Virtual Mentor
American Medical Association Journal of Ethics

September 2013, Volume 15, Number 9: 741-823
Motherhood and Medicine

Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 743-745.

FROM THE EDITOR
Motherhood and Medical Ethics: Looking beyond Conception and Pregnancy

In the last half-century, numerous technological advances, including oral contraceptives, in vitro fertilization, and prenatal testing, have drastically altered the nature of human reproduction. In turn, these technological innovations have challenged prospective parents, physicians, medical ethicists, and policymakers to reconsider what it means to become a parent and to question how much control individuals should have over what were previously the limits of biology, be it infertility or the genetic traits of a new child. At the same time, in the 40 years since abortion was made legal by the Supreme Court decision in *Roe v. Wade*, our society has continued to vociferously debate the obligations, if any, that individual women and society have to the unborn.

Yet these intense debates in the academy, in Congress, and in the public sphere almost seem to suggest that reproduction is primarily an issue of conception—*whose sperm? whose egg? how and where will they meet?*—and pregnancy—*in whose uterus? what rights has the fetus? can it be terminated?*

Outside of these highly publicized debates, reproduction extends far beyond conception and pregnancy. In reality, many women consider their reproductive plans years before becoming pregnant and may make significant life choices well in advance of that moment of conception. Once a woman becomes pregnant and gives birth, her engagement with her children has only just begun. In the process of raising the new generation, there is an infant, a toddler, a child, an adolescent, and a young adult, all with unique needs and possibilities. Thus, to understand reproduction in a fuller sense, we need to look beyond the moments when egg meets sperm, when an embryo implants in a woman's body, or even when a baby is born, and consider reproduction across the lifespan.

This theme issue of *Virtual Mentor* on medicine and motherhood aims to do just that. The articles cover the many stages of this reproductive lifespan, with particular attention paid to women's experiences as mothers and caregivers. At one end of this timeline, Kate Treadway considers the personal and professional questions a young medical student may face when choosing a career path and considering her own reproductive future. At the other end, Sidney Callahan offers a personal narrative of her stepmother's her final years with Alzheimer disease, in which the caring roles of mother and daughter were reversed.

In considering this timeline, several themes emerge. Perhaps not surprisingly, technological and clinical innovations continue to raise questions for mothers and

care providers alike. Yet when compared to innovations such as in vitro fertilization or preimplantation genetic diagnosis, the questions of technology presented here are more mundane yet more pervasive, arguably affecting women in far greater numbers. Anne Lyerly and Ruth Faden show how pregnant women have been left out of the widespread progress toward evidence-based prescribing and exposed to danger by a clinical trial structure that severely limits the testing of medically necessary drugs on women who are pregnant. Alice Dreger and Aron Sousa point to the lack of evidence-based medicine in the debate between "natural" and "medicalized" childbirth. Both articles demonstrate the haphazard application of medical knowledge and technology to motherhood and the unborn, about which emotions and cultural prescriptions run deep. Jessica Martucci continues this exploration of technological innovation and motherhood by examining the history of the breast pump and highlighting the limits of technology in addressing what are essentially social challenges faced by mothers.

Nearly all essays in this theme issue deal at some level with questions of responsibility. To what extent do we attribute the well-being (or lack thereof) of children to their genes or their environment? And within the category of "environment," how much responsibility do we place on parents, and mothers in particular, rather than society as a whole? Kristin Hessler examines recent research in epigenetics that offers an explanation of how genes and environment—including social structural factors—are interrelated, manifesting in the persistence of health disparities over generations. Hessler draws on theories of justice to make a case for greater social support in light of these scientific findings. Yesenia Perez discusses attempts to criminalize ingestion of dangerous substances by pregnant women, querying the motivations behind and ultimate effectiveness of these efforts to protect the unborn. Benjamin Silverman and Anne Gross take on a subtler version of this issue in the clinical setting, considering the case of a woman who would like to continue her antidepressant therapy during pregnancy, even though the treatment may pose some risk to her developing fetus. Grappling with this theme of responsibility in a different context, Josephine Johnston examines the history of etiologies of schizophrenia in children, from the theory of the "schizophrenogenic mother" of the past to the genetic model of the present, in an effort to leave mother blaming behind without rendering parental responsibility forbidden to discuss.

The articles in this issue also consider the diversity of contexts in which women become mothers and the ways in which these contextual specifics matter. Rachel Simon and Jennifer Clarke shed light on the unique challenges faced by incarcerated women who are pregnant or give birth while in the criminal justice system, offering a pointed critique of the use of shackling during labor and delivery and the separation of mothers and their newborns, sometimes permanently. Autumn Fiester and Lance Wahlert comment on the case of a lesbian couple expecting a child in which the nongestating mother would like to induce lactation so both mothers may breastfeed. Nancy Berlinger and Rebecca Kaebnick examine motherhood in the context of care labor more broadly and consider issues of justice when poor women, often from the

Global South, migrate out of economic necessity to provide care for elderly Americans, often leaving their own children behind.

The articles in this theme issue by no means capture fully the rich diversity of experiences with motherhood. To give just a few examples, the articles here do not begin to address questions of infertility, of families adopting children, or critiques of the concept of motherhood itself, preferring instead some conception of parenthood not linked to gender. But what this set of essays can capture is a glimpse of the ethical complexity of motherhood, especially as it intersects with medicine and health care, that is not limited to the pivotal events of conception and pregnancy.

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Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 746-752.

ETHICS CASE
Weighing Risks and Benefits of Prescribing Antidepressants during Pregnancy
Commentary by Benjamin C. Silverman, MD, and Anne F. Gross, MD

Rebecca, a 27-year-old recently married woman, visits her doctor, Dr. Krieger, after testing positive on a home pregnancy test. Rebecca hadn't been planning to get pregnant, but she has decided to continue the pregnancy and to raise the child. In reviewing Rebecca's medical chart, Dr. Krieger remembers that for the past 8 years she has been renewing Rebecca's prescription for Paxil. Rebecca had psychiatrists in the past, but had asked Dr. Krieger to prescribe the Paxil for the past several years, since she has been on a stable dose and feeling very well. Dr. Krieger asks Rebecca if she is still taking the drug and whether it has helped her depression.

"Yes, I still take it every day, and it's helped me so much," Rebecca explains. "Before taking it, I just felt so down. I had trouble concentrating at work, and when I came home I would spend the whole night slumped on the couch. I didn't want to be around anyone or do any of the things I enjoyed before. I tried seeing a therapist and taking a bunch of other antidepressants"—she'd been on Prozac, Lexapro, and Effexor—"but nothing seemed to work before Paxil. It let me actually connect with my friends and my husband and actually enjoy things like working in my garden and traveling. I can't even think about what my life would be like without it."

"I'm so glad to hear how well it's worked for you," Dr. Krieger responds. "However, there is some evidence that Paxil may put your fetus at an increased risk for a congenital heart defect. Other studies say there is no risk. But better safe than sorry—I don't think it's a good idea to take the Paxil during your pregnancy."

Rebecca is visibly upset by this plan. "I want my baby to be healthy, but some evidence of increase risks doesn't seem all that significant. I can't imagine going back to feeling the way I did—and I can't imagine being depressed would help my pregnancy or my baby either."

Dr. Krieger is sympathetic to Rebecca's concern about her depression recurring but is also concerned about the potential effects of Paxil on the fetus. Rebecca is due for a prescription refill, and Dr. Krieger needs to decide whether to renew the prescription or not.

Commentary
In this case, Dr. Krieger faces the question: should she renew Rebecca's paroxetine (Paxil) prescription or not? This is both a clinical and ethical question. We will start with the clinical perspective in order to then best consider the ethical challenges.

Major depressive disorder is a common illness, occurring more frequently in women than men [1]. Approximately 5-15 percent of women will have a major depressive episode during pregnancy [2, 3]. Women who have a history of prior depressive episodes are more likely to experience a major depressive episode during their pregnancies [4]. It is common for women who are on antidepressant treatment to consider discontinuing the medication during prenatal planning or when they find out they are pregnant due to information regarding risks of the antidepressant to the fetus [4, 5]. At the same time, women with histories of depression who discontinue antidepressant medications during pregnancy have been shown to have higher rates of relapse in depressive symptoms than women who continue taking medication [6].

The risk of antidepressant medication to the fetus must be weighed against the risk of recurrence of depression to the mother and its effect on the fetus. Women who suffer from depression during pregnancy have been found to more frequently use tobacco, alcohol, or other harmful substances and less frequently receive prenatal care [7]. This can lead to low birth weight, growth retardation, preterm delivery, preeclampsia, prematurity, and respiratory distress [4, 7, 8, 9].

Rebecca, who has a history of major depressive disorder, with multiple failed medication trials, has had her depression stabilized by the use of paroxetine (Paxil). She has been taking paroxetine consistently for the last 8 years and reports that her depression is well controlled; she is able to spend time with friends and family and enjoy pleasurable activities. From her perspective, the "pros" of continuing to take antidepressants are abundantly clear. In essence, we can imagine she might not even be pregnant and facing this positive life event if not for antidepressants (i.e., she was able to form relationships and have a social life only after her depression abated with paroxetine treatment). Given Rebecca's years-long history of clinical stability on paroxetine, the risk of clinical destabilization must be weighed against the risk of paroxetine exposure to the fetus.

Dr. Krieger attempts to explain the "cons" of continuing to take antidepressant treatments to Rebecca. In brief, the data on the safety of antidepressants during pregnancy are limited, as there are no randomized placebo-controlled trials. No studies indicate that antidepressant medications are without risks; selective serotonin reuptake inhibitors (SSRIs) (a class of medications that includes paroxetine) and tricyclic antidepressants (TCAs) may increase the likelihood of low birth weight, respiratory distress, and preterm birth [8]. In general, SSRIs and TCAs have not been associated with increased risk of congenital malformations [8]. In 2005, a meta-analysis did not identify an association between SSRIs and congenital malformations [10]. In December 2005, however, the Food and Drug Administration (FDA) issued a warning that paroxetine use in pregnant women may double the risk of fetal heart defects and labeled paroxetine a category D risk—more risky than other SSRIs, which are in category C [11]. This risk is associated with paroxetine exposure during the first trimester, when organogenesis is occurring. In the literature, there is controversy regarding the data that was used in support of the FDA warning [12],

and studies have been conflicting on the risk of paroxetine exposure in pregnancy [7, 13]. Two meta-analyses reported an increased risk for congenital malformations [14] and cardiac malformations [15] with paroxetine exposure. Other studies disagree and found no increased risk of congenital or cardiac malformations with paroxetine exposure [10, 13, 16]. A recent systematic review and meta-analysis of the literature found that antidepressant exposure was not associated with congenital malformations overall, but was associated with an increased risk of cardiovascular malformations and septal heart defects [13]. In this study, paroxetine (but not fluoxetine) was associated with an increased relative risk for cardiovascular malformations; however, the relative and absolute risks were small and did not reach clinical significance.

Rebecca appears to understand the increased risk of congenital heart defects; she understands that the risk is relatively small and appears to be concerned about the risk of recurrence of depression if she were to switch to another antidepressant or stop antidepressants altogether. The concerns that Rebecca has expressed to her physician are appropriate: those with a history of major depressive disorder have a risk of approximately 25 percent of relapse during pregnancy with treatment as compared to risk of 68 percent of relapse if medications are discontinued [6], and the absolute risk of fetal cardiac malformations associated with paroxetine use during pregnancy are low [7, 13]. Other subjective potential "cons" of discontinuing antidepressant treatment, i.e., Rebecca's recollection of what it felt like to be depressed, is difficult for Dr. Krieger to truly quantify in a risk-benefit analysis.

Given that Rebecca was already taking paroxetine, it is quite likely that the fetus has already had exposure to it during organogenesis. The risk of cardiac malformations is associated with first-trimester exposure to paroxetine, so the decision about whether or not to prescribe paroxetine should take into account current gestational age. The benefits of stopping paroxetine treatment now might be minimal if organogenesis has already occurred, in which case the risk of depression relapse might more obviously outweigh the benefits of stopping the antidepressant.

The decision of whether to continue the paroxetine needs to consider Rebecca's prior episodes of depression, including history of psychosis, mania, suicidal ideation, suicidal plans or attempts, prior psychiatric hospitalizations, current support system, current psychological and psychiatric treatment, prior relapses when paroxetine was discontinued, and any prior pregnancies during which she had depressive or postpartum illness. Treatment decisions must weigh the risks of untreated depression during the pregnancy but also other possible longer-term effects—for example, women who experience depression during pregnancy may have reservations about future pregnancies. Guidelines do exist in the literature about the use of paroxetine during pregnancy and include confirming an accurate diagnosis, appropriate dose with adjustments as needed, an ultrasound or fetal echocardiogram, and a slow taper off of paroxetine if the medication is going to be discontinued, inasmuch as paroxetine is associated with a withdrawal syndrome when abruptly stopped [8].

