures require a remediation plan that may be individualized for each learner by the instructor or be a standard policy developed by each institution.

Q *How do instructors create a remediation plan?*

A Repeated failure of the online examination requires a remediation plan. This plan may be individualized for each learner or be a standard policy developed by an institution. The learning requirements of the plan for each individual situation are at the discretion of the instructor and/or the institution. The plan should include additional time for study and test practice using the review sections for self-assessment and the summaries of Key Points in each lesson of the Textbook of Neonatal Resuscitation, 6th Edition. This approach places responsibility for learning on the participant rather than the instructor.

Q *What is the question revision process for the exam?*

A The NRP Steering Committee monitors exam question performance on a monthly basis to ensure at least 80% of learners are successfully responding to each question. If a question is not well performing, it is reviewed by the NRP Steering Committee and rewritten or removed from the exam.

NRP® Research Grants Awarded



Congratulations to the following individuals who received 2013 NRP Grant Awards

Vishal Kapadia, MD
University of Texas Southwestern Medical Center

“Novel transitional goal saturations for preterm resuscitation in the delivery room: A randomized control trial.”

Marya L. Strand, MD, FAAP
Saint Louis University

“Management of depressed infants and meconium aspiration syndrome – pilot study.”

Congratulations to our research grant awardees!

The Fall/Winter issue of the NRP Instructor Update will include information about the 2014 NRP Research Grant Program and Young Investigator Award opportunities.

Meconium Thickness Clarification

In the Fall/Winter 2013 edition of the *NRP Instructor Update* (Volume 22, No. 2), an article appeared titled, “Suctioning the Newborn at Birth: Questions and Answers.”

Within this article, the question was asked, “*Can you explain why there is no difference in risk between thin vs thick meconium?*” The answer included the statement, “there is no data to support that meconium consistency predicts risk or outcome.” The NRP Steering Committee has provided further clarification for this statement below.

Although it is true that assessing meconium consistency is subjective, there is data describing substantial differences in outcome directly related to meconium consistency (eg, thin vs thick). The thicker the meconium consistency, the greater the risk for respiratory distress and/or meconium aspiration syndrome (MAS); however, the intratracheal suctioning process does not decrease the incidence of MAS in vigorous newborns regardless of the meconium consistency as noted in the trial by Wiswell (Delivery Room Management of the Apparently Vigorous Meconium-stained Neonate: Results of the Multicenter, International Collaborative Trial, Pediatrics, 2000; 105:1 1-7). It is unclear whether intratracheal suctioning in the non-vigorous infant with MSAF decreases the incidence of MAS, but this procedure remains part of delivery room management for infants born through thick or thin meconium until more evidence is available. Although the vigorous infant born through thick or thin meconium does not receive intratracheal suctioning, the vigorous infant born through thick meconium is at a higher risk of respiratory distress than the vigorous infant born through thin meconium.

New Thoughts on Individual and Team Performance

Individual and team performance during neonatal resuscitation is influenced by not just our inherent cognitive, technical, and behavioral skills, but also by elements outside of our being; the study of how these elements influence performance is known as the field of human factors or ergonomics.

Limitations to performance occur whenever features of the environment impair our ability to interact with it. For example, processing of data into recognizable patterns that can then be translated into actionable information in a timely fashion is a key to delivering safe, effective, and efficient patient care. When data is presented in a manner in which it cannot be accurately interpreted and acted upon, our ability to deliver care is compromised. For example, placement of an oximeter in a

location that results in either the inability to read the display or hear the alarm impedes the flow of important information and increases the risk of error.

Just as features of our working environment can impair our ability to care for patients, they can also interact with us in a manner that improves our performance.

In the future, assessing and enhancing NRP performance in the delivery room will require an approach that goes beyond a focus on only content knowledge and technical skill. Management of the effects of stress and consideration of human factors/ergonomic issues in the delivery room will also be key to achieving optimal individual and team performance.



NRP® Online Examination Reminder

As a reminder, all Hospital-based Instructors and Regional Trainers are required to complete the NRP online examination every 2 years, beginning in 2013, based on their renewal date. However, instructors do not need to wait for their renewal date to approach to take the online examination. The exam will be provided at no charge to instructors once per calendar year.

HAVE QUESTIONS? CONTACT THE AAP LIFE SUPPORT STAFF AT LIFESUPPORT@AAP.ORG.