# Selective reduction of fetuses in multiple pregnancies and the law in Australia

# Colleen Davis and Heather Douglas\*

This article considers whether it is lawful in Australia to terminate one or more fetuses in a multiple pregnancy selectively and, if so, under what circumstances. It begins by addressing the preliminary question whether selective reduction is covered by laws relating to abortion and provides a brief outline of the law of abortion in Australian jurisdictions. The article then considers selective reduction of high-order multiple pregnancies, before turning to selective reduction of twin pregnancies in a range of circumstances. The article demonstrates that the law of abortion, as applied to selective reduction of multiple pregnancies, is uncertain and that there are considerable variations from one State to another. It concludes that the law in this area is in need of reform to recognise that some reductions are not performed prima facie to prevent danger to the mother's health and to remove the need for doctors to assert symptomatology of mental illness in order to guard against criminal law consequences. Further, there is a need to clarify whether selective reduction/ termination is abortion for the purposes of the law, and to achieve greater consistency across jurisdictions.

## INTRODUCTION

Much has been written about the legal aspects of abortion in Australia.<sup>1</sup> However, the lawfulness of terminating one or more fetuses<sup>2</sup> in multiple pregnancies has received scant attention. Selective reduction of fetuses is usually performed for one of four reasons:

- to reduce the number of fetuses in a high-order<sup>3</sup> multiple pregnancy, often after assisted reproduction technology treatment;
- to maximise the chance of the birth of at least one healthy baby;
- to prevent a fetus with a major abnormality or disability from being born; and
- to eliminate the threat from one fetus to another.

More recently, some doctors have started offering selective reduction of twins to a singleton pregnancy because of the perceived greater risk to both mother and fetuses in a twin pregnancy.<sup>4</sup> Reduction of a twin pregnancy is also becoming more commonplace for social and economic reasons, particularly for older mothers.<sup>5</sup>

<sup>\*</sup> Colleen Davis, Lecturer, School of Law, Griffith University; Heather Douglas, Professor, TC Beirne School of Law, The University of Queensland.

Correspondence to: Colleen.Davis@griffith.edu.au.

<sup>1</sup> See, for example, Douglas H, Black K and de Costa C, "Manufacturing Mental Illness (and Lawful Abortion): Doctors' Attitudes to Abortion Law and Practice in New South Wales and Queensland" (2013) 20 JLM 560; De Crespigny LJ and Savulescu J, "Abortion: Time to Clarify Australia's Confusing Laws" (2004) 181(4) MJA 201; De Costa C, "Abortion Law, Abortion Realities" (2008) 15 JCULR 6; Petersen K, "Abortion Laws and Medical Developments: A Medico-Legal Anomaly in Queensland" (2011) 18 JLM 594.

 $^{2}$  The term "embryo" refers to the fetus in the womb before eight weeks gestation. The term "fetus" describes the unborn child after the eighth week of development.

<sup>3</sup> A high-order multiple pregnancy is one in which there are three or more fetuses.

<sup>4</sup> Hasson J, Shapira A, Many A, Jaffa A and Har-Toov J, "Reduction of Twin Pregnancy to Singleton: Does It Improve Pregnancy Outcome?" (2011) 24(11) Journal of Maternal-Fetal and Neonatal Medicine 1362.

<sup>5</sup> Evans MI, Ciorica D and Britt DW, "Do Reduced Multiples Do Better?" (2004) 18(3) *Best Practice and Research Clinical Obstetrics and Gynaecology* 601 at 607; Evans MI, Krivchenia EL, Gelber SE and Wapner RJ, "Selective Reduction" (2003) 30 *Clinics in Perinatology* 103 at 108.

This article considers whether it is lawful in Australia to terminate one or more fetuses in a multiple pregnancy selectively and, if so, under what circumstances. It begins by addressing the preliminary question whether selective reduction is covered by laws relating to abortion and provides a brief outline of the law of abortion in Australian jurisdictions. The article then considers selective reduction of high-order multiple pregnancies, before turning to selective reduction of twin pregnancies in a range of circumstances. The article demonstrates that the law of abortion, as applied to selective reduction of multiple pregnancies, is uncertain and that there are considerable variations from one State to another. It argues that selective fetal reduction is no different to abortion, particularly in Queensland, New South Wales, South Australia, the Northern Territory and Western Australia, in that the procedure can be lawful only if it is performed on the basis that continuing the multiple pregnancy will endanger the mother's physical or mental health. This is so even where the real reason for the reduction is quite different. It concludes that the law in this area is in need of reform to recognise that some reductions are not performed prima facie to prevent danger to the mother's health and to remove the need for doctors to assert symptomatology of mental illness in order to guard against criminal law consequences. Further, there is a need to clarify whether selective reduction/termination is abortion for the purposes of the law, and to achieve greater consistency across jurisdictions.

# SELECTIVE REDUCTION AND SELECTIVE TERMINATION

In this article, the term "selective reduction" refers to the termination of one or more fetuses in a multiple pregnancy, usually in the first trimester, while allowing the remaining one or more fetuses to develop.<sup>6</sup> The procedure is performed to reduce maternal morbidity and fetal mortality, or for socioeconomic reasons.<sup>7</sup> Selective termination involves the interruption of the development of one or more fetuses affected by a serious and incurable pathology, or a fetus with less severe pathology where this pathology could be prejudicial to the development of a healthy fetus,<sup>8</sup> for example, where there is twin-to-twin transfusion syndrome or twin reversed arterial perfusion sequence.<sup>9</sup>

Selective reduction is usually carried out in the first trimester of pregnancy, between 11 and 14 weeks.<sup>10</sup> Some researchers argue that the procedure should be performed between 12 and 14 weeks, because this is the safest period and allows a better prognosis for the remaining fetus/es.<sup>11</sup> Sentilhes and colleagues claim 10 to 12 weeks is the optimum timeframe because the risk of spontaneous pregnancy loss is lower, and it is possible at that stage to identify and reduce fetuses with defects.<sup>12</sup> However, Legendre et al give the same reasons for recommending that fetal reduction be performed at 15 to 16 weeks.<sup>13</sup>

The most common method of selective reduction is transabdominal insertion of a needle into the thorax of the fetus, and into the fetal heart if possible, under ultrasound control, and the injection of

<sup>12</sup> Sentilhes L, Audibert F, Dommerques M, Descamps P, Frydman R and Mahieu-Caputo D, "Multifetal Pregnancy Reduction: Indications, Technical Aspects and Psychological Impact" (2008) 37(2) *La Presse Medicale* 295.

<sup>13</sup> Legendre et al, n 6 at 547.

<sup>&</sup>lt;sup>6</sup> Pinchuk S, "A Difficult Choice in a Different Voice: Multiple Births, Selective Reduction and Abortion" (2000) 7(29) *Duke Journal of Gender Law and Policy* 30. See also Legendre CM, Moutel G, Drouin R, Favre R and Bouffard C, "Differences Between Selective Termination of Pregnancy and Fetal Reduction in Multiple Pregnancy: A Narrative Review" (2013) 26(6) *Reproductive BioMedicine Online* 542.

<sup>&</sup>lt;sup>7</sup> Legendre et al, n 6 at 543.

<sup>&</sup>lt;sup>8</sup> Legendre et al, n 6 at 543.

<sup>&</sup>lt;sup>9</sup> Morris KR and Kilby MD, "Fetal Reduction" (2010) 20(11) *Obstetrics, Gynaecology and Reproductive Medicine* 341 at 342. Twin-to-twin transfusion syndrome occurs where there is a transfusion of blood from one twin to the other. This can result in anaemia of the donor twin and oversupply of blood and heart failure in the recipient twin. Twin reversed arterial perfusion sequence occurs where one twin is developmentally normal while the other has a serious condition such as missing a heart. This results in the "normal" twin pumping blood into the other twin which places stress on the heart of the normal twin.

<sup>&</sup>lt;sup>10</sup> Morris and Kilby, n 9.

<sup>&</sup>lt;sup>11</sup> Tadin I, Roje D, Banovic I, Karelovic D and Mimica M, "Fetal Reduction in Multifetal Pregnancies" (2002) 43(2) Yonsei Med J 252, discussed in Legendre et al, n 6 at 547.

potassium hydrochloride.<sup>14</sup> Fetuses with obvious abnormalities are selected for reduction,<sup>15</sup> but if all appear normal the choice of which ones to reduce is based on the ease of approach.<sup>16</sup> Fetuses closest to the uterine wall<sup>17</sup> and furthest away from the cervix are usually chosen.<sup>18</sup> In a high-order multiple pregnancy, monozygotic twins are often selected.<sup>19</sup> Some doctors offer parents the chance to choose to keep fetuses of a particular sex.<sup>20</sup> The dead fetus may be spontaneously expelled or may remain within the mother, where it will wither and be expelled with the other fetus/es at birth.<sup>21</sup>

Hall raises concerns about the prospect of unacceptable levels of fetal suffering, particularly where the procedure fails to kill the fetus and the procedure has to be repeated. The introduction of a needle into a fetal thorax may cause bradycardia followed by apparent recovery of normal cardiac function, requiring the procedure to be repeated at weekly intervals until the fetus has been killed.<sup>22</sup>

Selective termination (sometimes referred to as selective feticide) is done most often with twins, and is usually carried out in the second trimester.<sup>23</sup> A variety of methods are used, including cardiac tamponade, intracardiac air embolism, fetoscopic umbilical cord ligation and intracardiac potassium chloride injection.<sup>24</sup> The method chosen for selective termination depends on the stage of pregnancy.<sup>25</sup>

# "ABORTION", "MISCARRIGE" AND "TERMINATION OF PREGNANCY"

All Australian jurisdictions use the terms "abortion" and "miscarriage" in the context of ending or terminating a pregnancy but only some jurisdictions define these terms. In s 3 of the *Abortion Law Reform Act 2008* (Vic), "abortion" is defined to mean intentionally causing the termination of a woman's pregnancy by using an instrument, a drug or a combination of drugs or by any other means. The *Health Act 1993* (ACT) contains a similar definition.<sup>26</sup> Other jurisdictions rely on judicial interpretation of the terms. In *R v Bayliss* (1986) 9 Qld Lawyer Reps 8 at 9, McGuire J explains that the everyday meaning of the term "miscarriage" is "the accidental termination of pregnancy", while

<sup>18</sup> Antsaklis and Anastasakis, n 15.

