

# R · I · S · K

## and the Pregnant Body

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Reasoning well about risk is most challenging when a woman is pregnant, for patient and doctor alike. During pregnancy, we tend to note the risks of medical interventions without adequately noting those of *failing* to intervene, yet when it's time to give birth, interventions are seldom questioned, even when they don't work. Meanwhile, outside the clinic, advice given to pregnant women on how to stay healthy in everyday life can seem capricious and overly cautious. This kind of reasoning reflects fear, not evidence.

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**T**he first trimester of pregnancy had not been an easy one for Andrea—mornings brought waves of nausea and vomiting, and afternoons, debilitating fatigue.<sup>1</sup> What got her through were two things: the hope that her symptoms would start to lift when she got past her first trimester, and, of course, the promise of a baby in December. Unfortunately, neither of these came to pass.

Andrea had just reached fifteen weeks' gestation when she arrived in the emergency room at a major

academic medical center. After a short week of relief, her nausea had returned, accompanied by a low-grade, persistent, gnawing abdominal pain, and—perhaps of more concern—a conviction that something was badly wrong. Given the signs, her attending obstetrician ordered a CT scan, the gold standard for ruling out what would be inexcusable to miss: appendicitis.

Yet the medical imaging team, nervous about radiation exposure with a pregnant patient, resisted the CT scan. First they attempted to image without radiation, but an ultrasound and an MRI yielded no useful information. The team then requested extra layers of documentation verifying that risks of radiation exposure to the fetus were discussed with the

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patient—who, by this time, had been admitted to the hospital with signs of evolving sepsis. And when the CT was finally done eighteen hours after it had been requested by the attending obstetrician, it did, in fact, reveal not only appendicitis, but a ruptured appendix.

Andrea was right; something was wrong. Five days later she miscarried in her hospital bed.

As it turns out, Andrea's story was tragic in more ways than one, for the resistance to imaging that led to these layers of critical delay was unfounded. As the American College of Radiology emphasizes, the risks of a single CT scan even for fetuses are negli-

the pregnant body in a variety of settings. In the first two sections, we explore the dual nature of attitudes toward medical intervention during pregnancy and birth. When treating pregnant women's nonobstetrical medical needs, it turns out, there is a tendency to notice the risks of intervening without adequately noting the risks of *failing* to intervene. In contrast, when we turn from management of pregnancy to management of birth, we note a tendency to intervene without due regard for the burdens to both fetus and woman that such interventions may bring. If risk perception is often distorted, the nature of the distortion changes markedly de-

about the roles and responsibilities of motherhood. As many have noted, pregnancy can refract and intensify the already demanding moral standards of sacrifice we apply to mothers. In the present context, this can lead to a tendency to unreflectively judge *any* risk to the fetus, however small or theoretical, to trump considerations that may be of substantial importance to the woman herself.

### Nonobstetrical Care of Pregnant Women

For the first distortion, we return to Andrea's story. Concern about radiation exposure in pregnancy has a

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ble, carrying a fraction of the radiation dose shown to cause fetal harm.<sup>2</sup> Acting out of concern for the fetus brought about what the physicians had feared all along—not in spite of, but *because* of their “caution.”

Far from being an isolated incident, Andrea's story illustrates a widespread pattern of perceptions and reasoning about risk in pregnancy. Certainly, reasoning well about risk is among the most challenging tasks in the practice of medicine. A breadth of cognitive biases is well documented: absolute and relative risks are often confused; ranges of risk get falsely dichotomized into binary categories of “low risk” and “high risk”; information framing can alter risk perception.<sup>3</sup> But with the addition of a fetus, reasoning about risk becomes yet more problematic.<sup>4</sup>

In this article, we review certain specific patterns of distortion that shape the perception, communication, and management of risk around

pending on the circumstance of a pregnant woman's health needs. In the third section, we move outside the clinic, noting patterns of advice about decisions faced in everyday life during pregnancy—what to eat, how to sleep, which activities to engage in, and which to avoid. Here we see a retreat from evidence-based advice to the mantra of “better safe than sorry,” even in the face of reassuring data.