Rebecca's case raises important questions about autonomy. As a basic principle of medical ethics, we understand autonomy to reflect an individual's right to self-determination, i.e., the patient has the right to choose or refuse her or his own treatment. In modern medicine, the principle of autonomy has often been held above other ethical principles, as we have shifted toward a patient-centered view of health care and away from a paternalistic tradition in which the physician's word reigns supreme [17]. Respect for autonomy forms the basis for informed consent, in which physicians provide information to patients and allow them to make their own appropriately informed decisions.

Ethical dilemmas arise when patients and physicians face situations in which one ethical principle conflicts with another, perhaps leading to different actions or outcomes. In Rebecca's case, Dr. Krieger faces a situation in which respecting Rebecca's autonomy (i.e., permitting her choice to continue on antidepressants which are potentially harmful to her unborn fetus) might conflict with Dr. Krieger's sense of what would be best for the fetus (i.e., her duties of beneficence—doing what is in the best interests of the fetus—and nonmaleficence—not doing harm to the fetus).

An important question for Dr. Krieger to answer in this case is who is her patient—Rebecca, the unborn fetus, or both? How does she weigh a desire to respect Rebecca's autonomy with a desire to respect the principles of beneficence and nonmaleficence to and autonomy of the fetus? This challenge has been discussed at length in the literature, particularly on the topic of a complicated pregnancy and maternal-fetal conflict [18, 19]. If carrying a pregnancy to term were to be life-threatening to a woman, for example, do we prioritize beneficence and nonmaleficence toward the woman and abort the fetus or prioritize beneficence and nonmaleficence to the fetus and allow it to progress to term to give it the greatest chance at life? (A separate and important area of ethical consideration that is beyond the scope of this paper but relevant to decisions about how to balance these interests concerns the personhood and rights, or lack thereof, of the fetus. This distinction sits at the center of the ethical debate over abortion, which has been explored in depth in the literature [20].) As in Rebecca's case, the practical decisions are rarely actually so binary.

As described above, it is seemingly clear that respecting Rebecca's autonomous choices (with a caveat about if she is or can actually be truly informed about them, which we will discuss below) would lead Dr. Krieger to continue prescribing the antidepressant. It is much less clear, however, based on the medical details, how respecting the principles of beneficence or nonmaleficence toward the fetus might proceed. Would exposure to the slight risk of cardiac malformation be better or worse than exposure to a depressed mother, which can have significant medical sequelae as described above? If organogenesis had already occurred, would this shift the decision toward continuing the antidepressant? If Rebecca's previous episodes involved suicidal intent, plans, or actions (which could be lethal to both her and the fetus), perhaps the decision balance shifts toward continuing the antidepressant?

We must additionally consider whether Rebecca's preference can truly be categorized as informed and therefore autonomous. The elements of informed consent include understanding the indications, risks, benefits, alternatives, and consequences of no treatment for any particular medical therapy or decision. In this case, the information is unclear. The risks are uncertain. The data are conflicting. The medical evidence is constantly changing. Can a layperson (or even an educated expert, in the absence of clear and convincing medical evidence) truly understand these risks and benefits? Does this uncertainty push the physician to prioritize the principles of beneficence and nonmaleficence toward the fetus over Rebecca's autonomy, however complete or incomplete it may be? Would it matter if Rebecca had or had not attended college? Or if she were illiterate? Or if she had attended medical school? Appropriately or not, such details might influence the physician's view of the patient's autonomy, perhaps shifting toward or away from a more paternalistic response (i.e., to ignore Rebecca's choice in favor of "protecting" the fetus).

Making a decision in this case necessitates that more information be gathered, including details about Rebecca's prior history of depression and the fetus's stage of organ development and current health. With this further clarification, Rebecca and Dr. Krieger must each make a value-based determination about two matters: whether a high risk of depression in the mother is more or less dangerous to the fetus than a slightly increased risk of birth defect and whether absolute protection of the fetus is more important than preventing the mother's suffering. In Dr. Krieger's case, this means coming to terms with whom she considers to be her patient(s)—mother, fetus, or both—and if both, prioritizing one above the other. It is quite possible that Rebecca and Dr. Krieger will not come to the same conclusions, in which case, we believe neither has the moral right to compel the other to act in violation of a strongly held value (e.g., Dr. Krieger's autonomy also comes into play and holds some weight in the decision). If disagreement persists, Dr. Krieger would be advised to obtain additional consultation about how to proceed or refer Rebecca to another clinician who might be more aligned with her own value-based decision in this scenario. Further consultation might include bringing other viewpoints into the conversation, including those of Rebecca's spouse, other family, other treaters, spiritual advisors, and so on.

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Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 753-756.

ETHICS CASE
Induced Lactation for the Nongestating Mother in a Lesbian Couple
Commentary by Lance Wahlert, PhD, and Autumn Fiester, PhD

Ms. Forte is 6 months pregnant with her second child, a daughter. She was impregnated via insemination by an anonymous donor and comes to her prenatal care visits with her wife, Ms. Smith. Ms. Forte's obstetrician, Dr. Bustamante, begins to discuss Ms. Forte's plans for breastfeeding after the birth, which Ms. Forte did successfully with their first child. Ms. Forte explains that she plans to breastfeed the second child as well but would like her wife, Ms. Smith to also breastfeed their newest child. Ms. Smith, who is also Dr. Bustamante's patient, asks Dr. Bustamante if she can help induce her lactation.

Dr. Bustamante has known both women for several years. She was extremely happy for them when they got married and helped them to find a pediatrician for their first child who would be supportive of same-sex parents. However, this request for induced lactation strikes her as medically unnecessary. The baby will already have one mother who can breastfeed her, and the process of inducing lactation may carry some risks for Ms. Smith.

Commentary
In the United States, the typical context for inducting lactation in a nongestating mother pertains to an adoptive mother who wants to breastfeed an adopted infant [1-3]. In other parts of the world (most significantly across parts of Africa), induced lactation is sometimes initiated as a feeding method when infants are orphaned or maternal illness prevents breastfeeding and for infants with seropositive mothers concerned about virus transmission via breastfeeding [4, 5]. In the U.S. context, both the American Academy of Family Physicians [6] and the American Academy of Pediatrics [7] recommend induced lactation for breastfeeding the adopted infant in their policy statements. But the newest Forte-Smith baby in the above case, like the baby boy who preceded it in the family, will not join this family via adoption and will already have one the gestational carrier who can provide the baby with the nutritional benefits of breastfeeding. In the narrative of this case, then, inducing lactation strikes Dr. Bustamante as a pointless duplication of effort that carries risks without benefit. Accordingly, the physician resists the couple's request, despite her earlier demonstrations that she is supportive of same-sex couples as parents. This essay argues that Dr. Bustamante's reservation about providing induced-lactation counsel and services to Ms. Smith defies widespread recommendations in the American medical literature for other non-biological mothers and bespeaks a potential, latent discrimination of lesbian parents' breastfeeding needs in even the most sympathetic of physicians.

In standard medical practice, there are both pharmacologic and nonpharmacologic methods of inducing lactation that can be used alone or in combination—ranging from prescription drugs to herbal therapies to manual stimulations. Each category of intervention has been successful in inducing lactation in women both with and without prior pregnancy and lactation, though pharmacologic support is usually necessary in women who have never lactated. The nonpharmacologic method of inducing lactation carries no risks, but it may not be successful in Ms. Smith's case [3]. This method involves repeated nipple stimulation for several weeks before the anticipated birth, preferably with a hospital-grade electric pump [1, 8]. In women who have been pregnant and lactated before, extremely high success rates have been achieved with this method [9], but success rates vary in nulliparous women.

The most common approaches to inducing lactation involve pharmacologic intervention in conjunction with nipple stimulation. There are several possible pharmacologic methods with a range of potential short-term side effects for breastfeeding mothers [1, 3], but overall the interventions are considered to be of only minimal risk. One study of women who had never lactated achieved 100 percent success with a single dose of medroxyprogesterone (Depo-Provera) and then either chlorpromazine or metoclopramide for 5-13 days [5]. Both chlorpromazine and metoclopramide can sometimes produce side effects for the mother. With metoclopramide, sedation is the most common side effect, albeit with a 10 percent occurrence rate in women [1]. Depression is experienced less frequently than sedation, and approximately 1 percent of women experience extrapyramidal side effects [1]. With chlorpromazine, side effects include weight gain, sedation, bradykinesia, and tremor [3]. However, in the above-mentioned studies, none of the women experienced any sustained side effects from the intervention [5]. (The potential risks of these pharmacologic methods to the infant are either minimal or nonexistent. Both chlorpromazine and metoclopramide are classed in Hale's Lactation Risk Categories as L2 (safer), indicating that the studies available found little evidence of risk to the infant [10].) As a precaution, studies recommend stopping hormonal therapy 24-48 hours before the onset of breastfeeding.

The unlikely risks of induced lactation to both mother and infant can be put in proper perspective by considering the recommendations of the American Academy of Family Physicians [6] and the American Academy of Pediatrics [7], both of which advocate for induced lactation in cases of adoption. The AAFP states, "The physician should offer the adoptive mother the opportunity to breastfeed her child" and "should support lactation induction" [6]. The AAP includes in its breastfeeding recommendations: "Provide counsel to adoptive mothers who decide to breastfeed through induced lactation, a process requiring professional support and encouragement" [7]. These recommendations suggest that the very minimal (if any) risks attached to induced lactation in nongestating mothers are far outweighed by the benefits (emotional, nutritional, and practical) to the breastfeeding relationship between nonbirth mother and newborn child.

In Dr. Bustamante's defense, one could argue that the nutritional benefit for the typical adopted infant outweighs even the minimal risk for the adoptive mother in most cases of induced lactation. According to this line of reasoning, the risk-benefit justification would not apply to lesbian couples with a gestational carrier, such as the Forte-Smith parents, whose child will receive traditional breastfeeding nutrition from Ms. Forte. But this defense of Dr. Bustamante's position misidentifies the central benefit of induced lactation in conventional adoptive mothers. Such (mostly heterosexual) nonbiological mothers who induce lactation are widely appreciated as being usually unable to achieve an adequate supply of milk to be the sole (or even primary) source of nutrition for their infants [1, 3, 8]. Moreover, across the medical spectrum, nutrition is *not* viewed as the primary benefit of induced lactation by either adoptive mothers or the AAFM. Data from multiple studies shows that mothers view induced lactation as worthwhile even if adequate milk supply is never achieved [2]. Wittig, for example, reports that women "who attempt to induce lactation do so to achieve the enhanced mother-infant relationship that breastfeeding promotes rather than the nutritional benefit it brings" [3]. And the American Academy of Family Physicians concurs, writing in its policy statement: "In many cases, the opportunity to emotionally bond during nursing is the primary benefit of breastfeeding for adoptive mothers and babies" [6].

But we need not be limited to the dilemmas of hypothetical nongestating mothers on this issue. Consider the sentiments of nonbiological lesbian mothers. Faith Soloway, in *Confessions of the Other Mother: Nonbiological Lesbian Moms Tell All!*, writes of her conflicted feelings about her female partner's natural breastfeeding relationship with their child as the gestational carrier: "Basically, I am insanely jealous of their flesh-on-flesh, boundaryless, nurturing, complicated relationship" [11]. By contrast, there are the testimonials of nonbiological lesbian mothers—such as *Offbeat Families* blogger Liesbeth Koning—who attest to the invaluable emotional, practical, and psychological benefits of having both lesbian moms able to breastfeed their children in her article "How Two Lesbian Mamas Share Breastfeeding Duties" [12]. Like these real lesbian nonbiological mothers, the fictional Ms. Smith in the above case is drawn to induced lactation not merely for the nutritional benefit it will bring to her soon-to-be-born daughter, but for the emotional bond it will forge between child and nongestating mother.

In light of the very minimal health risks to Ms. Smith or to her future daughter, and the immeasurable benefits of the emotional bonds that breastfeeding generates for mother and child, any ethical reservations on Dr. Bustamante's part are unfounded. She should proceed with a plan to induce lactation for Ms. Smith, just as she would (without hesitation) for a non-lesbian nongestating or adoptive mother. Failing to do so will either demonstrate a troubling unfamiliarity with the clinical facts of lactation induction or (far worse) a worrisome concern that even the most progressive physicians may be treating their LGBTQ patients and families according to a different standard than they use for heterosexual patients.

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Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 757-760.

