The Ethical Course Is To Recommend Infant Male Circumcision — Arguments Disparaging American Academy of Pediatrics Affirmative Policy Do Not Withstand Scrutiny

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We critically evaluate an article published in the *Journal of Law, Medicine & Ethics* by Svoboda, Adler and Van Howe[1] challenging the validity of the American Academy of Pediatrics (AAP) 2012 affirmative policy statement on infant male circumcision (MC).[2] The serious errors in their arguments and claims deserve a detailed response. To assist readers, our critique will follow the section headings of their article.

I. The Facts

A. Normal Bodies and Customary Medical Practice

Our human forebears would have seen foreskin problems — phimosis, paraphimosis and balanitis — so could have adopted MC for prophylaxis. Over time MC might have been subsumed by cultural traditions. Today, 38% of the world's adult male population is circumcised.[3] Preventive medicine is a, "*norm of medical practice*," as recognized in AAP and CDC MC policies.

B. Origins: Barbarism and Medical Quackery

They cite opinion pieces and selectively refer to Victorian misunderstandings about MC, but not benefits recognized in the Victorian era, namely protection against sexually transmitted infections (STIs), penile cancer, phimosis, balanitis and inferior hygiene.[4] Their claim of "*medical quackery*," is an example of the genetic fallacy — a fallacy of irrelevance where a conclusion is suggested based solely on someone's or something's history, origin, or source rather than its current meaning or context.

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C. The Foreskin

A case is made, without evidence, for special properties and functions of the foreskin. The AAP and CDC statements explain that MC, especially in infancy, partly or completely protects against many STIs, urinary tract infections (UTIs), phimosis, paraphimosis, balanitis, smegma, candidiasis, penile cancer, prostate cancer, and cervical cancer.

Although the surface area of both the inner and outer layers of the foreskin averages, "*30–50 cm²*", the range in each study that has measured it was very wide: 7–100 cm² (n=965)[5] and 18–68 cm² (n=8).[6] Darwin noted, "*An organ, when rendered useless, may well be variable, for its variations cannot be checked by natural selection,*"[7] consistent with the foreskin being a vestigial structure.

MC does not remove, "*the vast majority of the penis's specialized erotogenic nerve endings.*" Erotogenic nerve endings reside in the glans, not the foreskin.[8] MC has no adverse effect on sexual function, sensitivity or sensation.[9] Sensitivity to vibration — the only stimulus known to correlate with sexual response — is similar in uncircumcised and circumcised men.[10]

D. The "Cons"

1. TRAUMA AND PAIN

Since MC without anesthesia is painful, the AAP and CDC advocate pain control by local anesthesia (general anesthesia being unnecessary and presents unnecessary risk).[11] Although pain response to vaccination 6 months after MC without anesthesia was greater than in those circumcised with local anesthetic cream and lowest in an uncircumcised group,[12] there was no long-term follow-up. By inference boys whose first post-partum encounter with pain is vaccine injection should also show a stronger pain response to subsequent MC. Contrary to Svoboda *et al.* no adverse psychological aftermath of MC has been demonstrated.[13] Longitudinal studies of boys from birth to age 26 in the UK,[14] to age 13 in New Zealand[15] and Sweden[16] found no difference in developmental, medical, psychological, intellectual and behavioral indices between circumcised and uncircumcised males. Claimed long-term psychological, emotional, and sexual impediments from infant MC are anecdotal[17] and can be discounted. Painful experiences are common before, during and after birth.[18] Cortisol, heart rate and respiration increase during and shortly after MC.[19] Taddio *et al.* recommend local anesthesia for MC[20] and vaccination.[21]

After citing irrelevant references Svoboda *et al.* refer to a Danish study claiming, "*circumcision pain*," causes autism spectrum disorder (ASD).[22] That study has been criticized.[23] It reported ASD in 6.3% of circumcised boys, but another study reported ASD in 7.2% of *uncircumcised* Danish boys, leading to a suggestion of confounding in Frisch and Simonsen's study.[24] Another ASD study cited by Svoboda *et al.* was actually a study of possible adverse effect of acetaminophen (paracetemol) (used for post-MC pain relief) on neural development and thus ASD.[25] Importantly, Frisch and Simonsen noted ASD in boys aged 0–4, but not in boys aged 5–9 (born before 1999 when guidelines to use analgesic medication post-MC were introduced).[26]

In the first week post-partum, neonatal/infant pain score (NIPS, range 0–7) during MC is close to zero using local anesthesia, but later gradually increases to 2.2–4.7.[27] The authors, "*assumed that a newborn who is asleep or indifferent during a potentially painful experience such as circumcision is unlikely to be experiencing pain (i.e. NIPS <2)*" and that "*all newborns cry with minimal stimulation such as nappy change, hunger, change of clothing ... and this can be as high as 3 on the NIPS scale.*"[28] NIPS for other painful procedures such as heel prick and central venous access scored 3.0 and 3.4, respectively, in randomized trials despite analgesia.[29] Infant MC should be done before the onset of mini-puberty of infancy, which starts at 4 weeks and ends at 3 months,[30] since, "*During this time the foreskin gradually becomes larger, thicker and has much better blood supply which increases the risk of bleeding* [and pain] *during circumcision.*"[31] Clearly, the first week, using local anesthesia, seems the optimum time for infant MC. MC can be pain-free when local anesthetic cream is applied 2 hours prior.[32]

Telephone surveys found parents' perception of level of discomfort from infant MC was mild in 84%, moderate in 11% and severe in 5% in one,[33] and, "*no pain (29%)*," "*minimal pain (15%)*," or "*acceptable pain (53%)*," with only a minority reporting pain that was, "*more than acceptable (1.5%)*," or, "*much more pain (0.9%)*," in another.[34]

In men, large randomized controlled trials (RCTs) found severe pain in only 0.8%,[35] 0.3%,[36] and 0.2%[37] of subjects.