<sup>19</sup> Cheang CU, Huang LS, Lee TH, Liu CH, Shih YT and Lee MS, "A Comparison of the Outcomes Between Twin and Reduced Twin Pregnancies Produced Through Assisted Reproduction" (2007) 88(1) *Fertility and Sterility* 47 at 48. In a dichorionic twin pregnancy, there are two separate placentas, whereas in a monochorionic pregnancy the twins share a single placental mass: Legendre et al, n 6 at 547. Monochorionic twins are subject to specific complications which originate in either imbalance or abnormality of the single placenta serving two twins. This unequal placental sharing can cause complications including twin-to-twin transfusion syndrome, twin anaemia-polycythaemia sequence, selective intrauterine growth restriction or twin reversed arterial perfusion sequence: see Chalouhi GE, Stirnemann JJ, Salomon LJ, Essaoui, Quibel T and Ville Y, "Specific Complications of Monochorionic Twin Pregnancies: Twin-Twin Transfusion Syndrome and Twin Reversed Arterial Perfusion Sequence" (2010) 15(6) *Seminars in Fetal and Neonatal Medicine* 349.

<sup>20</sup> Evans MI, Rosner M, Andriole S, Alkalay A, Gebb J and Britt DW, "Evolution of Gender Options in Multiple Pregnancy Management" (2013) 33 *Prenatal Diagnosis* 1.

<sup>21</sup> Grubb A, Principles of Medical Law (Oxford University Press, 2004) p 772.

<sup>22</sup> Hall A, "Selective Reduction of Pregnancy: A Legal Analysis" (1996) 22(5) J Med Ethics 304 at 305; see also Smith R, Gitau R, Glover V and Fisk N, "Pain and Stress in the Human Fetus" (2000) 92 *European Journal of Obstetrics and Gynecology* 161.

<sup>23</sup> Stone J and Berkowitz RL, "Multifetal Pregnancy Reduction and Selective Termination" (1995) 19(5) Seminars in Perinatology 363 at 370.

<sup>24</sup> Stone and Berkowitz, n 23 at 370.

<sup>25</sup> Legendre et al, n 6 at 543.

<sup>26</sup> Health Act 1993 (ACT), s 80. See also Criminal Law Consolidation Act 1935 (SA), ss 81(1), (2), 82; Acts Amendment (Abortion) Act 1998 (WA), s 119; Health Act 1911 (WA), ss 334, 335.

<sup>&</sup>lt;sup>14</sup> Evans et al, "Selective Reduction", n 5 at 105; Pinchuk, n 6 at 31.

<sup>&</sup>lt;sup>15</sup> Antsaklis A and Anastasakis E, "Selective Reduction in Twins and Multiple Pregnancies" (2011) 39(1) Journal of Perinatal Medicine 15.

<sup>&</sup>lt;sup>16</sup> Athanasiadis AP, Karavida A, Tzitzimikas S, Vavilis D, Grimbizis G, Tarlatzis BC and Bontis J, "Fetal Reduction in a Nontuplet Pregnancy: Technical and Ethical Considerations" (2005) 20(2) *European Journal of Obstetrics, Gynecology and Reproductive Biology* 227 at 228.

<sup>&</sup>lt;sup>17</sup> Pinchuk, n 6 at 31.

"abortion has the more sinister meaning of a deliberate and improper procuring by artificial means of the expulsion of the contents of the pregnant uterus". The term "miscarriage" is used in the various provisions in Australian legislation in conjunction with the phrase "intent to procure",<sup>27</sup> and it would seem therefore that the terms "abortion" and "miscarriage" have the same meaning in a legal context of deliberately ending a pregnancy. In some jurisdictions, "termination" is used in sections or notes that qualify sections that create the offence of abortion.<sup>28</sup> For example, the note to s 208B, Procuring Abortion, in the *Criminal Code 1983* (NT) refers to s 11 of the *Medical Services Act 1982* (NT) which outlines the circumstances in which it is lawful for a medical practitioner to give medical treatment with the intention of terminating a woman's pregnancy. Likewise, s 81A of the *Criminal Law Consolidation Act 1935* (SA) qualifies s 81, Attempts to Procure Abortion. In November 2013 Tasmania enacted new legislation which defines "terminate" as discontinuing a woman's pregnancy by using an instrument or a combination of instruments; using a drug or a combination of drugs; or any other means.<sup>29</sup> It appears then that the terms "abortion", "miscarriage" and "termination of pregnancy" are interchangeable under the legislation.

It could be argued that neither selective reduction nor selective termination falls within these definitions because neither procedure involves "termination of the pregnancy". The purpose of an abortion is to end the entire pregnancy, whereas both selective reduction and selective termination, in most cases, aim to protect or "salvage" the pregnancy.<sup>30</sup> If selective reduction and selective termination are performed successfully, the woman remains pregnant. Pregnancy means "the state of being with child" or "the state of the uterus in being pregnant".<sup>31</sup> Alternatively, Grubb has argued, before legislation in England and Wales was amended to provide specifically for selective reductions and terminations, that a court would take the view that destruction of one or more fetuses would be a termination of pregnancy<sup>32</sup> but this issue has yet to be addressed in Australia.

Further, unlike abortion, selective reduction does not necessarily involve the expulsion or extraction of the fetus/es from the uterus.<sup>33</sup> In some cases, the remains of the fetus can be seen as an attachment to the placenta, or it may be absorbed and visible only on dissection of the placenta after delivery.<sup>34</sup> In other cases, as noted earlier, the dead fetus withers, and is expelled with the other fetus/es at birth.<sup>35</sup> It could be argued that, although the dead fetuses are not expelled immediately (as is the case with therapeutic abortions), the definition of abortion is met because they are ultimately expelled when the remaining fetus/es are born.

There are two ways to remove any ambiguity so that both selective reductions and selective terminations clearly fall within the law of abortion in Australia. The first is to provide a definition of abortion similar to that used by Glanville Williams, who defines abortion as "the intentional destruction of the fetus in the womb or any untimely delivery brought about with the intent to cause the death of the fetus".<sup>36</sup> The second is to follow England and Wales and amend legislation to clearly bring both selective reduction and selective termination within the legislative provisions dealing with abortion.<sup>37</sup> The amended England and Wales legislation allows doctors to reduce the number of

 $^{37}$  Section 5(2) of the *Abortion Act 1967* (UK) was amended in 1990 as follows: "in the case of a woman carrying more than one foetus, anything done with intent to procure her miscarriage of any foetus is authorised by [s 1] if – (a) the ground for

<sup>&</sup>lt;sup>27</sup> See Crimes Act 1900 (NSW), ss 82, 83, 84; Criminal Code 1899 (Qld), ss 224, 225, 226.

<sup>&</sup>lt;sup>28</sup> Medical Services Act 1982 (NT), s 11.

<sup>&</sup>lt;sup>29</sup> Reproductive Health (Access to Terminations) Act 2013 (Tas), s 14(c).

<sup>&</sup>lt;sup>30</sup> Pinchuk, n 6 at 34.

<sup>&</sup>lt;sup>31</sup> Hall, n 22 at 306.

<sup>&</sup>lt;sup>32</sup> Grubb, n 21, p 773.

<sup>&</sup>lt;sup>33</sup> Pinchuk, n 6 at 34.

<sup>&</sup>lt;sup>34</sup> Hall, n 22 at 306

<sup>&</sup>lt;sup>35</sup> Grubb, n 21, p 773.

<sup>&</sup>lt;sup>36</sup> Williams G, Textbook of Criminal Law (2nd ed, Steven & Sons, 1983) p 292, in Hall, n 22 at 306.

fetuses in order to reduce the danger to the mother.<sup>38</sup> However, the section does not cover selective reduction of fetuses where a multiple pregnancy poses risks to the other fetuses.<sup>39</sup>

# **ABORTION LAW IN AUSTRALIA**

Assuming that selective reduction of fetuses falls within the meaning of "abortion," "miscarriage" or "termination" in Australian law, the current authors turn now to a brief outline of the law of abortion in Australia. The law is a complex patchwork that varies from one jurisdiction to another, and in some States has changed significantly in recent years.

It is no longer an offence for a medical practitioner to perform an abortion in the Australian Capital Territory, Victoria (before 24 weeks) or Tasmania (before 16 weeks) provided the pregnant woman consents to the procedure.<sup>40</sup> In the remaining jurisdictions of New South Wales, South Australia, Queensland, the Northern Territory and Western Australia, there are similar legislative provisions that make it an offence for a person to unlawfully use any instrument or other means, with intent to procure the miscarriage of a woman.<sup>41</sup> There are a number of exceptions to this basic offence but these differ depending on the jurisdiction.

Although no longer relevant in Victoria, Menhennit J in R v Davidson [1969] VR 667 at 672 established a test, known as the *Menhennit* ruling,<sup>42</sup> that has been largely followed in some other jurisdictions. For example, in New South Wales, Levine J in R v Wald (1971) 3 DCR (NSW) 25 essentially followed the *Menhennit* ruling, finding that the common law defence of necessity can render an abortion lawful provided that the doctor honestly believed on reasonable grounds that termination was necessary to preserve the woman from serious danger to her life or her physical or mental health (not being merely the normal dangers of pregnancy and childbirth) or that the doctor honestly believed on reasonable grounds that the act was proportionate in the circumstances to the need to preserve the woman from such danger. Notably, however, Levine J's articulation of necessity (at 29) extended the *Menhennit* ruling to cover detrimental effects on the woman's life or health that can be determined in consideration of not only medical grounds but also her social and economic circumstances.

In Queensland, s 282 of the *Criminal Code 1899* (Qld) provides a defence if the abortion is necessary for the preservation of the mother's life and is reasonable having regard to the woman's state at the time and to all the circumstances of the case. In determining the extent of the defence, McGuire J in R v Bayliss (1986) 9 Qld Lawyer Reps 8 at 30 also followed Menhennit J's judgment in R v Davidson [1969] VR 667 in interpreting s 292 to include preservation of the woman's physical and mental health. However, McGuire J made it clear (at 45) that, in Queensland, economic factors cannot be considered.

In New South Wales and Queensland, no distinctions are drawn based on the age of the fetus. However, in South Australia, the Northern Territory and Western Australia, the grounds upon which an

<sup>41</sup> See Criminal Code 1899 (Qld), ss 224, 225, 226; Crimes Act 1900 (NSW), ss 82, 83, 84; Criminal Law Consolidation Act 1935 (SA), ss 81, 82, 82A; Criminal Code Act Compilation Act 1913 (WA), s 199; Health Act 1911 (WA), s 334; Criminal Code 1983 (NT), ss 208B, 208C.

