Techniques to Communicate Better With Parents During End-of-Life Scenarios in Neonatology

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abstract

BACKGROUND AND OBJECTIVES: Clinicians are urged to optimize communication with families, generally without empirical practical recommendations. The objective of this study was to identify core behaviors associated with good communication during and after an unsuccessful resuscitation, including parental perspectives.

METHODS: Clinicians from different backgrounds participated in a standardized, videotaped, simulated neonatal resuscitation in the presence of parent actors. The infant remained pulseless; participants communicated with the parent actors before, during, and after discontinuing resuscitation. Twenty-one evaluators with varying expertise (including 6 bereaved parents) viewed the videos. They were asked to score clinician-parent communication and identify the top communicators. In open-ended questions, they were asked to describe 3 aspects that were well done and 3 that were not. Answers to open-ended questions were coded for easily reproducible behaviors. All the videos were then independently reviewed to evaluate whether these behaviors were present.

RESULTS: Thirty-one participants' videos were examined by 21 evaluators (651 evaluations). Parents and actors agreed with clinicians 81% of the time about what constituted optimal communication. Good communicators were more likely to introduce themselves, use the infant's name, acknowledge parental presence, prepare the parents (for the resuscitation, then death), stop resuscitation without asking parents, clearly mention death, provide or enable proximity (clinician-parent, infant-parent, clinician-infant, mother-father), sit down, decrease guilt, permit silence, and have knowledge about procedures after death. Consistently, clinicians who displayed such behaviors had evaluations >9 out of 10 and were all ranked top 10 communicators.

CONCLUSIONS: During a neonatal end-of-life scenario, many simple behaviors, identified by parents and providers, can optimize clinician-parent communication.

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WHAT'S KNOWN ON THIS SUBJECT: Pediatric clinicians are urged, when communicating with parents during end-of-life care situations, to be empathetic, warm, and compassionate. These recommendations generally do not include practical suggestions and have little evidence that parents value specific communication techniques.

WHAT THIS STUDY ADDS: In a neonatal simulation study, several simple clinician communication behaviors performed before, during, and after the resuscitation were consistently identified by parents and a variety of pediatric clinicians as optimal communication techniques.

ARTICLE

Despite improvements in neonatal medicine, some infants still die. The majority of neonatal and pediatric deaths occur in ICUs,[1,2] most often after a period of significant physiologic instability.[3,4] Communicating with parents in these circumstances is difficult. Clinicians are urged to communicate with families in a compassionate and effective manner but often without practical guidance.[5] Unlike in other areas of pediatrics, in which parental perspectives help inform teaching curricula, empirical evidence regarding communication with parents during and after a child's critical instability or death is scarce. When recommendations are made, they are usually based on expert opinion, with little or no input from families.[6,7] Simulation-based medical education has helped clinicians improve their communication skills,[8] often incorporating standardized actors in medical curricula.[9]

Realism is an important concept in simulation; the use of high-fidelity simulators results in improved cognitive performance in pediatric providers.[10] On the other hand, other aspects of realism have been neglected. The manikin rarely "dies," although it was demonstrated in an empirical study that this was beneficial to trainees.[11] During the feedback session of that study, research participants recommended "hybrid" mock codes, in which they would practice their technical and communication skills together.[11]

In this study, a simulation was designed to identify core behaviors associated with optimal communication with parents during and after an unsuccessful resuscitation and determine if these core behaviors were recognized as important by a wide variety of stakeholders, including bereaved parents.

METHODS

The study took place in Sainte-Justine hospital, a tertiary care mother-child hospital affiliated with the University of Montreal, with ∼4000 deliveries a year and a 67-bed NICU.

Simulation Session

We used similar methods reported in our previous studies.[11,12] Participants performed a videotaped simulation using a high-fidelity manikin assisted by a Neonatal Resuscitation Program (NRP)–trained provider (neonatal nurse or respiratory therapist). They were informed that 2 actors, playing the role of the parents, would be present at the resuscitation and to interact with them as they would do in practice. A term neonate would be born after an urgent cesarean delivery for fetal distress. They had 3 minutes to prepare for the birth. The manikin was programmed to remain pulseless despite resuscitation. Standardized actors were trained and followed specific guidelines (Supplemental Information). Immediately after each simulation, standardized debriefing occurred.[11]

Recruitment of Participants

To be representative of the diversity of clinicians who participate in resuscitations in our institution, we aimed to recruit 30 NRP-trained participants, with varying backgrounds and experience.