ETHICS CASE
Mentoring Students about Career and Life
Commentary by Kate Treadway, MD

Dr. Williams is expecting her mentee, Lauren, a third-year medical student, for a discussion of the residency options she is considering. Lauren has long had an interest in neuroscience and is trying to decide whether to pursue a residency in neurology or neurosurgery. Dr. Williams knows that Lauren is an outstanding student likely to excel and make important contributions in either field. She also knows, however, that the neurosurgery residency is significantly more arduous. She can't help but think that, if Lauren wants to start a family, doing so during this residency could be especially challenging, and waiting until after residency would increase the chances that Lauren would not be able to get pregnant. Lauren recently mentioned a boyfriend to Dr. Williams in casual conversation, but otherwise the two have not discussed personal matters. Dr. Williams is not sure if she should broach the subject of having children during residency with Lauren. She does not want to hold Lauren back from pursuing her ambitions, but she also wants to help her think realistically about her future.

Commentary
The case poses a dilemma that most professional women and, to an increasing degree, men must consider: balancing their work and personal lives. A career in medicine is immensely demanding of one's time and energy, and thus for many people it can be challenging—though by no means impossible—to combine with the duties of parenthood. Though in many regards women have made great strides in the field of medicine—indeed nearly half of medical school entrants today are women [1]—many women still face the reality that their prime reproductive years coincide with medical school, residency, fellowship, or the tenure track. And while men are increasingly involved in the rearing of children, mothers are quite frequently the primary caregivers, even beyond the biological demands of pregnancy, birth, and breastfeeding. Recognizing the difficulties of balancing career and family endeavors, some residency programs offer extended part-time options or combined residencies in which two residents split the duties of a single resident's job [2], though it is not common for residents to do so. Given these realities, medical school mentors and advisors realize their advisees may be struggling with these questions of balance when thinking about their career plans and that their thinking is likely to be informed by gender along with numerous other social and personal factors. In this case the mentor, Dr. Williams, is unsure whether she should raise questions about Lauren's personal life for fear such questions might "hold her back" or be perceived as discouraging Lauren from the more challenging career course.

Before discussing the case in particular, it is important to consider the role of advising in general. Advising is not telling people what they should do, nor is it simply agreeing with the plans laid out. It is first hearing the concerns of the person being advised, secondly helping her (in this case) articulate what is important to her, and thirdly providing information and raising questions that the person may not yet have considered—to generate further discussion about the choices that are being made and the compromises that each may require. Sometimes the advisor has greater expertise in the matter being discussed, but not necessarily. The advisor does have life experience that can be shared and that may be helpful to the student. Obviously the advisor should raise questions in the spirit of exploration and to expand the student's understanding, not to discourage the student from a particular course of action.

The first line of inquiry for the advisor is what Lauren finds attractive about neurology and neurosurgery respectively and what she finds less so. The two specialties under consideration offer quite different approaches to clinical practice. Often through these conversations—through explaining one's reasoning to another—it becomes clearer to the student which field is more compelling.

It is also important to understand what exposure the student has had to both fields. Presumably Lauren has completed a monthlong clerkship in neurology. What does she understand about a career in neurology? Unless she has had other experience in neurosurgery, she has had only brief exposure to it, given the organization of most surgical clerkships, so it would be important to explore her sense of what a career in neurosurgery would entail. If at the end of this discussion she is still undecided, it would make sense for her to plan an advanced experience in neurology as well as a neurosurgery elective, which she would need in any case if she were to apply to a neurosurgical residency.

As part of any career advising it is also useful to have the student talk a bit about how he or she envisions the next 5 or 10 years and what he or she hopes for in and out of medicine. At this point, if the desire for a significant relationship and children comes up, it is reasonable to ask about the student's thoughts on that. How does Lauren envision balancing the demands of a family with the demands of a career? Importantly, the advisor can reassure her that such a balance is quite possible but caution that it generally requires thought and compromise. The compromise need not be giving up a desired specialty but it may involve making choices that will allow greater flexibility. In this case, it would be wise for Lauren to try to talk to some neurologists and neurosurgeons about their careers, personal lives, and how they meet the demands of both and to use that information in thinking about her own future.

This discussion can be somewhat fraught due to the perception that relationship and childbearing questions are only asked of women and that to bring these matters up is therefore sexist. And, in truth, most men are not asked that question—the assumption is generally that if they are in demanding professions and want to have children there

will be someone there (partner or spouse) to care for those children while they pursue their careers. Increasingly, of course, this is not the case, and both men and women would be wise to consider—and mentors would be wise to bring up—what is important to them both in and outside of their professional lives.

That said, there are definitely circumstances in which consideration of personal life has been used in a sexist manner. That is why questions concerning marriage plans and children, for instance, are no longer asked in residency interviews. But it is a very different circumstance when a student is asking for advice and seeking to better understand her options. In this situation it is important to consider all the aspects of the decision. It is up to the student how to use that information.

I strongly disagree that raising the issue of children might "hold Lauren back" because of the implication that asking the question is itself discouraging. There is no particular reason why consideration of Lauren's goals outside of medicine should be considered discouraging or that the question implies that she cannot pursue the specialty that she wants. All choice involves compromise, and it is wise to understand the potential compromises when making a choice. If one is fortunate enough to have a choice of career, I favor following the one that is both intellectually interesting and emotionally satisfying. But anything Lauren decides will have consequences on the rest of her life, and it makes sense to consider these repercussions no matter what her final decision is. This is an opportunity for the advisor to work with the student on clearly identifying important and potentially competing goals and how they can be achieved. Failing to raise the question prevents the possibility of a productive approach to the issue.

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Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 761-766.

JOURNAL DISCUSSION
Whose Hands? Global Migration, Elder Care, and the Mothers of Others
Nancy Berlinger, PhD, and Rebecca Kaebnick

Tong R. Long-term care for the elderly worldwide: whose responsibility is it? *Int J Feminist Approaches Bioethics*. 2009;2(2):5-30.

Looking at care work in the context of the global migration of workers from low-income regions to higher-income regions offers an additional dimension to Rosemarie Tong's ethical analysis of who is and ought to be responsible for the long-term care of older members of affluent societies. Tong points out that caregiving, including the care of the elderly at home, is a responsibility that often falls to women, as hands-on givers and organizers of care. In the globalized world of work nearly one in two economic migrants is a woman and it is common for "family" caregiving work in developed nations to be performed by migrant women employed by families. In this commentary, we consider the ethical implications of relying on economic migrants, who are often mothers themselves, to care for the mothers (and fathers, and children) of others.

According to the International Organization for Migration (IOM), a Geneva-based intergovernmental organization, there is no single definition of "migrant" [1]. Most definitions of migrant workers refer to low-income, low-skilled workers, who are seasonally employed (as in agriculture) or guest workers in countries other than those in which they were born, or who live year-round as immigrants, without authorization, in the countries in which they work (undocumented or unauthorized migrants). Economic migrants leave home to find work, or better-paying work, and their remittances support families and communities back home. Remittances from Filipino/a migrant workers, for example, totaled $17.3 billion in 2009, constituting more than 10 percent of the gross domestic product of the Philippines [2].

The United Nations estimates that, in 2008, 105 million women were migrant workers, constituting 49 percent of the total estimated migrant population worldwide [3]. Human Rights Watch, a major nongovernmental organization (NGO), estimates that the "vast majority" of the world's 50 million to 100 million domestic workers, a category that includes caregivers for the elderly, are women, and that "migrants constitute an increasingly large proportion of domestic workers" [4]. Female domestic workers include "domestic helpers" or "maids" from the Philippines, Indonesia, or other emerging nations in Asia who find work in households in Singapore, Hong Kong, or the Persian Gulf through recruitment agencies and usually live in their employers' homes. They include legal and undocumented immigrant women from the Caribbean, Latin America, Africa, or Asia who care for the elderly

and for children in the United States. Human Rights Watch estimates that up to 30 percent of migrant domestic workers are children, usually girls [5].

In recent years, human rights NGOs, migration-focused NGOs, the World Bank, the World Health Organization, and the United Nations have drawn attention to the situation of migrant women workers as a vulnerable population [6]. Because domestic workers' places of employment are their employers' homes, and because they may have no colleagues and few protections in this workplace, their working conditions can be isolating as well as physically demanding. Some migrants who do domestic work endure virtual indentured servitude when they find themselves unable to leave a work situation that is abusive or exploitative [7]. They are also vulnerable to scams. In the U.S., migrant workers constitute the majority of the $4 billion annual market for telephone calling cards, and the Federal Trade Commission (FTC) has investigated scams that prey on this group of consumers [8]. Female domestic workers, like other economic migrants, can become stuck on the social and economic margins of the places where they live, invisible to the other members of the societies they contribute to through their labor, and not present in the societies back home that they help to support through remittances. And yet these women may have, if not "good" jobs, at least jobs that, because of the persistent wage gap between poorer and wealthier nations, allow them to earn more money than they could have if they remained at home.

So, should we accept that, in a globalized world, responsibility for the long-term care of the elderly in wealthier nations will depend on migrant workers from poorer nations? To put it another way, is a migrant worker an imperfect solution to the problem Tong describes of "ingrained notions about who should care (women) and who should work (men)"? If women in more-developed nations can subcontract their family caregiving responsibilities to women from less-developed nations, thereby allowing the wealthier women to continue to work or pursue other goals and the poorer women to send money home to their children and elders, is this a just arrangement—for each of these groups of women, for each of these societies—or not?

These questions are important for physicians and other health care professionals to consider, because understanding *who* provides care at home (or accompanies elderly people to medical appointments, or sits with them in the hospital) is part of everyday health care work, as when a patient is being sent home from the hospital and a "safe and effective" discharge plan must be put into place. The home care worker who is invisible to health care professionals will have little power to question or fix a care plan that is not working; her options will be reduced to trying to make the flawed plan work (with potentially bad consequences for the patient) or to quit her job. These questions are also important in health care ethics because the domestic worker is herself a person, not merely an instrument through which "care" is provided, and because her perspective on a patient's condition and preferences may be different from the perspectives of the patient's family members [9].

Imagine, for example, an elderly patient who is cognitively impaired as the result of a stroke or a progressive form of dementia and whose family has hired a migrant worker to care for him at home. The person with authority to make medical decisions on behalf of this patient, if the patient's preferences are unknown, is likely to be a family member, such as a spouse or an adult child, acting as the patient's surrogate. If the migrant worker does not agree with the care plan that reflects the surrogate's decisions, what should the worker do? Where can this person turn with her ethical concerns?

Possible arguments supporting the employment of migrant workers as long-term care providers for the elderly (and others) in wealthier nations include support for "flourishing" as a basic human freedom or right. Shouldn't a woman have the freedom to pursue opportunities to support herself and her family, including opportunities for paid (or better-paid) work not available in her home country or region?

Tong describes the problem of female family members, especially daughters and daughters-in-law, being at risk of becoming trapped in unpaid caregiving roles, with serious consequences for their own professional advancement and other goals—a risk male family members do not face. This common problem is reflected in another argument that can be made in support of the employment of migrant workers as long-term care providers for the elderly: if subcontracting care work to migrant workers not only creates work opportunities for one group of women but also offers more freedom to *another* group of women, does this further increase this transaction's support for human flourishing?

We should also consider whether subcontracting care work is better for the people in need of care. It seems plausible that a worker who is employed to focus on the needs of the elderly (or other) person in need of care could, if adequately trained, provide a better quality of care than female family members, who, as Tong points out, are likely to be caring for their own children, running their own households, and trying to keep their own working lives afloat.

However, there are significant arguments against relying on migrant workers as a way to "solve" the problem of too few hands for unpaid care among family members in wealthier nations, including the unfairness that women (but not men) are expected to perform care work for free.

The "capability" approach to improving the prospects of women in the developing world is articulated by scholars such as economist Amartya Sen and philosopher Martha Nussbaum [10, 11]. Capability is an ethically grounded theory that takes "development as freedom" as its hypothesis and its practical goal. It asserts that people should be free and that the freedom of women and girls merits special attention because of the historical and continuing harms of gender-based oppression. It thus promotes selecting economic development projects that enhance health, safety, and opportunities for this population.

From the perspective of capability theory, economic development strategies that promote migration by women and girls rather than opportunities at home (through scholarships, job training, or capital loans to start or expand small businesses, for example) could be viewed as less than freedom-enhancing because they have the potential to trap these women on the margins of a wealthier society without opportunities for advancement or integration. A capability approach is, arguably, more supportive of women as mothers and members of their own families than is a migration-based strategy. The capability approach focuses on developing opportunities for women (and others) in their own communities, presenting "development as freedom" and criticizing states that fail to invest in the health, education, employment, and future of their own societies.

