bioethics

Bioethics ISSN 0269-9702 (print); 1467-8519 (online)
Volume 24 Number 6 2010 pp 295–303

doi:10.1111/j.1467-8519.2008.01704.x

ELECTIVE TWIN REDUCTIONS: EVIDENCE AND ETHICS

LEAH MCCLIMANS

Keywords
ethics,
evidence,
multi-fetal reductions,
selective reductions,
elective reductions

ABSTRACT

Twelve years ago the British media got wind of a London gynecologist who performed an elective reduction on a twin pregnancy reducing it to a singleton. Perhaps not surprisingly, opinion on the moral status of twin reductions was divided. But in the last few years new evidence regarding the medical risks of twin pregnancies has emerged, suggesting that twin reductions are relevantly similar to the reductions performed on high-end multi-fetal pregnancies. This evidence has appeared to resolve the moral debate.

In this paper I look at the role of clinical evidence in medical ethics. In particular I examine the role of clinical evidence in determining what counts as a significant harm or risk. First, I challenge the extent to which these empirical claims are descriptive, suggesting instead that the evidence is to some degree normative in character. Second, I question whether such empirical claims should count as evidence for what are essentially difficult ethical decisions – a role they appear to play in the case of elective reductions. I will argue that they should not, primarily because the value-laden nature of this evidence conceals much of what is ethically at stake. It is important to recognize that empirical evidence cannot be a substitute for ethical deliberation.

Twelve years ago the British media got wind of a London gynecologist who had performed an elective reduction on a twin pregnancy, reducing it to a singleton. Perhaps not surprisingly, opinion on the ethical permissibility of the reductions was divided. Medical ethicists were clearer about the permissibility of selective reductions of genetically anomalous fetuses and of fetuses from high-end multi-fetal pregnancies; cases in which the health of the fetuses or woman carrying them was at risk. In the last few years, however, new evidence suggests that twin reductions improve perinatal outcomes. The question is what sort of difference, if any, should this clinical evidence make to our views about the permissibility of twin reductions?

I shall argue that the medicalization of concepts such as 'health' and 'harm' have led to an unreflective and at times simplistic use of the evidence in the attempt to answer difficult ethical questions such as this one. The use of this evidence is unreflective and simplistic, at least in part, because notions such as 'harm' and 'risk' are not purely empirical terms. Relying on empirical studies to justify the permissibility of different types of reductions does not settle the normative question, but rather begs it.

I

High-end multi-fetal pregnancies are associated with both maternal and neonatal morbidity. Maternal risks include gestational diabetes, preeclampsia and

Address for correspondence: Leah M. McClimans, University of South Carolina, Department of Philosophy, Columbia South, Carolina 29208, United States. Email: mccliman@gwm.sc.edu

others.[1] In terms of fetal-neonatal risks, perhaps the most absolute is pregnancy loss. The risk of a lost pregnancy increases with the starting number of fetuses, for instance, it is 4.5% for triplets; 8% for quadruplets; 11% for quintuplets and 15% for sextuplets.[2] But pregnancy loss is not the only poor outcome for high-end multiples; in fact preterm delivery is the primary determinate of perinatal morbidity and mortality.[3] Moreover, since it is common for high-end multiples to be delivered early – premature delivery also correlates with the starting number of fetuses[4] – low birth weight is a regular and serious consequence of high-end multi-fetal pregnancies. Indeed, low birth weight is a more serious consequence than is often recognized, with 20% of babies born at less than 750 g developing cerebral palsy sometime later in life. To illustrate the relative rates of occurrence, singletons will develop cerebral palsy at a rate of 2.3 compared with 12.6 for twins and 44.8 for triplets.[5]

To be sure, reducing a high-end multi-fetal pregnancy is not risk free; reductions can also end in mortality and morbidity. In fact, over the last 20 years there has been significant debate about the safety and efficacy of reductions and when they are warranted. These debates generally focus on three pregnancy outcomes: length of gestation, birth weight and pregnancy loss rate. The question is when can reducing a pregnancy achieve better outcomes than carrying the original pregnancy to term? When Richard Berowitz and his team wrote on this subject in 1988 they recommended that a reduction to twins should only be offered when a woman presented with four or more fetuses. But by 2001 the data indicated that reducing triplets to twins was also justified: when triplets and quadruplets are reduced to twins the outcomes are largely the same as pregnancies starting with twins.[6] Researchers are now beginning to suggest that, in experienced hands, twin reductions are also justified due to the improved outcomes of 'reduced' singleton pregnancies compared to 'reduced' or unreduced twin pregnancies.