<sup>42</sup> Menhennit J directed the jury as follows (at 672): "For the use of an instrument with intent to procure a miscarriage to be lawful the accused must have honestly believed on reasonable grounds that the act done by him was (a) necessary to preserve the woman from a serious danger to her life or her physical or mental health (not being merely the normal dangers of pregnancy and childbirth) which the continuance of the pregnancy would entail; and (b) in the circumstances not out of proportion to the danger to be averted."

termination of the pregnancy specified in subsection (l)(d) of that section applies in relation to any foetus, and the thing is done for the purpose of procuring the miscarriage of that foetus, or any of the other grounds for termination of pregnancy specified in that section applies."

<sup>&</sup>lt;sup>38</sup> Grubb, n 21, p 774.

<sup>&</sup>lt;sup>39</sup> Grubb, n 21, p 774.

<sup>&</sup>lt;sup>40</sup> These three States have decriminalised abortion: *Crimes (Abolition of Offence of Abortion) Act 2002 (ACT); Abortion Law Reform Act 2009 (Vic); Reproductive Health (Access to Terminations) Act 2013 (Tas).* In Victoria, it is not unlawful to perform an abortion of a fetus less than 24 weeks gestation.

abortion can be found to be lawful vary depending on fetal gestational age. Further, although abortion in Tasmania and Victoria is not unlawful if performed before 16 and 24 weeks respectively, abortions after this date are qualified by legislative requirements.<sup>43</sup> In South Australia, a doctor can perform an abortion within 28 weeks of conception provided it is immediately necessary to save the life of the woman or to prevent grave injury to her physical or mental health.<sup>44</sup> A pregnancy can be terminated after 28 weeks if the abortion is carried out to preserve the woman's life.<sup>45</sup>

In the Northern Territory, an abortion is lawful at 14 weeks or less if the continuation of the pregnancy would involve a greater risk to the woman's life or greater risk of harm to her physical or mental health than if the pregnancy is not terminated.<sup>46</sup> Between 14 and 23 weeks, an abortion can only be performed if it is required immediately to prevent serious harm to the woman's physical or mental health,<sup>47</sup> and after 23 weeks abortion is lawful if carried out to preserve the woman's life.<sup>48</sup>

In Western Australia, an abortion can be performed before 20 weeks if the woman will suffer serious personal, family or social consequences or serious danger to her physical or mental health if she continues with the pregnancy or gives birth. However, an abortion can be performed after 20 weeks if the mother has a severe medical condition that, according to two medical practitioners, justifies the procedure.<sup>49</sup>

Although it is not a criminal offence for a doctor to perform abortions in Victoria if the fetus is 24 weeks or older, two doctors must reasonably believe the abortion is appropriate in all the circumstances, including both relevant medical circumstances and the woman's current and future physical, psychological and social circumstances.<sup>50</sup> In Tasmania, abortions after 16 weeks require two doctors, one of whom must be a gynaecologist, to agree that continuing the pregnancy would involve a greater risk to the woman's physical or mental health than termination.<sup>51</sup> Doctors can consider the woman's current and future physical, psychological, economic and social circumstances.<sup>52</sup>

Some jurisdictions expressly provide for abortion where the fetus is severely abnormal. In South Australia, doctors can abort a fetus before 28 weeks where there is a substantial risk that the child would suffer from such physical or mental abnormalities as to be seriously handicapped.<sup>53</sup> The Northern Territory also permits abortion on this ground but only before 14 weeks gestation.<sup>54</sup> Given that many abnormalities are not identified until after 14 weeks,<sup>55</sup> the provision has limited use in practice. Although there are no similar express provisions in Queensland, de Jersey J observed in obiter dicta in *Veivers v Connolly* [1995] 2 Qd R 326 at 329 that the birth of a severely handicapped child could have a serious effect on the mother's mental health.

In summary at this point, the law of abortion in Australia is complex and varies considerably from one jurisdiction to another. There are differences in the grounds upon which an abortion can be lawful, and there is also little consistency in the legal requirements for legal abortion at varying gestational

<sup>53</sup> Criminal Law Consolidation Act 1935 (SA), ss 81, 82. See also Kerridge I, Lowe M and Stewart C, Ethics and Law for the Health Professions (4th ed, Federation Press, 2013) pp 568-569.

<sup>54</sup> Medical Services Act 1982 (NT), s 11.

<sup>55</sup> Genetics in Family Medicine: The Australian Handbook for General Practitioners, Testing and Pregnancy (2007) p 7, http://www.nhmrc.gov.au/\_files\_nhmrc/file/your\_health/egenetics/practioners/gems/sections/03\_testing\_and\_pregnancy.pdf.

<sup>&</sup>lt;sup>43</sup> Reproductive Health (Access to Terminations) Act 2013 (Tas), s 5; Abortion Law Reform Act 2008 (Vic), s 5.

<sup>&</sup>lt;sup>44</sup> Criminal Law Consolidation Act 1935 (SA), s 82A.

<sup>&</sup>lt;sup>45</sup> Criminal Law Consolidation Act 1935 (SA), s 82A.

<sup>&</sup>lt;sup>46</sup> Medical Services Act 1982 (NT), s 11(1).

<sup>&</sup>lt;sup>47</sup> Medical Services Act 1982 (NT), s 11(3).

<sup>&</sup>lt;sup>48</sup> Medical Services Act 1982 (NT), s 11(4).

<sup>49</sup> Health Act 1911 (WA), s 334.

<sup>&</sup>lt;sup>50</sup> Abortion Law Reform Act 2008 (Vic), s 5.

<sup>&</sup>lt;sup>51</sup> Reproductive Health (Access to Terminations) Act 2013 (Tas), s 5.

<sup>&</sup>lt;sup>52</sup> Reproductive Health (Access to Terminations) Act 2013 (Tas), s 5(2).

ages. The next part of this article examines whether selective reduction of fetuses in multiple pregnancies is lawful in Australia. It considers first high-order multiple pregnancies, and then situations in which a twin pregnancy is reduced to a singleton pregnancy. The remainder of this article is focused on the jurisdictions of New South Wales, South Australia, Queensland, the Northern Territory and Western Australia where the law on abortion is more complex and uncertain. However, the law in Victoria and Tasmania is considered where selective reduction takes place after 24 and 16 weeks gestation respectively.

## **SELECTIVE REDUCTION OF MULTIPLE PREGNANCIES**

# High-order multiple pregnancies

Assisted reproductive technology treatment refers to treatments or procedures that involve the in vitro (outside of body) handling of human oocytes (eggs) and sperm or embryos for the purposes of establishing a pregnancy.<sup>56</sup> In the decades following the development of this technology in the 1970s, there was a "virtual epidemic" in the number of high-order multiple pregnancies.<sup>57</sup> Athanasiadis et al wrote in 2005 that assisted reproduction technology treatment was responsible for more than 95% of multiple pregnancies, and that more than 70% of all twins and 99% of higher-order multiples derive from infertility treatments.<sup>58</sup> According to Mogra et al, the use of assisted reproduction technology over the past 20 years has resulted in a six-fold increase in the prevalence of triplets, and a 12-fold increase in quadruplet pregnancies.<sup>59</sup> Evans reported in 2003 that the twin pregnancy rate increased from 1 in 90 births to 1 in 45, and that quintuplet pregnancies increased by over a 1000-fold.<sup>60</sup>

According to Hall, the increase in multiple pregnancies is directly attributable to two things: the transfer of multiple embryos into a woman's uterus; and the administration of drugs to induce superovulation.<sup>61</sup> Because implantation rates for individual embryos were initially low, historically multiple embryos were transferred and therefore there was a high risk of multiple pregnancy.<sup>62</sup> In the past, doctors and fertility clinics did not try to avoid creating multiple pregnancies because the industry was fiercely competitive and clinics with the highest pregnancy rates tended to attract the most patients.<sup>63</sup> The need for clinics to be able to advertise high pregnancy rates may have contributed to the high incidence of multiple pregnancies.<sup>64</sup> Pinchuk reports that some clinics have offered money-back guarantees, and this, in turn, has encouraged doctors to perform multiple inseminations as a way to increase the chance of pregnancy.<sup>65</sup> Selective reduction became a "safety net" for multiple pregnancies resulting from assisted reproduction technology treatment.<sup>66</sup> The procedure, usually

<sup>57</sup> Evans et al, "Selective Reduction", n 5. See also Millbank J, Karpin I and Stuhmcke A, "Towards Facilitative Regulation of Assisted Reproductive Treatment in Australia" (2013) 20 JLM 701.

<sup>58</sup> Athanasiadis et al, n 16.

<sup>59</sup> Mogra R, Moore D and Hyett JA, "Management Conundrums in Multiple Pregnancies with Selective Reduction, Intrauterine Fetal Death or Spontaneous Abortion" (2009) 20(3) *Fetal and Maternal Medicine Review* 247 at 249.

<sup>60</sup> Evans et al, "Selective Reduction", n 5.

<sup>61</sup> Hall, n 22.

<sup>62</sup> Practice Committee of the Society for Assisted Reproductive Technology and Practice Committee of the American Society for Reproductive Medicine (Practice Committees), "Elective Single-embryo Transfer" (2012) 97(4) *Fertility and Sterility* 835.

<sup>63</sup> Pinchuk, n 6 at 50.

<sup>64</sup> Practice Committee of the American Society for Reproductive Medicine, "Multiple Gestation Associated with Infertility Therapy: An American Society for Reproductive Medicine Practice Committee Opinion" (2012) 97(4) *Fertility and Sterility* 825 at 827.

<sup>65</sup> Pinchuk, n 6 at 51.