In the fourth section, we broaden the discussion. The sources of these patterns are likely a multitude of factors: entrenched patterns in clinical practice and training, liability (to be sure), as well as fads and fashions of pregnancy advice. But on reflection, they also have a striking resonance with historical cultural themes around pregnancy and birth. These include themes about purity in pregnancy and control in birth—both of which can lead to reasoning about risk that is oriented more by magical thinking than evidence—as well as themes

long history, vividly informed by the aftermath of the atomic bombing of Hiroshima and Nagasaki and the Chernobyl disaster, which together have created a powerful dread of radiation exposure during pregnancy. In fact, though, the dose of radiation in diagnostic imaging studies is a fraction of that known to cause fetal harm. Studies in the last several decades have conclusively decoupled the radiation exposure of any single diagnostic study performed one time from fetal risk.<sup>5</sup> Concerns about a link between diagnostic radiation and childhood leukemia—often raised by patients and practitioners alike—are highly controversial; if the link does exist, the magnitude of such risk is very small.<sup>6</sup> As the American College of Radiology, the American College of Obstetricians and Gynecologists, and the National Council on Radiation Protection all affirm, animal and human data indicate that the dose of ionizing radiation from radiologic

procedures—including plain films and abdominal or pelvic CT scans with contrast—yields no increase in the risk of congenital malformations, growth restriction, or pregnancy loss.<sup>7</sup> Fetal radiation exposure from a chest x-ray performed on a pregnant woman is roughly equivalent to that from a transcontinental flight.<sup>8</sup>

Despite this evidence, studies consistently show that physicians and others overestimate the risk associated with radiation exposure. A Canadian survey of nearly four hundred randomly selected obstetricians and family physicians, for instance, found that almost two-thirds of family physicians and more than one-third of obstetricians overestimate the radiation risk associated with a CT scan during pregnancy. Approximately 5 percent of the doctors surveyed would recommend *abortion* after such exposure in early pregnancy, based on their perceptions of teratogenic risk.<sup>9</sup>

Of course, avoiding unnecessary radiation is advisable for anyone, pregnant or not, but diagnostic radiation is often both necessary and beneficial. And in Andrea's case, it was critical. The risks of not performing necessary diagnostic tests were clear and portentous: ruptured appendicitis, peritonitis and sepsis, uterine infection, fetal death. These risks were of a significantly higher magnitude than the negligible risks of harm from radiation. Indeed, delayed diagnosis is the leading cause of morbidity associated with ruptured appendicitis in pregnancy; some estimate a fetal loss rate of less than 2 percent with an unruptured appendix versus more than 30 percent after perforation.<sup>10</sup>

Here, then, we see the first notable pattern. When treating a pregnant woman's nonobstetrical health needs, as in Andrea's case, the risks of intervening are often highlighted without due notice for the risks of *failing* to intervene. As obstetricians well know, pregnancy is no prophylaxis against medical illness: in the United States, as many as one in five pregnancies are complicated by a significant underlying or emergent health issue.<sup>11</sup> But

when it comes to the diagnosis and treatment of these conditions, the tendency for many is to avoid medical intervention without considering the risks undertreatment may pose to the woman or her fetus.

Take, for example, the medical treatment of severe depression during pregnancy. Depression complicates up to five hundred thousand, or nearly 13 percent, of pregnancies per year in the United States.<sup>12</sup> Based on studies linking a popular class of antidepressants (selective serotonin reuptake inhibitors, or SSRIs) to temporary withdrawal symptoms in neonates, slight increases in fetal heart defects, and a rare fetal lung problem,<sup>13</sup> some providers automatically recommend that their pregnant patients discontinue medication while pregnant. In a vivid essay about her experience with major depression and pregnancy, writer Anna Blackmon Moore recounted that both her general practitioner and psychiatrist recommended she stop taking antidepressants unless she was suicidal.<sup>14</sup> The Web site for the National Alliance on Mental Illness admonishes women to "if possible, stop using the drugs before trying to conceive [and] do everything possible to avoid medication in the first trimester of pregnancy."<sup>15</sup> Reassuring and well-publicized articles reporting the safety of these medications during pregnancy have neither reversed these precautionary guidelines nor changed Federal Drug Administration warnings on drug labels.<sup>16</sup>