In 2004 Mark Evans and his colleagues compared 52 first-trimester twin reductions with both twin and singleton data from a variety of national registries. With one exception all the international data indicated that twin pregnancies are at significant risk for a variety of maternal and neonatal morbidities. For instance, in France an in vitro fertilization register from 1986–1998 found that twin pregnancies sustained significantly increased risk of preeclampsia, isolated hypertension, preterm labor and preterm rupture of the membranes; in the combined registers from the Australian states of Western Australia, South Australia and Victoria and the American states of California and Georgia, twins had a 5-fold increased risk of fetal death and 4-fold increased risk of cerebral palsy than singletons; in the combined registers from Canada, England, Wales, France and the United States between 1995–1997, each reporting country showed that twins had at least an 8-fold increased risk of Low Birth Weight (LBW) and a somewhat greater relative risk of Very Low Birth Weight (VLBW).[7]

Moreover, the 2002 United States National Vital Statistics Report on Births for the year 2001 reported that premature births at less than 32 weeks gestation are 7 times higher for twins than singletons and early births at less than 37 weeks are 5.5 times higher for twins.[8] Furthermore, the literature indicates a spontaneous pregnancy loss rate for twins of 8–10%.[9]

In comparison to the outcomes of twin births illustrated in these registers Evans et al. report a more positive experience with their 52 singleton births following a twin reduction. Although there are too few cases to demonstrate statistical significance the mean gestational age of all their cases was 37.2 weeks.[10] When compared with the 2001 United States National Vital Statistics Report on Births, 37.2 weeks is closer to spontaneous singleton gestations than typical twin gestations.[11] Moreover, out of the 52 elective reductions, only 1 patient miscarried, resulting in a pregnancy loss rate of 2.5% compared with the spontaneous twin pregnancy loss rate of 8–10%. Furthermore, only 1 baby in their cohort was born weighing less than 1500 g (1.9%); and only 4 were born weighing less than 2500 g (7.6%).

Evans et al. recognize that it is difficult to draw sound conclusions from the comparisons of such disparate studies as theirs and the various international registers –

[1] R. Depp, R. et al. Multifetal Pregnancy Reduction: Evaluation of Fetal Growth in the Remaining Twins. *AJOG* 1996; 174: 1233–1240.
[2] M. Evans et al. Do Reduced Multiples Do Better? *Best Prac Res Clin Obstet Gynaecol* 2004; 18: 601–612.
[3] Depp, *op. cit*. note 1.
[4] Evans et al., *op. cit.* note 2: p. 606.
[5] These figures are for every 1000 surviving infants, see P.O. Pharoa & T. Cooke. Cerebral Palsy and Multiple Births. *Arch Dis Child – Fetal Neonatal Ed* 1996; 75: 174.
[6] M. Evans et al. Multi-fetal Pregnancy Reduction (MFPR): Improved Outcomes with Increased Experience. *AJOG* 2001; 184: 97–103.
[7] M. Evans et al. Fetal Reduction From Twins to a Singleton: A Reasonable Consideration? *Obstet Gynecol* 2004; 104: 102–109. LBW denotes a birth weight of less than 2500 g and VLBW a birth weight of less than 1500 g.
[8] Ibid: 105
[9] Ibid.
[10] Ibid.
[11] Ibid.

the groups being compared are, to some extent, heterogeneous, the groups are not truly random, and some of the sample sizes are small.[12] But it is equally difficult, if not impossible, to design studies in this context that are truly randomized and homogenous in the appropriate respects.[13] Imperfect data notwithstanding, Evans and his team suggest that,

> '. . . parents who choose to reduce twins to a singleton may have a higher likelihood of taking home a baby than pregnancies remaining with twins.'[14]

Of course, Evans et al. do not recommend that the obstetrics community adopt twin reduction as a general practice; rather they suggest that the decision to reduce can be the right one in some cases and ought to be presented to women as a legitimate possibility during prenatal counseling.[15]

Why is this change in thinking about the medical risks of twin pregnancies, and hence the permissibility of twin reductions, important? In what follows, I shall argue that it is so because of what it reveals about our thinking about the differences between permissible and impermissible reductions.

II

Justifying High-end Multi-fetal Reductions

Mary Rorty and JoAnn Pinkerton distinguish elective reductions from both selective reductions and reductions of high-end multiples in order to show how the latter two procedures can be justified without necessarily justifying the former. They justify high-end multi-fetal reductions with two different arguments. With regard to assisted reproductive technology (ART), they claim that because high-end multi-fetal pregnancies are iatrogenic, reductions should be understood as *part* of the fertility process. In this analysis, because the physician put the fertilized eggs in the uterus he or she has a responsibility to remove them when there are too many to carry safely to term. With regard to high-end multi-fetal pregnancies that do not 'occur in the context of assisted reproduction',[16] they somewhat reluctantly suggest invoking the 'lifeboat' analogy.[17] It is permissible to deny one or more fetuses 'space' in a uterus if the alternative would endanger all of the fetuses and/or the woman carrying them.