66 Cheang et al, n 19.

<sup>&</sup>lt;sup>56</sup> Macaldowie A, Wang YA, Chambers GM and Sullivan EA, *Assisted Reproductive Technology in Australia and New Zealand* 2010 (Australian Institute of Health and Welfare, 2012) p 2. One of these procedures is in vitro fertilisation, which usually involves controlled ovarian hyperstimulation, aspiration of ooctyes from ovarian follicles, fertilisation of the oocytes in a laboratory, culture of fertilised oocytes for two to six days, and then transfer of one or more embryos into the uterus in order for a pregnancy to occur.

performed in the first trimester, was pioneered in the 1980s<sup>67</sup> and, according to Evans et al, became "a well-established and integral part of infertility therapy" and a way of "addressing the sequelae of aggressive infertility management".<sup>68</sup> As Ogilvie points out, professionals involved in assisted reproduction technology treatment "bear a great deal of the responsibility" for multiple pregnancies.<sup>69</sup>

However, since the turn of the century, there has been a growing awareness of the risks and costs associated with multiple births, and as a result an increasing number of countries have developed protocols that require assisted reproduction technology clinics to replace multiple embryo transfer with a single embryo instead, particularly in younger patients.<sup>70</sup> Australia has been a world leader in this respect, and the number of multiple births resulting from assisted reproduction technology treatment has decreased as a result.<sup>71</sup> In 2006, Australia and New Zealand had single-embryo transfer rates of  $57\%^{72}$  and by 2010, a single embryo was transferred in 69.6% of cases involving assisted reproduction technology treatment, with two embryos in 29.5% and three or more embryos in less than 1% of cases.<sup>73</sup>

Although the adoption of single embryo transfer protocols has reduced the incidence of higher-order multi-fetal pregnancies,<sup>74</sup> the number of multiple pregnancies nonetheless increased between 2006 and 2010.<sup>75</sup> Ogilvie attributes this to two possible factors: a considerable rise in the number of pregnancies resulting from in vitro fertilisation, and a lack of monitoring of drugs used to stimulate ovulation.<sup>76</sup> In the United States in 2000, 21% of twin births and 40% of higher-order multiple births were as a result of ovarian stimulation, without embryo transfer.<sup>77</sup> According to the Practice Committee of the American Society for Reproductive Medicine, most high-order multiple pregnancies result from superovulation or ovulation induction rather than from embryo transfer or

<sup>71</sup> Chambers GM, Illingworth PJ and Sullivan EA, "Assisted Reproductive Technology: Public Funding and the Voluntary Shift to Single Embryo Transfer in Australia" (2011) 195(10) MJA 594. The Fertility Society of Australia's *Code of Practice for Assisted Reproductive Technology Units* recommends that no more than one embryo be transferred into a woman under 35 years in the first treatment cycle, and that no more than two embryos be transferred in any treatment cycle to a woman under the age of 40 years.

<sup>72</sup> Practice Committee, n 62.

<sup>73</sup> Macaldowie et al, n 56, p 51.

<sup>74</sup> See, for example, Reproductive Technology Accreditation Committee, *Code of Practice for Assisted Reproductive Technology Units* (2010) p 7, <u>http://www.rtc.org.au/docs/RTAC\_Code\_of\_practice\_2010.pdf</u>; National Health and Medical Research Council, *Ethical Guidelines on the Use of Assisted Reproductive Technology in Clinical Practice and Research* (2007) at [5.2], <u>http://www.nhmrc.gov.au/\_files\_nhmrc/publications/attachments/e78.pdf</u>. See also Millbank et al, n 57 at 705.

<sup>75</sup> Ogilvie, n 69 at 523.

<sup>76</sup> Ogilvie, n 69 at 523.

<sup>77</sup> Min JK et al, "Guidelines for the Number of Embryos to Transfer Following In Vitro Fertilization No 182 September 2006" (2008) 102(2) *International Journal of Gynecology and Obstetrics* 203 at 212.

<sup>&</sup>lt;sup>67</sup> Evans MI, Ciorica D, Britt DW and Fletcher JC, "Update on Selective Reduction" (2005) 25(9) Prenatal Diagnosis 807 at 809.

<sup>&</sup>lt;sup>68</sup> Evans et al, n 67 at 812.

<sup>&</sup>lt;sup>69</sup> Ogilvie CM, "Multiple Pregnancy, Fetal Reduction and Selective Termination" (2013) 26 Reprod BioMed Online 522 at 523.

<sup>&</sup>lt;sup>70</sup> Sullivan EA, Zegers-Hochschild F, Mansour R, Ishihara O, De Mouzon J, Nygren KG and Adamson GD, "International Committee for Monitoring Assisted Reproductive Technologies (ICMART) World Report: Assisted Reproductive Technology 2004" (2013) 28(5) *Human Reproduction* 1375. In the United States, for example, in 2000 three or more embryos were transferred in more than two-thirds of IVF cases but the proportion of cases involving three or more embryo transfers declined between 2000 and 2008 from 70% to 39%: see Practice Committees, n 62 at 835. A review by the American Society for Reproductive Medicine shows that the adoption of single-embryo transfer has resulted in a reduction in multiple pregnancies: see Ogilvie, n 69 at 523. The number of higher-order births in the United States declined between 1998 and 2008, but the twin birth rate continued to rise: see Practice Committee, n 64 at 827. According to the Practice Committees, n 62 at 835, there are high rates of single transfers in some European countries, including Sweden (69%), Finland (50%) and Belgium (48%). In the United Kingdom, the Human Fertilisation and Embryology Authority reported a drop in the percentage of fertility-treatment-related multiple pregnancies from 26.6% in 2008 to 18.4% in 2012: see Human Fertilisation and Embryology Authority, *Fertility Treatment in 2012: Trends and Figures* (released 27 March 2014) p 41.

natural conception.<sup>78</sup> Couples who do not have health insurance, or whose insurance does not cover in vitro fertilisation, may choose superovulation as a less costly alternative.<sup>79</sup> Min et al point out that the control of multiples from superovulation is not as simple as it is when using other forms of assisted reproduction technology.<sup>80</sup>

The increase in multiple births is also due in part to spontaneous conception in older mothers.<sup>81</sup> According to Pinborg, the average age of mothers has increased in recent decades, and that one-third of the twin birth rate in Sweden is related to increasing childbearing age.<sup>82</sup>

Therefore, although the number of high-order multiple pregnancies has diminished as various countries have moved towards single-embryo transplants, the use of superovulation techniques, and spontaneous conception in older women, still produces many multi-fetal pregnancies. Selective reduction continues to be used to reduce risks to the mother's health, to give the remaining fetuses a better chance of survival and for socioeconomic reasons.

There is no doubt that a high-order multiple pregnancy greatly increases the risk to the mother. These risks include hyperemesis, hypertension, cerebral haemorrhage, placental bleeding, polyhydramnios, pre-eclampsia and gestational diabetes.<sup>83</sup> Other complications include cholestasis, dermatoses, excess weight gain and anaemia.<sup>84</sup> All obstetric complications, including pre-term labour and delivery, are more common in multiple pregnancies.<sup>85</sup> In contrast, Dodd and Crowther report that mothers of reduced pregnancies were less likely to have antenatal complications.<sup>86</sup> Research has also shown that mothers who raise multiple children are substantially more fatigued and stressed than mothers who raise single babies, and there is an increased likelihood of depression, substance abuse and divorce.<sup>87</sup> There are also economic implications, because the cost of raising multiple children is higher than for the same number of singletons.<sup>88</sup>

In all Australian jurisdictions, selective reduction aimed at reducing the perceived risk to the mother would be lawful. Quite clearly, continuing a high-order multiple pregnancy would involve a greater risk to the mother's life or a greater risk of physical or mental harm than if it is terminated or selectively reduced.<sup>89</sup> It could also be argued that selective reduction is "necessary to preserve the woman from serious danger to her life or her physical or mental health".<sup>90</sup> However, in New South Wales and Queensland, for abortion to be lawful, the "serious danger" to the mother's mental or

<sup>81</sup> Pector EA, "Ethical Issues of High-order Multiple Births" (2005) 5(2) Newborn and Infant Nursing Reviews 69.

<sup>82</sup> Pinborg A, "IVF/ICSI Twin Pregnancies: Risks and Prevention" (2005) 11(6) Human Reproduction Update 575 at 576.

<sup>83</sup> Hall, n 22 at 305. According to Antsaklis and Anastasakis, n 15, the prevalence of pregnancy-induced hypertension in women with triplets is 20%. The incidence of anaemia is 11-35%. In women with quadruplets, the prevalence is 20-90%, and 25% respectively. Hyperemesis is a complication of pregnancy characterised by intractable nausea, vomiting and dehydration; hypertension is high blood pressure; polyhydramnios is excessive fluid in the uterus; and pre-eclampsia is characterised by high blood pressure and significant amounts of protein in the urine of a pregnant woman and swelling of the hands, feet and face. When a pregnancy is complicated by pre-eclampsia, the baby may grow more slowly than normal in the womb or suffer a potentially harmful oxygen deficiency.

<sup>84</sup> Practice Committee, n 64 at 826.

<sup>85</sup> Practice Committee, n 64 at 826; Lee K, "In Support of a Gender-neutral Framework for Resolving Selective Reduction Disputes" (2010) 44(1) *Family Law Quarterly* 135 at 138; Mogra et al, n 59.

<sup>86</sup> Dodd J and Crowther C, "Multifetal Pregnancy Reduction of Triplet and Higher-order Multiple Pregnancies to Twins" (2004) 81(5) *Fertility and Sterility* 1420 at 1421.

<sup>87</sup> Lee, n 85 at 137, citing Strong S, "Too Many Twins, Triples, Quadruplets, and So On: A Call for New Priorities" (2003) 31(2) *Journal of Law, Medicine and Ethics* 272.

<sup>88</sup> Lee, n 85 at 137.

<sup>89</sup> It would therefore be lawful on these grounds in the Northern Territory and South Australia.

<sup>90</sup> It would therefore be lawful on these grounds in Queensland and New South Wales.

<sup>&</sup>lt;sup>78</sup> Practice Committee, n 64 at 831.

<sup>&</sup>lt;sup>79</sup> Practice Committee, n 64 at 827.

<sup>&</sup>lt;sup>80</sup> Min et al, n 77 at 212.

physical health must be beyond the normal dangers of childbirth.<sup>91</sup> It is not clear whether the usual risks associated with high-order multiple pregnancies are simply the "normal" risks of pregnancy, or whether because such risks are higher in a high-order multiple pregnancy they are no longer normal. Despite this uncertainty, it seems that in all Australian jurisdictions, it is probable that selective reduction in a high-order multiple pregnancy would be lawful because continuing the pregnancy would involve a risk to the life, and/or physical or mental health of the woman.

