

Virtual Mentor

American Medical Association Journal of Ethics
January 2014, Volume 16, Number 1: 63-69.

MEDICINE AND SOCIETY

Who Pays? Mandated Insurance Coverage for Assisted Reproductive Technology

Katie Falloon and Philip M. Rosoff, MD, MA

Bearing and raising children has been considered central to family life for as long as humans have been humans [1]. While adoption had been primarily a mechanism to secure a home for a child, it also offered a way for adults to establish a family. For couples unable to bear their own children, the stigma of barrenness could sometimes be relieved by adoption. Until relatively recently, this was accomplished by bringing orphans into the homes of relatives [2]. Indeed, the practice of adoption has ancient roots—among the 282 laws in the Code of the Hammurabi, one of the oldest legal documents in the world, are provisions regarding adoptions [3]. Though the modern conception of adoption, in which the best interests of the child are considered paramount, was much slower to develop (the first modern adoption laws weren't passed until 1851, in Massachusetts) [4], for about as long as people have been able to write, we've considered adoption something worth doing and writing about [2, 5].

In 1978, however, with the birth of the first test tube baby [6], another option for the childless emerged—with the help of in vitro fertilization (IVF), infertile couples could have a child genetically related to them—and the field of assisted reproductive technology (ART) was thus created [7]. During the last 35 years more than 5 million babies have been born through ART [7].

As with most technologically sophisticated medical interventions, ART isn't cheap. While there are many examples of treatments that are more costly—depending on the novelty of the chemotherapy drug, a cancer patient can rack up bills in the hundreds of thousands—the average cost per cycle for IVF, around \$12,500 [8], is far from insignificant. The total costs for actually achieving a live birth are even higher—estimates range from around \$66,000 to \$114,000—because the implantation success rate per cycle can range from 4 to 36 percent depending on the woman's age and other factors [9-11]. Currently, only about a third of states have mandated insurance coverage of infertility treatment, but the vast majority of health insurance plans in other states do not offer coverage; hence, most people pay out of pocket [12]. Furthermore, Medicaid does not pay for ART anywhere in the US [13].

Arguments in Favor of Mandated Insurance Coverage for ART

There are many reasons why mandated insurance coverage is appealing and why it would be desirable for this technology to be available to all those who want it. Infertility affects approximately 10 percent of couples at any given time worldwide, and the high cost of ART is a major barrier to its use [8]. National survey data

indicate that insurance coverage and finances are the main factors in whether or not a woman seeks medical help to become pregnant [14, 15]. There is an 11 percent chance that low-income women will pursue ART, while high-income women are almost twice as likely to do so [15]. It is therefore not surprising that those who have access to ART are wealthier and have had more education than the average person [14, 16].

Though unsurprising, this fact is morally problematic. If genetic reproduction is broadly believed to be of truly fundamental importance, then access to IVF in a just society would depend on need, not on morally irrelevant characteristics like wealth or education status [17, 18]. The service would be available to everyone who could medically benefit from it, rather than only to those who could pay for it. The idea behind the insurance mandate is thus a logical one—lower costs for ART services so that use of the technology would be based less on financial status. Use of ART is higher in states where insurance coverage for it is mandatory, suggesting that mandates are having the desired effect [15, 19].

A number of scholars have also argued that mandating insurance coverage reduces the risks associated with ART and, in the long run, cuts costs that arise from the incentive infertility clinics have to increase the live-birth rate by implanting large numbers of embryos per IVF cycle [8, 15, 20]. Successful implantation of multiple embryos means the woman requires more monitoring during pregnancy and is more likely to have a preterm delivery, while the infants are at increased risk for complications ranging from cerebral palsy to neurological problems [21]. It is estimated that these complications may cost up to \$26.2 billion per year [17, 20]. In 2006, the American Society for Reproductive Medicine (ASRM) enacted guidelines encouraging single-embryo transfer for those with a favorable prognosis and transferring no more than two embryos in women younger than 35 years old and no more than three in those 35-37 years old, yet the rates of multiple births continue to climb [21, 22]. The number of triplets or higher-order multiples has risen more than 400 percent since 1980, mostly because of increasing use of fertility treatments [22]. Since insurance mandates lower out-of-pocket expenses, they diminish this incentive to “make the most” of each cycle, and in states with insurance mandates fewer embryos are transferred each cycle [20]. Without cost significantly influencing their decisions, couples can focus on what is healthiest rather than what is most affordable, and doctors face less pressure from their patients to stray from ASRM guidelines, with a resulting decrease in multiple births [15, 21, 23].