Efforts to secure better conditions for migrant women in the societies in which they work also draw on capability theory. However, it is not difficult to see that, when the economic welfare of a family relies on mothers to migrate, to leave their children and elders to care for the children and elders of others, local development might have made it possible for these mothers to find work closer to their own families, and to have made a freer choice to stay or to go.

Furthermore, subcontracting care work from female family members to other women does not succeed in weakening the association between care work and gender: it remains women's work, for *different* women. Subcontracting care work "downward," from women with more power (acquired through money, education, or both) to women with less power, can perpetuate the notion that poorer, less educated women, or those from societies perceived as "traditional," are better at, or do not mind, or should not have aspirations beyond, caregiving work. Political philosopher Michael Walzer describes the idea of democratic societies "run[ning] their economies with live-in servants"—that is, on the labor of people who live in the society but are not recognized as members of the society—as "practically and theoretically troubling" [12]. Recognizing that home care work in developed nations is often low-status work; that low-status work (especially physically demanding "dirty work") is often where the migrant can hope to find employment; and that, given a choice, the migrant might prefer to do different work, puts things on a clearer ethical footing.

Mindful that the global migration of labor is a reality and that one of the major driving forces for migration by women is, and is likely to continue to be, the availability of caregiving work in wealthier nations, improving working conditions for migrant women and ensuring that elderly (and other) persons in need of care receive good care are intertwined goals. Health care professionals who are responsible for the care of elders (and others) who receive care at home can support these goals by asking whose hands provide home care, recognizing those people as members of the care team, identifying the skills needed to provide good care at home, supporting the ability of those who provide care (whether paid or unpaid) to acquire these skills, and lending their voices to efforts to improve compensation, protections, and other forms of support for all caregivers.

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Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 767-770.

STATE OF THE ART AND SCIENCE

Epigenetic Inheritance and the Moral Responsibilities of Mothers

Kristen Hessler, PhD

Mothers are widely considered to bear special responsibilities for the health of their children. Warning labels directed at pregnant women on containers of alcohol or cartons of cigarettes are indicative of social expectations regarding maternal responsibilities to provide their future children with the healthiest prenatal environment. Beyond pregnancy, as Rebecca Kukla has argued:

> mothers bear a disproportionate responsibility for managing their children's contact with professional health institutions, maintaining their health at the domestic level (through feeding and hygiene practices and the like), and training them in safety and self-care. Correspondingly, mothers are held disproportionately responsible for their children's physical and mental health imperfections [1].

Recent research in epigenetics raises complicated questions about maternal responsibility for health. Epigenetic changes are alterations in gene functions, including whether and to what degree a gene is expressed, that persist through mitosis and meiosis and that are not attributable to an alteration of the genes themselves [2]. For example, research suggests that a variety of factors, including nutritional inadequacy and exposure to environmental toxicants, especially in utero and in early life, induce epigenetic changes that last throughout the life span [3].

One of the best understood instances of epigenetic inheritance concerns the effects of maternal nurturing behavior during the first week of life. Among genetically identical rats, the more nurturing pups receive from their mothers, the more serotonin they produce. Serotonin levels then influence the process of genetic expression in the pups, with high serotonin levels ultimately leading to a more relaxed phenotype and lower serotonin levels leading to a more stressed phenotype. More stressed rats tend to be low nurturers, so in this way the nurturing style of mothers is heritable, not directly via the genome itself but rather through a complex process connecting maternal behavior and gene expression [4].

It is possible that epigenetic effects might be observed across multiple generations. According to one analysis of three successive generations in Sweden, for example, one generation's nutritional status during its prepubescent years correlated with the longevity of and morbidity experienced by that generation's grandchildren [5]. One possible explanation is that nutritional scarcity in developmental years may induce

meiotically stable epigenetic changes in the gametes, though this has not been shown [6].

On one hand, awareness of epigenetic impacts on health would seem to compound the moral responsibility that mothers bear for their children's health. For example, the University of Utah's Genetics Science Learning Center website points out that, when pregnant women smoke, three generations are being exposed to the smoke: the woman herself, her fetus, and the third generation by way of the fetus's germ cells [7]. The possibility that such exposures would lead to epigenetic changes durable throughout the lifetimes of each of these three generations creates a heavy responsibility on the pregnant woman not to smoke; and the possibility that such exposures could lead to gametic epigenetic effects in the fourth generation only adds to her already considerable moral responsibilities.

On the other hand, however, epidemiological research demonstrating patterns of health inequalities among populations suggests that individuals may be much less responsible for their own health, or the health of their children, than we might have thought [8, 9]. The pioneering Whitehall study demonstrated that health inequalities among civil servants in England correlated with seemingly insignificant differences in social status [10]. A more recent study shows that, among Nobel Prize nominees, those who actually win the prize live on average 2 years longer than those who are nominated but do not win [11]. These and other studies provide evidence that socioeconomic status (SES) influences health outcomes even among relatively affluent individuals who have secure access to medical care. Moreover, epidemiological research shows that there are significant disparities in health along racial lines in the United States [12]. These racial differences are apparent at all socioeconomic levels, so again, these disparities cannot be neatly attributed to poverty or lack of access to care alone.

Most causal explanations for how race or SES might influence health tend to emphasize either direct impacts of social conditions on the health of individuals or the prevalence of genetic predispositions for disease within social groups. Taking both the epigenetics research and the population health perspective seriously, however, illustrates how social experiences might become literally embodied in potentially inheritable ways. As one analysis concludes, "when combined with the evidence…that psychosocial stress can influence epigenetic profiles and health, it is clear that socially disadvantaged individuals are at increased risk of exposure to these stressors and are thus more likely to develop adverse disease outcomes" [13].

In turn, this suggests that moral categories such as blame and desert, which emphasize personal responsibility, may not be adequate or appropriate from a population health perspective. The prevalence of health-related behaviors for which we are most tempted to blame individuals, such as smoking, often themselves track SES [14]. According to one study, for example:

> low-income women use smoking as a means of coping with their economic pressures and the resulting demands placed on them to care for others.… Having to care for more, while simultaneously living on less, provided the context in which relatively few women attempted or succeeded at smoking cessation [15].

Instead of turning further towards a model of attributing individual moral responsibility for health, then, we should more carefully attend to whether the social structures that lead to health disparities (including those that lead to women's disproportionate responsibility for children's health beyond pregnancy) are themselves just.

Most theories of social justice incorporate a demand of equality. According to political philosopher John Rawls, for example, the point of egalitarian justice is not to make everyone the same (for example, equally rich or equally healthy) but rather to ensure that the basic institutions of society are organized so that no one is treated as morally inferior to others simply because he or she is poor, or sick, or female, or a member of a marginalized religious or racial group [16]. In other words, the goal of a just society is to ensure that that people are treated as moral equals rather than as more or less worthy of respect depending on characteristics like race, economic class, sex, age, sexual orientation, or similar attributes [17].

Importantly from a health perspective, an egalitarian society that treated all persons with moral respect would reduce the prevalence of psychosocial stress experienced due to discrimination and the consciousness of one's lower status, which would in turn reduce the prevalence of adverse health outcomes that result from this kind of stress. The research on epigenetics that shows that these adverse health outcomes might be more durable than we previously believed, and may even have transgenerational impacts, provides additional reasons to pursue a more just and egalitarian society. What we should be aiming for is a society in which health is not linked to one's SES or race, in which pregnant women have the support they need within their relationships and from society in keeping themselves and their children healthy, and in which family members and social programs shoulder some responsibilities traditionally borne by mothers after pregnancy.

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American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 771-774.

HEALTH LAW

Ferguson v. City of Charleston and Criminalizing Drug Use During Pregnancy

Yesenia M. Perez

Imagine that you are a pregnant woman battling a serious narcotic addiction. When you seek care at a local hospital, you are handcuffed to your bed during delivery and incarcerated immediately after the birth of your child [1]. This scenario, in which staff members of the Medical University of South Carolina (MUSC) reported to legal authorities those maternity patients whose unconsented-to urine tests were positive for cocaine in 1989, was brought before the Supreme Court of the United States in 2001 [2]. Ten women had been arrested for child abuse, on the theory that drug use during pregnancy was abuse of the fetus [2].

Good Intentions

In response to an increase in cocaine use among patients receiving prenatal care, MUSC referred any maternity patient who tested positive to the county substance abuse commission for counseling and treatment. When this did not lower the incidence of cocaine use among pregnant patients, MUSC's general counsel contacted a lawyer to develop policy to prosecute women who tested positive for cocaine while pregnant [2].

They created POLICY M-7, "Management of Drug Abuse During Pregnancy," which set forth procedures by which the hospital staff would "identify/assist pregnant patients suspected of drug abuse" [2]. A patient was to be tested for cocaine with a urine drug screen if she met at least one of the following nine criteria: "(1) no prenatal care, (2) late prenatal care after 24 weeks gestation, (3) incomplete prenatal care, (4) abruptio placentae, (5) intrauterine fetal death (6) preterm labor of no obvious cause (7) intrauterine growth retardation of no obvious cause (8) previously known drug or alcohol abuse, (9) unexplained congenital anomalies" [2]. MUSC partnered with the Charleston police in creating the program. After the patients tested positive for cocaine use, they were referred to the police. A woman could be charged with simple possession if she tested positive for cocaine during the first 27 weeks of her pregnancy. If the positive result occurred at 28 weeks or later, she could also then be charged with possession and distribution to a person under 18. Finally, if she delivered the child while testing positive for cocaine, she could be charged with unlawful neglect of a child [2].

Bad Outcomes

Crystal Ferguson was one of 30 women arrested under the collaborative policy. When Ferguson's drug screen came back positive during her prenatal care visit, she agreed to attend substance abuse counseling. When she delivered her child, she

tested positive again [3] and was arrested 3 days after giving birth for failing to comply with the order to receive drug treatment [3].

Many who tested positive for cocaine abuse before birth were arrested and sent to jail, taken to the hospital for weekly checkups, and in some cases, chained to their hospital beds during birth [4]. The women affected by the collaborative policy did not consent to the tests, nor did the authorities obtain warrants.

Ferguson v. City of Charleston

The Center for Reproductive Rights, a nonprofit advocacy group that works to advance reproductive freedom, brought suit against MUSC and local law enforcement officials on behalf of ten women arrested under the policy [1]. The original lawsuit was filed on behalf of Ferguson and one other woman, but eventually grew to include ten patients who had been arrested under the policy [3].

The United States Court of Appeals for the Fourth Circuit found that the hospital's testing policy could be approved if a "special need" was found for the drug tests [2]. To determine if a "special need" exists, courts must weigh the degree of infringement of a right (in this case, the women's right to privacy from nonconsensual search) against the state interest other than law enforcement that the infringement is invoked to protect [2]. The federal appellate court found that the state's interest in preventing complications of pregnancy and the medical costs associated with them constituted a special need and that infringement on the women's right to privacy to protect that need was minimal. The Center for Reproductive Rights appealed the court's decision and brought the case before the U.S. Supreme Court [1].

Violation of the Fourth Amendment. Ferguson v. City of Charleston was the first Supreme Court case to deal with the maternal-fetal conflict in the context of warrantless searches. The Supreme Court reversed the federal appellate court's decision, finding that a special need did not exist; the state's interest in preventing complications in pregnancy and their associated costs did not justify the nonconsensual search. Because the women were arrested and prosecuted after they tested positive, the special needs requirement that the program be unrelated to law enforcement was not satisfied [2]. Moreover, the court found that the hospital's use of a drug test without the women's consent was unconstitutional if not authorized by a valid warrant [2]. Although citizens and state employees have a duty to provide the police with evidence of criminal conduct, in this case abusing illegal substances, "they have a special obligation to make sure that the patients are fully aware of their constitutional rights when such evidence serves the purpose of incriminating that patient" [2].

Racial Profiling. MUSC is a hospital in Charleston where the population was predominantly low income and African American [3]. MUSC's records indicated that, among its maternity patients, an equal percentage of white and African

American women consumed illegal drugs [3]. Yet 29 of the 30 women arrested under POLICY M-7 were African American [5].

Researchers found that 15.4 percent of white women and 14.1 percent of African American women used drugs during pregnancy, but African American women were 10 times more likely to be reported to the authorities [6]. According to the ACLU, because "poor women of color are far more likely to give birth in public institutions and have more contact with state agencies, their drug use is far more likely than that of middle-class white women to be detected and reported" [5]. Similarly, the ACLU argued that the MUSC's policy had little to do with the drug use and more to do with poverty. The hospital tested women who received little to no prenatal care. "Poor women are more likely to delay seeking prenatal care until relatively late in pregnancy or to obtain no prenatal care at all" [5]. This inadequate care could lead to birth defects or poor fetal growth, which were conditions considered by the MUSC as grounds for testing these patients. Finally, the ACLU argued that the MUSC's policy on targeting "crack cocaine, a drug more prevalent among inner-city communities of color, rather than other substances like methamphetamines, which is a drug more often used by white rural and suburban women, will unfairly result in the arrests of women of color in Charleston" [5].

