



**Neonatal  
Resuscitation  
Program®**

## 2024 Grant Intent Application

### WHO CAN APPLY?

Researchers from Canadian and US Institutions are invited to apply for one of the four grant options to investigate the best ways to optimize care in the delivery room using NRP.

### WHAT SHOULD THE APPLICATION ADDRESS?

Initiatives can include addressing gaps in our understanding of transitional physiology and evidence-based resuscitation practice, teaching and evaluating the cognitive, technical and behavioral skills necessary for successful resuscitation of the newborn and retention of skills and knowledge over time.

### WHAT ARE THE FOUR CATEGORIES OF GRANT APPLICATIONS?

**NRP Human Factors or Education Grant** (up to \$15,000): Any health care professional with an interest in the impact of human factors on delivery room resuscitation or optimization of NRP education

**NRP Young Investigator Award** (up to \$15,000): Physicians-in-training or individuals within 4 years of medical training

**NRP Research Grant Program** (up to \$50,000): Any health care professional with an interest in neonatal resuscitation

**Jeanette Zaichkin NRP Nursing Grant for Excellence and Innovation in NRP Education** (up to \$10,000): The recipient must be a nurse or nurse practitioner who works in a neonatal care setting or perinatal unit in the United States or Canada. The recipient must also be a current NRP Instructor in good standing.

*Primary Investigators can apply for no more than one grant.*

*Please note, NRP grants should not be considered as a source of funding for implementation and dissemination of the Helping Babies Breathe Program.*

## Application Procedures

### There are two steps for applicants:

1. Potential applicants for an NRP grant must submit an intent for application to the NRP Steering Committee by **Friday, May 3, 2024**.

Intent applications will be reviewed by the NRP Steering Committee. Applications that are scored favorably will be invited to submit a full proposal on or before **Friday, May 31, 2024**.

2. Full applications must be submitted to the NRP Steering Committee on or before **Friday, August 2, 2024**. Applicants will be informed of the decision regarding their application by **November 2, 2024**. Funds will be distributed in 2025.

Please note that all funds will be awarded to the applicant's institution. The application can be accessed here: <https://form.jotform.com/233324156094049>

### Abstract Guidelines

The 1-page grant intent (abstract) should include:

- ◆ The hypothesis of the study including brief supporting background information. (What do you want to do and why?)
- ◆ The methods proposed for carrying out the project including a rough timeline. (How are you going to do it?)
- ◆ How the results would be analyzed. (How will you figure out if the results are meaningful?)
- ◆ What impact this study would have on NRP. (How will your new knowledge improve NRP?)

### Budget Guidelines

Requests can include costs for supplies, minor equipment, and salaries for support personnel. Funds are not to be used for faculty salaries (including the Primary Investigator's) or indirect costs. Time and efforts of physician trainees or technical support can be included in the budget; however, the requested expense for their time must be clearly justified. Travel reimbursement is limited to local travel for research purposes and travel to locations with pertinent resources for the proposed study. IRB fees up to \$1,000 may be included in the budget.

Funding is for one year; however, a non-funded extension up to one year may be requested. All recipients are asked to provide publication information and updates one year following study completion.

# NRP Research Grant

Any health care professional with an interest in neonatal resuscitation can submit a proposal for up to \$50,000 through the NRP Research Grant Program.

## Top Initiative

What are the best ways to optimize care in the delivery room using NRP? Initiatives can include addressing gaps in our understanding of transitional physiology and evidence-based resuscitation practice, teaching and evaluating the cognitive, technical and behavioral skills necessary for successful resuscitation of the newborn and retention of skills and knowledge over time.

### Topic: Effective Delivery of Ventilation

#### Questions of Interest

- What is the optimal method to use in safely and effectively establishing functional residual capacity (FRC) and assisting ventilation during resuscitation?
- What is the optimal role of the laryngeal mask in NRP?
- When administering positive-pressure ventilation (PPV) in the delivery room, should volume and/or pressure be measured? If volume is measured, what is the optimum volume to deliver as compliance changes while trying to establish a functional residual capacity (FRC) in a newborn?
- Is there a role for CPAP and PEEP to help in the stabilization of the spontaneously breathing term newborn?
- What is the role of respiratory function monitoring in the delivery room, including the use of exhaled CO<sub>2</sub> to guide ventilation efforts?