Weighing up whether continuing a multi-fetal pregnancy would be more risky to the mother's life or health would require an assessment of the risks and effects of the selective reduction process. Research shows this is a stressful and emotionally painful experience for women, particularly those who have struggled to become pregnant.<sup>92</sup> In some cases, a multi-fetal pregnancy is the result of years of effort and considerable expense.<sup>93</sup> Like abortion in singleton pregnancies, the procedure also has moral, religious and ethical implications, and one study has found that up to one-third of couples with multiple pregnancies refuse selective reduction for these reasons.<sup>94</sup> On the other hand, the ethical dilemmas associated with selective reduction are mitigated by the fact that the aim of the procedure is to increase the chance of a successful pregnancy by reducing the health risk to the mother and by giving the remaining fetus/es a better chance of survival.<sup>95</sup>

Multiple pregnancies are more risky not only for the mother but for the fetuses as well. There is a high risk of premature birth and low birth weight, and this in turn is associated with infant death and morbidity.<sup>96</sup> The infant mortality rate is 10 per 1,000 live births for singletons, 53 per 1,000 for twins, and 140 per 1,000 for triplets.<sup>97</sup> Research shows that 15% of singleton pregnancies result in premature delivery, compared with 40% for twins, 75% for triplets and 99% for quadruplets.<sup>98</sup> Premature babies are at risk of health complications at birth, including breathing difficulties.<sup>99</sup> Multi-fetal pregnancy is also associated with prolonged admission to neonatal intensive care and chronic health problems such as respiratory distress, intracranial haemorrhage, and retinopathy of prematurity.<sup>100</sup> Other risks related to multiple pregnancies include polycythemia, hypoglycaemia, and necrotising enterocolitis.<sup>101</sup>

Children from multiple births are also at increased risk of long-term health problems, such as intellectual disability, learning and behavioural problems, vision and hearing loss.<sup>102</sup> They are more likely to have behavioural problems, and those born prematurely often have lower IQ scores in mid-childhood.<sup>103</sup> While the prevalence of cerebral palsy is 1.6 per 1,000 live births for singletons, it

<sup>97</sup> Perinatal mortality rates in Australia are 7, 25 and 63 per 1,000 births for single, twin and triplet pregnancies respectively: see Mogra et al, n 59. The rates are similar in the United Kingdom and the United States of America. (The perinatal period commences at 20 completed weeks (140 days) of gestation and ends 28 completed days after birth.)

<sup>100</sup> Mogra et al, n 59 at 249.

102 Lee, n 85 at 138.

<sup>&</sup>lt;sup>91</sup> R v Davidson [1969] VR 667 at 672; R v Wald (1971) 3 DCR (NSW) 25; R v Bayliss (1986) 9 Qld Lawyer Reps 8 at 45.

 $<sup>^{92}</sup>$  Lee, n 85 at 140, citing Strong, n 87 at 275.

<sup>&</sup>lt;sup>93</sup> Lee, n 85 at 142.

<sup>&</sup>lt;sup>94</sup> Lee, n 85 at 141, citing Strong, n 87 at 275. Lee notes that the moral and ethical dilemmas a couple may have are likely very similar to those faced by women considering abortion.

<sup>&</sup>lt;sup>95</sup> Papageorghiou AT, "Ethical Considerations in Embryo-reduction" (2006) 16(3) Current Obstetrics & Gynaecology 181 at 183.

<sup>&</sup>lt;sup>96</sup> Hall, n 22 at 305.

<sup>&</sup>lt;sup>98</sup> Strong, n 87 at 274.

<sup>&</sup>lt;sup>99</sup>Lee, n 85 at 138; Practice Committee, n 64 at 827.

<sup>&</sup>lt;sup>101</sup> Practice Committee, n 64 at 827. Polycythemia is a condition where there are too many red blood cells in blood circulation, which can lead to the newborn having difficulty breathing; hypoglycaemia is low blood sugar which can result in health problems; necrotising enterocolitis is characterised by tissue death of portions of the bowel.

<sup>&</sup>lt;sup>103</sup> Practice Committee, n 64 at 827.

is 7.3-9 per 1,000 for twins, 28-31 per 1,000 for triplets and 111 per 1,000 for quadruplets.<sup>104</sup> A Western Australian study showed that cerebral palsy rates were 4.6 times higher per live births for twins than singletons.<sup>105</sup>

Despite the fact that multiple pregnancies clearly increase the risks to both the health and survival of the fetuses, selective reduction on this ground alone would not be grounds for exculpating doctors who selectively reduce the number of fetuses in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory. Although selective reductions performed solely to improve the chances of survival of the remaining fetus/es would not be covered under Australian legislation, it is, of course, possible to argue that improving the chances of survival of the remaining fetuses and securing the birth of healthy infants is necessary to avoid a risk to the mother's mental health and wellbeing, particularly in cases where couples have sought assisted reproduction technology treatment. However, selective reduction does not completely "undo" some of the risks to the remaining fetus(es), and research shows that selective reduction does not necessarily result in a better outcome for them.<sup>106</sup> Pregnancy loss and prematurity rates are related to the starting number of fetuses,<sup>107</sup> and Evans suggests there may be a fundamental "imprinting" of the uterus early in pregnancy that is not completely undone by selective reduction.<sup>108</sup> Other writers also report a direct correlation between the starting number of fetuses and pregnancy loss rate and prematurity,<sup>109</sup> "showing there still is a real price to be paid for over-aggressive infertility therapies".<sup>110</sup>

The economic burden associated with raising multiples can be taken into account in New South Wales<sup>111</sup> and Western Australia,<sup>112</sup> although recourse to this reason is likely to be unnecessary given that it would be quite plausible to justify a selective reduction based solely on reducing the risk to the mother's health.

Women who have consented to ovulation stimulation or the implantation of more than one embryo during in vitro fertilisation treatment are aware of the risk of a multiple pregnancy, as are the doctors who undertake these procedures. In such circumstances it could be argued that, in going ahead with such treatments, women have agreed to the risk and doctors have created the risk and so neither should be able to rely on the "danger to the mother's health" as the basis for justifying selective reduction.

# Reduction of twin pregnancies to singleton pregnancies

Reduction of high-order multiple pregnancies to twins or singletons has become widely accepted and practised.<sup>113</sup> From a medical perspective, reduction to twins reduces obstetric risks to the woman and the fetuses she is carrying to an acceptable level but at the same time still allows selective feticide if

<sup>104</sup> Antsaklis and Anastasakis, n 15; Stone J, Belogolovkin V, Matho A, Berkowitz R, Moshier E and Eddleman K, "Evolving Trends in 2000 Cases of Multifetal Pregnancy Reduction: A Single-center Experience" (2007) 197(4) *American Journal of Obstetrics & Gynecology* e1.

<sup>105</sup> Evans et al, "Do Reduced Multiples Do Better", n 5.

<sup>106</sup> Data compiled in 2001 suggest quadruplets and triplets reduced to twins do as well as if they started out as twins: see Evans et al, "Do Reduced Multiples Do Better", n 5 at 604; Morris and Kilby, n 9. Cheang et al compared reduced and non-reduced twin pregnancies and reported in 2007 that premature births were greater in the reduced group (and that the rates of premature deliveries increased as the initial number of fetuses increased), and that the mean birth weight of reduced twins was significantly lower than the non-reduced group: Cheang et al, n 19 at 49-50.

<sup>107</sup> Evans et al, "Selective Reduction", n 5 at 106.

<sup>108</sup> Evans et al, "Selective Reduction", n 5 at 107.

<sup>109</sup> Athanasiadis et al, n 16 at 228.

<sup>110</sup> Evans et al, "Do Reduced Multiples Do Better", n 5 at 605.

<sup>111</sup> *R v Wald* (1971) 3 DCR (NSW) 25.

<sup>112</sup> Section 334(3) of the *Health Act 1911* (WA) indicates that an abortion is justified if the woman will suffer serious personal, family or social consequences if the abortion is not performed.

<sup>&</sup>lt;sup>113</sup> Hasson et al, n 4.

one fetus is later found to be abnormal.<sup>114</sup> However, the incidence of high-order multiple pregnancies has declined since the turn of the century, partly because of growing acceptance of single-embryo transfer protocols, and most reductions are now carried out on triplet and twin pregnancies.<sup>115</sup> The incidence of twin births has grown and is reported as being more than 250% of the natural incidence.<sup>116</sup> An increasing number of patients are choosing to reduce twin pregnancies to singletons.<sup>117</sup>

The possible reasons for reducing a twin pregnancy to a singleton pregnancy can be the same as for selective reduction in higher-order pregnancies, and include medical indications for the mother, to improve the outcome for the remaining fetus, to remove the risk posed by one twin to the other, and for social and economic reasons.

## Increased risk to the mother

Reduction from twins to a singleton was not widely practised in the past, but the growing awareness of the increased risks associated with a twin pregnancy, together with growing data on twin reduction, has resulted in some doctors changing their views in recent years<sup>118</sup> and many now offer "elective" reduction to a singleton pregnancy.<sup>119</sup> Evans et al suggest that the debate over whether fetal reduction should be offered routinely for twin pregnancies includes natural pregnancies where twins have up to now "been considered good enough".<sup>120</sup>

In some individual cases, specific maternal health problems prompt a decision to reduce a twin pregnancy. A 2001 report shows that one-third of cases where twin pregnancies are reduced to a singleton are performed because of medical indications such as maternal cardiac disease, a prior twin pregnancy with severe prematurity, or uterine abnormality.<sup>121</sup>

In other cases, an awareness of the potentially greater risks to the mother of a twin pregnancy is the reason for considering a reduction to a singleton pregnancy. According to Hasson et al, in twin pregnancies there is a two-fold increase in the risk to the mother of hypertension, pre-eclampsia, thromboembolism, urinary tract infections, anaemia, placental abruption, placenta previa, and death.<sup>122</sup> Twin pregnancies carry a greater health risk to the mother, including an increased rate of hypertensive disorders and postpartum haemorrhage.<sup>123</sup>

A reduction from twins to a singleton is lawful if performed before 14 weeks gestation in the Northern Territory or before 28 weeks gestation in South Australia in circumstances where the continuation of the pregnancy would involve a greater risk to the woman's life or greater risk of harm to her.<sup>124</sup> It is arguable that the continuation of *any* pregnancy involves a greater risk to a woman than

<sup>119</sup> Stone et al, n 104.