But summary recommendations to discontinue medication for depression during pregnancy are highly problematic, for untreated depression carries significant risks of its own. Women who discontinue medication have significantly higher rates of relapse of major depression than those who continue medication (68 percent compared to 25 percent).<sup>17</sup> The risks of unmedicated severe depression are significant: weight loss, alcohol and drug use, and decreased social support are all associated with maternal depression. And while the risk of suicide during pregnancy is small, it is

the most common cause of maternal death in the year after birth.<sup>18</sup> Such depression also carries significant risks to the fetus, who is more likely to have growth problems during gestation, be born prematurely, and suffer a number of postnatal complications.<sup>19</sup> Despite these risks, as many as one in three women with depression will discontinue antidepressant medications during pregnancy, either at the recommendation of their doctors or of their own accord.<sup>20</sup>

Indeed, providers are not the only ones who may have selective perception about risks of medical treatment in pregnancy: patients, too, can fall prey to this risk distortion.<sup>21</sup> In a recent survey, only 35 percent of pregnant women indicated they would take antidepressant medication even if it were recommended by their doctors.<sup>22</sup> And these tendencies are not specific to depression. Women with severe asthma, for example, sometimes stop using their medications because they fear fetal harm. But halting such medication is dangerous not only to the pregnant woman (poorly controlled asthma places a pregnant woman at higher risk of hypertension, preeclampsia, and uterine hemorrhage), but to the fetus. Poorly controlled maternal asthma is associated with intrauterine growth restriction, prematurity, and low perinatal birthweight; women with asthma well controlled by medication, in contrast, have perinatal outcomes as good as comparable groups of women without asthma.<sup>23</sup> As maternal-fetal medicine specialists are often at pains to emphasize, usually the best way to ensure the health of the fetus is to ensure the health of the pregnant woman.

Even when public recommendations to intervene or medicate during pregnancy are clear and emphatic, women can have a difficult time following them. A current case in point is that of vaccination against pandemic flu. Following reports of strikingly high death and complication rates in pregnant women with H1N1 influenza during the first months of the

pandemic,<sup>24</sup> the Centers for Disease Control and Prevention put pregnant women at the top of the priority list of groups who should receive the vaccine when it is available. But that recommendation faces an uphill battle. Pregnant women have an abysmal rate of vaccination against seasonal flu—a paltry 15 percent—even though it is recommended for them in particular.<sup>25</sup> While practice patterns undoubtedly contribute (only about 50 percent of obstetrical clinics stock flu vaccine<sup>26</sup>), so do pregnant women, for whom the small and theoretical risks of vaccination can loom larger than the far more significant risks of the flu itself.<sup>27</sup> But as scientists and public health leaders are emphasizing, decades of data on influenza vaccine use in pregnant women indi-

cation, such patterns often reflect a risk distortion of their own: the tendency to notice, and organize around, the risks of failing to intervene without adequately balancing the risks that intervention itself can bring in its wake.

For a dramatic example, consider the use of continuous electronic fetal monitoring for uncomplicated pregnancies. Electronic monitoring of the fetal heart pattern during pregnancy was introduced in the 1960s with the hope that it would enable doctors to identify fetuses in need of early delivery and prevent fetal morbidity and death.<sup>30</sup> But the evidence does not support this benefit. Despite EFM's widespread use, the rate of cerebral palsy has not decreased.<sup>31</sup> When compared to intermittent auscultation,

her coping strategies, and her sense of agency in the birthing process.<sup>34</sup> Concerns have been forcefully raised that EFM may divert a woman's attention and awareness away from her sensed experience of labor, may direct caring eyes away from the laboring woman and instead toward a computer screen, and may contribute to a problematic "cascade of intervention."<sup>35</sup>

There is more. EFM has also been linked with the daunting problem of malpractice litigation in obstetrics. Despite EFM's poor predictive value, plaintiff's attorneys can almost always find an expert who will retrospectively identify an abnormality in EFM tracings that "should" have led to a cesarean delivery.<sup>36</sup> The tracings then turn into a smoking gun—but a mis-