But why the reluctance? Why should we think that reducing high-end multiples coming from ART pregnancies is more justified than 'spontaneous' multiples? As Mark Evans and his team point out, Rorty and Pinkerton's suggestion that reductions can be justified, in the context of medically managed high-end multi-fetal pregnancies, may be taken to imply that there is a morally relevant difference between fetuses developing from medical processes and those developing from natural ones.[18] But why should we think that medically managed fetuses are more disposable than 'spontaneous' ones? The way in which fetuses are conceived is irrelevant to their moral status. Moreover, it is also irrelevant to the obligations that physicians have to their patients. These obligations do not rest on their culpability for a particular outcome; rather, physicians have a duty to provide competent and compassionate medical care to *all* of their patients.[19]

The term 'responsibility' has numerous practical functions. Sometimes it refers to that for which we can be held accountable; sometimes it refers to the nature of moral agency; sometimes to a particular kind of virtue. When 'responsibility' is used synonymously with 'duty' it typically refers to certain expectations that attach to a particular role. For instance, a landlord is responsible for the upkeep of her property and for finding appropriate tenants. Moreover, she is responsible for these things *because* she is the landlord. This notion of responsibility as the duties we have in virtue of the roles we perform extends beyond the idea that we are responsible only when we are culpable. For if I am a landlord, I am responsible for the upkeep of my property regardless of who or what is culpable for the damage. For example, I'm responsible for the maintenance of the yard regardless of whether or not it is my fault that the yard is a wreck; regardless, that is, of whether I forgot to mow the lawn for a month or whether there was a tornado. Put differently, I can be held responsible for things even when I am not culpable for them.

[12] Ibid: 104–5.

[13] For instance, it would be unethical and logistically problematic to randomize woman pregnant with twins to a control group that carried the pregnancy to term and an intervention group which underwent a reduction. Moreover, even if randomization was achieved there would still be the problem of self-selection – twin pregnancies have increased more than 38.9% since 1989 and much of this increase is due to greater numbers of infertile women taking advantage of fertility treatment.

[14] Evans et al., *op. cit.* note 7, p. 105.

[15] Ibid: 107.

[16] M.V. Rorty & J. Pinkerton. Elective Fetal Reduction: The Ultimate Elective Surgery. *J Contemp Health Law Pol* 1996; 13: 63.

[17] Ibid.

[18] Evans et al., *op. cit.* note 7: p. 107.

[19] American Medical Association, Council on Ethical and Judicial Affairs. 2006. Code of Medical Ethics, 2006–2007: Current Opinions With Annotations. Available at: http://www.ama-assn.org/ama/pub/category/2512.html [Accessed 2 Dec 2008].

This point is important and one that Rorty and Pinkerton seem to overlook when they argue that physicians have a particular duty to women whose high-end multi-fetal pregnancies are the result of fertility treatments, a duty they do not have to 'spontaneous' high-end multi-fetal pregnancies. For physicians have certain duties to their patients primarily because of their role, not their level of culpability. Thus physicians have a duty to treat all women with high-end multi-fetal pregnancies in a medically competent fashion regardless of whether these pregnancies are the result of fertility treatment. Whether it is permissible to perform a reduction is a question of whether or not doing so amounts to competent and compassionate medical care.

A common way to understand the duty that obstetricians have to their pregnant patients – especially since the rise of evidence-based medicine – is in terms of the empirical research on the risks and harms of a pregnancy. Competent and compassionate care is, at least in part, care that minimizes risks and harms and maximizes benefit for the fetuses and the woman carrying them.

Those who accept that high-end multi-fetal reductions are part of 'competent and compassionate' medical care generally do so when the harms and risks associated with an unreduced pregnancy are greater than those associated with a reduced pregnancy. We can justify reductions under these circumstances via a relatively uncontroversial principle, namely that it is wrong to bring about avoidable suffering and harm. In certain cases – cases that are carefully defined by the empirical literature – reductions appear to offer us a way to minimize the risk of harm that is likely to result from high-end multi-fetal pregnancies. Whether a pregnancy is the result of ART or 'spontaneous' the risks are the same; if we are correct to try to minimize harm, then the origin of the pregnancy is irrelevant in the justification of a reduction.