Some bioethicists have convincingly argued that infertility is a medical condition that deserves remedy. For example, Josephine Johnston and Michael Gusmano of the Hastings Center argue that, while infertility may not kill a patient, neither do countless other medical conditions that nevertheless receive insurance coverage [21]. They further argue that fertility treatments are not “lifestyle medicine” akin to elective cosmetic surgery, as they are sometimes characterized, but rather a medical treatment because they relieve the suffering imposed by infertility [21]. But the suffering experienced by the infertile must be greater and qualitatively different from

that imposed by simply not being in the pregnant state and giving birth; there must be some features about raising a genetically related child that distinguish it in an elemental way from other means of creating a family.

Infertility certainly does impact quality of life—one study found that 50 percent of women and 15 percent of men rated infertility as “the most upsetting events of their lives” [21]; another found that infertile women had psychological symptom scores similar to those of people suffering from diseases like cancer [24]; and yet another found that infertile men experienced anxiety and depression [25]. In 2008, the World Health Organization joined the ASRM in classifying infertility as a disease [11]. And, in *Bragdon v. Abbot*, the US Supreme Court ruled that the inability to reproduce was a disability and thus afforded the protections of the Americans with Disabilities Act [11, 26].

Would Mandated Insurance Coverage Achieve These Goals?

Though the arguments that infertility is a disease have merit, for a variety of troubling reasons we believe they have failed to prove that insurance coverage should be mandated to address this issue. Analysis of access to and utilization of ART in states with insurance mandates reveals major social and ethnic disparities, and, while mandating coverage in select states did make ART more broadly available to those with health insurance, it did not make the distribution of ART more equitable. For instance, in Massachusetts, one state that enacted an insurance mandate, the majority of people accessing services are still Caucasian, highly educated, and relatively well-off [17, 27]. Even with insurance mandates, then, ART services remain effectively unavailable to the poor and uninsured, a population that has the same or greater incidence and prevalence of infertility than their more financially advantaged peers [28].

In addition, health insurance is expensive, and with the cost of medical care steadily rising, it is important to consider carefully where funds should go and whether coverage of ART should be given priority over other needed treatments. The newly enacted Affordable Care Act (ACA) makes no explicit recommendations about whether or not infertility treatments should be covered, and states that already mandate coverage for ART services may choose to include them as an essential health benefit [29]. While some believe that coverage for ART undermines the idea of affordable basic care at the heart of the ACA, others argue that including infertility as an essential health benefit will be cost effective [29].

But arguments about cost effectiveness remain unconvincing, given the complexities of both the technology and the outcomes being measured (pregnancy as distinct from live birth and a baby who makes it home from the hospital) [17]. The decrease in multiple births in states with mandated coverage for ART may reduce long-term costs, but it has been suggested that the reduction might be due to the fact that people with poorer prognoses undergo treatment in those states, lowering the number of babies born whether or not rates of embryo transfer are affected [20, 30]. Moreover, stricter regulation of ART protocols and more stringent enforcement of ASRM

guidelines could prove just as effective at limiting the number of embryos implanted as mandating insurance coverage.

Is ART Legitimately Preferable to Adoption?

To make a convincing case for government-mandated coverage, one would have to argue that medicine (through ART) offers a means to parenthood that is superior to the nonmedical means (through adoption).

Clearly, some infertile couples feel that ART is preferable—if they didn't, there wouldn't be such demand for the service—and it is worth exploring why. Yet three of the reasons given by the infertile couples surveyed by van Balen and colleagues about their preference for ART over adoption—not wanting children with behavioral problems, reluctance to fill out the paperwork adoption requires, and the fear that they will be unable to adopt successfully [31]—are misguided. Genetically related children may have behavioral problems too, and, while adoption may require paperwork, medical treatment of infertility involves a great investment of time and emotional energy, which can be just as taxing as filling out forms, if not more so. Moreover, adoption boasts a “success” rate much higher than the approximately 4 to 40 percent chance (depending on age) that a cycle of IVF will result in a live birth [10]. Rather than making ART superior, the low success rate and substantial fiscal, emotional, and physical investment required make ART in many ways inferior to adoption.

Among the other reasons for preferring ART offered by couples in van Balen's and colleagues' survey were the desire for genetically related children and concerns about cultural differences [31]. We do not consider these to be convincing ethical claims for the superiority of ART. If the goal is allowing infertile couples to become parents, and that is the standard on which we judge both services, then the fact that some people value genetic and cultural relatedness does not conclusively make ART a better means for becoming parents or obligate society to make it possible for them to have genetically related children by mandating insurance coverage for ART.