Assessment of Simulations

To represent a wide sample of perspectives, we aimed to recruit 20 evaluators with various interdisciplinary backgrounds, including bereaved parents.[13] Each video was viewed by all evaluators, including the 2 standardized actors.

Technical Evaluation

Two registered NRP instructors independently evaluated resuscitations using the NRP

performance checklist,[7,12,14] and their scores were averaged.

Evaluation of Parent-Clinician Interactions

The evaluators scored videos on a scale of 0 to 10 for (1) overall performance, (2) communication with the parents during resuscitation, and (3) communication with the parents after resuscitation. They were asked to justify their scores with 2 open-ended questions:

1. Identify up to 3 aspects that made interaction with parents optimal.
2. Identify up to 3 aspects of interactions that could be improved (or should be avoided).

Finally, each was asked to rate the top 10 communicators.

Behavior Coding

A list of the most reported positive and negative themes invoked by evaluators was developed. Of those, behaviors that could be easily observed were identified. All the videos were then watched by an independent evaluator (blinded to the previous scores and to the study protocol) who examined whether each participant had displayed these behaviors. The frequency with which the top 10 communicators demonstrated each of these behaviors was compared with the remaining participants.

Analysis of Data

Quantitative Analysis

For statistical analysis, the participants were separated in 4 different categories: junior residents, senior residents, neonatologists and fellows, and transport team personnel. The appropriateness of these groupings was tested using the intraclass correlation coefficient. Differences between groups were tested by using nonparametric statistics.

Open-ended Questions

All answers to the open-ended questions were analyzed by using thematic analysis[15–17]: themes and subthemes were developed by 3 independent investigators who coded 50 randomly chosen evaluations. Themes and subthemes were then defined, and 50 more evaluations were coded by 2 investigators. After 85% coding agreement was reached, the coding themes and subthemes were finalized, and the remainder of the evaluations were coded by 1 investigator (Supplemental Information). Comparisons between quantitative data (evaluation on a scale of 10; being a top communicator or not) and answers to open-ended questions were also performed.

Ethics

Participants consented to being observed, videotaped, and having their videotapes evaluated. They were assured these were anonymous and would not influence their clinical evaluations. Evaluators were informed about the sensitive nature of the study and signed a confidentiality agreement, agreeing to keep the content of the videos and evaluations confidential. Recruiting bereaved parents was ethically challenging and involved particular care (see Supplemental Information). The protocol was codeveloped with a bereaved veteran resource parent (M.S.). The protocol was approved by the Institutional Review Board of Centre Hospitalier Universitaire Sainte-Justine.

RESULTS

Thirty-one participants were recruited: 15 pediatric residents (6 junior [postgraduate year 1 and 2] and 9 senior residents [postgraduate year 3 or 4]), 5 neonatal fellows, 3 neonatologists, 3 neonatal nurse practitioners, and 5 transport and resuscitation team providers (2 nurses and 3 respiratory therapists).

The videos were analyzed by 21 evaluators: 3 involved in the simulation (the 2 standardized actors and the assisting clinician), 6 members of the neonatal team (1 neonatologist, 1 fellow, 2 nurses, 2 neonatal nurse practitioners), 2 obstetrics providers (a maternal-fetal medicine specialist and a nurse), 1 pediatrician, 3 allied health professionals (social worker, psychologist, and respiratory therapist), and 6 parents. Nine potential parent participants were contacted (Supplemental Information): 8 answered the invitation, 1 declined, and another did not confirm his participation. Six participated: 4 mothers and 2 fathers. Five had experienced a neonatal death, and the sixth had an infant who faced ongoing complex medical problems and had had 3 extensive resuscitations.

Technical Performance Assessments

The technical resuscitation "NRP scores" were between 69% and 100%. The transport team and neonatal nurse practitioners scored slightly higher than the other groups (mean score: 88% vs 81%; $P = .04$) (Table 1).

Evaluation of the Interaction Between Providers and Parents

Each video was examined by 21 evaluators, leading to 651 evaluations. In all groups, communication scores were lower during the resuscitation (Table 1). Neonatologists, fellows, and the transport team and neonatal nurse practitioners had higher scores than residents for communication after the resuscitation (Table 1).

Positive and Negative Interactions

In each of the 651 evaluations, 3 positive and 3 negative evaluator comments were identified, for a total of 3906 items, which were subject to thematic analysis.