This justification of high-end multi-fetal reductions is not yet to say that women *ought* to have such a reduction; rather it is simply meant to justify their permissibility – clinicians may rightfully counsel women and families about this possibility. Indeed whether or not a woman *ought* to have a high-end multi-fetal reduction is a separate question, one that, at least in Western medicine is strictly taken to be within the scope of personal choice.

Justifying Reductions in the Face of Genetic Anomalies

Counseling with regard to the option of a selective reduction arises when genetic testing reveals a serious genetic anomaly in a fetus. Counseling about a selective reduction is thought to be permissible if doing so is taken to reduce the harm to the fetus. These kinds of reductions are also justified via the principle discussed above, namely that it is wrong to bring avoidable suffering and harm into the world. Again, this requirement is consistent with physicians' duty to provide competent and compassionate medical care since doing so generally entails that clinicians should counsel their patients on the possibilities for relieving their pain and suffering or, as in the case of reductions, the suffering of those for whom their patients are responsible. As Rorty and Pinkerton note, even physicians who question the permissibility of elective abortions find it easier to accept selective reductions when the prognosis is not good.[20]

But how do we determine if the prognosis is not good? Or, at least, not good enough? While some genetic disorders such as iniencephaly or cyclopia offer only grim prospects in most contexts, others such as Kleinfelters disease or Downs Syndrome vary depending on a multiplicity of factors including a family's social and economic circumstances. This concern is somewhat ameliorated by distinguishing the question of when counseling in terms of the option of a selective reduction is permissible and the question of whether or not an individual chooses to have one. The first question is dealt with in practice by the kinds of genetic tests available – decisions over what tests to develop and which ones to offer typically determine the sort of anomalies in light of which we are prepared to reduce. Although this process does not resolve the theoretical issue of what counts as a *serious* anomaly, in practice it does tend to define its scope since clinicians are likely to make information about reductions available in light of most abnormal tests.[21] It is less a poor prognosis than an atypical diagnosis that warrants counseling on the option of selective reductions.

Thus, in most cases individuals who face an irregular genetic diagnosis are given the choice about whether or not to abort the fetus carrying the anomaly. It is here that issues of financial and social arrangements are meant to come into play, as well as individual understandings of disability. Notice, once again, that this justification for the permissibility of selective reductions is silent on whether or not individuals or families *ought* to terminate an anomalous fetus; it merely justifies the option of termination given an adverse prognosis. In such cases it is ultimately the individual or family's decision whether or not to reduce.

[20] Rorty & Pinkerton, *op. cit.* note 16: p. 69.

[21] Clinicians may refuse to perform a reduction on personal grounds, nonetheless they must help their patients find a clinician who is willing to help them.

Rorty and Pinkerton, as well as others, have argued that the justification for selective reductions differs from high-end multi-fetal reductions.[22] The main reason for this distinction is that selective reductions are not performed to increase the chances of a live birth, rather they are done to decrease the chances of an anomalous birth. As a result the 'lifeboat' justification cannot be employed. Nonetheless, selective reductions *are* justified via the principle that it is wrong to bring avoidable suffering into the world.[23] And as we saw previously, high-end multi-fetal reductions are considered justified when the risk of harm to the fetuses and the woman carrying them is less than if the pregnancy was not reduced. In both cases the avoidance of harm centrally figures.

Elective Reductions

What, then, about elective reductions? Both selective and high-end multi-fetal reductions are permissible, at least in part, according to the idea that one should not promote certain kinds of avoidable suffering or harm. The logic of this justification seems to be the following: some pregnancies, if carried to term, bring infants into the world who will suffer as a result of being born. Conventionally multi-fetal pregnancies of at least three or more fetuses are thought to run significant risks of morbidity and mortality; pregnancies with genetically anomalous fetuses by definition risk certain morbidities and/or mortality. Elective reductions, however, differ from these procedures in that the same kind of suffering or harm is not anticipated as a consequence of carrying a pregnancy to term. For instance, elective reductions are not requested because of a fetal anomaly and until recently carrying a twin pregnancy to term was not considered a significant risk to the fetuses or the woman carrying them. Without the relevant harm the permissibility of twin reductions are not justified. As Rorty and Pinkerton put the point,

> There are no significant medical or genetic threats to the fetuses or the mother that would justify selective [elective] termination . . . Although it is technically possible to perform a reduction, it is not ethically preferable to do so.[24]

From this statement it appears as though the relevant suffering or harm that can justify a reduction is some kind of *biological* harm. Admittedly, this term is not easily defined, but Rorty and Pinkerton – as well as others, whom I shall discuss below – seem to see these terms as marking a contrast with social harms and personal preference. Thus in their discussion of a case of elective reduction Rorty and Pinkerton conclude:

> The case . . . appears, on its face, to be a case of MFPR [Multi-Fetal Pregnancy Reduction] for medical reasons, but turns out to be a maternal request for an elective reduction for social reasons.[25]

Although Rorty and Pinkerton do not take twin reductions to entail the right kind of suffering or harm that would justify the procedure, it is reasonable to assume that those who request elective reductions perceive their pregnancy as entailing significant suffering or harm. Presumably it is this perception that motivates their request. But if their motivation is a perception of substantial harm, then we might ask why some kinds of suffering or harm trump others when determining the legitimacy of different kinds of fetal reductions; what justifies the use of *biological* harm as the warrant for ethically permissible reductions?

Harm and Intentions

It is not a particularly controversial moral precept that it is impermissible to intend the harm of another. This is not to say that it is always wrong to bring about harm, but rather that it is impermissible to *intend* to harm another because one desires that harm as an end.[26] In justifying the permissibility of high-end multi-fetal and selective reductions, the literature often falls back on the intentions of those individuals who would choose these procedures. For while elective reductions, abortions, high-end multi-fetal reductions and selective reductions all result in a certain kind of harm – the termination of at least one fetus – in the latter two cases the decision to reduce is characterized as an intention to have a healthy pregnancy or to carry to term a healthy child. In these cases the termination of a fetus is not intended as an end; what these individuals really desire by requesting a reduction is a healthy child – they act for a good end. The intention to have a healthy child is then contrasted with the supposed intention of those who request elective reductions or abortions. In these cases the termination of a fetus *is* construed as an end in itself; in requesting an elective reduction or abortion these individuals simply wish not to have a child.

As Evans et al. write:

[22] Rorty & Pinkerton, *op. cit.* note 16: pp. 70–71.
[23] Ibid: 65–66.
[24] Ibid: 77.
[25] Ibid.
[26] A. McIntyre. Doing Away with Double Effect. *Ethics* 2001; 111: 226–227.

> . . . there are specific ethical differences between selective termination or multifetal pregnancy reduction and abortion per se. Specifically, a woman has an abortion because she has decided, for whatever reason, that she does not wish to have a child. A woman undergoes selective termination or reduction precisely because she does wish to have a healthy child . . .[27]

The American College of Obstetrics and Gynecology's Committee on Ethics similarly states,

> . . . there are differences between the ethical analyses involved in multifetal pregnancy reduction and elective abortion because the intent is different . . . an infertility patient who has a multifetal pregnancy undergoes fetal reduction precisely because she does wish to bear a child.[28]

It is the desire for a healthy child that makes the difference in the above analyses. Those who request high-end multi-fetal and selective reductions are not taken as intending to terminate a fetus because they desire this harm as an end – on the contrary, they want a child. Rather they are understood as requesting a reduction in order to ensure the health of their future children. Alternatively, those who request elective reductions or abortions are taken to differ from those who request these other reductions in that they are understood as not wanting a child – healthy or otherwise.

In order to carve out the distinction between elective reductions and abortions, on one hand, and high-end multi-fetal and selective reductions on the other, 'health' must also be construed quite narrowly as a biological variable. For instance, 'desiring a healthy child' can mean desiring a child with 23 pairs of chromosomes in every cell with one of those pairs – the sex chromosomes – appearing as XX or XY; or it can mean desiring a child with a gestation of at least 37 weeks weighing over 2500 g. But 'desiring a healthy child' does not seem to entail desiring to raise a child with a certain level of financial security nor does it seem to mean desiring to provide adequate attention and emotional support.

Together with the emphasis on intentions, this biological characterization of harm and health tends to mean that reductions are thought to be permissible only if they are clinically warranted; only, in other words, if there is a risk of having an *un*healthy child. Rorty and Pinkerton deny that the appropriate harm is present in a twin pregnancy and thus twin reductions were unjustified. Evans et al. acknowledge Rorty and Pinkerton's concerns in their article, 'Fetal Reduction From Twins to a Singleton: A Reasonable Consideration?' but suggest that new evidence about the risk of twin pregnancies and the improved safety of twin reductions makes them 'a reasonable consideration for medical reasons'.[29] This new evidence would appear to alter the moral status of at least some twin reductions; if twin pregnancies are potentially harmful in terms of a woman or fetus' biological health, then, following the logic above, it is permissible to counsel individuals and families about this option.