Moreover, if we choose to consider which option is better for society as a whole (rather than for a given infertile couple) we could reasonably argue that adoption is the better choice. There are large numbers of children without homes, children whose adoption would, in most cases, improve their lives [11]. In addition to being more accessible and affordable than ART, adoption brings with it the social good of giving a child who is without parents a chance to grow up in a loving home and reduces governmental expenditures for that child's support [8].

The State's Role

It is unfortunate that some couples are able to carry and give birth to genetically related children while others are unable to do so and must live with the accompanying heartbreak. It is also unfair that some couples can afford to pay to have genetically related children while others cannot. Norman Daniels has argued that the state should allow people to pursue “the array of life plans reasonable

persons are likely to develop for themselves” [32], which includes having biological children. But though the world in which we live is devastatingly imperfect and many suffer from bad luck in the “natural lottery” [32], it is hard to find moral justification for a state responsibility to promote access to having biologically related children in particular. While Article 16 of the UN Declaration of Human Rights states that “men and women of full age, without any limitation due to race, nationality, or religion, have the right to marry and have a family” [33], it does not obligate the state to help people achieve these goals beyond merely refraining from preventing them. Nor does the Declaration of Human Rights mention a right to genetically related children with cultural backgrounds similar to those of their parents. In our view, a reasonably just state should offer coverage for medical treatments for which alternatives do not exist, and ART does not meet that criterion—adoption remains an extremely good alternative.

Conclusion

Ultimately, the loss and hardship of infertility are undeniable, and the desire to help people suffering from that loss is a worthwhile one. Parenthood is, and should be, available to all, but a certain route to parenthood is not. Mandated insurance coverage for ART shouldn't be either.

References

1. Narvaez D. The emotional foundations of high moral intelligence. *New Dir Child Adolesc Dev.* 2010;2010(129):77-94.
2. Zamostny KP, O'Brien KM, Baden A L, Wiley MO. (2003). The practice of adoption history, trends, and social context. *Couns Psychol.* 2003;31:651-678.
3. Horne C, Johns C, King LW. Ancient history sourcebook: Code of Hammurabi c. 1780 BCE. Fordham University. <http://www.fordham.edu/halsall/ancient/hamcode.asp>. Accessed September 25, 2013.
4. Massachusetts Trial Court Law Libraries. Massachusetts law about adoption. <http://www.lawlib.state.ma.us/subject/about/adoption.html>. Accessed October 19 2013.
5. Hawes JM. Creating new families: this history of adoption in the United States. *Rev Am Hist.* 2004;32(1):90-96.
6. The world's first test tube baby. *American Experience.* PBS. <http://www.pbs.org/wgbh/americanexperience/features/general-article/babies-worlds-first/>. Accessed November 10, 2013.
7. Five million babies born with help of assisted reproductive technologies [press release]. Washington, DC: American Society of Reproductive Medicine Office of Public Affairs; October 14, 2013. http://www.asrm.org/Five_Million_Babies_Born_with_Help_of_Assisted_Reproductive_Technologies/. Accessed October 15, 2013.
8. Chambers G, Hoang V, Zhu R, Illingworth P. A reduction in public funding for fertility treatment--an econometric analysis of access to treatment and savings to government. *BMC Health Serv Res.* 2012;12(1):142.