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cate no problematic outcomes of even a small nature in the children born to them.<sup>28</sup>

### Birth and Intervention

**I**f providers (and patients) tend to be overly averse to medical intervention when treating pregnant women's nonobstetrical health needs, matters are quite different when it comes time to get the baby out. If there is one thing American birth is all about, it is intervention. Modern, hospital-based obstetrics is marked by a proclivity toward technology: 31 percent of births are now delivered by cesarean section, 22 percent involve labor-speeding medication such as pitocin, and 63 percent involve epidural analgesia.<sup>29</sup> Problematic in terms of resource allo-

EFM does not reduce the rate of fetal death. Recent meta-analyses suggest that it does reduce the risk of neonatal seizure by approximately half, but such seizures are extremely rare (occurring in between 0.4 percent to 0.04 percent of neonates)<sup>32</sup> and their long-term effects are unknown.

What data *do* point to are the clinical downsides of routine EFM. EFM is associated with higher rates of cesarean delivery and of operative vaginal delivery with vacuum or forceps—procedures that carry increased morbidities for woman and fetus alike.<sup>33</sup> Use of routine EFM has also been linked to subtler but important ill effects: it limits a woman's ability to move during labor and delivery (to use different body positions or immersion in water to improve her com-

leading one. Indeed, a recent article in the *Journal of the American Medical Association* titled "Who Will Deliver Our Grandchildren?" cites EFM as a leading contributor to the liability crisis that is shrinking the number of obstetrical providers and hospitals providing maternity care.<sup>37</sup> And yet, even with severely limited evidence of EFM's benefit for neonates, even with its contribution to the climbing numbers of cesareans and attendant risks for both women and fetuses, even with its potential detrimental effects on freedom, empowerment, and meaning of birth, and even with malpractice litigation leading to a worrisome dearth of obstetrical providers, most still agree that EFM is here to stay.<sup>38</sup> Why?

Some have cited logistical or staffing challenges associated with EFM's only studied alternative, intermittent auscultation.<sup>39</sup> Others suggest that the lack of standardized interpretation guidelines and nomenclature has made it more difficult to contain EFM's untoward effects.<sup>40</sup> But leaders in the field have raised a different possible source of recalcitrance. They speculate that routine EFM has persisted, despite its many problems, because it has virtually eliminated the horror of *unexpectedly* delivering a dead baby.<sup>41</sup> That is, EFM has eliminated the possibility of the "fresh still-birth"—the unanticipated death that older obstetricians (or those working today in the developing world) recall with a shudder. Again, it is not that fewer babies die because of EFM. They don't. Rather, EFM allows us to know when the unthinkable is happening. It allows practitioners the comfort of acting quickly and decisively, even if they do so in vain.

When it comes to pregnancy, it turns out, our attitudes toward medical intervention are Janus-faced. With nonobstetrical care of pregnant women's health, the tendency is to notice the dangers of intervening without seeing the dangers of nonintervention; while with birth, the idea of not availing ourselves of all possible interventions is what strikes as dangerous, even when those interventions can themselves be the source of danger.

### "Better Safe Than Sorry"

Of course, many of the decisions about what one should or shouldn't do during pregnancy have to do not with medications or medical interventions, but with day-to-day issues about what to eat and drink, how to move and sleep, where to be, and what activities to engage in or avoid. Indeed, in the United States, pregnant women are under a torrent of advice advanced in the name of safety. Pregnancy advice books and Internet sites admonish pregnant women to avoid an array of

foods from soft cheese to sushi, to sleep in a specified position (currently, avoiding stomach and back, with left side preferred to right), to avoid paint (including those with low volatile compounds), to avoid changing the cat litter, not to sit in the bathtub longer than ten minutes, not to sample the cookie dough, to avoid loud music, and even to keep a laptop computer several inches from their pregnant bellies, "just in case."<sup>42</sup>

The explicit aim of all these restrictions, of course, is to safeguard the health and well-being of the fetus. For a great many such restrictions, though, the exposure or activity carries no actual evidence of harm, and sometimes carries evidence of safety. Far from being based on a balanced exploration of risks and benefits, restrictions are often based on an imagined or theoretical risk without due consideration of data supporting safety or even possible benefit.