The American Medical Association included in their *amicus* brief that use of many legal and illegal drugs during pregnancy can harm fetal development as much or more than cocaine [7]. The ACLU argued that MUSC's policy was a form of racial profiling, by both "design and implementation, the policy led inevitably to the identification and punishment of drug use by pregnant, low-income women of color, leaving other pregnant users free of the threat of warrantless, suspicionless, nonconsensual drug testing" [5].

Ferguson's Effect on the Future of Reproductive Rights

Cases that criminalize pregnant women for acts that might harm their fetuses continue to be controversial. A case pending in the supreme court of Indiana similarly calls into question a woman's privacy and autonomy vis-a-vis her fetus [7]. Bei Bei Shuai was charged with murdering her infant because she ate rat poison when she was 8 months pregnant in an effort to commit suicide after a breakup. She was hospitalized after the attempt, and the doctors determined that the fetus looked healthy for the first few days. After a few weeks, Shuai gave birth, and 3 days later the baby died from bleeding in the brain. Shuai was charged under a state statute that declares a person who "knowingly or intentionally kills a fetus that has attained viability commits murder" [8]. Shuai's lawyers argue that the statute was intended to apply only to someone who attacks a pregnant woman and kills her fetus [8].

The ACLU gives many policy reasons not to punish women for ingesting substances during their pregnancies [5]. Punishing women who use drugs during pregnancy deters them from seeking prenatal care and entering drug treatment programs [3]. Rules intended to protect fetuses and help women end up having the opposite effect [5].

Furthermore, efforts to protect a fetus by confining women, regardless of compelling medical treatment, violate the guarantee of liberty of the due process clause of the Constitution [3, 5]. Singling out women of color may also violate the equal protection clause of the Fourteenth Amendment. The ACLU calls the maternal drug criminalization "bad medicine and bad public policy" [5].

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American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 775-778.

POLICY FORUM
Mothers Matter: Ethics and Research during Pregnancy
Anne Drapkin Lyerly, MD, MA, and Ruth R. Faden, PhD, MPH

This spring—and for the first time in 30 years—the U.S. Food and Drug Administration approved a medication for the treatment of nausea and vomiting associated with pregnancy (NVP). Though the condition occurs in an estimated 80 percent of pregnancies, up to this point women with NVP had to weigh two less-than-ideal options: either manage the condition with diet and alternative therapies or take a drug "off label" and with limited official guidance regarding safety and efficacy for use during pregnancy.

Such in fact remains the story for most medications used during pregnancy. Due to ethical concerns about exposing pregnant women and fetuses to the risks of research, many researchers and institutional review boards regard pregnancy as a near-automatic cause for exclusion from research studies, even when the risks are negligible and the study addresses a question of critical relevance to maternal or fetal health. Though deployed in the spirit of "protection," decisions to exclude pregnant women and their interests in the research agenda come at a profound cost for women and children alike.

First, it is widely known that pregnancy is no "magic bullet" against illness. It is estimated that at least 10 percent of women face serious medical conditions that require treatment during pregnancy—hypertension and heart disease, diabetes, even cancer. Nearly 90 percent of women take medication at some point in their pregnancy; approximately 50 percent take at least one prescription medication, and use has generally increased over the last 3 decades [1]. Given dramatic increases in the proportion of births to women aged 35 and older and increasing rates of obesity and its associated morbidities, it is likely that the use of medications in pregnancy will only grow. Yet Diclegis (the newly approved NVP drug) is an exception to the rule: few drugs have been approved by the FDA for use in pregnancy (2 from 1962 to 1995) [2]—and all for gestation or birth related issues. Any medicine taken to treat a nonobstetric illness during pregnancy is used without adequate data about its safety or effective dosing.

This can be a serious problem because pregnancy often changes the ways that drugs act in the body—the drug's pharmacokinetics and pharmacodynamics. Several recent studies have shown that using standard adult doses of drugs or vaccines in pregnant women can lead to undertreatment or overtreatment. For instance, in the wake of rates of morbidity and mortality among pregnant women that exceeded that of the general population in the recent H1N1 pandemic [3], researchers investigated the pharmacokinetics of the drug oseltmavir phosphate (Tamiflu) in pregnant women

and found that the standard adult dose (which was recommended for pregnant women during the pandemic) may be inadequate for treatment or prevention of flu during pregnancy [4].

Further, there are few data to address worries about fetal safety. For 98 percent of the drugs approved between 2000 and 2010, the teratogenic risk is unknown [5]; for drugs approved in the previous 20 years, we still don't know enough about nearly 9 out of 10 [5]. The average time it takes for a drug to be categorized in terms of risk is 27 years after market approval [5].

In the absence of clear data about the appropriate dosing or safety of medications, women (and their doctors) are often reticent to use (or prescribe) drugs during pregnancy. But excess precaution has serious downsides. Specifically, untreated illness can present far greater risks than those posed by medications. Untreated asthma is associated with preeclampsia, premature delivery, low birth weight, and hemorrhage, but women whose asthma is controlled have outcomes comparable to women without asthma [6].Treatment delays possibly attributable to reticence had serious consequences for pregnant women during the H1N1 pandemic: women who received treatment more than 4 days after the onset of symptoms were more likely to be admitted to the intensive care unit and receive mechanical ventilation—and more than 50 times as likely to die—than women who received timely treatment with antivirals [7].

How should we redress this state of affairs? Perhaps the most important lesson is that we can no longer hide behind claims that ethics precludes the inclusion of pregnant women and their interests in research. Rather, ethics—and to be more precise, justice—*demands* that we move forward with their responsible inclusion. Pregnant women have not benefitted fairly from the research enterprise. It is well past time that they do.

The first step is recognizing that there are many ways to gather data without having to sort out the ethical complexities of risk trade-offs between pregnant women and their fetuses. There is plenty of what might be called ethical *low-hanging fruit*—ethically unproblematic research that can help fill the evidence gap about health care for pregnant women. For instance, a wealth of critical information about the pharmacokinetics of drugs in pregnancy could be garnered by doing a simple series of blood tests on pregnant women who are *already* taking medications. The National Institutes of Health's Obstetric-Fetal Pharmacology Research Units have funded several such "opportunistic" studies in the last several years [8], yet major gaps remain. For instance, HIV-related tuberculosis accounts for 10 percent of maternal deaths in some developing countries [9], yet there are no pharmacokinetic data on any TB medications and, of the 40 TB trials currently underway, all exclude pregnant women [10].

In addition to opportunistic pharmacokinetic studies, large cohort trials can be a rich source of information, but these golden opportunities are—all too often—

overlooked. For instance, in 2009 the NIH launched the National Children's Study; more than 100,000 women were to be followed during pregnancy and their children would be followed for 20 years to understand the impact of the environment on children's health. The problem is that pregnant women—consenting research participants—were understood not as subjects but as part of the environment to be studied, as the data collected pertained almost exclusively to children's health [11].

Studies that involve more than minimal risks to fetuses tend to raise red flags among researchers, IRBs, and even patients themselves. It is important to remember, however, that participation in a research study—in which there are rigorous standards for informed consent and close monitoring—may well be a safer context for the use of medications in pregnancy than the clinical setting, where the evidence base is so profoundly lacking. In considering the ethics of trial participation, we cannot forget context: if women are excluded from research, their only option may be to take a medication in an uncontrolled clinical environment absent the data to inform dosing or safety considerations specific to pregnancy. Absent systematic research involving pregnant women, their only option will remain having their illnesses treated in this uncontrolled clinical environment in which the data needed to secure FDA approval remains elusive. Indeed, the American College of Obstetricians and Gynecologists endorsed—for nearly a decade before FDA approval—the use of the medications in Diclegis in pregnant women suffering from NVP [12].

Though approval by the FDA, and a pregnancy category A to boot [13], are both reassuring—and in the case of Diclegis, long-awaited by the many women who did take the drug years ago—what we need most are data, so that women can make informed decisions about whether or not to use a medication during pregnancy and so that doctors can prescribe such medicines at appropriate and effective doses. Still, with the FDA's recent decision, it feels like a page has turned in the history of maternal health. Let's hope the momentum continues.

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September 2013, Volume 15, Number 9: 779-785.

POLICY FORUM
Shackling and Separation: Motherhood in Prison
Jennifer G. Clarke, MD, MPH, and Rachel E. Simon

A society should be judged not by how it treats its outstanding citizens but by how it treats its criminals.
Dostoevsky

The United States has the highest incarceration rate of women in the world, with over 205,000 women currently behind bars in either state and federal prisons or jails and another million on probation or parole [1]. With an eightfold increase in the female incarcerated population since the 1970s, more women are incarcerated now than at any other point in U.S. history, and this rapid, unprecedented growth is predicted to continue [2]. Numerous studies indicate that the increase in numbers of incarcerated women is largely the result of the "war on drugs," the governmental policy changes on drug sentencing that include mandatory minimum sentencing laws for low-level drug offenses and the prioritization of drug arrests by law enforcement [3, 4]. Because women are more likely than men to be in prison or jail for nonviolent, low-level drug-related crimes, women, especially poor women of color, bear a significant burden of this "war" [5].

As a historically male-focused institution, correctional facilities often fail to address the needs of incarcerated women. These needs include appropriate medical and psychiatric health care (such as reproductive health care, gender-specific substance abuse treatment, and counseling for histories of abuse), family services, appropriate bathroom and recreational facilities [6, 7], and protection against sexual victimization while incarcerated [8].

While incarcerated, many women—already vulnerable and marginalized in multiple ways—are pregnant or give birth. The majority of women in prison and jail are in their reproductive years with a median age of 34 [9, 10]. Between 5 and 10 percent of women enter prison and jail pregnant, and approximately 2,000 babies are born to incarcerated women annually [11]. Given the mother's status as an offender, pregnancy and birth are frequently handled in ways considered unacceptable in any other circumstance. Two aspects of this care deserve particular attention: the shackling of women in labor and the treatment of mothers and newborns after birth.

Shackling Policy in U.S. Prisons and Jails: Explanations, Consequences, and Ethics
As most correctional facilities do not have on-site obstetric care, pregnant women are typically transported to community-based providers for prenatal care, and women in

labor are transferred to medical facilities for delivery. Though policies vary by jurisdiction, during transport, labor, delivery and post-delivery, women are frequently shackled with handcuffs, leg irons and/or waist chains [12]. In response to tremendous community advocacy and institutional support from organizations including the Rebecca Project and the American Public Health Association, 10 states have passed legislation prohibiting the use of restraints on pregnant women and women in labor [12]. The Federal Bureau of Prisons and the Departments of Corrections in 13 additional states have internal policies that similarly prohibit this practice. However, reports from the ACLU and Amnesty International show that such policies are not strictly enforced [7, 13]. And, in the remaining 27 states, pregnant women are regularly shackled during transport to and from medical facilities and chained to hospital beds by the ankle, wrist, or both during labor and delivery.

The practice of shackling pregnant women and women in labor is principally a remnant of protocols designated for male institutions and is not based on genuine security concerns [14]. Because the number of male prisoners overwhelmingly exceeds the number of female prisoners—prisons and jails are over 90 percent male—these institutions have not prioritized the appropriate health and safety protocols for women during transport to a medical facility [15]. Correctional institutions shackle inmates during transport to prevent escape attempts and to protect correctional officers and other personnel, such as medical professionals, from physical harm [16]. However, during the physical and emotional stress of labor and delivery, the risk of a woman's escaping while accompanied by armed officers is highly unlikely. Furthermore, we believe it is wrong that this shackling, which occurs as part of a uniform policy, does not account for a woman's history of violence (most female inmates are incarcerated for nonviolent crimes), escape attempts (the vast majority have not made such an attempt), and physical capacity to escape [7].

Shackling a woman by the ankles, wrists, and/or waist during pregnancy and delivery is not only unnecessary for security reasons, it is also medically hazardous and emotionally traumatizing. While shackled, pregnant women are at increased risk of falling and sustaining injury to themselves and their fetuses [17]. During labor and delivery, shackling interferes with a woman's ability to assume various positions and prevents her immediate transport to the operating room if necessary [18, 19]. Echoing these concerns, in 2011, the American College of Obstetricians and Gynecologists (ACOG) released a committee opinion concluding that "[p]hysical restraints have interfered with the ability of physicians to safely practice medicine by reducing their ability to assess and evaluate the physical condition of the mother and the fetus, and have similarly made the labor and delivery process more difficult than it needs to be; thus, overall putting the health and lives of the women and unborn children at risk" [17].