### Topic: Use of Oxygen

#### Questions of Interest

- What are the optimal goal saturation ranges for preterm infants needing resuscitation in the delivery room?
- How much supplemental oxygen should be used when there is persistent heart rate < 60 bpm despite 30 seconds of effective ventilation?
- What is the effect of administering room air as compared to supplemental oxygen during circulatory arrest on restoring spontaneous circulation and limiting organ injury?
- What is the most effective starting oxygen concentration for achieving optimal patient outcomes in babies born preterm and babies born at term?
- What is the most effective method of titrating supplemental oxygen and respiratory support to optimize outcomes in babies born preterm and babies born at term?

### Topic: Methods to Support Newborn Circulation (Chest Compressions, Medications)

#### Questions of interest

- Is coordination of compressions and ventilations important?
- How can efficacy of chest compressions be best evaluated in the delivery room?
- What is the optimal ratio of chest compressions to positive-pressure ventilation breaths in neonatal resuscitation?
- When (i.e., at what HR) should chest compressions be initiated?
- What methods support circulation in addition to chest compressions (e.g., medications)?

### Topic: Use of Telemedicine in Neonatal Resuscitation

#### Questions of interest:

- Does the use of telemedicine in neonatal resuscitation improve patient outcomes?

### Topic: Resuscitation for Special Considerations

#### Questions of interest:

- How can newborn resuscitation techniques be adapted for special populations (eg, congenital malformations)?

For background information or references to the science of NRP, please see: [2020 AHA Guidelines for CPR and ECC Part 5: Neonatal Resuscitation](#)

# NRP Human Factors or Education Grant

Any health care professional with an interest in the impact of human factors impact on delivery room resuscitation or optimization of NRP education

## Top Initiative

What are the best ways to optimize care in the delivery room using NRP? Initiatives can include addressing gaps in our understanding of transitional physiology and evidence-based resuscitation practice, teaching and evaluating the cognitive, technical and behavioral skills necessary for successful resuscitation of the newborn, and retention of skills and knowledge over time.

### Topic: Optimization of NRP Education

#### Questions of Interest

- ◆ Are there new techniques of learning cognitive information, skills, or team performance that result in better retention of that learning over time?
- ◆ How does the Neonatal Resuscitation Program affect patient outcomes in the delivery room?
- ◆ What are the most effective methods to improve team performance across disciplines (OB, Neonatologists, nurses, RTs, etc.)?
- ◆ What are the physical factors in the delivery room environment that facilitate effective team performance?
- ◆ What is the optimal way to measure individual and team performance during neonatal resuscitation?

### Topic: Human factors impact on delivery room resuscitation Questions of interest

- Is the RQI method as effective as the instructor led method when both the intermediate outcomes of knowledge/skill retention and the more important endpoints of delivery room resuscitation performance and patient outcome are compared?
- What features facilitate rapid and correct assimilation and interpretation of physiologic data streaming from patient monitors used during resuscitation?
- What are optimal delivery room physical features or set-up to enhance individual and team situational awareness?
- Does the use of scripts, technology, coaches, or "readers" improve compliance with the NRP algorithm steps?
- What is the ideal team composition for the most effective resuscitation?
- How can documentation be improved for greater accuracy?
- Are pre-briefings and debriefings useful for improving individual and team performance?

For background information or references to the science of NRP, please see: [2020 AHA Guidelines for CPR and ECC Part 5: Neonatal Resuscitation](#)

# NRP Young Investigator Award

Physicians-in-training or individuals within 4 years of medical training are eligible to apply for up to \$15,000 through the NRP Young Investigator Award.

## Top Initiative

What are the best ways to optimize care in the delivery room using NRP? Initiatives can address gaps in our understanding of transitional physiology and evidence-based resuscitation practice; teaching and evaluating the cognitive, technical and behavioral skills necessary for successful resuscitation of the newborn; and retention of skills and knowledge over time.

### Topic: HR monitoring

#### Questions of interest

- What is the impact of use of ECG or other modalities for heart rate assessment on neonatal outcomes and resuscitation team performance?

### Topic: Effective Delivery of Ventilation

#### Questions of interest

- What is the optimal method to use in safely and effectively establishing functional residual capacity (FRC) and assisting ventilation during resuscitation?
- What is the role of the laryngeal mask?
- When administering positive-pressure ventilation (PPV) in the delivery room, should volume and/or pressure be measured? If volume is measured, what is the optimum volume to deliver as compliance changes while trying to establish a functional residual capacity (FRC) in a newborn?
- Is there a role for CPAP and PEEP to help in the stabilization of the spontaneously breathing term newborn?
- What is the role of respiratory function monitoring in the delivery room, including the use of exhaled CO<sub>2</sub> to guide ventilation efforts?