Take that worry about sushi, for instance. Warnings to avoid it are based on the speculative risk of foodborne illness from parasites. But as Stephen Shaw, an op-ed contributor to the *New York Times* artfully noted, the risks are unfounded for a panoply of reasons. Sushi is flash-frozen to destroy parasites; it is shellfish, not sushi, that is responsible for the vast majority of food-related illnesses; and most species of fish used for sushi are unlikely (by virtue of their size or habitat) to have parasites. "The risk of falling ill from eating [seafood excluding mollusks]" notes Shaw, "is 1 in 25,000."<sup>43</sup> All of this prompts the question of why sushi got selected for restriction, and not, say, lettuce, as happened in the United Kingdom.

Or again, consider the more general worry about fish. In 2004, the U.S. Department of Health and Human Services and the FDA issued a statement advising pregnant women to limit consumption of all seafood due to concerns about fetal exposure to neurotoxins, citing risks of mercury in particular.<sup>44</sup> In fact, this ad-

vice may be counterproductive. A growing body of evidence suggests that a seafood hiatus during pregnancy can be bad for the fetus given the benefits to the developing fetal brain from the fatty acids in fish. A recent report of a large study of nearly twelve thousand pregnant women and their children in the journal *Lancet* suggested that children may benefit when their mothers consume seafood in excess of the U.S. recommendations, and that children of women whose intake was limited and consistent with U.S. regulations had lower scores than their exposed counterparts in developmental, behavioral, and cognitive outcomes. The authors concluded that "advice to limit seafood consumption could actually be detrimental [and] risks from the loss of nutrients were greater than the risks of harm from exposure to trace contaminants in 340 grams of seafood eaten weekly."<sup>45</sup>

Further, when reassuring evidence emerges, it is rarely given the same attention as evidence of danger. For a recent example, we can look to the well-publicized findings of a study designed to explore the possible link between caffeine consumption and early pregnancy loss.<sup>46</sup> Evidence of a modest increase in miscarriage risk with moderate caffeine consumption in the first trimester was touted as reason to "stop or reduce caffeine intake during pregnancy," even when the same study found no evidence of an association between consumption of two cups of coffee a day or less and miscarriage. Rather than suggesting that the lack of an association between low caffeine consumption and miscarriage risk could serve to reassure pregnant women that a cup of coffee a day is safe, the authors of this study chose to interpret their findings as justifying complete abstinence from yet another substance that many women would much prefer to enjoy.<sup>47</sup>

All of this can lead to a state of hypervigilance in which every bite is checked and to considerable anxiety as pregnancy becomes an exercise of caution, restraint, and fear. Too often

in pregnancy, the boundaries between “dangerous” and “safe” and between “reckless” and “responsible” are shaped in capricious and rigid ways. Everyone agrees that pregnant women should have access to information and means to stay as safe and healthy as possible. But during pregnancy, a balanced exploration of risks and benefits is replaced by a flight from evidence in which the admonition “don’t—just in case” runs roughshod over the facts, not to mention the circumstances of a given woman’s life.

In short, the widely embraced ideal of evidence-based recommenda-

tion is in pregnancy too often replaced with a particularly unfettered version of the precautionary principle. Comforting at first blush, the mantra “better safe than sorry” can in fact become misleading, counterproductive, and unfair when its application is insulated from and resistant to evidence.

long history, stretching at least as far back as the seventeenth century and across many cultures. For example, in her classic book, *Purity and Danger*, Mary Douglas described beliefs and rituals concerning purity around persons in liminal states such as pregnancy<sup>48</sup>—patterns discernable in sources as wide-ranging as seventeenth century midwifery texts and twentieth century advocacy literature.<sup>49</sup> While the early half of the twentieth century brought a brief period of overconfident assurances that the womb was a predictably protective barrier against fetal harm, this view was proven dramatically, disastrously, and publicly

ing can turn an innocuous exposure into a dangerous one—a sip of beer to poison, a bite of sushi to contamination. Such thinking is considered a familiar and natural response to uncertainty and the unimaginable.<sup>51</sup> In pregnancy, it may be a way to try to tolerate an unsettling truth: that try as we might, what we love may perish. The temptation is to tell ourselves that if we can only find and follow the right set of “musts” and “mustn’ts,” all will be well: we will eliminate the possibility of regret and be able to manage the responsibility and potential for tragic loss that creating, gestating, and shaping a life inevitably brings.