Communication Before the Resuscitation

Although evaluators were not asked to score communication before the resuscitation, 16 evaluators reported (in open-ended questions) examples of positive and/or negative interactions between providers and parents during the 3-minute preparation time (Table 2). At least 1 of 3 positive main themes were invoked by all evaluators. Good communicators (1) introduced themselves in simple language, (2) asked the name of the infant and used it, and (3) prepared the parents for a potentially difficult situation (Table 2).

Communication During the Resuscitation

When identifying positive interactions during the resuscitation, evaluators invoked 6 themes (between 2 and 6 per evaluator) (Table 3). Good communicators (1) recognized the presence of the parents and allowed the father to approach the bedside; (2) used the name of the infant; (3) prepared the parents for death in a stepwise fashion; (4) used the words death, dying, or dead; (5) remained calm; and (6) made a clear decision to stop the resuscitation without asking parents' permission (Table 3).

Communication After the Resuscitation

When identifying positive interactions, evaluators invoked 8 themes (between 3 and 8 themes invoked per evaluator): (1) clearly and unambiguously stating the infant had died, (2) avoiding medical jargon and metaphors related to death, (3) making a clear statement that this was not the fault of the parents, (4) listening to the parents and providing silence, (5) providing proximity (either between clinician-parent, mother-father, clinician-infant, and/or parents-infant), (6) speaking

TABLE 1 Evaluation of Participants' Scores

	Junior Residents	Senior Residents	Neonatologists and Fellows	Transport Team and NNPs
Technical scores, scored on 100, mean (SD)	77 (9)	82 (8)	82 (8)	88[a] (6)
Overall performance, scored on 10, median (IQR)	7 (6–8)	7 (6–8)	8[a] (6–10)	7 (5–9)
Communication with parents during the resuscitation, scored on 10, median (IQR)	8 (7–9)	7 (6–9)	8 (6–10)	6 (5–8)
Communication with parents after the resuscitation, scored on 10, median (IQR)	7 (6–8)	7 (6–8)	8[a] (9–10)	8[b] (8–10)

IQR, interquartile range; NNP, neonatal nurse practitioner.

[a] Significantly higher than the other 3 groups.

[b] Significantly higher than the residents.

about what happens after a death, (7) offering support from hospital staff and parents' loved ones, and (8) offering future support (Table 4).

Top Communicators and Use of Words Associated With Compassion

Each of the 31 evaluators identified 10 top communicators, for a total of 310 votes. The top 10 communicators were more likely to be neonatologists or neonatal fellows ($P = .035$). There was broad agreement about the top 10 communicators, 8 of whom were scored in the top 10 by 81% of evaluators; 2 others were scored in the top 10 by 62%. One or more of the following 5 words were more likely to be used in the positive comments for top 10 communicators: "empathy," "compassion," "warm," "human," or "trust" ($P < .001$). Notably, when these words were used in the negative ("lacking

empathy," "not compassionate," etc), participants were never in the top 10.

Behavior Coding

In the list of all possible positive interactions, 21 behaviors that can easily be observed were identified. For example, "sitting down" and "using the infant's name" were identified. In contrast, "empathy" or "compassion," which are subjective, were not. Then, all the videos were reviewed by an independent reviewer to examine whether these behaviors were present (Table 5); 90% of the top 10 communicators adopted at least 20 of these 21 behaviors. Importantly, such behaviors were strongly associated with the use of the words "empathy," "compassion," "warm," "human," and "trust" in the open-ended evaluators' comments ($P < .001$; use of 1 of the 5 words). Providers who displayed all 21

behaviors had evaluations >9 out of 10 by all evaluators.

Differences in Scoring Between Evaluators

Communication scores and rankings given by neonatal and non-neonatal providers were generally similar. Actors gave significantly higher scores compared with the others ($P = .04$), and parent evaluators gave lower scores compared with provider evaluators ($P = .045$). Discrepancies of >2 points, on our scale of 10, between evaluations occurred in 19% of the 651 evaluations. The 6 participants who had discrepant scores usually had lower scores from parent evaluators, who had different perspectives from providers and actors. Discrepancies were mainly related to the language participants used related to death. For example, parents had problems understanding some sentences, or