### Topic: Use of Oxygen

#### Questions of Interest:

- What are the optimal goal saturation ranges for preterm infants needing resuscitation in the delivery room?
- How much supplemental oxygen should be used when there is persistent heart rate below 60 bpm (or below 100)?  
What is the effect of administering room air as compared to supplemental oxygen during circulatory arrest on restoring spontaneous circulation and limiting organ injury?
- What is the most effective starting oxygen concentration for achieving optimal patient outcomes in babies born preterm and babies born at term?
- What is the most effective method of titrating supplemental oxygen and respiratory support to optimize outcomes in babies born preterm and babies born at term?

### Topic: Methods to Support Newborn Circulation (Chest Compressions, Medications)

#### Questions of Interest

- Is coordination of compressions and ventilations important?
- How can efficacy of chest compressions be best evaluated in the delivery room?
- What is the optimal ratio of chest compressions to positive-pressure ventilation breaths in neonatal resuscitation?
- When (i.e., at what HR) should chest compressions be initiated?
- What methods support circulation in addition to chest compressions (eg, medications)?

### Topic: Post-Resuscitation Care

#### Questions of Interest:

- What is the optimal temperature, glucose concentration, gas exchange parameters in the post-

resuscitation period?

- ◆ How do we monitor an infant with a severely acidotic cord gas but with a relatively normal neurological examination in the delivery room?

**Topic: Use of Telemedicine and Technology in Neonatal Resuscitation**

**Questions of interest:**

- ◆ Does the use of telemedicine in neonatal resuscitation improve patient outcomes?
- ◆ Are there new technologies (monitoring, sensing, etc.) or devices (equipment) which would improve performance of neonatal resuscitation?

**Topic: Resuscitation for Special Considerations**

**Questions of interest:**

- ◆ How can newborn resuscitation techniques be adapted for special populations (eg, congenital malformations)

For background information or references to the science of NRP, please see: [2020 AHA Guidelines for CPR and ECC Part 5: Neonatal Resuscitation](#)

# The Jeanette Zaichkin NRP Nursing Grant for Excellence and Innovation in NRP Education

The Jeanette Zaichkin NRP Nursing Grant for Excellence and Innovation in NRP Education was created in recognition of the significant contributions to the Neonatal Resuscitation Program made by Jeanette Zaichkin, RN, MN, NNP-BC during her tenure as NRP Consultant from 1998-2022. Jeanette also served as Associate Editor of the Textbook of Neonatal Resuscitation, Editions 4th through 8th and Editor of the NRP Instructor Toolkit.

The Jeanette Zaichkin NRP Nursing Grant for Excellence and Innovation in NRP Education recognizes nurses who are champions of NRP and committed to most effectively training NRP learners. This award is dedicated to enhancing NRP Instructor or Provider training in neonatal resuscitation. Initiatives can address improvements to the NRP Instructor course, opportunities to enhance NRP Instructor or Provider skills training, teaching, or debriefing, or how to best evaluate training. Nurses who meet the below criteria are eligible to apply for up to \$10,000 in funding for projects that focus on neonatal resuscitation research, evidence-based practice, or quality improvement initiatives.

## **Nominees must meet the following criteria:**

- ◆ The recipient must be a nurse or nurse practitioner who works in a neonatal care setting or perinatal unit in the United States or Canada
- ◆ The recipient must be a current NRP Instructor in good standing

The nurse applicant/principal investigator may collaborate/consult with an academic research partner to help ensure that the study has design integrity capable of producing credible findings. The collaborator need not have NRP instructor or provider status.

## **Topics of Interest:**

- ◆ How to optimize and innovate NRP Instructor or Provider training
- ◆ Evaluation of NRP Instructor performance when teaching Provider courses
- ◆ How to best teach NRP Providers the basics of neonatal resuscitation
- ◆ How to effectively reinforce NRP skills throughout the two-year renewal cycle
- ◆ Methods for learning through innovative techniques such as AI, simulation, etc.
- ◆ How to enhance training through debriefing

**Please note: This grant is not intended for equipment purchases.**

For background information or references to the science of NRP, please see: [2020 AHA Guidelines for CPR and ECC Part 5: Neonatal Resuscitation](#)