The 1976 Supreme Court case *Estelle v. Gamble* explicitly affirmed that the Constitution requires prisons to provide medical care to inmates by holding that

"deliberate indifference to serious medical needs of prisoners" violates the Eighth Amendment's prohibition on cruel and unusual punishment [20]. The use of restraints on pregnant women and women in labor contradicts this legal and ethical principle by knowingly increasing the risk of significant medical harm to the mother and unborn child.

All patients should be protected from indignity while receiving medical care, but incarcerated people, regardless of their medical conditions, describe feeling humiliated in the hospital, where they must interact with medical professionals and other hospital staff while in restraints. Giving birth in shackles is a devastating emotional experience for many women, as evidenced in reports by Amnesty International and other human rights organizations [21, 22]. Incarcerated women in labor express the physical pain of giving birth while unable to move, the medical complications resulting from this lack of mobility, and the psychological distress of holding their newborns while chained to the hospital bed. The birth of a child—a momentous, joyful experience for many—is turned into a traumatic event for incarcerated women. A woman who gave birth while incarcerated, describes the experience:

> When they shackled me I had two handcuffs, one was on my wrist and the other one was attached to the bed…My leg and my arm were attached to the bed so there was no way for me to move and to try and deal with the labor pains. And the metal, cause when you're swollen, it would just cut into your skin. I had bruises after the fact that stood on me for three weeks. I mean, purple bruises from my ankle and my wrist from them having them shackles and handcuffs on me. Even when I had to get an epidural, they didn't take the shackles and the handcuffs off. I just had to bend over and just pray that I could stay in that position while they were putting that needle in my back through the whole procedure. Not once did he [*the correctional officer*] try and loosen them. And the doctor asked him, you know, 'Can't you take them off of her? She can't go nowhere. She can't walk. She's not goin' nowhere.' 'It's procedure and policy. Can't do it' [23].

Personal accounts like these illustrate that the routine use of restraints on pregnant women, and particularly on women in labor, is a cruel and unsafe practice.

Post-Delivery Treatment of the Mother and Her Newborn

In addition to shackling, many pregnant women who deliver while incarcerated are almost immediately separated from their newborns after delivery. After giving birth, most incarcerated mothers are allowed only 24 hours with their newborns in the hospital; the infants are then either placed with relatives or in foster care, and the mothers are returned to prison or jail [24]. This separation is devastating for both mother and infant. For infants, maternal separation at birth can lead to multifaceted, severe emotional and behavioral problems in later life including low self-esteem, less successful peer relationships, and difficulty coping with life stressors [12, 24]. For

mothers, this separation can also be psychologically traumatizing and has been shown to increase the risk of recidivism [25].

With the growing number of women in prison, departments of corrections in 12 states now offer prison-based nursery programs that house mothers and their newborns in special units. However, these programs have widely differing capacities and rehabilitative services. While incarcerated women have very high rates of substance abuse and mental illness, histories of sexual and physical abuse, and multiple medical problems such as HIV and hepatitis C, less than half of these nursery programs offer appropriate services such as substance abuse treatment, mental health care, and domestic violence counseling [26]. Massachusetts is the only state to offer a community-based alternative, where mothers can keep their infants with them for up to 24 months in correctional residential programs in the community; however, these women may have to return to prison later to finish their sentences [22]. While new and limited in scope, prison and jail diversion programs—through which sentenced individuals attend community-based drug treatment programs as an alternative to incarceration—have also been successful at keeping mothers and their newborns together [27]. And yet, despite the expansion of prison and community-based nurseries, most incarcerated women are separated almost immediately from their newborns [24], a devastating situation for both mother and child.

Legislation contributes to the difficulty mothers face reuniting with their children after release. In an effort to place children in permanent adoption more quickly, the Adoption and Safe Families Act (ASFA) implemented in 1997 requires states to terminate parental rights to children who have been in foster care for 15 of the last 24 months [13]—with no exception for incarcerated parents. Because the average sentence for women in prison is 18 months, by the time parents are released it is likely they will no longer have custody of their children. Thus, a sentence as short as 15 months can result in the lifelong separation of a mother and her children.

Alternatives

All women, regardless of incarceration status, deserve to have a safe, healthy, and dignified pregnancy and delivery, which necessarily entails freedom from medically unsafe and dehumanizing restraints. With the growth of the female prison and jail populations, legislative action to end shackling is imperative. Moreover, reproductive rights for all women do not end with birth; society must uphold the right of a competent parent to raise her own children—and a woman's incarceration status alone does not indicate incompetence. Despite the recent expansion of prison and community-based nurseries, incarcerated women continue to have these rights violated. Many incarcerated mothers and newborns are separated after delivery, and, with the implementation of the ASFA, such separation can result in the permanent termination of parental rights. States should prioritize expanding the capacity of community-based nurseries, increasing the permitted length of stay, and ensuring that parenting classes, substance abuse and mental health counseling, and social services are offered.

Most importantly, however, broader efforts must be made to prevent inappropriate imprisonment of women in the first place. Incarcerated women are arguably one of the most marginalized groups in the U.S. population, and it can be argued that many of them should not be behind bars. Nearly half of the women in prison are African American, and two-thirds are women of color [28]. The majority are unemployed, lack high school diplomas, and face extremely limited access to social services, health care, and stable housing prior to incarceration [5, 29, 30]. Women in prison have disproportionately high rates of infectious and chronic disease and histories of physical and sexual abuse, mental illness, and substance abuse. Improving social institutions such as schools, housing and health care, providing employment opportunities and ending the governmental "war on drugs" would strengthen families and communities, especially poor communities of color disproportionately targeted in the epidemic of incarceration. Such initiatives will also reduce inappropriate involvement of women in the criminal justice system and ultimately contribute to a more just society.

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September 2013, Volume 15, Number 9: 786-790.

MEDICINE AND SOCIETY

The Difference between Science and Technology in Birth

Aron C. Sousa, MD, and Alice Dreger, PhD

Medicine is not a science; ordinary clinical care is not (and should not be) experimentation with the goal of discovering general principles. But a contemporary physician's professional duty includes an orientation towards science—a willingness to consult, to know, and to appropriately employ available evidence in the practice of medicine. Sackett defines evidence-based practice as "the integration of the best research evidence with clinical expertise and patient values" [1]. To use evidence properly, clinicians need to share evidence with patients so that they can make well-informed choices about their care. Evidence is ethically essential to informed consent, and employment of evidence is an ethical duty of the clinician.

Nevertheless, in many U.S. hospitals today, the management of labor and delivery doesn't look very evidence-based. Many well-intentioned obstetricians still employ technological interventions that are scientifically unsupported or that run *counter* to the evidence of what is safest for mother and child. They do so *not* because a well-informed pregnant woman has indicated that her values contradict what is scientifically supported, a situation that might justify a failure to follow the evidence. They do so out of tradition, fear, and the (false) assumption that doing something is usually better than doing nothing [2]. These problematic motivators are not unique to obstetrics, but obstetrics seems to be particularly resistant to the evidence, perhaps because of the emotional climate surrounding pregnant women and babies.

Here are but a few examples of common disjunctures between evidence and practice in obstetrics:

- Although we still see external continuous fetal monitoring employed in many low-risk pregnancies, "as a routine practice [it] does not decrease neonatal morbidity or mortality compared with intermittent auscultation.... Despite an absence of clinical trial evidence, it is standard practice in most settings to place internal scalp electrodes and intrauterine pressure catheters when there is concern for fetal well-being demonstrated on external monitoring" [3].
- Some obstetricians still routinely employ episiotomy although it "is not recommended due to increased rates of third and fourth degree perineal trauma and no evidence to support decrease rates of subsequent organ prolapse and/or incontinence" [3].
- The use of a trained doula (labor support person) has been repeatedly shown to increase likelihood of spontaneous vaginal birth, to shorten labor, to reduce C-section rates, and to reduce use of intrapartum analgesia [3]. In spite of the fact that this intervention is remarkably effective and safe, few American

obstetricians prescribe doulas. (DONA International, "the oldest, largest, and most respected doula association in the world" has 7,000 members [4], and there are approximately 10,000 births a day in the U.S. [5])

- Epidural analgesia increases risk of maternal hypotension, maternal fever, and C-section for fetal distress [6]. Epidurals also increase odds a child will be born with fever, which in turn may lead to more interventions and thus more risks [3]. Yet few women who "choose" epidurals seem to understand—or even know—the risks, nor have they been first provided the benefit of nonpharmacological pain management, e.g., doulas.

We could go on and on; for low-risk pregnancies, many routinely employed medical interventions are not supported by the evidence. Why does this pattern persist? Presumably because many pressures—economic, cultural, psychological—continue to impel clinicians to intervene. Part of the problem may be terminological. Low-intervention births are often labeled "natural," something that sounds more foolishly romantic than medically sensible. For this reason, we believe it would be better to think of childbirth not in terms of "natural versus medical" but rather "scientific versus unscientific."

We offer our own experiences to illustrate the differences between technology and science in birth. When one of us (AD) became impregnated by the other (ACS) for the second time, we consulted the Cochrane Collaborative for guidance. The outcome we valued was safety for mother and child, and thus we wanted to know (as most pregnant women and obstetricians would) which interventions would increase or decrease likelihood of that outcome.

A previous pregnancy had resulted in a miscarriage at 7 weeks; our obstetrician's nurse had insisted that, if AD had consulted the obstetrician earlier in the pregnancy, this miscarriage might have been prevented. Needless to say, early miscarriage in a first and low-risk pregnancy is not known to be preventable by an obstetrician; early miscarriages are generally due to chromosomal anomalies and are therefore not preventable [7]. The unscientific attitude of this nurse and the office in general led us to seek out a midwife who would practice evidence-based medicine for our second pregnancy. Cochrane suggests that use of a midwife will not increase risk of harm and might decrease it [8]. Interestingly, one retrospective cohort study of about 4,800 low-risk births also showed that women attended by family physicians were less likely than those attended by obstetricians to have their labors induced and less likely to receive oxytocin augmentation, epidural anesthesia, episiotomies, or C-sections [3].

With our midwife, we followed the evidence: during pregnancy, maternal urine, blood pressure, and fetal growth and presentation were regularly checked to monitor for a high-risk pregnancy. We opted out of a prenatal sonogram because it would not improve maternal or fetal outcome in our low-risk pregnancy. [9] During labor, we employed a doula. The midwife conducted intermittent fetal monitoring. We

declined all interventions that would increase risk without improving outcomes, including medical analgesics (e.g., epidural) and episiotomy.

When the amniotic fluid showed thin meconium, sometimes assumed within obstetrics to be a potential sign of fetal distress and a potential cause of pneumonia after birth, our midwife was forced by hospital policy to employ continuous fetal monitoring, an intervention that was unscientific, uncomfortable, and restrictive. The presentation of meconium also meant our midwife was required to have pediatricians ready to suck out the baby's windpipe after birth. In theory, this was to prevent pneumonia. A few months later, we learned that a randomized controlled trial had showed that clearing of the trachea via intubation, which happened for our baby, does not improve outcomes for a vigorous child like ours [10]. (In the trial, "vigorous" children were defined as having a heart rate above 100 beats per minute, spontaneous respirations, and good muscle tone 15 seconds after delivery. [10]) This, then, was yet another intervention that could increase risk without benefit.

In spite of this, our desired outcome was achieved: mother and child suffered no harms other than a small maternal perineal tear, which we knew the evidence suggested would heal better than a surgical cut would have [11]. Although our primary goal was safety, we were both satisfied with the birth experience, with ACS's respect for AD increased not only by her scientific attitude, but also by her ability to birth without medication when normally she whines about the smallest headache.

The science behind the hands-on surveillance and hands-off management of this birth makes it impossible to think of it as "natural." This birth was much more *scientific* and indeed more *ethical* than many in America, because all of the participants in it (except the baby) were fully informed of the facts and were making decisions based on "the integration of the best research evidence with clinical expertise and patient values" (except when hospital policy prevented us from doing so). The decisions made respected the patient and her baby by respecting the evidence.

A medical student witnessing unscientific pregnancy or labor management in a clinical setting may not have the ability to do much for a woman caught in a poor practice system, given power differentials, myths around pregnancy and birth, and time constraints. But students can consult the literature and ask their attending physicians reasonable questions about the evidence. They can and indeed should bring the literature to discussions with medical personnel and patients. They can also learn by watching the cascades of risk that can result from a single unsupported intervention.

They can then apply that understanding to their own practice, no matter what specialty they ultimately pursue. William Osler, the Canadian founder of American medicine, famously opined in his day, "He who knows syphilis knows medicine."

We would argue that, in our day, he who knows birth knows evidence-based and ethical medicine.

