

CLINICAL DECISIONS

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Family Presence during Cardiac Resuscitation

This interactive feature addresses the approach to a clinical case. A case vignette is followed by specific options, neither of which can be considered correct or incorrect. In short essays, experts in the field then argue for each of the options. Readers can participate in forming community opinion by choosing one of the options and, if they like, providing their reasons.

CASE VIGNETTE

Roberta is a 72-year-old woman with hypertension and chronic obstructive pulmonary disease who has smoked for the past 50 years. She is admitted to the inpatient medical service after 3 days of progressively worsening fever, chills, and productive cough. On presentation to the emergency department, her temperature is 38.4°C (101.2°F), her heart rate is 110 beats per minute, and her blood pressure is 105/62 mm Hg. The respiratory rate is 26 breaths per minute, and the oxygen saturation while she is breathing ambient air is 86%. Chest radiography reveals an infiltrate at the right lung base consistent with pneumonia. She receives ceftriaxone and azithromycin, an intravenous saline solution, and supplemental oxygen through a nasal cannula. By the time she arrives at the inpatient unit, her heart rate has slowed to 86 beats per minute, the respiratory rate is 20 breaths per minute, and the oxygen saturation is 96% while she is breathing 4 liters of supplemental oxygen. As her attending physician, you confirm with the patient that she wants to receive aggressive medical therapies, including cardiopulmonary resuscitation, if her medical condition deteriorates.



Choose an option and comment on your choice at NEJM.org

The following morning, Roberta's nurse notices that the pulse-oximetry readings have declined abruptly to 70%. When she enters Roberta's room, the nurse is unable to arouse the patient in response to verbal stimulus or sternal rub. She cannot detect a radial or carotid pulse. She

calls loudly for help and activates the cardiac-arrest alert system. Chest compressions are initiated, and within 60 seconds the medical response team has arrived. At this moment, the patient's husband and two children enter the inpatient unit. Verifying that the code team has sufficient personnel for the moment, you step out of the patient's room and inform the family that Roberta's condition has deteriorated rapidly and that she is currently receiving cardiopulmonary resuscitation.

After conveying this information to the family, you consider whether to ask the family members to remain with a social worker in the family waiting room, where they will be given frequent clinical updates from the care team, or to invite the family into Roberta's room to observe the resuscitation. Which one of these approaches to the broader issue do you find appropriate? Base your choice on the published literature, your own experience, and other sources of information.

1. Recommend against family presence during resuscitation.
2. Recommend family presence during resuscitation.

To aid in your decision making, each of these approaches is defended in the following short essays by experts in the field. Given your knowledge of the patient and the points made by the experts, which option would you choose? Make your choice and offer your comments at NEJM.org.

OPTION 1

Recommend against Family Presence during Resuscitation

James Downar, M.D., C.M., M.H.Sc.

I do not routinely invite family members to be present during resuscitations. My opposition stems from personal experience as a participant

in resuscitation teams, when the presence of family members has interfered with the resuscitation efforts. I am concerned that family presence during resuscitation may increase the risk of death for the patient and may also have physical, psychological, or legal repercussions for members of the resuscitation team. Most of all, I am worried about the psychological trauma to

a family member witnessing the resuscitation efforts.

At first glance, the study by Jabre et al., which is reported elsewhere in this issue of the *Journal*,¹ seems to address these concerns. In a cluster-randomized, controlled trial of family presence during resuscitation in a home setting, family members who were invited by emergency medical services (EMS) personnel to witness resuscitation efforts had lower rates of post-traumatic stress disorder (PTSD)-related symptoms than did controls who were not invited. There were no significant between-group differences in the level of emotional distress in the medical team or in the outcomes of resuscitation, and there were no medicolegal claims in either group.

I hesitate to apply these findings to inpatient resuscitations because cardiac arrests that occur at home are different in that family members actually “invite” EMS to be present for the resuscitation, rather than the reverse. In the study by Jabre et al., all the cardiac arrests took place at home, and 73% were witnessed (presumably by family members). Moreover, almost half the family members in the control group witnessed cardiopulmonary resuscitation (CPR), and 20% actually performed CPR on their loved one before the arrival of EMS. In contrast, most inpatient cardiac arrests are discovered by nurses who then call for the resuscitation team to respond, and family members learn of the event only once the resuscitation is ongoing.