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### **Purity, Control, and Forbidden Trade-Offs**

**W**e have articulated several distortions of reasoning about risk in the pregnant body. Disturbing in their own right, they also bear striking similarities to certain cultural themes that have historically shaped behavior and perception around pregnancy and birth.

The first is a longstanding theme about purity and the pregnant body. Scholars have long problematized the idea of the pregnant woman as a “vessel” whose purity is valued. Fears of the permeable pregnant body have a

wrong by thalidomide. Devastating birth defects linked to the use of this drug in early pregnancy led to public outcry and to new laws that ultimately resulted in the near-exclusion of pregnant women from participation in and benefits from research trials for the next quarter century.<sup>50</sup> The pendulum has now swung from overconfidence back to overanxiety: medicines and interventions that should be seen as therapeutic or lifesaving are instead seen as frightening or poisonous in the context of the pregnant body, and innocuous materials such as sushi can get marked as dangerous without data to support broad admonitions against them.

Such concerns about purity reflect a form of magical thinking rather than evidence-based reasoning about actual harms and dangers. As psychologists point out, magical thinking is the tendency to see causality in coincidence and to substitute rituals and taboo for empirical evidence. In the context of pregnancy, magical think-

If purity is a significant theme during pregnancy, control is the theme of American birth. The womb that was seen as a space to be protected during pregnancy can come to be viewed as a *barrier* to fetal safety during birth itself (in one account, a “fortress against fetal health care”<sup>52</sup>). In what may be their own version of magical thinking, American hospitals often respond to the boundaries of life—to birth and to death—with the comfort of intervention. If routine EFM does not help medical outcomes, it does give a stream of information that helps keep at bay the unexpected. Likewise, as death approaches, the first inclination of medical professionals is often to bring more options to the bedside—another intervention, a promising research protocol. Individuals in the palliative care and hospice community have made great strides in countering this inclination at the end of life. Our practices around birth, however, lag behind our practices around death.

The point is not that birth, as something “natural,” should be naively regarded as “safe.” Women still do die during birth, at a rate of 6.5 per 100,000 in the United States, and only about a quarter of these deaths are considered preventable.<sup>53</sup> Preeclampsia, a pregnancy-related disease, can be life-threatening. Amniotic fluid embolism can cause horrifyingly rapid respiratory collapse and death. And neonatal birth injuries and death, though rare, do happen, even in the context of the highest quality maternity care and the absence of error.

The point, rather, is about how we perceive and reason about risks. Too often, current practices reflect reasoning that is governed more by dread than by evidence. In birth, no less than in life itself, there is an irreducible element of risk; responsible risk reasoning requires confronting the fundamental fact that the joy of birth carries with it a vulnerability to the possibility of traumatic loss.

Another strand in the tapestry has to do with themes of motherhood. Reasoning about risk during pregnancy and birth inevitably asks us to face the possibility of trade-offs between the pregnant woman’s interests and those of her fetus. Often, of course, maternal and fetal interests are far more aligned than the headlines or ethics discussions about “maternal-fetal conflict” would indicate. Usually, what’s best for the baby is what’s best for the pregnant woman, and vice versa. Sepsis from a ruptured appendix is good for neither woman nor fetus; a hiatus from fish is not only unhealthy for women, it may rob the fetus of nutrients important to brain development; and a mother’s struggle with severe depression (not to mention the risk of suicide) has potentially profound implications for her children. But if a model of “maternal-fetal conflict” is overwrought, so, too, would be a model that insists on the romantic alignment of maternal and fetal interests: genuine trade-offs can arise.