2. RISKS

Severe complications are extremely rare for medical circumcisions performed by well-trained operators. As for any medical intervention negligence can lead to litigation and compensation, being the *raison d'etre* of Svoboda and Adler's anti- MC organization, "*Attorneys for the Rights of the Child.*" A Danish study in which, "*5.1% had significant complications.*"[38] involved "*ritual circumcisions,*" the complications were not particularly serious overall, and were related to inferior technique.

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Their 20% prevalence of meatal stenosis 5–10 years after newborn MC[39] was for 27 boys presenting with other problems at a pediatric clinic in Iran. In all cases the meatal stenosis was asymptomatic. There was no control (uncircumcised) group. Svoboda *et al.* did not refer to a study of meatal stenosis by Van Howe[40] that contained serious methodological flaws.[41] In circumcised boys the meatal opening is visible, but is often invisible in uncircumcised boys. Svoboda *et al.* fail to cite a high-quality CDC study of adverse events from 1.4 million circumcisions in the US in which meatal stricture (that includes meatal stenosis) was 0.01% in circumcised and uncircumcised boys 180 days postpartum.[42] They also fail to cite a U.K. study that found meatal stricture in 7/66,519 (0.01%) boys,[43] or large Iranian studies that reported prevalence to be 0.55%[44] and 0.9%.[45]

The claim by Svoboda *et al.* that, "*Complications may be greater with circumcisions done neonatally*" is contradicted by the CDC study, which found adverse events in 0.4% of newborn boys, 9% of boys aged 1–9 and 5% of those aged over 10 years.[46] In the U.K. study of boys circumcised at age 0–15 years (only 1.4% during infancy) adverse event frequency was 1.2%.[47]

Although the CDC found total adverse events were 2–4 times higher in circumcised than uncircumcised males, incidence of infections, surgical procedures, pneumothorax, penile disorders and gangrene were higher in uncircumcised males.[48]

To support their claims of harm they selectively cite opinion pieces, non-peer-reviewed web documents, book chapters by MC opponents, a conference abstract never published in full, and small, weak studies, some of which have been criticized and rated as low quality in systematic reviews.

Svoboda *et al.* state, "*7.4% of all visits to pediatric urologists at Massachusetts General Hospital over a 5-year period were attributed to circumcision.*"[49] But overall prevalence of MC-related visits to this hospital was 4.7%. The figures cannot be used to conclude complications from newborn MC are common because (i) this is a referral hospital, so includes cases in which MC was performed elsewhere and (ii) reflects the fact that newborn MC is a very common pediatric procedure in U.S. males.

Svoboda *et al.* cite magazine articles, websites and other weak, as well as outdated, sources. Their claim of, "*more than 100 deaths per year in the United States alone* [from infant male MC]"[50] is based on the false[51] assumption that the well-known sex difference in infant mortality is entirely a consequence of infant MC. Deaths from medical MC are exceedingly rare.[52]

Contrary to the claim by Svoboda *et al.*, the CDC study *did* document, "*how often circumcision results in serious injury.*" It showed that the adverse event rate in *uncircumcised* newborns was 5 times higher for, "*surgical procedures*," 1.7 times higher for "*disorders,*" 2.8 times higher for "*pneumothorax*," 1.3 times higher for "*infections*" and 3-times higher for "*gangrene, death, and decay of body tissue.*"[53] The higher risk of adverse events at older ages, highlighted newborn MC as a safer time for MC.

The CDC's finding of 0.4% for infant MC adverse events supports the AAP's assertion, based on older data, that adverse event rates are less than 0.5%. Accusations against the AAP that, "*its main conclusion was based not on science but rather on a feeling*" cannot be sustained. Svoboda *et al.*'s comments on complications and, "*risk/benefit structure*" are repudiated later.

3. HARM

To support their claims of harm they selectively cite opinion pieces, non-peer-reviewed web documents, book chapters by MC opponents, a conference abstract never published in full, and small, weak studies, some of which have been criticized and rated as low quality in systematic reviews. As discussed below, high quality systematic reviews, large well-designed RCTs, meta-analyses and large case studies reach diametrically opposite conclusions from those offered by Svoboda *et al.*

a. Physical Harm. They claim that, "*Medical associations outside the United States agree that circumcision harms all boys and men,*" citing the Royal Australasian College of Physicians (RACP)'s 2010 policy.[54] The RACP and the other bodies they refer to do not, however, have evidence-based policies.[55] Svoboda *et al.* then sidetrack to discuss a failed attempt by the AAP to ameliorate the danger posed by female genital cutting/mutilation (FGM). Yet, harms from MC are infrequent and uncommon.

b. Sexual Harm to Men. They appeal to "*common sense,*" while ignoring the scientific evidence (discussed above) contradicting their contention that, "*circum-*

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cision impair[s] *men's sex lives*." Danish research[56] undermines the claims by Frisch with mostly Danish and northern "*European physicians*" who criticized the AAP's policy.[57] Their claims in a 1994 article about functions of the foreskin during sexual intercourse[58] are highly speculative. They cite a conference abstract from Greece, a country with a strong bias against MC, which found 35% of 123 men circumcised for medical indications reported a worse sex life after MC compared with 16% who reported an improvement.[59] There was no control group. They do not reveal that 54% of those men reported their female partner's "*sexual life*" improved or did not differ after their circumcision. Flaws undermine that study.