Few experiences before medical school prepare a person for what it means to act on the principle "First, do no harm." In most areas of life, action is more highly valued than nonaction. Yet birth offers an opportunity to appreciate the importance of clinical humility and of living by the motto, "Don't just do something—stand there." To be a good doctor means to stand there until you know that intervention is likely to be best *for the patient,* even when that may be the most harrowing for your own psyche.

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Acknowledgment
The authors wish to thank Kepler Domurat-Sousa for his contributions to this article.

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September 2013, Volume 15, Number 9: 791-797.

HISTORY OF MEDICINE

Breast Pumping

Jessica Martucci, PhD

The important place of the breast pump in contemporary mothers' experiences with breastfeeding is a relatively new phenomenon. Discussion of the place and meaning of this technology, particularly in the last 5 years, has held an almost constant presence in the media. An article published by American historian Jill Lepore in *The New Yorker* in 2009 [1] prompted an overwhelming onslaught of commentary and inquiry from mothers and media outlets across the nation. Somewhat unexpectedly, perhaps, Lepore touched a nerve when she asked, "If breast is best, why are women bottling their milk?" She received hundreds of e-mails and phone calls in response to her discussion of the rise of breast pumping, and eventually she appeared on the National Public Radio's show *Talk of the Nation* [2]. Mothers called in and shared their exasperation with the modern-day conflation of breast pumping with breastfeeding [1-5]. As many mothers then and since have attested, the experiences of hooking oneself to an electrical milking machine and feeding an infant at the breast are two very different things [6].

As odd as it may seem when pointed out in this way, by the late 1990s, the breast pump had ascended to near ubiquity as part of the breastfeeding process—becoming so integral to feeding a baby breast milk that the technology seemed all but invisible to critique, analysis, or question. By the early 2000s, as breastfeeding activism in the U.S. focused on public breastfeeding and lactation rooms in work places, few seemed to take notice of the subtle takeover of the breast pump. While scholars have attempted to evaluate the technology in terms of what it can do for women, few have taken a longer look at the history of this device to see where it has come from and to ask what, if anything, the breast pump means for the future of breastfeeding in America.

Prior to the 1920s, the most common methods for extracting breast milk were a nursing infant or manual hand expression [7]. Although pumps, borne from the same lineage as bloodletting and cupping devices, did exist, they tended to require the same amount of manual labor as manual expression and produced poorer results [8]. Few mothers or physicians sought to improve upon the process of manual hand expression, which any mother could do herself if the need arose but which was also tedious, time-consuming, and quite frequently unpleasant, particularly when done at the hands of an impatient caregiver. The possibility of improving this process began, therefore, as hospitalized childbirth and postpartum care expanded over the first several decades of the twentieth century, leaving hospitals, and particularly nurses, with more women with uncooperative lactating breasts to care for [8].

The most successful electric breast pump emerged in the 1920s out of the collaborative efforts of an engineer named Edward Lasker, a German immigrant and an international chess champion, and the famous American pediatrician Isaac A. Abt [9]. Working for a cow milking-machine manufacturer, Lasker had what Abt believed to be the perfect background for designing a pump that could be used on human mothers. Abt invited Lasker to build something he could use in his hospital in Chicago "for premature infants who were too weak to nurse" [9]. Lasker accepted his challenge and, in 1923, filed for a patent for an electric breast pump based on his knowledge of cow milking. Within a few short years the pump was being featured in articles in nursing journals and discussed in medical textbooks. Lasker recalled in his memoirs that the famous pediatrician, Joseph B. DeLee wrote to tell him that he "considered the machine indispensable in any hospital in which maternity work was done" [9].

By designing electric breast pumps, inventors like Lasker helped move the age-old device into the modern era, a period characterized by its impressive high-technology hospitals and awe-inspiring scientific medicine. Being embedded in this context of the hospital, however, meant that breast pumps were employed as medical devices only and were not typically designed to optimize the reuse of the milk for feeding to healthy infants. Engineering problems that resulted in the contamination of the extracted milk coupled with the era's ongoing faith in scientific infant feeding restricted the use of these devices to medical purposes only—cases of engorged, inflamed, or infected breasts—or feeding premature babies [10].

Physicians seemed to balk at sending these electrical milking machines home with mothers. Los Angeles physician Earl Tarr commented that "this electric pump will be found far more useful in the maternity division of the hospital than elsewhere, and I feel reasonably sure that it should be used there rather than sold to the mother for home use" [11]. Such concerns about who would control this device played into larger narratives in early- and mid-twentieth century medicine, as the medical profession and its specialties vied for jurisdiction over how medical technologies should be made available to the public [12, 13]. Soon after Abt's Pump entered the medical world, physicians like Dr. Tarr seized on the prospect of implementing the technology more widely within the confines of the hospital. Tarr believed there was no such thing as a "new-born infant [who] is physically able, during the first few weeks of life, to empty a breast" and he took it upon himself to prove the superiority of Abt's Pump over the natural sucking of an infant [11]. In a series of clinical experiments performed at the Anita M. Baldwin Hospital for Babies in California, Tarr used the Abt Pump to reestablish milk supplies in mothers who had "gone dry" and compared the abilities of the pump with that of the infant in establishing milk supply. He pleaded with physicians to "pay decidedly more attention" to breastfeeding than to the "modification of cow's milk," arguing that "the electric breast pump can be used by [the doctor] to wonderful advantage" [11].

Despite the enthusiasm that many leading physicians expressed about breast pump technologies, some of those who worked the hardest to support breastfeeding in the

mid-twentieth century believed manual expression was still better. It was free, it could be easily learned by any mother, it carried very little risk of contamination, and, by teaching it, doctors and nurses educated women about how their bodies worked [14]. In spite of the efforts of some to focus on fewer technological interventions, the breast pump became a standard fixture in postpartum care [15]. In the meantime breastfeeding rates amongst American mothers overall continued to decline throughout the post-war years [16].

With Abt's Pump leading the hospital-based milk extraction market, the United States served as the world's primary manufacturer of hospital breast pumps until World War II [17]. When war broke out in Europe in 1939, restrictions on inter-Atlantic trade left many overseas hospitals without a supply of replacement Abt Pumps and parts. It was then that a struggling Swedish engineer named Einar Egnell became intrigued by the prospect of building a better breast pump. He devoted 3 years to learning the mechanics of lactation and experimented with how best to mimic the nursing infant. His eventual success relied greatly upon the assistance of Maja Kindberg, the head nurse of Stockholm's Södersjukheset hospital. Reportedly, Egnell went through eight prototypes before coming up with a design that earned Kindberg's and his patients' approval [17]. From the earliest days of its introduction, mothers at the Stockholm hospital began to demand what became called the Sister Maja Breast pump (or SMB pump) over the existing Abt Pumps because they found it to be more comfortable (personal correspondence).

In 1965, the Egnell pump caught the attention of American psychologist and maternal health researcher Niles Newton. Newton, a long-time supporter of the breastfeeding advocacy organization La Leche League, asked its secretary, Edwina Froelich, to share news of her recent discovery while in England—"an excellent new breast pump which was superior to any used before. It not only sucks [but] it then lets go with a push. This is more like natural suckling and more comfortable for the mother" [18]. Enclosed in her letter were some promotional materials for "Egnell's Breast Pump," which stressed its utility as a rental unit that the mother "can conveniently use…in her home." The main selling points, however, continued to be its medical utilities, including "in cases of harelip or prematurity," "when the mother's nipples are inverted," and "when breast feeding has to be suspended temporarily" due to illness [19]. Still, the sales literature even in this early period hinted at a much broader user base when it suggested that the pump could be used for mothers who suffered from "hypogalactia" or "too little milk" as well as in cases when the mother "has more milk than the baby can use" [19]. Once league members and others in the breastfeeding community began to learn of these benefits, interest in the pumps slowly expanded [20, 21].

By the 1950s and 1960s, small pockets of women in the U.S. were beginning to build a movement back to the breast, a trend that accelerated in the 1970s and has continued to this day [22-25]. For women at the forefront of the breastfeeding movement, the pump appeared to be less of a medical device, as Lasker and Abt had originally imagined, than a natural breastfeeding aid. La Leche League arguably

maintained a relatively cautious relationship with breast pump technology into the 1990s, with many in the organization remaining wary of the ideological implications of a device that could be used as a substitute for breastfeeding. The league conducted multiple surveys and discussions on the subject over the years, the results of which they often circulated in their newsletters and pamphlets [26]. The dialogue that emerged by the 1970s suggested that many in the breastfeeding advocacy community opposed the widespread use of the pump, preferring to see it remain a medical device used on an as-needed basis rather than a staple of domestic technology [27].

Despite some unease over the expansion of the pump, the technology only grew in popularity as the twentieth century neared its close. Hospital-grade, personal-use breast pumps like the fashionable "Pump In Style," first released by the Medela Company in 1996, emerged in response to the continuing demand for home breastfeeding technologies. While women could (and still can) rent hospital-grade pumps, the direct-to-consumer sale of personal-use pumps further contributed to the domestication of this formerly medical device. The "Infant Feeding Practices Study II," the largest study yet on pumping, indicated that, between 2005 and 2006, 85 percent of breastfeeding mothers who had healthy single-born infants had expressed milk from their breasts [28]. No longer envisioned as a medical device alone, the pump has become a standard fixture on baby registries alongside other "necessities" [29].

Mainstream social critics of this relatively new emphasis on breast pumping have begun to emerge in reaction to this change. As Lepore has observed, "pumps put milk into bottles, even though many of breast-feeding's benefits to the baby…come not from the liquid itself but from the smiling and cuddling" [1]. Feminist-minded mothers and scholars alike have struggled to come up with a position on breast pumps [30]. The technology appears to allow women greater freedom—both to work and provide their children with the same fundamental advantages of breastfeeding. And yet, as editorials and blog posts will attest, it can also restrict women's abilities to make choices about their maternal experiences by making breastfeeding a "woman's burden"—something no "good" mom can excusably not do.

Meanwhile, policies that support breastfeeding mothers have not kept pace with the increasing pressure for women to make this choice for their babies. A provision tucked in with the Patient Protection and Affordable Care Act, for example, requires insurance companies to cover the cost of breast pumps and lactation consultation [31]. As a result, the breast pump industry is now booming, and yet the U.S. continues to rank near the bottom in the world for things like paid maternity leave—something that is likely to have far more of an impact on breastfeeding than free breast pumps [32].

It behooves us to remember how recent this whole redefinition in breastfeeding really is. Despite our quest for that singular technological fix for our problems, the breast pump, like most technologies, has simply helped us to refashion them, in many ways by making them less visible and more unevenly distributed. The

expectations of breastfeeding that the breast pump has helped to create have meant greater burdens for mothers who work in low-paying or low-status jobs. Breast pumping may make feeding with breast milk possible for more mothers, but it has done little to change the fundamental inequalities surrounding motherhood and infant care. It remains for us to manage the new landscape of breastfeeding that the breast pump has helped carve out.

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MEDICAL NARRATIVE
A Life of Mothering
Sidney Callahan, PhD

Motherhood is a drama in many acts that ends only with the death of the cast. Second and third acts never get as much attention as the thrilling opening scenes featuring pregnancy, childbirth, and babies. When a woman becomes a mother she is changed forever, physically and psychologically. An intimate lifelong relationship begins with a new human being who is fully her responsibility. Motherhood is constituted of an irreversible, committed relationship between a mother and another unique human being who is dependent on her. A mother possesses responsibility for a mutual relationship that is dedicated to the survival, thriving, and social flourishing of her beloved charge. It takes energy to give unconditional love and think intelligently about another's best interest (what is most needed for her or him, and how can I make it happen? How can he or she fulfill his or her potential?). And mothers in the twenty-first century do not have a ready-made script to follow. What women have ever lived so long, or experienced so many sweeping changes in women's roles?

The Dilemmas of Mothering
My family story is in some sense a traditional one: I have had a big family, lost an infant, lost a daughter-in-law in childbirth, and stepped in to mother her child in a three-generation household. I married young 59 years ago, stayed home for 14 years while having 6 sons and a daughter, and now have a family of 6 grown children and 5 grandchildren, including my 17-year-old live-in granddaughter Perry, who came home with my son when her mother died from complications of a C-section.

I have lived on the cusp of the feminist revolution and, unlike most of my feminine forbearers, I have been privileged to enjoy traditional feminine satisfactions as well as wonderful new opportunities for intellectual fulfillment. I have been able to write books, articles, and columns, and gradually obtain a PhD in psychology (on the 25-year plan). And being in good health with the gift of modern medicine, I have had time and energy to pursue a full academic career. I have participated in the exciting work of my husband, Daniel, as he co-founded the Hastings Center, a pioneering bioethical research institute.