III

For some time health professionals have recognized that achieving a consensus among all interested parties regarding when a *particular* individual ought to undergo a *specific* intervention is difficult if not impossible to achieve. This difficulty is usually attributed to the different values, preferences and beliefs among those concerned. Thus clinicians generally recognize that questions of how to proceed in the face of illness and risk of harm are inextricably connected to different visions of the good. For instance, while one woman may understand a high-end multi-fetal pregnancy as a threat to the health and wellbeing of her children and request a reduction, another woman may understand this threat as a call for solidarity among herself and the fetuses and yet another may see it as a reason to pray. In the face of these sorts of differences, parental choice is taken to be the 'fairest and least morally offensive policy for decisions after prenatal diagnosis'.[30]

The policy to let an individual decide for herself when, for example, a high-end multi-fetal reduction is the right choice, is reasonable – no longer may physicians merely prescribe a treatment without consulting the wishes, values and interests of their patients. Different values, experiences and life circumstances mean that what is a good choice for one person may not be a good choice for another. Nonetheless, the overwhelming emphasis on an individual's right to choose her treatment may serve to conceal another area in medicine where value-laden decisions are made with less transparency.

While it is supposed to be almost impossible to achieve consensus regarding the circumstances in which a *specific* woman should request a high-end multi-fetal reduction

[27] M. Evans et al. Selective Termination for Structural, Chromosomal, and Mendelian Anomalies: International Experience. *AJOG* 1999; 181: 896.

[28] American Committee of Obstetricians and Gynecologists Committee on Ethics. 2003–2004. *Ethics in Obstetrics and Gynecology*. Washington, DC: ACOG: 43–44.

[29] Evans et al., *op. cit*. note 7, p. 106.

[30] Ibid.

or what fetal anomalies count as making a life unlivable for a *particular* fetus and its family, decisions *are* readily made regarding what counts as an unfavorable prenatal diagnosis. For instance, a woman is not asked to decide *if* a fetus is anomalous or *if* a pregnancy is risky; rather she is asked whether she wants to proceed with her pregnancy *despite* the anomaly or *despite* the risk of harm. As Onora O'Neill has written, informed consent is basically the ability for an individual to accept or refuse treatment.[31]

In practice unfavorable prenatal diagnoses are generally uncontroversial because they are typically construed as medical facts, not value judgments. As facts they have supporting evidence in the form of observation studies, case-controlled studies and so on.[32] To be sure, there is occasional disagreement over how to interpret the available evidence; nonetheless, it is assumed that there is a correct interpretation even if it's disputed. Disagreement over how to proceed given a particular diagnosis, however, is different in that there is no 'correct' way to carry on; individual values, preferences and beliefs are simply different and result in different choices. Thus in discussions of informed consent there is a clear delineation between the value-driven decisions over how to proceed and the disclosure of medical facts. The former supposedly constitutes the ethical dimension, drawing as it does on individual visions of the good; the latter constitutes the information necessary for informed ethical deliberation.

But there are two problems with this picture of medical facts as the handmaiden to ethical decision-making. Firstly, it is an unfavorable prenatal diagnosis that determines the moral permissibility of a reduction, for it is this diagnosis that allegedly articulates the harm that a particular pregnancy might incur. The medical facts in such a case are not morally neutral since it is only in virtue of an emphasis on the *biological* aspects of health that one is even given a choice about a reduction. Secondly, this emphasis on biological health is misguided. At least since the mid-1980s, health service researchers have recognized that one's health status is *not* merely a biological concept, but that it also has a phenomenological dimension. In fact health-related quality of life research was developed specifically to articulate this other dimension.

Although health-related quality of life research has its own set of methodological difficulties the recognition that health and illness is a multi-dimensional concept is profound.[33] Recognizing that how individuals experience their predicament is as fundamental to health as the descriptive functioning of our bodies means that health status cannot be determined independent of considerations of the good. For different understandings of what makes for a good life will affect how different individuals experience health and illness.[34] For instance, imagine a woman who understands a good life to be one in which the unexpected is met with an attitude of accommodation and in which all things have a place and purpose. This woman might reasonably experience a diagnosis of Down's Syndrome not as anomalous pregnancy, but as a perfect one. Another who sees a good life as one filled with high-risk activities may contrast the risks of a high-end multi-fetal pregnancy with base-jumping instead of a twin or singleton pregnancy. In such a context a quadruplet pregnancy may not seem so risky.

Notice that in these cases it isn't that the individuals decide to proceed with a pregnancy despite the medical diagnosis, but rather their different understandings of what makes for a good life challenge the diagnosis itself. The emerging importance of health-related quality of life research suggests that the ethical challenge in medicine is not simply to provide patients with the mechanisms of informed consent – with which they accept or deny treatments designed to thwart or stave off an already defined illness – but also to engage them in studies that shape the very contours of what counts as health; what counts as harm; what counts as illness.