Before generalizing the results of the study by Jabre et al. to the inpatient setting, we need to know more about the mechanisms of harm and benefit that apply when family members are present during resuscitation efforts. Do family members benefit from being present at the resuscitation, or is family presence during resuscitation actually a harm that is mitigated by the presence of a resuscitation team member who provides support during and after the resuscitation? Social supports are known to protect against the development of PTSD,² and they are a feature in many studies of family presence during resuscitation in the emergency department and pediatric setting (as well as in the study by Jabre et al.). But these social supports are not usually available in the case of inpatient arrests in adults, and family members who are present could experience severe psychological trauma if they are not given adequate support. Inpatient resuscitations are also more likely to feature in-

terventions that cause visible bleeding, such as the insertion of a central venous catheter, and witnessing such interventions may be particularly traumatic to family members.³

We must also remember that not all people react to a given psychological trauma in the same way. In the study by Jabre et al., family members who witnessed CPR were 11% less likely than controls to have symptoms of depression, but all five relatives (1%) who attempted suicide during the follow-up period had witnessed CPR. This suggests that there may be a subgroup of the population that is at risk for a severe adverse reaction to witnessing a resuscitation. We need to be careful whom we invite, since some persons may have a predisposition to PTSD after a traumatic event.⁴ At the time of the event we would have no way to predict which persons are most at risk for PTSD. The results of the study by Jabre et al. should prompt further investigation into the effects of family presence during resuscitation in the inpatient hospital setting. But until these investigations are complete, I will not routinely invite family members to be present during resuscitation efforts.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

From the University Health Network, Toronto.

OPTION 2

Recommend Family Presence during Resuscitation

Patricia A. Kritek, M.D.

Although incorporating family presence into resuscitation events can be challenging, Roberta's family deserves the opportunity to be in the room in what may be the last minutes of her life. Small observational studies in the 1990s raised concerns that watching a loved one undergo CPR might result in immediate distress and lingering psychological impact. More recent studies,⁵ including the large, randomized, controlled trial reported in this issue of the *Journal*,¹ show the opposite; in the study by Jabre et al., relatives who *did not* witness resuscitation efforts were more likely to have anxiety, depression, and PTSD-related symptoms afterwards.

We must provide guidance, explanation, and support to family members who decide to remain in the room during resuscitation efforts. Patients

and families often express a desire to “do everything” but do not have an appreciation of what that really means. CPR and defibrillation can be brutal both to perform and to watch. It is not appropriate to invite family members into a patient’s room unless the resources are available to have a family liaison present whose role is to guide them through the process as well as to counsel them about the outcome, particularly if the resuscitation is not successful. For some families, observing resuscitation efforts may help clarify the goals of care, reinforcing that what is happening is “too much.” Being in the room during an unsuccessful resuscitation effort may also help provide closure for the family by showing that everyone tried as hard as possible to save their loved one’s life. Perhaps most important, family presence can allow for a final goodbye by a spouse, sibling, adult child, or parent who can’t fathom being separated at the moment of death.

Many providers have expressed concern that the presence of family members in the room will alter the performance of the resuscitation team. Although early studies suggested that family presence altered decision making, more recent research,^{6,7} including the study by Jabre et al., shows that providers can perform equally well and feel equally comfortable with or without the family present. Having a dedicated liaison as part of the resuscitation team can also help ensure that the family does not impede the function of the team. Implementation of a guideline for family presence, coupled with training of the resuscitation team through simulation, has been shown to improve the comfort and performance of the health care team when family members are observing resuscitation efforts.⁸ As with all

changes in practice, incorporating family presence into resuscitation will become easier as providers gain experience with the practice.

Keeping relatives out of a patient’s room during what may be the last minutes of life can be quite painful for doctors, nurses, and other allied health providers. Part of our job as physicians is to help patients and families establish goals of care, process life-threatening events, and, at times, orchestrate the best death possible. We need to embrace this role to the end, allowing relatives the chance to be with a loved one in the last minutes of life, if that is what they desire.

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1. Jabre P, Belpomme V, Azoulay E, et al. Family presence during cardiopulmonary resuscitation. *N Engl J Med* 2013;368:1008-18.
2. Kotler M, Iancu I, Efroni R, Amir M. Anger, impulsivity, social support, and suicide risk in patients with posttraumatic stress disorder. *J Nerv Ment Dis* 2001;189:162-7.
3. Itzhaki M, Bar-Tal Y, Barnoy S. Reactions of staff members and lay people to family presence during resuscitation: the effect of visible bleeding, resuscitation outcome and gender. *J Adv Nurs* 2012;68:1967-77.
4. Aidman EV, Kollaras-Mitsinikos L. Personality dispositions in the prediction of posttraumatic stress reactions. *Psychol Rep* 2006;99:569-80.
5. Compton S, Levy P, Griffin M, et al. Family-witnessed resuscitation: bereavement outcomes in an urban environment. *J Palliat Med* 2011;14:715-21.
6. Dudley NC, Hansen KW, Furnival RA. The effect of family presence on the efficiency of pediatric trauma resuscitations. *Ann Emerg Med* 2009;53:777-84.
7. O’Connell KJ, Farah MM, Spandorfer P, Zorc JJ. Family presence during pediatric trauma team activation: an assessment of a structured program. *Pediatrics* 2007;120(3):e565-e574.
8. Curley MA, Meyer EC, Scoppettuolo LA, et al. Parent presence during invasive procedures and resuscitation: evaluating a clinical practice change. *Am J Respir Crit Care Med* 2012;186:1133-9.

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