Many different ways of combining nurturing and other kinds of work are possible. Negotiating the much-discussed and -debated work-family balance may be easy or difficult, depending on personal aspirations and social resources. A deep-rooted commitment to motherhood and a dedication to intellectual work make up the core of my identity. Consequently, juggling the needs of family and the demands of professional projects has always been an immense challenge. I feel like the storied

Dutch boy who ran along the crumbling dike, plugging each new opening hole to save his land from flooding. What is the most important need to fulfill first?

The Experience of Mothering

As mothers move through the life cycle, different forms of maternal care emerge. The foundation for later maternal behaviors is an infant's experience of being mothered. Later in childhood a small girl can prepare for future mothering by playing and caring for dolls, animals, siblings, and other of her kith and kin. In adolescence apprenticeships may begin with babysitting experiences; here fantasies about imaginary future children can arise. The actual drama commences after pregnancy and childbirth, when evolution-selected behaviors ground the culture's learned prescriptions for mothers. The craft of maternal caretaking is both innate and socially learned.

Less noted is the fact that, as daughters grow up, forms of mutual mothering can emerge. Mothers and daughters can give each other maternal care when the need arises. My middle-aged Alabama aunt once held and rocked my elderly grandmother for 2 whole days after her youngest son had been killed in an accident. Mama Jones was a stalwart Baptist country woman, a hardworking mother of nine, but she needed her daughter's comfort in grieving. Alternate, intermittent, and mutual mothering can continue until dementia or illness mandates a virtual reversal of the mother and child roles.

About 15 years ago a call for this reverse mothering sounded for me. This summons was to play a traditionally feminine role: to care for an old, ill parent. Unfortunately but unmistakably, my beloved stepmother, who had generously given me so much care since I was 7 years old, began to develop Alzheimer disease. At this point, "Mommy" or "Lady" had been widowed twice and had been established for 20 years in an upscale military retirement community in the D.C. suburbs. A fiercely independent, private and competent southern woman, Lady had been living a happy, socially active, and efficiently arranged life from her apartment.

When Mommy first began to falter in her busy routine, she seemed relieved to give up her apartment and let me help her settle in the assisted-living wing of the complex. And then, despite my wishfully thinking that she wasn't all that badly impaired, it eventually became clear that she was, and she was moved to the building for the memory-impaired.

Reverse Mothering in the Twenty-First Century

During the next dozen years, as Mommy's friends and distant relatives dropped away and her dementia progressed, she needed me. I supervised her care, attended to the paperwork, bought her clothes, hired supplementary caretakers, sent her flowers, and most importantly visited her overnight from New York.

I hardly ever engaged in the hands-on physical caretaking of feeding, dressing, diapering, and lifting into her wheelchair that so exhausts caretakers who can't afford help or residential care. Institutional care becomes more of a necessity in light of a demographic fact: women now live so long that their aging daughters don't have the

physical strength to care for them. “I’m old too you know,” I used to joke with the young, *strong* female staff. In fact, as I neared 80, I was older than many of the residents and fit right in when I participated in the daily activities. And, over the years, the long subway and train rides to get down to D.C. became more grueling.

My main moral challenge during this end-of-life maternal caregiving was the one I have always faced: my deep desire to generously give time to my family and simultaneous need to throw myself into intellectual work. Since time and energy are limited, I have to make choices, and, as aging brings depletion of energy, more leisure and self-care become necessary and dilemmas and decisions become more sharply defined. Family-family conflicts come up as well. When my granddaughter Perry was a baby I was sometimes torn between caring for her and getting myself down to D.C. to visit Mommy. Which need was more urgent and which could I alone meet? The maternal mindset adopts a systemic contextual perspective and moves back and forth in time. Inevitably one makes mistakes and fails, but this must not be allowed to deter the effort. While life lasts and the brain still functions, maternal hearts and minds persevere. And so I continued to be Mommy’s chief visitor until she died quietly 2 days before her hundredth birthday.

The Lessons of Mothering

After my experience of mothering I can posit two important moral ideas. The first is that by virtue of being born of woman people have obligations to other human beings that are not explicitly contracted for, chosen, or necessarily foreseen. Unexpected events happen and bring moral imperatives. If my child becomes ill or my mother falls and breaks her hip, I must give help. Bad things happen to good, and bad, people, and as a member of the human community I must accept the moral obligation to respond. This is an even stronger mandate when my kin are in need.

The other more benign moral truth that I can confirm from experience is that, the more you give in love and work, the more you receive. Giving is receiving, helping brings happiness. Even in its worst moments, motherhood is full of meaning and purpose at whatever the age. More to the point—there can be few more joyful engagements with life.

Sidney Callahan, PhD, is a psychologist and distinguished scholar at The Hastings Center, a pioneering bioethics center in Garrison, New York. She is the author of numerous articles and eleven books, including *In Good Conscience: Reason and Emotion in Moral Decision Making* and *Created for Joy: A Christian Experience of Suffering*. She received her BA in English from Bryn Mawr College, her MA in psychology from Sarah Lawrence College, and a PhD in social and personality psychology from the City University of New York.

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OP-ED

The Ghost of the Schizophrenogenic Mother

Josephine Johnston, LLB, MBHL

A few years back, my colleague Erik Parens and I ran a project whose basic aim was to understand the debate over using psychotropic medications to treat children with emotional and behavioral problems [1]. Of course this debate is really a number of debates nested together. Some say that diagnostic thresholds in psychiatry are too low, causing too many children to be diagnosed, while others counter that mental disorders are underrecognized in children. Some argue that troubled children need behavioral treatments not drugs, while others point out that many medications show impressive efficacy in clinical trials. Some say that problematic moods and behaviors are caused by brain malfunctions that are no more prevalent today than they were 30 or 50 years ago, while others argue that we have the etiological picture all wrong: it's our society that is troubled, not our kids [1, 2]. We found important insights on all sides of these debates—and, in fact, if you scratch the surface you find significant agreement where you initially saw polarization (overdiagnosis and underdiagnosis can coexist, for instance [3]) [1].

We also observed that some issues are particularly difficult to discuss. The role of parents in this whole debate is one such question. On the one hand, we all know that parents can have a significant impact on the mental health of their children, not just because they may pass on a genetic risk but because they control and constitute a significant part of their child's environment. On the other, while we might gripe to each other (or online) about unskilled, lazy parents using medications as a quick fix, or overly ambitious parents using medications to give their children an advantage, there is a deep reluctance, even among clinicians, to interfere with how people raise their kids.

There are a number of possible reasons for this reluctance, including an appropriate concern about respecting the privacy of families. Developmental psychologist Jerome Kagan points to "[t]he American ethic of egalitarianism, which obligates each individual to award dignity and respect to all citizens independent of their values or practices" [4]. While there is much positive to be said about this moral imperative, Kagan argues that it can create problems for child psychiatry because "it makes it more difficult to blame parental neglect or ineffective socialization practices as contributors to aggressive behavior or poor academic performance and easy to award power to genes for which no one is responsible" [4]. Anyone who criticizes the way parents raise their children, including by suggesting they do it differently, risks disrespecting individual choice and equality, and possibly alienating parents, a

necessary ally for pediatricians and child psychiatrists and psychologists, in the process.

Still other factors are likely to reinforce this reluctance—clinicians' (reasonable) desire to attend to the issues on which they have received training, which may not include family dynamics or parenting strategies [5, 6]. Clinicians may also know that parents can struggle to find the time to participate in parent training or other psychosocial interventions [7]. And perhaps most importantly, the constraints of the U.S. payment system can make it difficult for clinicians to find the time to delve deeply into the child's home environment [8].

I suspect there are still other factors at work that end up inhibiting a frank and open discussion about how we can get at the role of the child's environment in creating and ameliorating problematic emotions and behaviors, including the role of parenting practices and expectations. Psychiatry has made some mistakes investigating the environmental—and particularly the parental—causes of dysfunction, and this difficult past haunts the field today. I am referring not only to Freudian theory and analysis, which stressed the importance of childhood events and experience to understanding adult mental health and which now enjoys a mixed reception, but also to the extension of these ideas beyond neuroses to psychosis, specifically to schizophrenia.

Beginning in the mid-1930s, clinicians looked to the families of schizophrenic patients to better understand what might be causing their dysfunction. One study published in 1934 reported maternal rejection in two patients and maternal overprotection in 33 out of 45 schizophrenic patients in the study [9]. The idea that a mixture of maternal overprotection and maternal rejection could cause schizophrenia gained steam, and in 1948 psychiatrist Frieda Fromm-Reichmann named these rejecting and overprotective mothers "schizophrenogenic," writing that "[t]he schizophrenic is painfully distrustful and resentful of other people, due to the severe early warp and rejection he encountered in important people of his infancy and childhood, as a rule, mainly in a schizophrenogenic mother" [10]. Mothers with their own psychological problems, it was thought, "gave birth to healthy children and then literally drove them mad" [11]. In these homes, according to the theory, the mother and her delusional ideas dominated, making her unaware of the needs of other family members. Schizophrenic behaviors were a way for the child to make sense of this toxic home environment.

Studies published in the 1950s and 1960s seemed to confirm the schizophrenogenic mother—and later schizophrenogenic families—theory. It was not until the mid-1970s that the concept lost favor [11]. In 1982, Australian psychiatrist Gordon Parker published a review of schizophrenogenic mother research, concluding that, while the distant and controlling mothers probably exist, there was no evidence that they were more likely than anyone else to have schizophrenic children.

> The most plausible explanation is that there is no *sui generis* schizophrenogenic mother; instead, there is a parental type distinguished by a hostile, critical, and intrusive style, and it is not particularly over-represented in parents of schizophrenics. This explanation would account both for the description and delineation of a schizophrenogenic maternal style in uncontrolled studies of schizophrenics and for the failure to find clear and replicable differences in case-control studies [12].

Today, in light of what we now understand about schizophrenia, the theory of the schizophrenogenic mother seems hopelessly mistaken, and more than a little embarrassing. But (of course) its wrongness doesn't mean that parenting and the family environment play no role in children's mental health or that addressing these aspects is the same as blaming mothers—or parents. We know, for instance, that a parent's mental health status can have a negative impact on a child's well-being. Psychiatric epidemiologist Myrna Weissman at Columbia University has led a number of studies showing that children of depressed mothers have higher rates of psychopathology than those of nondepressed mothers *and* that a powerful way to help these children is to treat their mothers' depression [13, 14]. We also know that altering parenting practices can improve the mental health of some children. Clinical psychologists like William Pelham have shown that parent training—teaching parents basic strategies for effective parenting—is an important component of an effective treatment plan for children diagnosed with ADHD (indeed, Pelham argues it is the most effective component) [15].

Yet we also know that many children in the U.S. do not receive the kind of integrated mental health care that they need. While some of the public debate about pediatric psychiatry pits drug treatments against psychosocial interventions, treatment guidelines for many disorders favor combining drug and psychosocial treatments because medications can quickly reduce the severity of children's symptoms so that they and their parents can begin to engage with psychosocial interventions [16].

Despite these recommendations, many children treated for mental disorders only take medications. Epidemiologists Mark Olfson and Steven Marcus have documented this trend in the general population, reporting that between 1998 and 2007 the percentage of people in outpatient mental health care who received psychotherapy declined significantly and the percentage who received only drugs increased 13 percent [17]. In children, Olfson and colleagues found that amongst privately insured children aged 2 through 5 years who were taking antipsychotic medications, fewer than half received a psychotherapy visit during a year of medication use [18].

I am not attributing these problems solely to the ghost of the schizogenophrenic mother. Indeed, I have no doubt that the other factors I described above, including importantly the constraints of managed care, are more directly responsible for our failure to attend to the whole child. But I suspect that the desire to stand apart from

the psychiatrists of the mid-twentieth century and their mother-blaming beliefs is also part of the story.

Mother blaming helps no one, that much should be clear. But when we ignore the child's context—particularly the practices of those adults who most affect the child's life—we risk locating the child's problems solely in the child and suggesting that the child is the only one who needs to change. That, too, can be a mistake. I know psychiatrists who firmly advocate the use of behavioral treatments, which very often attend not just to the child but also to the child's context, frequently requiring changes in how parents parent and how teachers teach—and some of these physicians are able to raise behavioral treatment options with parents and suggest that parents go to family therapy and parent training classes. It isn't always easy to do this. Venturing into the home environment, and parenting practices in particular, is delicate territory for physicians. But it is territory worth exploring. Many children can be helped by an enlarged clinical focus that seeks to make changes in the child's environment, including at the level of the family. Don't be spooked.

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Virtual Mentor
American Medical Association Journal of Ethics
September 2013, Volume 15, Number 9: 820-823.

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