But when confronting such possibilities, we run headlong into an area of profound discomfort, for the idea of pregnant women trading off their own interests for those of their fetuses runs up against a cultural mandate. The dominant idea of a “good mother” in North America requires that women abjure personal gain, comfort, leisure, time, income, and even fulfillment;<sup>54</sup> paradoxically, during pregnancy, when the woman is not yet a mother, this expectation of self-sacrifice can be even more stringently applied. The idea of imposing *any* risk on the fetus, however small or theoretical, for the benefit of a pregnant woman’s interest has become anathema. A second cup of coffee, the occasional beer, the medication that treats a woman’s severe allergies but brings a slight increase in the risk of cleft palate, the particular SSRI that best treats a woman’s severe recalcitrant anxiety disorder but brings a small chance of heart defects—all are off limits, or nearly so, to a “good mother.”

Such reasoning is not applied with equal opportunity. Consider the dialogue around sexual intercourse during pregnancy. Most researchers on the topic agree that there is inadequate empirical evidence for making recommendations for couples about the safety of intercourse during pregnancy.<sup>55</sup> Yet despite inadequate data and plausible physiologic reasons for concern (prostaglandins in sperm cause contractions, orgasm causes contractions, intercourse can cause bleeding in the context of placenta previa), most Web sites and doctors reassure that intercourse is safe during pregnancy and advise women to go ahead if they are so inclined.

The curious about-face with regard to risk in this case suggests that the acceptability of trade-offs depend in part on whose interests are being met—or constrained. For the woman’s solitary pleasure of coffee, abstinence is held out as the standard with no comfort offered to those who accept a calculated risk. Yet for heterosexual intercourse, abstinence is

portrayed as optional, and reassurance given to those who partake. Which trade-offs strike us as acceptable and which as reckless in the context of pregnancy, in short, may turn in part on social relationships, power dynamics, and who, exactly, is being inconvenienced or burdened.

The pursuit of zero risk to the fetus in these ways, then, holds pregnant women to a standard to which we do not hold prospective fathers. More than that, it holds them to a standard we don’t impose on parents of *born* children. We accept small risks to our children for our own sakes every day. We believe it reasonable to impose the small risk of fatality introduced every time we put our children in the car (safely restrained in a car seat), even if our errand is mundane and optional. Likewise, we recognize as reasonable the decision to live in a city that happens to have high levels of air pollution even if doing so increases the risk of our children later developing cancer.<sup>56</sup> To be sure, balancing such risks can be among the most challenging tasks of parenthood. But we recognize that reasoning about risk is inevitable, that thoughtful, responsible trade-offs are a fact of life, and that there are times when benefit to one member of a family comes at the price of a risk to another.

Once again, our point is not that anything goes. Balancing risks to the fetus with benefit for the pregnant woman (and vice versa) should be done carefully and responsibly, with attention to evidence when it is available. And when we can eliminate a risk to the fetus—even a very small one—at no cost, then of course we should. But the pursuit of absolute zero risk to the fetus too often comes at very real costs to women and their families.

Pregnancy is often heralded as a time of hope and happiness. But when issues of risk enter—as they always do—pregnancy also challenges our ability to reason well. There is a tendency to think of safety in ways unmoored from evidence. Under-

neath these patterns are themes of purity, control, and forbidden trade-offs that work together and affect what we think to notice, which risks we think reasonable and which irresponsible, and how we view women themselves—at worst, as vessels, or more subtly, as agents whose needs can and should be met only if they can do so without any risk to the fetuses they carry.

As complex as pregnancy is, recommendations, guidelines, and advice should be based on evidence, not on unrealistic expectations, dread, or denial, and evidence that encompasses the full profile of risks, including those of not intervening. Further, recommendations around pregnancy should recognize the legitimacy of maternal well-being as a consideration important both for its own sake and for its importance to fetal well-being. Most centrally, we need to reason better about risk and the pregnant body not by suspending the usual modes of analysis when confronted with pregnancy, but by giving the same careful, responsible, and comprehensive assessment we hope for in all of medicine.

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