TABLE 2 Interaction Between Providers and Parents Before a Resuscitation

Interactions With Parents Before a Resuscitation Examples	Quotes From Evaluators or Examples of Participants' Interactions Reported by Evaluators	
	Examples of Behaviors To Adopt	Examples of Behaviors To Avoid
Acknowledge parents and introduce yourself	"He established eye contact, the parents knew he was there." "Spoke in clear terms. 'Mr and Mrs Smith, I am Melanie, the baby doctor.'"	"She didn't even look at the parents, totally ignored them." "A neonatologist, normal people don't know what that is."
Know and use the name of the infant	"She asked if they had a name and used it." "We will be there for Beatrice when she is born."	"He messed up the sex of the baby. It was indicated the baby was a girl on the instructions."
Prepare the parents: what is about to happen; time constraints; you are there	"He prepared the parents for what was about to come and that they may not have much time to speak later." "Beatrice could need some help at birth. We always prepare for the worst but hope for the best. Sometimes, we cannot talk to parents much when we help babies, but we are there for you."	"She said everything would be okay without looking at the parents." "She said 'don't worry' in a carefree way." "He said everything was under control when it was clear it wasn't."

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TABLE 3 Interaction Between Providers and Parents During a Resuscitation

Positive Interactions With Parents During the Resuscitation	Quotes From Evaluators or Examples of Participants' Interactions Reported by Evaluators	
	Examples of Behaviors To Adopt	Examples of Behaviors To Avoid
Acknowledge the presence of the parents; let the father approach the bed Use the name of the infant	"She told the dad he could take his baby's hand." "He told the father to come closer."	"Stay where you are, we don't have time to speak to you." "Don't touch your baby."
Use the name of the infant	"He continued using the name of the baby."	"He said 'your son' when it was a daughter."
Prepare parents for the death in 2–3 steps	"'She prepared parents for the death in several clear steps. Said it was not going well and that she hoped Beatrice would improve, then that she was trying a last dose and if it didn't work, Beatrice would die. Then she told them Beatrice was dead, that they did everything they could."	"It was very unclear what was going on. She seemed overwhelmed, then said the heart did not come back. It was unclear if the baby had died and when."
Say the words ("death," "dying")	"It was clear, he said they did their best, but that she died, Beatrice was dead. He used the words."	"'She is with the angels?' Really?" "'She was born with no heart?' Who understands that?"
Remain calm	"She was confident, I would trust her."	"He was jumping up and down and losing it."
Do not ask for parents' permission to stop resuscitation	"It was clear they had done all they could, and she said it was time to stop."	"'Do you think it is a good time to stop?' Really?" " He asked the parents if he should stop."

thought they were insensitive: "your infant was born without a heart" or "her heart never came back." Some of the language commonly used in the medical field was judged to be negative by all parent evaluators, for example, "letting the infant die" or "allowing natural death." Other discrepancies were less common. For example, 1 of the participants placed the hands of the father on the infant early in the resuscitation, eventually showed him how to provide cardiac massage, asked him to provide it, and went to speak to the mother for 20 seconds, informing her that resuscitation would be stopped and that her infant was dead and would be in her arms soon. All parents evaluated this participant favorably (scores >8), even using this as an example of a positive interaction. In contrast, provider evaluators were critical and gave low marks, using this example as something to avoid.

DISCUSSION

This is the first study to evaluate communications skills during a simulated end-of-life scenario, with interdisciplinary participation and evaluation. The goal was to identify core behaviors that could be easily taught and emulated. All participants were adequate in their technical and communication skills, and they were NRP trained and often participated in resuscitations, some rarely as team leader.

TABLE 4 Interaction Between Providers and Parents After an End-Of-Life Scenario

	Quotes From Evaluators or Examples of Participants' Interactions Reported by Evaluators	
	Examples of Behaviors To Adopt	Examples of Behaviors To Avoid
Positive interactions with parents after the resuscitation		
Clearly state the child died	"She is dead, I am sorry."	"He just said it was tragic but did not mention death once."
Avoid medical jargon related to death	"We tried everything we could to save her life, but it didn't work. She is dead."	"She was born without a heart; it never came back."
Tell parents they could not have prevented the death	"There is nothing you could have done to prevent this."	"She told the parents it was a shame they did not come to the hospital earlier."
Listen and provide moments of silence	"She spoke slowly, listened; there were many pauses."	"He just wouldn't stop speaking. Parents couldn't get a word in."
Provide proximity		
Provider-parent	"The doctor was sitting on a chair, at the same level as the mom in her bed."	"She was standing up, in the corner, with no eye contact."
Provider-infant	"He took the baby in his arms and you could tell he cared."	"He just left the baby naked on the table when he went to speak to the parents."
Parent-infant	"She placed Beatrice in the parents' arms, placed all 4 hands together, after telling them she would."	"She spoke to Dad alone, then went to speak to Mom, and the baby was alone on the table, dead. Everybody was alone."
Be knowledgeable about what happens after death	"He knew what happened to the body, the practical aspects after death."	"He had no idea about the body and the next steps: did not inspire trust."
Offer "formal" support	"She said she would call the psychologist."	"She just left the room."
Offering future support	"I will always be there in the future if you have questions."	"She ended abruptly, did not offer follow-up."