<sup>120</sup> Evans et al, "Do Reduced Multiples Do Better", n 5 at 609.

<sup>121</sup> Evans et al, "Do Reduced Multiples Do Better", n 5 at 607.

 $^{122}$  Hasson et al, n 4. Pre-eclampsia and hypertension are described at n 83. Thromboembolism is where a blood clot forms inside a vessel in the body; placental abruption is where the placenta has detached from the wall of the uterus, either partly or totally; and placenta previa is where the placenta has implanted at the bottom of the uterus, over the cervix.

<sup>123</sup> Min et al, n 77.

<sup>&</sup>lt;sup>114</sup> Cheang et al, n 19.

<sup>&</sup>lt;sup>115</sup>Legendre et al, n 6 at 550.

<sup>&</sup>lt;sup>116</sup> Hasson et al, n 4.

<sup>&</sup>lt;sup>117</sup> Stone et al, n 104 at e3. See also Mogra et al, n 59 at 250. In 2007, Stone et al reported a four-fold increase in the number of patients who chose to reduce twin pregnancies to a single fetus with about 40% of patients opting to deliver a single baby.

<sup>&</sup>lt;sup>118</sup> Hasson et al, n 4. A leading fetal reduction practitioner, Dr Mark Evans, in 2004 changed his position from opposing reduction of twins to singletons, to endorsing the procedure. See Padawer R, "The Two-Minus-One Pregnancy", *The New York Times* (10 August 2011), <u>http://www.nytimes.com/2011/08/14/magazine/the-two-minus-one-pregnancy.html?pagewanted =all& r=0</u>.

<sup>&</sup>lt;sup>124</sup> Criminal Law Consolidation Act 1935 (SA), s 82.

a termination does. Therefore, in the Northern Territory and South Australia, the law could be interpreted to permit abortion on demand, up to 14 weeks and 28 weeks respectively, in both singleton and multiple pregnancies.<sup>125</sup>

In Western Australia the circumstances permitting a reduction would appear to be narrower. In that State an abortion before 20 weeks gestation will be permissible if the woman's physical or mental health will be seriously endangered or she will suffer serious personal, family or social consequences if the abortion is not performed.<sup>126</sup> As noted previously, an abortion can be performed lawfully after 20 weeks if two doctors agree that the mother has a severe medical condition that justifies the procedure.<sup>127</sup>

Reductions may be defensible in Queensland and Western Australia where they are carried out for the preservation of the mother's life and the dangers to be averted go "beyond the normal dangers of pregnancy and childbirth".<sup>128</sup> Similar to multi-fetal pregnancies, on the one hand, a twin pregnancy is arguably not a "normal" pregnancy as it carries with it an increased risk to the mother's physical and/or mental health compared to a singleton pregnancy. Thus the dangers to be averted in reduction of twins to a singleton arguably always go beyond the normal dangers of pregnancy and childbirth. On the other hand, in the context of reducing twin pregnancies, it is arguable that modern medicine is now able to manage most of the risks associated with twin pregnancies and, despite the increased risk, "the overwhelming majority of women carrying twins will deliver two healthy babies".<sup>129</sup> One medical practitioner has said that there is no medical justification in a "normal twin pregnancy" to reduce to one.<sup>130</sup> Further, improved care in the antenatal period has improved results for both twin and triplet pregnancies and it could be argued that selective reduction is unjustifiable on the basis of any inherent general danger associated with twin pregnancies.<sup>131</sup> There does not appear to be any case law involving fetal reduction in these States and this issue is unresolved.

The procedure of reduction in twin pregnancies is not without risk, and can result in the loss of the entire pregnancy.<sup>132</sup> According to Legendre et al, there can be serious complications, such as bleeding, uterine rupture and placental retention and infection, but these are uncommon.<sup>133</sup> Further, the dead fetoplacental tissue in the uterine cavity restricts the size of the placenta available to other fetus/es and leads to a lower potential for growth and development.<sup>134</sup> Selective reduction is associated with short-term emotional problems.<sup>135</sup> but these dissipate over time.<sup>136</sup>

In jurisdictions such as Queensland, where the abortion must be reasonable having regard to the woman's state and all the circumstances, it may be difficult to justify selective reduction of a twin

<sup>129</sup> Dr Richard Berkowitz, perinatologist at Columbia University Medical Centre, quoted in Padawer, n 118.

<sup>130</sup> Dr Ronald Wapner, director of reproductive genetics at Columbia University Medical Centre, quoted in Padawer, n 118.

<sup>134</sup> Antsaklis and Anastasakis, n 15.

<sup>135</sup>Legendre et al, n 6 at 546.

 $<sup>^{125}</sup>$  Although if the reduction is performed after 14 weeks, it may be more difficult to justify in the Northern Territory because of the requirement for serious harm. The situation in the Northern Territory and South Australia can be contrasted to Queensland where Macguire J in *R v Bayliss* (1986) 9 Qld Lawyer Reps 8 at 45 specifically stated that there was no legal justification for abortion on demand.

<sup>&</sup>lt;sup>126</sup> Health Act 1911 (WA), s 334.

<sup>&</sup>lt;sup>127</sup> Health Act 1911 (WA), s 334.

<sup>&</sup>lt;sup>128</sup> R v Davidson [1969] VR 667 at 671 (Menhennit J); followed in R v Bayliss [1986] 9 Qld Lawyer Reps 8 at 30 (McGuire J).

<sup>&</sup>lt;sup>131</sup>Legendre et al, n 6 at 550.

<sup>&</sup>lt;sup>132</sup>Legendre et al, n 6 at 547.

<sup>&</sup>lt;sup>133</sup>Legendre et al, n 6 at 547.

<sup>&</sup>lt;sup>136</sup> Legendre et al, n 6 at 546. There has been significant debate about the relationship generally between abortion and depression, with studies reaching different conclusions: see, for example, Fergusson DM, Horwood LJ and Boden JM, "Reactions to Abortion and Subsequent Mental Health" (2009) 195(5) *British Journal of Psychiatry* 420; compare Coleman PK, "Abortion and Mental Health: Quantitative Synthesis and Analysis of Research Published 1995-2009" (2011) 199(3) *British Journal of Psychiatry* 180.

pregnancy on the basis of the general increase in risk. On the other hand, if a particular woman has a specific medical condition or prior history of problems associated with a twin pregnancy, the reasonableness requirement may be easier to prove.

## Improve the outcome for the remaining fetus

A twin pregnancy carries increased risks to both fetuses, as well as the mother, and some women choose to reduce to a singleton pregnancy to optimise the chance of delivering a single healthy infant.<sup>137</sup> Research shows that twin pregnancies carry a five-fold increase of delivery before 32 weeks,<sup>138</sup> a two-fold increase in risk of very low birth weight, a five-fold increase in risk of fetal death, a seven-fold increase in risk of neonatal death, and a four-fold increased risk of cerebral palsy compared with singleton pregnancies.<sup>139</sup> There is also a greater risk of in-utero death, and loss of the complete pregnancy.<sup>140</sup> Further, twins are more likely to be admitted to neonatal intensive care units, and to have higher rates of congenital malformations, childhood hospitalisations and surgeries than singletons.<sup>141</sup> Twins are also at greater risk of developing epilepsy and learning disabilities later in life.<sup>142</sup>

Research shows that the reduction of twins to a singleton improves the prognosis for the remaining fetus.<sup>143</sup> According to Antsaklis and Anastasakis, the "hot debate over the next years will be about the appropriateness of offering reduction in twin pregnancies, irrespective of the mode of conception, since good quality data suggest that reduction of twins to a singleton improves the outcome of the remaining fetus".<sup>144</sup>

Selective reduction on the basis that this would improve the prognosis for the remaining fetus would not be lawful in New South Wales, Western Australia, Queensland or the Northern Territory. In these jurisdictions it would need to be shown that continuation of the twin pregnancy poses a risk to the mother's mental or physical health. Recent Australian research suggests that sometimes doctors "manufacture" mental illness in women in order to justify performing abortions,<sup>145</sup> but establishing a risk of mental illness may be more difficult in cases where selective reduction from twins to singletons is contemplated. However, where a woman has been trying for many years to conceive a child, the fear of losing both fetuses as a result of the increased risks associated with a twin pregnancy could be shown to have such potentially devastating effects on her mental health that justify the reduction. It could also be argued in a particular case that a woman's mental health is so vulnerable that she might be able to cope with one child but not two.

## One twin poses a risk to the other

Selective termination of one fetus is also used in situations where one fetus threatens the survival of the other. An example of this situation is where there is a twin reversed arterial perfusion sequence, a rare complication of monozygotic twinning in which a twin without a heart, and often with other severe abnormalities (the recipient twin), survives because the other twin's heart pumps blood to it

<sup>&</sup>lt;sup>137</sup> Evans MI, Kaufman MI, Urban AJ, Britt DW and Fletcher JC, "Fetal Reduction from Twins to Singleton: A Reasonable Consideration?" (2004) 104(1) *Obstetrics and Gynaecology* 102.

<sup>&</sup>lt;sup>138</sup> Stone et al, n 104 at e3.

<sup>&</sup>lt;sup>139</sup> Topp M, Huusom LD, Langhoff-Ross J, Delhumeau C, Hutton J and Dolk H, "Multiple Birth and Cerebral Palsy in Europe: A Multicentre Study" (2004) 83(6) *Acta Obsterica et Gynecologia Dcandinavica* 548.

<sup>&</sup>lt;sup>140</sup> Stone et al, n 104.

<sup>&</sup>lt;sup>141</sup> Mastroiacovo P et al, "Congenital Malformations in Twins: An International Study" (1999) 83 American Journal of Medical Genetics 117.

<sup>&</sup>lt;sup>142</sup> Hasson et al, n 4.

<sup>&</sup>lt;sup>143</sup> Evans et al, n 137 at 108; Legendre et al, n 6 at 550.

<sup>&</sup>lt;sup>144</sup> Antsaklis and Anastasakis, n 15 at 17. The issue has already provoked public debate: see Padawer, n 118.

<sup>&</sup>lt;sup>145</sup> Douglas et al, n 1 at 576.

(the pump twin).<sup>146</sup> As the twins grow, the pump twin is at increased risk of cardiac failure.<sup>147</sup> One way of addressing this is to stop the blood flow to the recipient twin by radiofrequency ablation, a procedure usually performed between 17 and 24 weeks of pregnancy.<sup>148</sup> This procedure results in the death of the recipient twin.