Svoboda *et al.* quote from a 2011 study by Frisch *et al.*,[60] which was rated as low quality (grade C) by Danish researchers,[61] and as SIGN[62] level 2– in a systematic review[63] because: (i) correction for multiple statistical testing would have negated the finding, (ii) only half of those invited accepted, (iii) 85% of the circumcised men underwent MC later in life, most likely for a medical reason (which may be independently associated with sexual dysfunction and psychologically-based behavioral aversion to penetrative sex, as found in an Australian study),[64] (iv) in Denmark medical circumcisions, mostly for phimosis, tend to involve a dorsal slit, rather than foreskin removal, and (v) one might expect that individuals having a strong opinion would be more likely to participate, representing a potential bias.[65] The AAP also criticized the Danish study.[66]

To clarify other studies, in the Portugese telephone survey of 109 men, 3 months to 1 year after MC, the authors suggested the sexual dysfunctions seen in their small survey, were related to diabetes, older age and/or psychological factors. Phimosis was present in 89% of men in the study, 50% of whom experienced pain during intercourse *prior to* MC, falling to 6.5% *after* MC.[67] The Belgian survey reporting lower sexual sensation in circumcised men[68] was rated as low quality (2–) in a systematic review[69] because (i) it reported the percentage of uncircumcised, but *not circumcised*, men who rated sexual pleasure and orgasm intensity as "*mild*" to "*very strong*"; (ii) the statistical analyses did not correct for multiple testing, (iii) it was doubtful that statistically significant differences of 1–11% for all but one item (37%) identified in uncorrected statistical tests would be *biologically* meaningful, (iv) it seemed unlikely that a man could accurately know whether orgasm intensity was greater for stimulating, say, the lateral shaft of his penis by itself, (v) the n values for each of the 42 measurements made in each group were not stated, (vi) while some differences of 1% or 2% (favoring the uncircumcised) were highly significant, a difference of 39% showing higher, "*unusual sensations intensity*" of the lateral penile shaft of *uncircumcised* men was not significant.[70] The questionnaire used included questions on the foreskin, but unlike co-author Schober's 2009 study,[71] Bronselaer *et al.* did not present foreskin data or whether the latter differed from other sites on the penis in uncircumcised men. The proportion of men who were circumcised (23%) and the proportion who were homosexual (12.1%) was much higher than prevalences in Europe generally, consistent with bias in the self-selected convenience sample surveyed.[72] In Europe circumcision for non-religious reasons is usually for treatment of a medical problem, such as balanitis, lichen sclerosis or phimosis, conditions that can have long-lasting adverse effects on sexual function. MC for a medical reason could explain the findings.[74]

They refer to criticisms by Frisch of questionnaires used in the large RCTs that found no adverse effect of MC on sexual function, sensitivity and satisfaction. But Frisch provided little detail about his concerns. He directed an inappropriate, emotive personal attack on a critic and seemed unaware of the right of others to criticize his research. An RCT reported difficulty with penetration 6 months after MC in 1.4% of circumcised men vs. 0.6% in uncircumcised men, and pain on intercourse (dyspareunia) was 0.6% vs. 1.2%, respectively, but at 24 months there was no significant difference.[75] A meta-analysis of 6 dyspareunia studies[76] concluded MC made no difference (OR=1.05).[77]

c. Sexual Harm to Women. Frisch *et al.* reported, "*sexual function difficulties overall*" for 31% vs. 22% of women during sexual intercourse with a circumcised vs. uncircumcised spouse, respectively.[78] This included 8 of 68 (12%) reporting frequent dyspareunia with a circumcised spouse compared with 56 of 1683 (3%) with an uncircumcised spouse and 13 (19%) vs. 246 (14%) who reported frequent "*orgasm difficulties*" with each. There was no difference in "*lubrication insufficiency*" (14% vs. 12%). Frisch nevertheless acknowledged that, "*Thorough examination of these matters in areas where* [MC] *is more common is warranted.*" Frisch also acknowledged that dyspareunia could be psychological, as is likely in Denmark where 95% of the men are uncircumcised and women are unused to a circumcised penis.[79] Prevalence risk ratio should have been used to express associations rather than odds ratio (OR).[80] For example, "frequent sexual function difficulties" in women with circumcised partners (31%) compared with uncircumcised partners (22%), yields a prevalence risk ratio of 1.41, but an OR of 3.26.

Other studies Svoboda *et al.* cite are small and have been shown to contain serious flaws in data interpretation.[81] Claims that the foreskin confers a "*gliding*"

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action and, "*reduces friction and vaginal dryness in women*" are speculative and contradicted by RCT data that found the wives of men circumcised in the trial reported either no change (57%) or improved (40%) sexual satisfaction after their male partner's circumcision.[82] One reason was improved genital hygiene. The trial authors concluded that MC has no deleterious effect on female sexual satisfaction and might have social benefits in addition to health benefits. The claims by Svoboda *et al.* are also at odds with a Mexican survey of women before and two months after their male partner's MC.[83] That study found no difference in sexual satisfaction, pain during vaginal penetration, desire and vaginal orgasm. Most women prefer their male partner to be circumcised.[84] Reasons included: esthetics, better hygiene, reduced risk of infection, easier and less traumatic vaginal (or anal) penetration during intercourse, and greater overall sexual pleasure.[85]

d. Psychological Harm. Instead of evidence, Svoboda *et al.* cite several opinion pieces claiming MC might cause psychological harm. These include an article criticizing the AAP over its infant MC policy statement, an article by MC opponent, Goldman, in a 1999 issue of *BJU International* which invited articles opposing MC, a book by Goldman, a 1999 opinion piece in an obscure journal claiming neonatal MC causes post-traumatic stress disorder, and claims in a book, a book chapter and in another article in the one-sided *BJU International* issue of 1999 about, "*unhappiness at having been circumcised*."

There is a, *"disparity between the mythology and medical reality of circumcision regarding male sexuality."*[86] A psychopathology term that fits the sexual obsession with the foreskin is termed "*partialism*," defined as, "*exclusive focus on part of the body*".[87] It is a form of paraphilia in the sexual and gender identity disorders section of the American Psychiatric Association's DSM-5.[88] Diagnosis is merited if, "*the behavior, sexual urges, or fantasies cause clinically significant distress or impairment in social, occupational, or other important areas of functioning*." A detailed professional analysis of psychiatric aspects in 8 patients seeking prepuce restoration noted several psychological disorders.[89] These included narcissistic and exhibitionistic body image, depression, major defects in early mothering and ego pathology. Such men have a preoccupation with their absent foreskin and represented a subgroup within the community of men who have sex with men.[90]

Thus, strong scientific data show that MC has no adverse effect on sexual function, sensitivity or pleasure. Unsubstantiated claims that MC may impair sexual function or pleasure can produce adverse psychological outcomes and physical harm in believers.

