“Are we having a boy or girl?” is one of the first things prospective parents wonder about the most. During pregnancy, couples wanting to know the sex of the future child may use ultrasound, chromosome analysis or testing of fetal DNA in maternal blood early in pregnancy, to find out the answer months before delivery. An estimated 50–70% of parents want to learn the sex of their future child during pregnancy [1].

The desire for a child of a particular sex is not a new story. Since the beginning of time, couples have attempted to use the various methods rumored to influence whether the child would be male or female. Actually selecting the sex, however, involves a different set of parental actions. Now, new genetic technologies — sperm sorting and preimplantation genetic diagnosis — allow couples to choose a baby’s sex even before pregnancy begins. With people becoming parents later in life, desires for smaller families, and struggles with infertility, more people — of all cultures and backgrounds — may expect doctors to help them get exactly the family they want.

The decision to use sex-selective technologies is motivated by a range of factors and may “look” different in different contexts and cultures. Most people assume that concerns about sex selection should be directed at traditional families and cultures where there is a strong bias for having a son. Due to strong cultural preferences for sons, marked sex ratio disparities have emerged in countries like China, Armenia, Azerbaijan, South Korea and India [2]. This lopsided preference for boys is often explained by gendered expectations as preferences that lead to sex ratio imbalances often steeped in the same kind of gendered social norms and expectations as preferences that lead to sex ratio imbalances in other countries.

There are serious social and ethical concerns at stake in sex selection that require deeper, more long-term consideration by providers and patients alike, especially given the current political anti-choice fights and popular concerns about designer babies.

1. Data on sex-selective practices in the United States

The gender equity concerns raised by these practices globally are increasingly expressed in the United States: not only about sex ratios in US immigrant communities but also among women’s rights advocates and, lately, by anti-choice advocates seeking to exploit this issue as a reason to limit abortion access.

Families have a multitude of reasons for preferring a child of a specific sex, and providers often face strong market pressures to help them do so. There is limited public information about the practice of sex selection in the United States; but even without solid data, media coverage and anecdotes shared among colleagues suggest that providers are increasingly encountering patients wanting to select the sex of their future children, including fertile couples with no history of infertility or family genetic disease who seek in vitro fertilization (IVF) and preimplantation genetic diagnosis (PGD) simply to choose the sex of the child. However, there are no official data on the frequency of pre- or during-pregnancy sex selection, and those who choose to use these techniques are often reluctant to discuss it publicly.

In 2006, the Genetics and Public Policy Center at Johns Hopkins University surveyed IVF providers about their PGD practices. The survey showed that nearly half (42%) of clinics offering PGD had provided PGD for sex selection for reasons other than avoiding sex-linked disease. And, according to the survey, sex selection was part of 9% of the PGD cycles performed that year [3].

Data on the reasons for the decision to terminate a pregnancy are hard to find. In general, some indication of the occurrence of sex selection may be found by examining sex ratios at birth for various populations. Globally, there
are 104–107 boys born for every 100 girls; when the sex ratios at birth for a given population fall outside this narrow range, there is evidence that sex-selective practices are taking place.

In 2008, two studies were published documenting the emergence of sex ratio disparities in Indian, Chinese and Korean–American families. Almond and Edlund [4], using data from the 2000 US Census, examined sex ratios in these Asian–American families. They found that while the sex ratio for the first-born children was normal (1.05 males:1 female), for subsequent children, there was a notable bias towards boys. Abrevya’s report [5] on Chinese and Indian–American families analyzed birth data since 1980 and notes a boy bias in the sex ratios, notably for third- and fourth-born children in these families, and that Indian–American women who already have daughters are more likely to have a son. They found that while the sex ratio for the first-born children was normal (1.05 males:1 female), for subsequent children, there was a notable bias towards boys. Abrevya’s report [5] on Chinese and Indian–American families analyzed birth data since 1980 and notes a boy bias in the sex ratios, notably for third- and fourth-born children in these families, and that Indian–American women who already have daughters are more likely to have a son. Abrevya’s report [5] on Chinese and Indian–American families analyzed birth data since 1980 and notes a boy bias in the sex ratios, notably for third- and fourth-born children in these families, and that Indian–American women who already have daughters are more likely to have a son. Abrevya’s report [5] on Chinese and Indian–American families analyzed birth data since 1980 and notes a boy bias in the sex ratios, notably for third- and fourth-born children in these families, and that Indian–American women who already have daughters are more likely to have a son.

Even though these sex-selective practices are happening within the context of “family balancing,” sex ratio disparities are clearly materializing at the population level. Whether these sex ratios are being skewed due to the use of selective technologies before or during pregnancy is mostly unknown. At the same time, anti-choice groups have begun politicizing sex selection by tying it to abortion. Recently, the Prenatal Nondiscrimination Act to ban sex-selective abortions was introduced in the US House of Representatives but failed to pass. In the last few years, as many as 12 states have introduced sex-selective abortion bans with two states, Arizona and Oklahoma, successfully passing the legislation.