- <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3464128/pdf/1472-6963-12-142.pdf> Accessed December 1, 2013.
9. Neumann PJ, Gharib SD, Weinstein MC. The cost of a successful delivery with in vitro fertilization. *New Engl J Med.* 1994;331(4):239-243.
 10. Society for Assisted Reproductive Technologies. Clinic summary report 2011.
https://www.sartcorsonline.com/rptCSR_PublicMultYear.aspx?ClinicPKID=0. Accessed October 18, 2013.
 11. Cohen IG, Chen DL. Trading-off reproductive technology and adoption: does subsidizing IVF decrease adoption rates and should it matter? *Minn Law Rev.* 2010;(95):485.
 12. Jain T, Harlow BL, Hornstein MD. Insurance coverage and outcomes of in vitro fertilization. *N Engl J Med.* 2002;347(9):661-666.
 13. National Council on Disability. Chapter 11: Assisted reproductive technologies. *Rocking the Cradle: Ensuring the Rights of Parents with Disabilities and Their Children.*
<http://www.ncd.gov/publications/2012/Sep272012/Ch11>. Accessed October 11, 2013.
 14. Farley Ordozensky Staniec J, Webb NJ. Utilization of infertility services: how much does money matter? *Health Serv Res.* 2007;42(3 part 1):971-989.
 15. Connolly M, Ledger W, Postma M. Economics of assisted reproduction: access to fertility treatments and valuing live births in economic terms. *Hum Fertil.* 2010;13(1):13-18.
 16. Stephen EH, Chandra A. Use of infertility services in the United States: 1995. *Fam Plann Perspect.* 2000;32(3):132-137.
 17. Mladovsky P, Sorenson C. Public financing of IVF: a review of policy rationales. *Health Care Anal.* 2010;18(2):113-128.
 18. Culyer AJ. Equity—some theory and its policy implications. *J Med Ethics.* 2001;27(4):275-283.
 19. Hammoud AO, Gibson M, Stanford J, White G, Carrell DT, Peterson M. In vitro fertilization availability and utilization in the United States: a study of demographic, social, and economic factors. *Fertil Steril.* 2009;91(5):1630-1635.
 20. Martin JR, Bromer JG, Sakkas D, Patrizio P. Insurance coverage and in vitro fertilization outcomes: a U.S. perspective. *Fertil Steril.* 2011;95(3):964-969.
 21. Johnston J, Gusmano MK. Why we should all pay for fertility treatment: an argument from ethics and policy. *Hastings Cent Rep.* 2013;43(2):18-21.
 22. Practice Committee of American Society for Reproductive Medicine; Practice Committee of Society for Assisted Reproductive Technology. Criteria for number of embryos to transfer: a committee opinion. *Fertil Steril.* 2013;99(1):44-46. Accessed November 19, 2013.
 23. Sunde A. Europe's declining population and the contribution of ART. *Pharm Policy Law.* 2007;9:79-89.
 24. Domar AD, Zuttermeister PC, Friedman R. The psychological impact of infertility: a comparison with patients with other medical conditions. *J Psychosom Obstet Gynaecol.* 1993;14 Suppl:45-52.

25. Freeman EW, Boxer AS, Rickels K, Tureck R, Mastroianni L Jr. Psychological evaluation and support in a program of in vitro fertilization and embryo transfer. *Fertil Steril*. 1985;43(1):48-53.
26. *Bragdon v Abbott*, 524 US 624, 629; 118 S Ct 2196 (1998).
27. Jain T, Hornstein MD. Disparities in access to infertility services in a state with mandated insurance coverage. *Fertil Steril*. 2005;84(1):221-223.
28. Chandra A, Copen C, Stephen E. Infertility and impaired fecundity in the United States, 1982-2010: data from the National Survey of Family Growth. *National Health Stat Rep*. 2013;67:1-19.
29. Omurtag K, Adamson GD. The Affordable Care Act's impact on fertility care. *Fertil Steril*. 2013;99(3):652-655.
30. Henne MB, Bundorf MK. Insurance mandates and trends in infertility treatments. *Fertil Steril*. 2008;89(1):66-73.
31. van Balen F, Verdurmen J, Ketting E. Choices and motivations of infertile couples. *Patient Educ Couns*. 1997;31(1):19-27.
32. Daniels N. *Just Health: Meeting Health Needs Fairly*. New York, NY: Cambridge University Press; 2008.
33. United Nations. Universal Declaration of Human Rights. <http://www.un.org/en/documents/udhr/index.shtml#a16d>. Accessed October 10, 2013.

Katie Falloon is a second-year medical student at Duke University School of Medicine in Durham, North Carolina. She graduated magna cum laude from Yale University with a degree in English.

Philip M. Rosoff, MD, MA, is a professor of pediatrics (oncology) and medicine at the Duke University School of Medicine and Duke University Medical Center in Durham, North Carolina. He is also chair of the center's ethics committee and a member of the Trent Center for Bioethics, Humanities and History of Medicine. His research interests and scholarly work are in the area of medical resource allocation, especially rationing. His book *Rationing Is Not a Four-Letter Word: Setting Limits on Healthcare* will be published in spring 2014 by MIT Press.

Read a [response by Jason S. Yeh and Jennifer L. Eaton to this article](#) in the April issue of *Virtual Mentor*.

Related in VM

[AMA Code of Medical Ethics' Opinions on Assisted Reproductive Technology, January 2014](#)

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2014 American Medical Association. All rights reserved.