E. The "Pros"

1. URINARY TRACT INFECTIONS

Contradicting Svoboda *et al.*, UTIs are common in infancy.[91] UTIs present with severe pain and fever and can cause significant morbidity.[92] Renal injury and scarring can result, especially in infancy when the kidney is still growing.[93] UTIs are not, as Svoboda *et al.* claim, "*limited to the first six months of life*." By the age of 7 years, 2% of boys have definitely had a UTI and another 5% have probably had at least one.[94] A recent meta-analysis found that, over the lifetime, 32.1% of uncircumcised males experience a UTI compared with 8.8% of circumcised males.[95] It found relative risk of UTI in uncircumcised males was 9.91 for age 0–1 year, 6.56 for age 1–16 years and 3.41 for 16 years and over. Thus, given that risk of complications from infant MC is 1 in 250,[96] risk of UTI in an uncircumcised boy vastly exceeds risk of adverse events, refuting the 1992 claim by Chessare[97] and "*European experts*,[98]" used by Svoboda *et al.* to support their argument.

Svoboda *et al.* misrepresent a Cochrane analysis that confined their inclusion criteria to just RCTs,[99] while ignoring the more than 20 case-control, cohort and retrospective studies, some involving tens of thousands of boys. The Cochrane authors missed a published RCT that showed MC reduced UTI 7-fold in boys aged 3 months to 10 years.[100] Given the overwhelming evidence of strong protection against UTI, today it would be deemed unethical to perform a RCT of MC and UTI.

Svoboda *et al.* state that UTIs, "*can be easily and effectively treated with antibiotics*." In reality, "*a baby with UTI presents with fever, often leading to blood draws, a spinal tap, and, when UTI is diagnosed, hospitalization and intravenous antibiotics*."[101] There has been an alarming increase in bacterial resistance to commonly used antibiotics for treatment of UTI in children.[102] Swabs taken from under the foreskin of boys aged 7 days to 11 years identified 50 bacterial isolates, most of which were multi-drug- resistant strains.[103] Methicillin-resistant *Stapylococus aureus* is increasing in prevalence in children in the U.S. by 10% per year, being higher in infants aged less than 90 days (44 per 100,000) compared with older infants (11 per 100,000) and children (1–3 per 100,000).[104] Patients of all ages with uncomplicated UTIs will increasingly require treatment with intravenous rather than oral antibiotics.[105] Concerns have been raised about the future availability of effective antibiotics to treat UTI.[106] Maternal antibiotic use during pregnancy

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increases the risk of resistant pathogens causing neonatal UTI.[107]

Svoboda *et al.* cite, "*evidence from Israel ... that UTIs may be caused by circumcision*." In one study UTI prevalence was 6.7/1000 after neonatal MC.[108] The authors stated that the higher prevalence than U.S. figures of 1–2/1000 was contributed by the 2.8-times higher UTI prevalence after MC performed by a religious authority rather than by a physician. The explanation was, "*urinary retention caused by gauze pressure*" from "*the haemostasis technique and duration of shaft wrapping*" adopted in the religious MC. The other study involved only boys (circumcised on day 8) presenting with fever,[109] so did not document UTI prevalence in Israeli boys overall. Neither study included a control group of uncircumcised boys. Traditional orthodox Jewish circumcision does not involve sterile technique, thus contradicting the AAP's recommendations for infant MC.

2. PENILE CANCER

This devastating cancer is not "*rare*", but is uncommon. The AAP quoted a figure of 1 in 909 from a study of *lifetime* risk of penile cancer for an uncircumcised man.[110] This is 13 times higher than the lifetime risk of being, "*struck by lightning*" of 1 in 12,000,[111] thus contradicting Svoboda *et al*. They fail to appreciate that the 1 in 322,000 figure from another (weaker) study referred to by the AAP was an upper estimate of the number of newborn MCs required to prevent one case of penile cancer *per year*. Although penile cancer is extremely rare in boys, MC performed during the neonatal period, but not later in life, confers a high degree of protection against invasive squamous cell carcinoma of the penis in older men.[112] This may in part be because MC reduces risk of oncogenic types of HPV that may be acquired once a male begins sexual activity.

A meta-analysis of 14 studies up until 2007 (5 in the USA, 2 in Mexico, 2 in Australia, and one each in South Korea, Denmark, England, Kenya and a multinational study involving Brazil, Spain, Thailand and The Philippines), involving 5,880 circumcised and 4,257 uncircumcised men, found being uncircumcised was associated with increased penile HPV (OR 2.9).[113] Meta-analyses found the biggest risk factor for penile cancer is phimosis (OR=12.1), followed by balanitis (OR=3.82) and smegma (OR=3.04).[114] Each of these conditions is common in uncircumcised, but not circumcised, men.

There is no scientific evidence that improved penile hygiene can reduce the risk of penile cancer in an uncircumcised man.[115] A case-control study in California found no correlation between penile cancer and frequency of bathing or method of cleaning the anogenital area before or after sexual intercourse.[116] Etiological routes to penile cancer include sexual transmission of oncogenic HPV in younger men and causes unrelated to HPV in older men (reviewed in Micali *et al.*[117]). In each case, lack of MC represents an important pre-condition and major risk factor.