Selective termination is also used in some cases of twin-to-twin transfusion syndrome, in which there is an imbalance in the blood flow between twins who share a placenta. As a result, the twins grow at different rates, with the donor twin smaller than the larger recipient twin.<sup>149</sup> Twin-to-twin transfusion syndrome is usually diagnosed at 20-21 weeks, but can also occur in late pregnancy. Selective termination is typically not used as first-line therapy, but only where laser treatment designed to seal off shared blood vessels (laser ablation) and stop the unhealthy blood transfer between the twins fails, where there are signs of brain damage in one twin,<sup>150</sup> or the prognosis for one twin is considered dismal.<sup>151</sup> Laser ablation is usually performed between 16 to 26 weeks of pregnancy.<sup>152</sup> If this is not successful, it can be followed by selective termination. The major health risk of these conditions is to one twin; the syndrome does not appear to pose any major risks to the mother's physical health. The abortion of the recipient fetus would be unlawful in Queensland and New South Wales if done for the sole purpose of ensuring a good outcome for the other fetus. Thus, in Queensland and New South Wales, to defend a selective abortion in this context at least part of the reason for reduction would need to be based on the mother's mental or physical health concerns. The situation is similar in Tasmania: after the fetus has reached 16 weeks gestation two doctors would need to find that the abortion was necessary to protect the woman's health in order to justify abortion. The difference in Tasmania is that a doctor carrying out the abortion post-16 weeks for alternative reasons would, at most, face professional sanctions rather than criminal sanctions.<sup>153</sup>

It may be possible to raise an argument in the Northern Territory and South Australia that the procedure is necessary because one fetus is "handicapped". However, this argument applies before 14 weeks in the Northern Territory<sup>154</sup> and given that the procedures considered above are both usually carried out after 17 weeks gestation, the provision is unhelpful. In South Australia, termination on this ground must take place before 28 weeks.<sup>155</sup> Furthermore, the wording of s 82(1)(iii) of the *Criminal Law Consolidation Act 1935* (SA) focuses on the risk of serious "handicap" *after* birth, and therefore this section would not cover selective termination in a situation involving a twin reversed arterial perfusion sequence or twin-to-twin transfusion syndrome. Likewise, abortion of a severely handicapped fetus may be lawful in Queensland, New South Wales or Tasmania if its birth could have a serious effect on the mother's mental health.<sup>156</sup> The wording of the Western Australian legislation is wide enough to cover selective termination of one fetus in such a situation. Section 344(7)(a) of the *Health Act 1911* (WA) permits an abortion after 20 weeks if two doctors agree that the unborn child has a severe medical condition that justifies the procedure. There is no specific requirement that this

<sup>146</sup> Norwitz ER et al, "Separation of Conjoined Twins with the Twin Reversed-Arterial-Perfusion Sequence After Prenatal Planning with Three-dimensional Modeling" (2000) 343(6) NEJM 399.

<sup>151</sup> Chalouhi et al, n 19 at 351.

<sup>152</sup> Chalouhi et al, n 19 at 354.

<sup>153</sup> Reproductive Health (Access to Terminations) Act 2013 (Tas), s 5. The Act received Royal Assent on 19 December 2013 but has not yet commenced.

<sup>154</sup> Medical Services Act 1982 (NT), s 11(1).

<sup>155</sup> Criminal Law Consolidation Act 1935 (SA), s 82(1).

<sup>156</sup> Veivers v Connolly [1995] 2 Qd R 326 at 329.

<sup>&</sup>lt;sup>147</sup> Chalouhi et al, n 19 at 354.

<sup>&</sup>lt;sup>148</sup> Children's Hospital of Wisconsin, *Twin Reversed Arterial Perfusion (TRAP) Sequence*, <u>http://www.chw.org/</u>display/PPF/DocID/48798/Nav/1/router.asp.

<sup>&</sup>lt;sup>149</sup> Children's Hospital of Wisconsin, *Twin-to-Twin Transfusion Syndrome*, <u>http://www.chw.org/display/PPF/DocID/</u> 48812/Nav/1/router.asp.

<sup>&</sup>lt;sup>150</sup> Huber A, Diehl W, Bregenzer T, Hackeloer BJ and Hecher K, "Stage-related Outcome in Twin-Twin Transfusion Syndrome Treated by Fetoscopic Laser Coagulation" (2006) 108(2) *Obstetrics & Gynecology* 333 at 336.

condition affect the mother's health. Similarly, in Victoria, abortions can be performed after 24 weeks if two doctors believe it is appropriate under the circumstances. The circumstances that can be considered include medical circumstances.<sup>157</sup> In the Australian Capital Territory the procedure would be lawful in this context.<sup>158</sup>

## One twin would have a serious abnormality or disability

In the last two decades, rapid and reliable diagnosis of birth defects of fetuses in utero has become common practice.<sup>159</sup> In the past, the only two options facing parents where one or more fetuses in a multiple pregnancy were found to be abnormal would be to continue with the pregnancy or terminate the entire pregnancy.<sup>160</sup> It is now possible in many cases for an abnormal fetus in a twin pregnancy to be selectively terminated. The procedure will be lawful in South Australia, provided it is performed before 28 weeks, and in Queensland and New South Wales, provided it can be shown that the birth of a seriously disabled child would have a serious effect on the mother's health.<sup>161</sup> In Western Australia, an abortion can be performed after 20 weeks if two doctors agree that the unborn child has a severe medical condition that justifies the procedure.<sup>162</sup> Tasmanian law used to permit abortion on the ground of fetal abnormality up to 14 weeks gestation but this was of limited use in practice because many prenatal tests cannot be done until after this gestational age. Recent amendments to Tasmanian law make no specific provision for termination on the grounds of fetal abnormality.<sup>163</sup>

There are two unresolved issues in those jurisdictions where an abortion can be performed on the grounds of fetal abnormality. The first relates to the nature of the abnormality or disability; the second to the gestational age of the fetus. In those jurisdictions which identify fetal abnormality as a reason for abortion, the level or type of fetal abnormality (or "handicap") is not defined.<sup>164</sup> De Crespigny and Savulescu report that abortions at 34 weeks have been performed on fetuses with possible dwarfism, Down syndrome and spina bifida.<sup>165</sup> Most doctors interviewed for de Costa et al's research said they would carry out an abortion even where the fetus's disability was compatible with life if a woman requested it.<sup>166</sup>

In general, there are no guidelines in Australian legislation for an upper limit of gestation for abortion.<sup>167</sup> In some cases, fetal abnormality can be detected in the first trimester. However, in many other cases abnormalities are only detected in the second trimester or later.<sup>168</sup> To complicate matters further, with the exception of Victoria, New South Wales, and Tasmania, a child destruction type of offence exists in all Australian jurisdictions and it is unclear how widely these offences can be interpreted.<sup>169</sup>

Selective reduction of a twin pregnancy on the grounds of fetal abnormality could be argued to be lawful on the grounds that the carrying and delivery of a disabled child will affect a woman's mental

<sup>167</sup> Douglas et al, n 1 at 566.

<sup>&</sup>lt;sup>157</sup> Abortion Law Reform Act 2008 (Vic), s 5.

<sup>&</sup>lt;sup>158</sup> Health Act 1993 (ACT), ss 81, 82.

<sup>&</sup>lt;sup>159</sup> Evans et al, n 20.

<sup>&</sup>lt;sup>160</sup> Stone and Berkowitz, n 23 at 369.

<sup>&</sup>lt;sup>161</sup> R v Wald (1971) 3 DCR (NSW) 25; R v Bayliss (1986) 9 Qld Lawyer Reps 8 at 45.

<sup>&</sup>lt;sup>162</sup> Health Act 1911 (WA), s 334(7)(a).

<sup>&</sup>lt;sup>163</sup> Reproductive Health (Access to Terminations) Act 2013 (Tas).

<sup>&</sup>lt;sup>164</sup> South Australia and the Northern Territory.

<sup>&</sup>lt;sup>165</sup> De Crespigny and Savulescu, n 1 at 202.

<sup>&</sup>lt;sup>166</sup> de Costa C, Douglas H and Black K, "Making It Legal: Abortion Providers' Knowledge and Use of Abortion Law in New South Wales and Queensland" (2013) ANZJOG 1.

<sup>&</sup>lt;sup>168</sup> de Crespigny L, Chervenak F, Coquel P, Ville Y and McCullough L, "Practicing Prenatal Diagnosis Within the Law" (2004) 24 (5) *Ultrasound in Obstetrics & Gynecology* 489.

<sup>&</sup>lt;sup>169</sup> See Rankin M, "The Offence of Child Destruction: Issues for Medical Abortion" (2013) 35(1) Syd LR 1.

health. However, late terminations on this ground may be more problematic because, as gestation increases, risks to the mother also increase, making the decision, and balancing exercise, more complicated.

## Social reasons

The number of older women seeking fetal reduction has increased in recent years.<sup>170</sup> According to Evans et al, "the vast majority" of requests for twin to single pregnancy reductions have come from women in their 40s and 50s who want a singleton pregnancy for social and economic rather than medical reasons.<sup>171</sup> Their reasons include the financial cost of raising twins, the fact that they already have other children, the "enormous disruption in families with multiples, and higher levels of social isolation, exhaustion and depression in mothers of twins".<sup>172</sup>

It may be easier in cases where older women seek selective reduction for social or economic reasons for doctors to find mental illness or a risk of mental illness so as to justify the procedure, either on the basis of the possible future stress, exhaustion and depression after the twins are born, or on the basis of worry and anxiety about this, during the pregnancy. For example, a woman interviewed in Padawer's study said she feared twins would "soak up everything she had to give, leaving nothing for her older children".<sup>173</sup> In Victoria even late termination for social reasons would be permissible as doctors can take a woman's future physical, psychological and social circumstances into account. In other jurisdictions it is less certain whether future health concerns can be taken into account or whether only present dangers to the woman's health are relevant.<sup>174</sup>

## Sex selection

In high-order pregnancy reductions, where there is no medical reason for selecting particular fetuses for reduction, some doctors consider patient requests for selection of fetuses of a particular sex.<sup>175</sup> Likewise, where a patient decides to reduce a twin pregnancy to a singleton, and both fetuses are normal but of different sexes, some United States doctors ask patients to choose which one to keep.<sup>176</sup>

Sex selection in multiple pregnancies, where patients want at least one live-born infant, can be performed in two ways. The first is by sex-selective sperm sorting<sup>177</sup> and this is beyond the scope of this article. The second is by selective reduction of embryos of a particular sex.