2. Oversight of sex selection

There are professional guidelines in place intended to help reproductive health providers decide whether and how to offer sex-selective technologies to their patients. The American Society for Reproductive Medicine (ASRM) and Society for Assisted Reproductive Technologies as well as the American College of Obstetricians and Gynecologists (ACOG) have disseminated guidelines. The ASRM Ethics Committee has published several opinions on sex selection, including one opinion that focuses on PGD, and states that among infertile patients using IVF for infertility, the addition of PGD solely for sex selection “should not be encouraged,” and use of IVF and PGD solely for sex selection where infertility is not an issue “should be discouraged” [7]. In a separate opinion, the ethics committee recommended that if pre-pregnancy techniques, particularly sperm sorting, were found to be safe and effective, doctors should be able to offer them to couples for family balancing, as long as certain conditions such as informed consent are met [7,8]. Both guidelines express the concern that sex selection may perpetuate sex discrimination, gender role expectations and stereotypes.

ACOG’s Committee on Ethics has concluded that sex selection for family balancing is inappropriate. However, the Committee also held that when procedures are undergone for reasons other than discerning the sex of the fetus but will nonetheless reveal the fetus’ sex, this information should not be withheld from the pregnant woman if she requests it, as “this information legally and ethically belongs to [her].”

The current guidelines provide an excellent overview of most of the arguments for and against allowing sex selection and make appropriate and measured recommendations. Yet, it is not clear to what extent the existing guidelines are being followed. IVF clinics have a wide range of policies about whether and under what circumstances they will provide PGD for sex selection. Some refuse to offer it at all; others advertise their services, including targeting specific cultural groups and media venues.

In light of changing technology, the evidence of sex ratio disparities emerging in some communities, increasing demands by anti-choice advocates to restrict the ability of women to access abortion, and concerns about parental expectations driving sex-selective practices, reproductive health professionals and the organizations that represent them might want to revisit their practice guidelines. The goal should be to discourage sex-selective practices while protecting reproductive autonomy.

Ultimately, the best way to address concerns about sex selection are not legislation, but rather to understand the root causes of gendered preferences, educate the public about how sex-selective practices reinforces gender bias and defeat anti-choice legislation at the federal and state level; and, in the current political and medical environment, self-regulation is in the best interest of doctors and patients since it keeps the decision-making close to those most affected and responsive to changing technologies and data.

3. A parenting approach to sex selection

As providers craft their own practices, they should consider addressing sex selection in the broader context of parenting. Sex selection is the first decision couples make as future parents. Many have a vision for how we would like our family to be, but we also can strive to set aside beliefs or practices that might limit our children with rigid expectations. Parenting should not be about creating a perfect child but, rather, about unconditional love and support for who a child is. Doctors and advocates should encourage parents-to-be to consider what type of parents they want to be, rather then what kind of child they want to have.

Many preferences for a particular sex are based in stereotypical ideas about gender. For example, women with

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1 Florida, Rhode Island, Kansas, Massachusetts, New York, West Virginia, Georgia, Mississippi, New Jersey, Idaho, Michigan and Minnesota.
sons may long for a unique bond with a girl, but gender, personality and closeness do not necessarily follow from biological makeup, and a family is healthiest when parents can respect and accept children for who they are.

Providers should embrace a role of not only helping couples become parents but also helping them grow as families in healthy ways. As Puri and Nachtigall [9] note in their study comparing the experiences of primary care physicians and providers of sex-selective technologies, primary care providers tended to use a more comprehensive perspective about the family they were treating and the community in which they were located. Providers should be encouraged to work with patients who are contemplating sex selection decisions, to help them place the decision in the context of their own parental aspirations. Thoughtful involvement by reproductive health professionals can help stem the increasing calls for the political regulation of doctors and family decision-making.

Providers should be better equipped to engage patients in a discussion of parenting and the initial preference for a boy or girl while still respecting the patient’s individual choice. Professional organizations can take a more active role in monitoring the practices of their members and use that data to better meet the ethical and practical needs of their members. Possibilities for new tools could include scripts, case studies, do’s and don’ts, available in online materials to members who are struggling to set the appropriate tone with patients seeking to use sex-selective technologies.

With better information for patients, better guidelines for providers and tools to help providers and patients to engage in a more robust conversation about healthy parenting, the public discourse and practices about sex selection can change. There is also broader work to be done with the American public — including, but not only in specific ethnic communities — to question the assumptions about parenting boys vs. girls that lead to the desire to select the sex of a future child as a way of choosing who the child will be. Ultimately, the way in which providers, patients, policy makers and the general public work on the challenge of sex selection could set the precedent for how we address the emerging question of selecting for other genetic traits. The power of setting a good precedent should give providers even more incentive to do this right.

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