Svoboda *et al.*'s use of inter-country comparisons is misleading, as the similar incidence of penile cancer in the U.S., where MC prevalence is high, and Denmark, where MC prevalence is low, is because in the U.S. penile cancer varies 30-fold among ethnic groups, being highest in those in which MC is uncommon, and whose risk factors for penile cancer may be higher than in Denmark.[118] In Israel, where MC is virtually universal, penile cancer is 10-fold lower than in Denmark and Germany.[119]

They fail to mention prostate cancer, for which MC prior to sexual debut reduces prevalence by 15–50%.[120] The significant protective effect was confirmed in a recent meta-analysis.[121] In countries globally in which MC prevalence is greater than 80%, prostate cancer-related mortality, corrected for potential confounding factors, is half that of other countries.[122]

3. CERVICAL CANCER

Svoboda *et al.* cite a chapter in a book by MC opponents to falsely claim that, of 16 studies, only one reported a statistically significant association of MC with reduction in cervical cancer. They do not cite a well-performed ecological analysis of data from 118 developing countries that revealed a cervical cancer incidence of 35 per 100,000 women per year in 51 countries with a low (<20%) MC prevalence, compared with 20 per 100,000 in 52 countries with a high (>80%) MC prevalence ($P<0.001$).[123] A large, well-designed study of mostly developed countries found that the single risk factor of lack of MC increased cervical cancer risk by 5.6-fold.[124] OR for the association between MC and cervical cancer in monogamous women whose male partner was high-risk (6 or more previous sexual partners and commencement of sexual activity prior to age 17) was 0.18. If their male partner had an intermediate sexual behavior risk index OR was 0.50. Penile HPV infection was associated with a 4-fold increase in risk of cervical HPV infection, and cervical HPV infection was associated with a 77-fold increase in the risk of cervical cancer. RCT data indicated 28% lower oncogenic HPV rates in female partners of circumcised men.[125] In the U.S., for 2008–2012 HPV caused 19,200 new cancers in females and 11,600 in men.[126]

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4. OUT OF AFRICA

In their HIV subsection Svoboda *et al.* repeat arguments by MC opponents, while ignoring the strong evidence that MC reduces risk of HIV infection from heterosexual intercourse. Fallacies in their reasoning have been explained in detail previously.[127] Public health authorities accept and promote MC as one of the most effective ways to protect men against HIV acquisition during heterosexual intercourse with an infected woman in both developing countries and the U.S.[128]

II. Is Non-Therapeutic Circumcision Ethical?

A physician fully informed of the benefits of infant MC and low risks when performed by an experienced medical professional is just as likely to discourage MC as he or she would advise against childhood vaccination.

A. The Cardinal Ethical Rules

1. AUTONOMY

Here Svoboda *et al.* cite a web-based Tasmanian Law Reform Institute (TLRI) report, written by a graduate student with guidance from a U.K. lawyer opposed to infant MC, Paul Mason, who moved to Tasmania as Commissioner for Children. Svoboda *et al.* ignore a detailed critique of the TLRI report by a lawyer, ethicist and medical experts.[129]

The AAP's Committee on Bioethics recognizes that parents, not the child, take responsibility for vaccinating their children. Similarly, the AAP's infant MC policy recognizes that benefits of MC substantially exceed risks and that MC benefits accrue from an early age. Based on these observations and an understanding that parents make decisions based on the best interests of their child, the AAP policy recommends that parents should be informed and provided with an opportunity to consent to MC.

2. NON-MALEFICENCE ("DO NO HARM")

Svoboda *et al.* cite a statement by pediatric bioethicist, Douglas Diekema, but his statement was not about MC. As a member of the AAP Task Force, Diekema clearly supports infant MC. He was, moreover, an author of an article criticizing Adler's attempt to discredit the legal, ethical and scientific aspects of the CDC's MC policy.[130]

Svoboda *et al.* misconstrue the Hippocratic Oath, which states, "*I will prevent disease whenever I can, for prevention is preferable to cure.*"[131] Disease prevention is central to affirmative infant MC policy recommendations. Given the immediate and lifelong protections and very low risk of adverse events, failure to recommend infant MC or to suggest that MC should be delayed would seem unethical as it would expose the boy to substantial harms. Since MC later in life is no longer a simple surgical procedure, is higher risk, is more expensive, and presents psychological and organizational barriers, means exposing the boy to adverse medical conditions earlier in his life,[132] failure to circumcise might be considered unethical.

The AAP's Committee on Bioethics recognizes that parents, not the child, take responsibility for vaccinating their children. Similarly, the AAP's infant MC policy recognizes that benefits of MC substantially exceed risks and that MC benefits accrue from an early age. Based on these observations and an understanding that parents make decisions based on the best interests of their child, the AAP policy recommends that parents should be informed and provided with an opportunity to consent to MC.

Thus, because the benefits of infant MC greatly exceed the risks of adverse events, infant MC does not violate the principle of non-maleficence. The physician is putting the best interests of the child first by ensuring routine, accurate, unbiased education of parents while facilitating access to infant MC by a competent experienced operator for parents who request it.

3. BENEFICENCE ("DO GOOD")

Here Svoboda *et al.* again quote Diekema. But since Diekema (as others, especially members of the AAP Task Force) regard the benefits of infant MC to exceed harms from the procedure, the argument by Svoboda *et al.* falls flat. In the current era of preventive medicine an intervention such as MC, just as vaccination, should be applied as early as possible. MC in the newborn period using local anesthesia is safer, simpler, cheaper, quicker, more convenient and involves faster

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healing time than MC later in childhood, in adolescence or in adulthood, and the benefits accrue immediately.[133] MC has at least as great a, "*prospect of benefiting the health of each boy and man*" as vaccination. MC passes the test of beneficence.

4. JUSTICE

Foreskin removal in infancy confers medical, health and cosmetic benefits. A recent survey found that 29% of uncircumcised men wished they had been circumcised, compared with only 10% of circumcised men who wished they had not been.[134] A reason some circumcised men might be unhappy that their parents ensured they were circumcised after birth may be exposure to misleading "intactivist" propaganda on the Internet. The latter presents claims that appear in the article by Svoboda *et al.*

B. Specific Ethical Rules

1. NO UNNECESSARY SURGERY

Svoboda *et al*. falsely state that the American Medical Association (AMA) prohibits MC. If this statement were true, then MC would not be seen in 91% of white, 76% of black and 44% of Hispanic men in the U.S..[135]

2. EQUALITY

Svoboda *et al*. equate MC with FGM. These arguments are scientifically, anatomically and ethically flawed. If they were valid the AMA would likely be opposed to infant MC.