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TABLE 5 Comparison or Behaviors Displayed by Top 10 Communicators Versus Others

Proportion of Participants Adopting the Following Positive Behaviors	In the Top 10, %	Not in the Top 10, %
Throughout the resuscitation		
Used name of infant**	90	62
Before the resuscitation		
Introduced themselves	100	78
Mentioned the resuscitation could be difficult	100	80
Mentioned that communication during resuscitation would be difficult	100	80
During the resuscitation		
Allowed father to approach the bedside**	90	62
Acknowledged the presence of the father**	90	62
Encouraged the father to report back to the mother	80	62
Acknowledged the presence of mother	100	100
Prepared parents for the death in a stepwise fashion*	100	65
Stopped resuscitation <15 min	100	80
Took the decision to stop the resuscitation (did not ask parents)	100	80
Stated clearly that the infant was dead**	90	50
Noted time of death	90	78
After the death		
Stated there was nothing parents could have done to prevent this**	100	65
Placed the infant in the mother or the father's arms	100	71
Touched the mother	90	90
Sat down*	70	29
Allowed opportunity for parents to ask questions (30 s silence)	100	80
Knew what happened to the body after death**	100	31
Offered creation of souvenirs	90	90
Offered to call family or spiritual supports	100	78
Offered future support*	100	65

* $P < .05$

** $P < .01$.

The evidence regarding how to communicate with families before a critical delivery or when a child becomes unstable is scarce and generally not addressed in resuscitation manuals. A resuscitation team may only have seconds to communicate with parents, but our results show that this time can be used effectively. Similarly, there is scarce evidence regarding communication with families during resuscitations. Although parental presence remains controversial,[18–24] the mother is inevitably physically present at birth (although sometimes under general anesthesia) and the father is often there. The communication scores during the resuscitation were the lowest. Indeed, this task is complex because it requires multitasking by the code leader. Ideally, a provider would be dedicated to do this task. Several institutions have developed specific training guidelines for such a family support role.[25,26] Realistically, in these rare situations, the additional personnel (when they exist) are generally diverted to help with the resuscitation. In this study, it was possible for more than half of the participants to communicate well (scores >80%), using 6 core behaviors. This took a total time of less than a minute and was feasible while leading a resuscitation.

Optimal communication after death comprised many elements. Not surprisingly, some of the behaviors identified in this article been described in the literature[27]: for example, guidelines on how to give bad news[28,29] or how to speak to parents about life-and-death issues.[30] Yet, none of these publications include all the core behaviors described in this empirical investigation.

Neonatologists and neonatal fellows had higher evaluations on average, suggesting that experience is important to improve skills. On the other hand, some junior residents with limited clinical experience were highly scored. Some seem to have "natural skills" for these interactions. To those who have this natural talent, our results may seem infantilizing: "introduce yourself," "use the infant's name," "clearly state that the infant has died," or "sit down." Interestingly, when we asked the top communicators to describe what they did, they were mostly unable to inform us clearly, they "just did what they usually do." But even "natural communicators" have bad days or days when these situations happen at a bad time, for example, at the end of a long call. In these situations, these core behaviors can be used as a checklist to make sure parents feel well treated. For those who start their training or for whom these interactions are stressful or come less naturally, it is possible to be "good with parents" by adopting some simple behaviors and avoiding others because these are perceived acutely by parents and classified consistently by professionals (Fig 1). Institutions can also have an impact on these core behaviors, for example, by including the name and/or sex of the child during "time-outs" before an urgent delivery or by making sure there are chairs available in all rooms where resuscitations and/or deaths occur.