That bioethics and certain areas of clinical research have not absorbed the significance of the multi-dimensional nature of health is particularly obvious in the case of twin reductions. Here we see that the threshold of permissibility depends on the risk of harm to the health of the woman or fetus(es) that a particular pregnancy carries. But in these cases, 'harm' and 'health' are almost exclusively determined by clinical indicators; indeed it is the lack of clinical indicators that differentiate elective reductions from selective and high-end multi-fetal reductions. If, however, 'health', 'illness' and 'harm' are multidimensional concepts, then what ought to justify a permissible reduction is not merely its biological harm but, rather, a broader investigation of different legitimate

[31] O'Neill, O. 2002. *Autonomy and Trust in Bioethics*. Cambridge: Cambridge University Press.

[32] Although the determination of a poor prognosis in the face of a fetal anomaly may be a value-laden decision, as I discussed in Section II the permissibility of selective reductions practically depends not on a 'poor prognosis', but on a demonstrable fetal anomaly. Moreover, whether or not a result is anomalous is presented as a medical fact.

[33] For some of these methodological difficulties see J.C. Hobart et al. Rating Scales as Outcome Measures for Clinical Trials in Neurology: Problems, Solutions, and Recommendations. *Lancet Neurol* 2007; 6: 1094–1095.

[34] Allen Edgar makes this argument in A. Edgar. Weighting Health States and Strong Evaluation. *Bioethics* 1995; 9: 240–51; and A. Edgar. A Discourse Ethics Approach to Quality of Life Measurement. *Ann NY Acad Sci* 1997; 809: 30–39.

conceptions of harm in the context of pregnancy and a wider understanding of the factors that contribute towards a healthy woman and child.

Consider a fetus diagnosed with Klinefelter's Syndrome. The choice to reduce in this case can only be construed as an intention to have a healthy child insofar as Klinefelter's Syndrome is considered an instance of poor health. Although individuals with Klinefelter's are biologically similar to one another in respects that make them different from those without the syndrome, these differences indicate poor health only in certain social contexts and relative to certain values – some individuals with Klinefelter's don't even know they have it and those that do may not take themselves to be unhealthy.[35] When health is in question extra-clinical factors figure in this concern, for instance, certain understandings of perfection or disability; the role of fertility in a good life; or contexts where resources to aid in language development are scarce.

How individuals experience their health is important to our understanding of it given the multi-dimensional nature of the concept. But if this is the case, then the mere existence of a certain configuration of sex chromosomes cannot alone provide the grounds for a permissible reduction because alone it cannot demonstrate poor health. Moreover, the absence of an irregular diagnosis cannot solely establish one's health.[36] Recognizing that Klinefelter's Syndrome might sometimes represent a legitimate reason to reduce or terminate a pregnancy requires us to acknowledge that extra-clinical factors matter.

But once we focus on extra-clinical factors, then no longer are the intentions of those who request elective reductions quite so distinct from those requesting selective reductions. For example, one can imagine worrying about whether it would be possible to give a child with Klinefelter's the support and attention he might need in order for him to be healthy. But if it is legitimate to worry about the health of a child due to the amount of attention and care one will be able to provide, then this worry about health is legitimate whether it is directed towards a fetus with Klinefelter's or without it. To be sure, biological considerations are not irrelevant to health. The development of a fetus with a diagnosis of Tetrology of the Fallow will proceed in one way and a fetus without Tetrology of the Fallow will proceed in another. But whether or not this development marks an abnormality or part of the ebb and flow of life, whether it is a case of unnecessary suffering or par for the course, depends very much on one's outlook.

In this example I've stressed how extra-clinical factors figure in our understanding of health. One consequence of this is that a broader range of requests for reduction can be characterized as intentions to have a healthy child. For example, harm might be understood as a lack of resources for education or the inability to provide the attention and emotional support a child needs. But we might also understand the harm involved in elective reductions differently. Toward the end of their article, Rorty and Pinkerton deny that a woman's reproductive right to determine whether to be pregnant extends to a choice involving how *many* children she will bear.[37] In a later article Rorty supports this position with an argument that locates the harm of elective twin reductions in the lack of substantive difference between the fetuses; any decision to reduce one as opposed to the other will be arbitrary or worse.[38]

In the context of selective reductions the fetus carrying the anomaly is the one aborted. Rorty's point in this later paper is that with no anomaly to distinguish the fetuses,