3. A PHYSICIAN'S DUTY IS TO THE PATIENT

Based on its review of the scientific evidence and ethical issues, the AAP policy recommends that parents be accurately informed of the benefits and risks of infant MC. They advise that this information should be provided early in a pregnancy to allow parents time to make an informed decision should they have a boy. Having done their duty to advise, the AAP recognized that some parents might not choose MC for their newborn boys, just as some parents may choose to not have their newborns vaccinated. The AAP noted that for some families, religion, culture or personal factors might play a more important role than medical advice in deciding whether or not to have a boy circumcised. That is why the AAP did not recommend mandatory infant MC, even though routine MC would be a logical evidence-based position.

4. Ethical Preventive Medicine

Here they cite a 2002 article by Hodges and Van Howe that ignored the prophylactic benefits of infant MC. If indeed, "*any other part of the body*" had a 1 in 2 chance of "*fall*[ing] *prey to disease*" it would be logical to have it removed if it serves no function. Given the simplicity of infant MC and its enormous lifetime benefits, MC should be a simple decision for parents.

Svoboda *et al*. argue that the, "*risk/benefit calculation used by the AAP*" was flawed. They cite an article by Darby that has been severely criticized.[136] The AAP did not perform a risk-benefit analysis, whereas the CDC's policy stated, "*In a comprehensive risk-benefit analysis of* [infant MC] *based on reviews of the literature and meta-analyses, it is estimated that over a lifetime, benefits exceed risks by a factor of 100:1*."

Parents have a legal right and ethical duty to authorize MC for their sons, given the scientific data.[137] If MC were illegal, then successful lawsuits would be common, especially in the U.S. However, this is not the case. Even Svoboda has previously acknowledged that, "*Most circumcision lawsuits go nowhere.*"[138] Any resentment later in life by the boy or man for having been circumcised is likely to stem from gullible acceptance of "intactivist" propaganda that permeates the Internet. Perpetrators of these fallacies exhibit unethical behavior since their objectives undermine public health and individual wellbeing.

Thus, contrary to Svoboda *et al*., neonatal MC does not violate any of the, "*four cardinal ethical rules*."

III. Is Non-Therapeutic Circumcision Already Unlawful?

A. Recent International Recognition of the Unlawfulness of Circumcision

In Europe, there is widespread opposition to MC. This may reflect lack of familiarity, anti-Semitism, anti-Islamic sentiment, or anti-American attitudes. Most likely this view reflects ignorance about the wide-ranging benefits and low risks from MC. MC of boys nevertheless remains legal in all European countries.

1. MEDICAL ASSOCIATIONS

Svoboda *et al*. rely on opinions posted on websites of the German pediatric society, the Dutch medical association, and articles in online news media and "*Intact News*" (mostly by anonymous authors) to support a claim their views reflect official views of South African, Swedish, Danish and Finish medical associations. The South African Medical Association has strongly denied that it opposes MC.[139] In comparison to policy statements by the AAP and CDC, whose recommendations followed an exhaustive, thorough evaluation of the scientific evidence, who should one believe?

2. LEGISLATIVE AND JUDICIAL BODIES

The evidence does not support their statement that outside the U.S. a, "*consensus is emerging ... that circumcision violates the rights of the child*." The

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Queensland Law Reform Commission (QLRC)'s Circumcision of Infant Males Research Paper of 1993 states that, "*because of the fairly widespread community acceptance of the procedure it is unlikely, at this time, that a prohibition on routine neonatal male circumcision would be universally supported. It is also unlikely at this time that a medical practitioner acting in good faith and with due care and skill would be prosecuted for assault for performing a circumcision on a male infant.*"[140] While the QLRC recognized the cultural and religious benefit to some children, in 1993 the medical benefits of MC were less clear. Referring to the QLRC, a lawyer of the Queensland Supreme Court stated in 2012: "*Today medical policy holds that it is a decision for parents and has benefits.*"[141] The lawyer went on to state, "*applying the same reasoning today would thus make prophylactic circumcision acceptable. ... Circumcision in the neonatal period with informed parental consent, just as childhood vaccination, is permissible at law and there is no need for those unqualified to practice law to give contrary advice.*"

Svoboda *et al.* again cite the TLRI issues paper in 2009 while ignoring the critique of that report.[142] The TLRI report, "*ignored the extensive scientific evidence supporting infant circumcision*" [and also ignored] "*a very respectable legal opinion ... by a High Court Judge (and former Governor General of Australia), Sir William Patrick Dean, who stated that circumcision 'for perceived hygienic — or even religious — reasons ... plainly lies within the authority of parents of an incapable child to authorize surgery on the basis of medical advice.*[143]*"* The TLRI report has failed to gain traction or political consideration.

Next, Svoboda *et al.* refer to what they call, "*a landmark criminal case*" by a regional court in Cologne, Germany. They fail to mention prior obfuscation of the judgment in that case[144] was exposed.[145] This court lacked authority to set precedent in Germany, and that this case has been widely misconstrued in the English-speaking news media. The court actually held that the defendant (the circumciser) was not guilty of a criminal act because the legality or illegality of circumcision is unclear, being among the *"...questions of law ... not answered unanimously within the literature, especially in cases in which the legal position is unclear as a whole,"* going on to say *"This is the case here. The question whether circumcision for religious reasons at the request of the parents is lawful is not answered uniformly in the case law and literature"*[146] The court did not declare that infant MC might be considered a human rights violation. In response, the German Parliament passed a bill legalizing the circumcision of boys.[147] The German ethics council lent its support.[148] Svoboda *et al.* ignore this and merely cite an opinion piece posted on the "*Attorneys for the Rights of the Child*" website.

