

FROM THE INSIDE



The number needed to mourn

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I still see her sometimes, when I walk by room 501. She was not even 25; her first child had only been in her womb for 18 weeks, a bright dream of life. And she died, under our care, from *Staphylococcal* endocarditis. For 10 days, we did everything we could to save her. It has been a decade, but I cannot forget that we lost her. We clinicians are prone to second-guessing ourselves after tragedy, but her fate was beyond our control. I mourned her anyway, mourn her still. We clinicians all of us have experiences of loss that sit, uneasily, in our souls. The stories mount over the course of a career.

In 1988, Laupacis and colleagues proposed the “number needed to be treated [1].” As the “number needed to treat” or “NNT,” this simple summary of efficacy has become widespread. The NNT indicates when a relative risk reduction is more “smoke and mirrors” than actual substance. This is a good thing—we ought to identify statistically efficacious treatments that may not matter for our patients and their families.

I spend my professional time in the intensive care unit (ICU). The implications of no treatment in the ICU are not remote hazards of cardiac catheterization or changes in glomerular filtration rate. For us, the NNT is about death. But treatments are intense, disfiguring, and emotionally draining. This strain places us at risk for burnout or worse [2].

As we consider intensive care when death may be near, I worry that the burden of therapy on clinicians looms quietly larger in decision-making than it should. We need a way to acknowledge clinicians’ experience, if only to find ways to ease our burden without distorting our view of the patients we treat.

Take the sickest patients in the ICU, those in the highest decile of risk for modern predictive models. These patients and their families are in desperate straits. The contrast between treated (nearly 100%) and untreated (60–80%) mortality is the reason ICUs exist. At 80% treated mortality, the NNT is 5. Even at 95% treated mortality, the NNT is only 20. Inpatient cardiopulmonary resuscitation (CPR), that oft-discussed intensive therapy, has an NNT less than 10 [3]. Outside the ICU, an NNT of 5–20 represents marvelous effectiveness. And, yet, we clinicians seem to doubt.

So why might clinicians or patients want to avoid such efficacious treatments? There are many reasons, some good and some bad. Perhaps, the best reason is that the patient is already independently dying before the critical illness, and failures of communication and support may lead to disproportionate treatment. Less worthy is the unacknowledged emotional toll we clinicians experience when we try and fail.

An NNT of 5 means that we must try and fail to save four patients for every one we save. We will actually hope a patient will survive, fight for recovery, and then witness their death. Four times. This painful reality may distort our vision. There are better ways to manage our grief than therapeutic nihilism.

I now think in terms of the “number needed to mourn,” or “NNM.” Mathematically, the NNM is the NNT-1. (The difference between the two is the survivor who would have died without treatment.) The NNM admits that to treat patients with an untreated mortality of 50%, we must mourn one patient for each one who survives.

I watch our clinical teams as we care for extremely ill patients. I understand their distaste for invasive treatments. I still see the stunned face and cut palm of a nurse, his blood mingling with the blood of a dying man, after an old sternotomy wire worked its way through thinned skin during unsuccessful CPR. Many ICU deaths are harried and gruesome.

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Independent of distressing therapies, I have grieved with trainees and colleagues when patients die despite our best efforts. I know that ache between jaw and sternum when a patient dies. A statistic like the NNM—indeed any attempt to quantify a death—feels sacrilegious as a description of the wild drama of a possible deathbed. Our distress is real and can break our hearts. And it threatens to draw our eyes away from patient-centered care. Where the NNT warns society away from therapies of limited utility, the NNM raises a red flag—we clinicians are at risk for failing to understand the world as reasonable patients see it.

The NNM may be relevant to patients and family members, albeit in different ways. Families may mourn not just the fact of a death but its shape. Many will not regret having tried—attempted treatment may ease their mourning if death comes. Others, though, will grieve alongside clinicians the effort to prolong life. When we embark on high-risk treatments, we ought to pause and confess together with family members the chance that they may mourn not just the loss of the beloved but also, in some cases, the fact that they soldiered on for weeks and did not avert death.

I worry that clinicians' mourning fatigue may inspire a therapeutic nihilism that is not true to our patients or their families. Most people would willingly suffer intensive care for a 20% chance at survival [4]; if the associated NNM of 4 dissuades us from the attempt, we will have failed the worthy goal of person-centered care.

With humility, patience, and attention to our own mental health, we who treat people at high risk for death must stretch to understand better the worlds they inhabit

as they confront serious illness. We owe to them and to ourselves greater rigor and insight into the best ways to support clinicians, provide authentic care, and ease the burden of the mourning that will inevitably come. We, thus, honor and remember those who die under our care.

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