> Any information about either fetus that can distinguish them, in a context where only one will survive, discriminates between them to the disadvantage of one.[39]

Her worry is that morally irrelevant differences such as sex may serve to determine which one is aborted. Elective reductions could easily become a vehicle for eugenics.[40]

But Rorty's worry about discrimination is to a large extent misplaced. Firstly, as Mark Evans and his team point out, there is a standard triage for determining which fetus to reduce. In lieu of a diagnosis or suspicion of an anomaly, a healthcare team will first look for size discordancy, then the respective location of the fetuses and finally the technical ease with which either could be

[35] In a 2002 study of the validity of the SF-36 Sara Mallinson found that even when respondents acknowledged an illness they sometimes characterized their health as an independent issue. For example to the question, 'In general how would you say your health is?' one individual answered, 'My health is good. It's the spinal atrophy that's the problem'. See S. Mallinson. Listening to Respondents: a Qualitative Assessment of the Short-Form 36 Health Status Questionnaire. *Soc Sci Med* 2002; 54: 19.

[36] Quality of life researchers often make this latter point: clinical measures and tests do not exhaust the ways in which one can be ill or unhealthy. See G.L. Albrecht. 1994. Subjective Health Assessment. In *Measuring Health and Medical Outcomes*. Crispin Jenkinson, ed, London: University College London Press.

[37] Rorty & Pinkerton, *op. cit.* note 16: p. 76.

[38] M.V. Rorty. 1999 Feminism and Elective Fetal Reduction. In *Embodying Bioethics, Recent Feminist Advances*. Anne Donchin & Laura M Purdy, eds. Lanham: Rowman & Littlefield Publishers.

[39] Ibid.

[40] Ibid.

aborted.[41] This decision process doesn't discriminate on the basis of morally irrelevant characteristics, such as sex, nor is it arbitrary, given the purpose of a reduction. Nonetheless, Evans and his team do disclose the fetus' sex if the woman requests it.[42] This policy is not unusual since a fetus' sex is typically disclosed to parents if requested. Although this policy opens the door to sex discrimination it does so across the board – in both twin reductions and singleton terminations.[43] Thus it isn't clear, in Rorty's account, why possible discrimination should limit a woman from choosing how many fetuses to carry to term when it doesn't limit her right to terminate an entire pregnancy.

Nonetheless, I'd like to flesh out Rorty's general concern, albeit in another direction. Without any clinical indications, the choice to reduce one fetus as opposed to another may appear to treat fetuses as though there is nothing distinctive or unique about each one. In fact it may appear to treat them as objects, for just as one object of the same kind can typically stand in for another object of the same kind, we might think that elective reductions imply that one biologically normal fetus can stand in for any other. Thus we might conclude that elective reductions are at odds with the respect we owe to fetuses – even if we accept that fetuses are not persons, neither are they objects.

From this perspective, wholesale abortions may be less 'harmful' than elective reductions in that they respect fetuses by treating an entire pregnancy in the same fashion. Nonetheless, if elective reductions are criticized in this way, then consistency requires us to criticize high-end multi-fetal reductions as well – at least in cases where each fetus is genetically 'normal'. Once again the boundary between elective reductions and other reductions is complicated and blurred.

Although it seems to me that with a broader understanding of health and harm the permissibility of selective and high-end multi-fetal reductions entails the permissibility of at least some elective reductions, the aim of this paper is not to take sides in the debate. Rather my point is that the medicalization of 'health' and 'harm' leads to an oversimplification of the ethical analysis. Indeed, as evidence-based medicine claims more of a central role in medical decision-making, this kind of oversimplification appears to become more prominent. But medical ethics does not become less important simply because medicine has become more empirically minded. Whether we think the moral permissibility of elective reductions stands or falls with the intentions of those requesting a reduction or the decision to abort one fetus as opposed to another, clinical indicators shape ethical deliberation but do not determine it.

[41] Evans et al., *op. cit*. note 7: p. 107.

[42] Ibid.

[43] Although sex selection is illegal in many places, legal abortions combined with the disclosure of a fetus' sex often make it difficult to police. It may in fact be easier to police in elective reductions, since individuals would have to specify explicitly which fetus they want reduced.

Acknowledgements

I would like to thank Georgia Warnke and Kelley Ross for their comments on previous drafts of this paper. I would also like to thank Kerry Bowman at Mount Sinai Hospital in Toronto for encouraging me to write it.

Leah M. McClimans (PhD, London School of Economics, 2007) is Assistant Professor of Bioethics at the University of South Carolina. Her current research is into the methodology of health-related quality of life measures, the art of questioning, and the use of empirical outcomes in bioethical decisions.