We agree that the United Nations (UN) would oppose tribal MC, as would the AAP and CDC. Given the wide-ranging protections, some have argued that it would be unethical for boys to not receive medical MC.[149] Article 24(3) of the UN Convention on the Rights of the Child (CRC)[150] refers to the elimination of traditional practices that are prejudicial to a child's health, which indirectly supports MC, since not circumcising boys is prejudicial to their health.[151] The CRC Articles in support of the child's health include 3(1) and 24(1). Denial of MC would deprive the child of the highest attainable standard of health, so violating the CRC, as opposed to the opposite position. CRC Articles 14(2) and 18(1) support parental rights and responsibilities towards children, which in turn support infant MC.

Svoboda *et al.* cite several online news media reports, draft legal proposals and isolated court cases that reflect the general opposition to MC in Europe. No European country has banned MC. Nor would any country be likely to do so.

B. Children's Legal Rights in the United States

1. EQUAL PROTECTION?

Their attempt to equate infant MC with FGM contradicts 18 US Code § 116 Female genital mutilation,[152] which applies only to *female* genital anatomy. Since infant MC is highly beneficial, but FGM is not, that argument is flawed.[153] They mention that, "*male circumcision is also potentially fatal*," but not the extreme rarity of deaths. The same could also be said about childhood vaccination. Any medical intervention carries a degree of risk. Society accepts medical interventions when doing nothing will pose greater risks than the intervention.

2.PERSONAL SECURITY

They claim that every individual has an, "*inalienable right ... to bodily integrity, of which genital integrity is a subset.*" The right to health is arguably more important to uphold than the right to foreskin integrity. They fail to cite a single case in which a male recovered damages for parent-approved MC and no major complications. Attempts to ban infant MC in the U.S. have failed for very good reasons.[154] The trend in favor of MC is evident in the AAP's infant MC policy.

3. AUTONOMY

They quote legal cases that were not about MC. Authorities on ethics have presented sound reasons refuting their "*right to autonomy*" opinion.[155] It has

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been argued that being circumcised boosts autonomy more than constraining it.[156]

4. FREEDOM OF RELIGION

Here they refer to reasoning by the court in Cologne. But a court decision in Germany cannot be used to support a claim about freedom of religion in the U.S. Any interpretation of U.S. constitutional law should refer to U.S. cases. The first amendment to the U.S. Constitution states, "*Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof.*" No religion in the world rejects converts who are circumcised. Svoboda *et al.* misconstrue a FGM case in the U.K.[157] The Judgement distinguished the cultural, health and medical benefits of MC (see clauses 62, 63, 72 and 73). They cite another U.K. case, which was more about a child custody dispute.[158] The court order cited Section 2(7) of the Children Act 1989 that can require, "*the consent of more than one parent in matters affecting the child.*"

5. CHILDREN'S HUMAN RIGHTS

They claim that MC of boys violates various international treaties. The most relevant is the U.N. CRC.[159] But, the CRC is not governing law in the U.S. In any case, the CRC supports the, "*best interests of the child*" standard, as well as parental rights. The U.S. has not ratified the CRC. One of the main reasons is robust, civil society opposition, founded in a strong American belief, that parental rights are supreme. U.S. government agencies do not look to international human rights law for U.S. public health policy. Contrary to Svoboda *et al.*, international treaties are not, "*the supreme law of the land.*" Nor is the U.S., "*subject to the CRC based on customary* [international] *law*," which is complex and debated.[160] Its theoretical reach contrasts with practice and is not legally enforced in the U.S. (For more see Rivin *et al.*[161])

Svoboda *et al.* then refer to the UN Universal Declaration of Human Rights (UDHR; Articles 2, 3, 12 and 29),[162] the International Covenant on Civil and Political Rights (ICCPR; Articles 6, 9, 17 and 24.1),[163] and the International NGO Council on Violence Against Children.[164] Claims that the UDHR are violated are not substantiated by evidence. Since MC is a safe procedure, especially in newborns, prevents disease and is in the best interests of the child, there is no evidence for violations of Article 2, Article 3 ("*right to life, liberty and security of person*"), Article 12 (*arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation*") or Article 29 ("*exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law...*").[165]

We agree that the U.S. is obligated to uphold the International Covenant on Civil and Political Rights (ICCPR), monitored by the Human Rights Committee.[166] The U.S. is not in violation of the ICCPR with regards to MC. Current medical and bioethics standards and procedures for MC mean MC does not cause harm to infants and children and would not violate the ICCPR article's intent on freedoms from arbitrarily depriving life (Article 6), liberty and security of person, such as unlawful arrest and detention (Article 9), arbitrary or unlawful interference with his privacy, family, home or correspondence (Article 17) or protections as are required by status as a minor (Article 24.1). The International NGO Council on Violence Against Children[167] supports the CRC. The CRC supports MC because it is in the best interests of the child. However, the report, "Violating Children's Rights: Harmful Practices Based on Tradition, Culture, Religion or Superstition" includes a section on MC and refers to many of the same arguments refuted in our paper.

A UCLA Law School article stated, "*a violations-only approach to human rights advocacy is unduly limiting; indeed it overlooks the duty of states affirmatively to create conditions necessary for the fulfillment of rights*" and refers to MC as, "*an important tool for realizing good health.*"[168] It follows that health benefits mean the state should make MC available.

C. Parents' Legal Obligations

1. NO RELIGIOUS RIGHT TO CIRCUMCISE

They again refer to the Cologne case while ignoring Federal legislation ensuring the rights of parents in Germany to have their sons circumcised. As further flimsy support for their claim they cite a 1944 case that was not about MC, but rather distribution of religious literature or articles of merchandise on the streets by minors.[169] As evidence that the *Prince v. Massachusetts* case is irrelevant, infant MC continues to be one of the most common surgical procedures in the U.S.[170] The 1878 Utah case they cite was about polygamy as part of religious beliefs,[171] not MC.