There are a number of reasons why parents might want a child of a particular sex, including a desire for "family balancing",<sup>178</sup> cultural and traditional practice,<sup>179</sup> or to avoid genetic disorders. The use of prenatal testing for sex selection has caused demographic imbalances in some countries, such India and China, and even in the places like the United States in Chinese, Asian, Indian and Korean communities.<sup>180</sup> Meseguer et al reported in 2002 that about 85% of clients at their Spanish fertility clinic would pay one-third more to have the chance of choosing the sex of their child.<sup>181</sup>

<sup>177</sup> Wilkinson S, "Sexism, Sex Selection and 'Family Balancing'" (2008) 16(3) Medical Law Review 369.

<sup>178</sup> The term relates to a situation where a couple has children of one sex and would like a child of the other sex to complement their existing family: see Wilkinson, n 177 at 371.

<sup>180</sup> Evans et al, n 20 at 2.

<sup>&</sup>lt;sup>170</sup> Evans et al, n 137 at 107.

<sup>&</sup>lt;sup>171</sup> Evans et al, "Do Reduced Multiples Do Better", n 5 at 607; Evans et al, n 137 at 108.

<sup>&</sup>lt;sup>172</sup> Padawer, n 118.

<sup>&</sup>lt;sup>173</sup> Padawer, n 118.

<sup>&</sup>lt;sup>174</sup> For example, see *R v Bayliss* (1986) 9 Qld Lawyer Reps 8 at 45.

<sup>&</sup>lt;sup>175</sup> Evans et al, n 20 at 2.

<sup>&</sup>lt;sup>176</sup> Padawer, n 118.

<sup>&</sup>lt;sup>179</sup> Health Insurance Amendment (Medicare Funding for Certain Types of Abortion) Bill 2013 (Cth), Explanatory Memorandum. The purpose of this Bill was to remove Medicare funding of abortions "procured on the basis of gender selection".

<sup>&</sup>lt;sup>181</sup> Meseguer M, Garrido N, Remohi J, Simon C and Pellicer A, "Gender Selection: Ethical, Scientific, Legal, and Practical Issues" (2002) 19(9) *Journal of Assisted Reproduction and Genetics* 443.

In Australia, ethical guidelines provide that sex selection, by whatever means, is not permissible except to reduce the risk of transmission of a serious genetic condition.<sup>182</sup> According to Meseguer et al, there are more than 300 known sex-linked diseases, most of which affect only males, such as, haemophilia and Duchenne's muscular dystrophy.<sup>183</sup>

There may well be cases where a woman is under severe social pressure to terminate a fetus because of its sex and it could be argued that the consequent danger to her mental health might be grounds for selective termination. Likewise, some cases of a sex-unbalanced family involve stress and psychological effects on the woman and it can be argued that sex selection is as necessary as other medical therapies.<sup>184</sup> In Australia, a couple was reported to have aborted healthy twin boys recently because they wanted a girl. They had three boys but a daughter died soon after birth.<sup>185</sup> The woman is reported to have said that she was consumed by grief, had become obsessed with having a daughter, and this was affecting her mental health.<sup>186</sup> It is possible that women who know the sex of the fetus/es they are carrying may proffer other reasons for wanting a termination.<sup>187</sup> Newiss suggests it would be difficult to draft effective laws to ban fetal sex selection.<sup>188</sup>

The National Health and Medical Research Council guidelines outlaw sex selection, by whatever means, unless it is to reduce the risk of a serious genetic condition.<sup>189</sup> Despite the use of the broad phrase "by whatever means", the Guidelines relate to assisted reproduction technology and are focused on pre-implantation genetic diagnosis. Pre-implantation genetic diagnosis is generally used to select the best embryo for implantation and focuses on identifying genetic concerns but could be used to identify sex. It could be argued therefore that the guidelines do not apply to selective reduction of fetuses already growing in the womb on sex selection grounds, that is, they apply only to the formation and use of embryos and not to the reduction of fetuses. Sex selection has begun to be debated in the Australian community.<sup>190</sup> There does not appear to be any legislation dealing specifically with selective reduction on sex selection grounds and the general law of abortion would apply.

## CONCLUSION

This article concludes that the law in the area of selective reduction or termination of fetuses in a multiple pregnancy is in need of reform. The first issue that needs to be addressed is to clarify whether selective reduction/termination is abortion for the purposes of the law.

The second issue is the need for legislators to recognise that some reductions are not performed prima facie to prevent danger to the mother's health. The different circumstances that give rise to selective reductions and terminations highlight the difficulties facing doctors who want to ensure such procedures are performed lawfully. In some cases, the only reason for the selective reduction of a fetus

<sup>&</sup>lt;sup>182</sup> National Health and Medical Research Council, n 74, p 53.

<sup>&</sup>lt;sup>183</sup> Hoyer LW, "Hemophilia A" (1994) 330(1) NEJM 38; Evans MI, Greb A, Kumkel LM, Sacks AJ, Johnson MP, Boehm C, Kazazian HH and Hoffman EP, "In Utero Fetal Muscle Biopsy for the Diagnosis of Duchenne Muscular Dystrophy" (1991) 165(3) *American Journal of Obstetrics and Gynecology* 728.

<sup>&</sup>lt;sup>184</sup> Meseguer et al, n 181 at 445.

<sup>&</sup>lt;sup>185</sup> Hadfield S, "Parents Want Right to Choose Their Child's Gender", *The Advertiser* (Adelaide) (8 January 2011), <u>http://www.adelaidenow.com.au/news/parents-want-right-to-choose-their-childs-gender/story-e6frea6u-1225983877669</u>.
<sup>186</sup> Hadfield, n 185.

<sup>&</sup>lt;sup>187</sup> Newiss H, "Regulating Post-implantation Fetal Sex Selection: A UK Perspective" (2006) 26 Prenatal Diagnosis 627 at 628.

<sup>&</sup>lt;sup>188</sup> Newiss, n 187 at 629.

<sup>&</sup>lt;sup>189</sup> The guidelines issued under the *National Health and Medical Research Council Act 1992* (Cth) are ethical guidelines and are not, in themselves, legally binding. However, they have legal effect, when agreements with Commonwealth bodies require compliance. The Fertility Society of Australia also endorses the National Health and Medical Research Council assisted reproductive technology guidelines as part of its accreditation process. The guidelines can also be given legal force by State or Commonwealth statute, which is the case for research involving the formation or use of human embryos. See National Health and Medical Research Council, n 74, p 15.

<sup>&</sup>lt;sup>190</sup> See, for example, "IVF: Sex Selection in Australia: Should It be Legal?", *Life Matters* (ABC Radio National, 28 November 2013), <u>http://www.abc.net.au/radionational/programs/lifematters/sex-selection-ivf/5119420</u>.

in a multiple pregnancy is to reduce the risk of danger to the mother's physical wellbeing, and quite clearly this is a lawful basis for terminating the fetus/es. As discussed earlier, there are particularly high risks for the woman's health associated with high-order multi-fetal pregnancies. Thus, in those jurisdictions where abortion is prima facie a crime, selective reduction of multi-fetal pregnancies will usually be justifiable on the grounds that the mother's health is endangered.

However, selective termination in twin pregnancies may be more difficult to justify on this basis. Medical technology has developed to the extent that the risks to the mother of a twin pregnancy can usually be managed well, so in many cases it may be difficult to argue that her physical health is in danger. As has been argued elsewhere, in many cases abortions will ultimately be justified on the basis of the danger posed to the woman's mental health, a situation that misrepresents the actual circumstances and may encourage dishonesty.<sup>191</sup>

In other cases selective reductions and terminations are performed to optimise outcomes for the remaining fetus/es but reductions and terminations performed for this reason alone would not be lawful in some jurisdictions. Doctors may therefore feel pressured to document symptomatology of mental illness or a risk of mental illness to guard against criminal law consequences. In such cases, doctors are required either to misrepresent the actual circumstances or to refuse to perform the procedure. The same applies where selective reductions and terminations are performed for purely social reasons.

The third issue that needs to be addressed is the considerable variation in the law from one jurisdiction to another. As with abortion generally, a number of implications arise from this inconsistency in the law. The first is that women may have to travel far from home to secure selective reduction or termination services in States where abortion has been decriminalised.<sup>192</sup> Such travel places stress on women and unfair burdens on particular States. The legal uncertainties identified in this article may also lead to delays and increased dangers to women and fetuses. Some doctors may avoid offering selective reduction or selective termination precisely because the law is unclear in their jurisdiction and they may fear criminal prosecution. This may have the effect of reducing the pool of doctors willing to offer requested services and may place pressure on a small group willing to carry out such procedures. Many women will want to reduce their multi-fetal pregnancy or selectively terminate a twin pregnancy for social reasons or because of risks to the fetus(es). As discussed earlier, these reasons only justify the procedure in some jurisdictions at some gestations.

In 1962 Barry observed that "it may well be that sociological considerations will yet result in a widening of the relevant section to include eugenic as well as therapeutic reasons as justifying the termination of pregnancies by medical practitioners".<sup>193</sup> Barry's comment is pertinent in the context of selective reduction and termination. Pregnant women are now routinely tested for a range of genetic and health disorders of the fetus(es) they are carrying and pregnancies are particularly closely monitored in multi-fetal and twin pregnancies. Abortion is regularly carried out by doctors in all Australian jurisdictions as a response to any number of concerns associated with the development of fetus(es) in these more complex pregnancies. The law in most Australian jurisdictions has not kept pace with community expectations and medical practice.

<sup>&</sup>lt;sup>191</sup> Douglas et al, n 1 at 574.

<sup>&</sup>lt;sup>192</sup> That is, to Victoria, the Australian Capital Territory or Tasmania.

<sup>&</sup>lt;sup>193</sup> Barry JB, "Law of Therapeutic Abortion", *Medico-Legal Society Proceedings* (Medico-Legal Society of Victoria, 1938) p 233, <u>http://mlsv.org.au/wp-content/uploads/2013/08/The-Law-of-Therapeutic-Abortion.pdf</u>, mainly discussing the criminal offences relating to abortion in Victoria in 1938; *Crimes Act 1928* (Vic), ss 62, 63 (now repealed).