It is not rare to hear that a compassionate provider is one with a good heart and that intentions are what counts. Some may consider such behaviors as less virtuous when they are part of checklists. Unfortunately, empathy and good intentions may not be enough. Caring clinicians can inadvertently display behaviors that are judged to be insensitive, such as leaving the dead infant alone or not using

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Before
Name of infant: Caleb (if no name, know the sex, if available).
"*My name is Johanne Smith. I am a pediatric resident, a doctor who trains to be a pediatrician, a doctor for children. I will be part of the team taking care of Caleb.*"
"*Caleb is not doing well. We are preparing for the worse but hoping for the best.*"
"*I may not have time to speak to you, but we will be there for him and for you.*"

During
"*Dad, you can come close to the bed if you want.*"
"*Dad, you can take Caleb's hand if you want.*" (If infant is not named, use the sex "*your boy*").
"*If you want, you can go and speak to your wife.*"
"*Mom, we are taking care of Caleb.*"
Prepare parents for the death in a stepwise fashion: "*Caleb is not improving even with a tube to help him breathe and medication for his heart.*" "*Dad, we are trying a last dose of medication, but it is not going well. We will stop the resuscitation if this does not work.*" "*Dad, Mom, Caleb is dead. We did everything we could that we thought would help to save him. I am sorry.*"
Stop resuscitation or interventions when reasonable without asking parents. Clearly state when clinician is stopping (or when respirator is removed), including the time.

After
"*Mom and Dad, there is nothing you could have done to prevent this.*"
Provide proximity: clinician-parent, parent-infant, clinician-infant. Do not leave the dead infant naked and alone on the bed. Place the infant in the parents' arms if they wish.
Sit down.
Allow opportunity for parents to ask questions (at least 30 seconds of silence).
Know what happens to Caleb's body after death: creation of memories, funeral arrangements, etc.
Offer to call family or spiritual support (spiritual advisor, social worker, etc.).
Offer future support, including a way to reach the clinician.

FIGURE 1
Communication strategies when communicating with parents of an unstable child at risk for dying. Example of a "time-out checklist" filled by the resident taking care of Caleb.

his or her name. Clinicians can display behaviors that ensure families will feel well cared for in these difficult moments, even if sometimes it may not "come from the heart."

Although evaluators generally agreed, in some cases, parent evaluators disagreed with nonparent evaluators. We should remember the language we use to speak about death can be unclear. Although the actors were lay people, they were probably too involved with the medical world to realize some sentences made little sense or could be insensitive to families. Parents' criticisms mainly had to do with jargon related to death ("born without a heart"), but some were about elaborate vocabulary, such as "allow natural death." This vocabulary evolves in academic circles, without stakeholder involvement. We were also sometimes surprised by parental evaluations, for example, judging favorably the inclusion of the father-actor providing cardiac massage. This is a reminder that we should remain humble and curious and always include stakeholders in these kinds of investigations. The inclusion of parent evaluators in this study gave us unique insights. It was also a complex endeavor. Bereaved stakeholders are often not included in research or clinical initiatives because of risks to them. Although they are indeed a vulnerable population, excluding them from such activities omits an important and often complementary perspective.

This study has several limitations. It was performed in a single center, and results may be different in other centers. On the other hand, because we examined the perspectives of diverse evaluators on various resuscitators and communicators, which lead to >600 evaluations and almost 4000 examples of positive and negative interactions, the main core behaviors would probably be similar. These core behaviors are a skeleton on which to build additional skills with practice and training. Cultural sensitivity and flexibility in their application is also important. For example, in some cultures, the infant is not named before birth. This was also a simulation study, and it is unknown whether these scenarios would exactly translate to a real-life experience. The evaluations were also based on high-_fidelity videos, which leads to limitations. On the other hand, investigating these resuscitations in real life would be almost impossible.

The simulations were also limited to 1 scenario. We used this scenario because it had previously been safely used with trainees.[11] However, many of these core behaviors could be applied in other circumstances that are more frequent within the NICU,[4] such as when an infant with respiratory failure becomes bradycardic and eventually dies, with or without extensive cardiopulmonary resuscitation. Developing these "hybrid" technical communication simulations was also appreciated by trainees. These could

be developed for other situations. Neither the NRP nor the Pediatric Advanced Life Support textbooks include a score sheet related to interaction with parents. Some of the core behaviors identified in this study could be considered objective behaviors to validate in future studies.

CONCLUSIONS

This study describes core behaviors that are easy to teach and learn. "Empathy," "compassion," and "trust" were all words associated with these behaviors. The results show that concrete actions may be taken to make it possible for all clinicians to interact in a way parents can feel well treated, even during complex resuscitations, even on bad days.

ABBREVIATION

NRP: Neonatal Resuscitation Program

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