2. PARENTAL "CONSENT" TO UNNECESSARY CIRCUMCISION IS INVALID

Here they cite a 1997 AAP statement on bioethics, but that document did not prohibit MC, nor any other medical procedure (such as vaccination) that provides healthy boys with preventive benefits against infection and disease. MC, "*is clearly in the child's best interests.*" Just as vaccination, MC "*can be deferred,*" although in the intervening period the child will be at heightened risk of UTI, penile inflammatory conditions, phimosis, paraphimosis and other problems. The physician and family do not have to, "*wait until the child's consent is*

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obtained." Responsible parents will consider the best interests of the child in ensuring they are vaccinated, educated, fed, clothed, housed and otherwise cared for. A male child's best interests would include MC. Moreover, as pointed out in an extensive review on MC, "*a parent or legal guardian is bound to make countless other decisions for their growing child over the years .... many of which will likely have a more profound effect on them than the presence or absence of a foreskin*."[172]

D. Physicians' and the AAP's Legal Obligations

It is patently absurd that physicians, "*risk being held liable for every non-therapeutic circumcision*."

1. PHYSICIANS CANNOT TAKE ORDERS FROM PARENTS

While physicians have a duty to children they treat, they are legally entitled to circumcise a boy after parents have consented. The AAP policy recognizes that parental consent is required.

In an apparent attempt to intimidate, they assert that, "*the AAP is advocating breaking the law*" by recommending third party coverage for cost of parent-approved prophylactic MC. They base this on the false statement that, "*circumcision has not been proven effective in preventing any disease*." The scientific evidence cited by the AAP in its policy, and evidence that has accumulated subsequently, clearly shows the opposite to be true.

2. PHYSICIANS CANNOT OPERATE ON HEALTHY CHILDREN

Healthy children are operated on even when, unlike MC, doing so has no health benefit, e.g., cosmetic orthodontia, correction of harelip, surgery for tongue-tie, treatment of dwarfism by growth hormone injections, and surgery for removal of supernumerary digits.[173] Svoboda *et al.* cite as support an irrelevant case of a woman who had surgery for a blocked sinus and where there was a disagreement about whether the surgery was necessary.[174]

3. LIABILITY FOR MISLEADING PARENTS

They refer to the case of an anesthesia-related death of a boy operated on for a blocked urethra and whose earlier MC failed to heal.[175] The AAP policy states that parents should be advised that newborn MC carries risks, which, although usually minor, on rare occasions can be serious. Similarly, doctors are required to inform parents of the risks, some serious, associated with vaccination of their child. Informing parents is part of the consent process. Using the same logic as Svoboda *et al.*, a doctor may be liable for misleading parents if he or she does not accurately inform parents of the benefits of MC and the boy goes on to develop a serious medical condition that could have been prevented by MC in infancy.

It is insulting to suggest, without evidence, that the AAP's guidelines, "*exaggerated the benefits of circumcision while understating the risks, and perhaps let monetary incentives determine its recommendation*" and function as a "*sales pitch*." Medical bodies are required to develop policies based on evidence. The failure of medical bodies in other countries to do so should more appropriately be regarded as negligent, given the consequences to the health of individuals and the community.

It is untrue that, "*circumcision is unlikely to benefit most boys and men*." The CDC policy stated that benefits exceed risks by "*100:1*", citing a risk-benefit analysis that found, over their lifetime, 1 in 2 uncircumcised males will experience an adverse medical condition caused by retention of their foreskin.[176] Svoboda *et al.* suggest that MC, "*eliminates any sexual function involving manipulation of the foreskin*." By this, perhaps they are referring to "docking" or the use of the foreskin for other sexual activities engaged in by men who have sex with men? And their subsequent claim about, "*eliminat*[ing] *sexual pleasure obtained from the stimulation of the foreskin itself*" is contradicted by scientific research.[177] Since the neuroreceptors involved in sexual pleasure reside in the head of the penis, not the foreskin,[178] their claims about removal of erogenous tissue are false. There is no scientific evidence for psychological harm. Rather, there is evidence of various psychological disorders[179] in men preoccupied with their absent foreskin.[180] They fail to state that risk of adverse events from newborn MC is low.[181]

4. UNLAWFUL CLAIMS FOR MEDICAID REIMBURSEMENT

In an apparent attempt to intimidate, they assert that, "*the AAP is advocating breaking the law*" by recommending third party coverage for cost of parent-

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approved prophylactic MC. They base this on the false statement that, "*circumcision has not been proven effective in preventing any disease*." The scientific evidence cited by the AAP in its policy, and evidence that has accumulated subsequently, clearly shows the opposite to be true. Although the neutral infant MC policies preceding the AAP's 2012 policy statement did lead 18 U.S. States to withdraw Medicaid coverage for elective MC, "*lack of Medicaid coverage for circumcision may translate into future health disparities for children born to poor families covered by Medicaid*".[182] Medicaid coverage for infant MC has been considered a, "*health parity right of the poor.*"[183] Florida's withdrawal of Medicaid coverage in 2003 resulted in a 6-fold increase in medical costs for publicly-funded MCs for medical need.[184] So Florida restored Medicaid coverage in 2014. The other 17 states have begun to follow suit.

IV. Conclusion

We have highlighted the flaws in claims by Svoboda *et al.* and have argued that parent approved MC of boys is legal, ethical and in the best interests of the health of the male child. In order to maximize benefits and minimize risks the optimal time for MC is the newborn period.[185] The Hippocratic Oath contains the statement, "*I will prevent disease whenever I can, for prevention is preferable to cure.*"[186] Disease prevention is central to the affirmative policy recommendations of the AAP and the CDC. These policies have now raised the bar, meaning that medical organizations elsewhere can no longer rely on opinions, but must henceforth consider the extensive high quality scientific evidence as an integral part of developing MC policies. The arguments made by MC opponents disagreeing with AAP and CDC policies have been consistently rebutted. Unless, as seems unlikely, any new opposing argument emerges it would appear the time has now come for the infant MC critics to desist.

Note

Dr. Morris is a member of the Circumcision Academy of Australia, a not-for-profit, government registered, medical association that provides evidence-based information on MC and a list of doctors who perform MC in Australia and New Zealand on its website.

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