Invisible persons, invisible patients: Determining the ethics of hormone-blocker therapy through an understanding of the transgender-transsexual adolescent-physician relationship

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March 2010

A thesis submitted to McGill University in partial fulfillment of the
requirements of the degree of Master of Science

Invisible persons, Invisible patients:
The Ethics of Hormone-Blocker Therapy through an Understanding of the Transgender/Transsexual Adolescent – Physician Relationship

Acknowledgements

This has truly been a difficult two years. With my pediatrics residency and Chief resident year at the Montreal Children's Hospital, fellowship year at SickKids, and my masters, to say that I have been busy is truly an understatement.

I thank my family Emilie Cruz, Nerrisa Bonifacio, and Vergel Valencia- my mother, sister, and brother-in-law. Growing up in a single-parent family is not easy but it gave me a lens through which to view the world— to witness selfish acts based in hatred and fear tempered by acts of infinite kindness, love, and humility.

I thank my friends in Montreal who have constantly supported me. I know I can always count on Elisa David, Stephanie Pineda, Paolo D'Agnillo, Alpha Gumboc, Cyd Virola, Marie and May Handinero, and Abdullah Al-Sanea. I also thank Ivy Suriyopas, Melissa Astudillo, and Crystal Green, my fellow Ithacans and friends from Cornell who gave me much extended breaks to relax and rejuvenate in New York City during these hard times. I thank Patricia Li my fellow Montrealer turned Torontonian for being an inspiration for excellence.

I would like to personally thank Saleem Razack, who I thank annually for letting me into the McGill Pediatrics Residency. I thank Annie Janvier for being the truest mentor possible, taking me under her feisty wing and being the inspiration for pursuing bioethics. I thank Giosi DiMeglio, Francizka Baltzer, Suzanne McDonald, Shuvo Ghosh, and Richard Gosselin for opening my eyes to becoming an adult and, I daresay, an adult learner. I thank Peter Granger in Vancouver for mentoring me during my days at the University of British Columbia and allowing me to help those who need help the most. I thank Eudice Goldberg at SickKids for allowing me to work with wonderful adolescents each day. I thank Karen Leslie and Debbie Katzman who first inspired me to work with teens. I thank Ken Zucker from whom I am learning so much in his book crammed office at the Centre for Addiction and Mental Health. I must thank Kathleen Glass for being a wonderfully supportive supervisor and willing to take me on as a graduate student. Not only did she accept my tardy drafts but, more importantly, she became someone who I can trust and talk to as a friend and confidant.

Lastly, I acknowledge and thank the transgender community for letting me into your world and perhaps making it a little bit better. You are beautiful people and are an inspiration for us all.

I will repeat the question I used during my medical school valedictory speech based on a homeless man standing amongst a sea of candles during a vigil post-assassination of Harvey Milk. During the peaceful and silent procession to Castro Street, he yelled, "Where is your anger? Where is your anger?" I ask myself this often. I hope I will never forget my anger. I hope to use it as a force, as a reminder, to help those who need it the most, perhaps even more importantly, because I was so fortunate with all the above people who have helped, inspired, and guided me.

Abstract

A new ethical medical dilemma concerns the use of hormone-blockers or medications that put puberty on hold in the care of transgender/transsexual (TG/TS) adolescents. These medications are taken until she is old enough to legally consent to cross-sex hormones. Such individuals are often “invisible” in clinical medicine because of a lack of knowledge and research concerning TG/TS. Using Emmanuel and Emmanuel’s preferred decision-making patient-physician relationship, I critique clinical medicine’s (1) inadequacy of clinical knowledge regarding TG/TS and hormone-blocker therapy, (2) misunderstanding of the health-related values of the TG/TS adolescent, and (3) lack of appreciation of her autonomy. Despite a problematic relationship, I argue that hormone-blockers are an ethical and viable option in TG/TS care and their use can be grounded through the ethical considerations of trust, privacy, and self-determination. Clinical guidelines are recommended through the incorporation of hormone-blocker therapy in the management of TG/TS adolescents. Such suggestions are in hopes of providing greater access to transgender care so that TG/TS adolescents are finally seen and no longer “invisible”.

Il existe un nouveau dilemme médico-éthique entourant l’utilisation des inhibiteurs hormonaux ou de médicaments entravant la puberté, dans le traitement des adolescents transgenres ou transsexuels. Ces médicaments seront administrés jusqu’au moment où ces patients atteignent l’âge où ils pourront légalement consentir à l’utilisation des hormones de sexe croisé. Ces individus sont très souvent “invisibles” en médecine clinique car il n’existe que peu de recherches et d’écrits a leur sujet. Suivant le modèle de la relation médecin-patient selon Emmanuel et Emmanuel, qui permet un processus décisionnel éthique, j’émets une critique de certains aspects de la médecine clinique. Les critiques sont les suivantes dont: (1) l’existence de lacunes dans les connaissances cliniques quant à la thérapie hormonale et les TG/TS, (2) les malentendus concernant la valeur attribuée par les adolescents TG/TS à leur propre santé et bien-être, (3) l’absence d’estime des autres pour l’autonomie de ces adolescents. Malgré cette problématique, je soumets que l’utilisation des inhibiteurs hormonaux représente néanmoins une option valable et éthique parmi les soins accordés aux TG/TS, puisque cette utilisation peut se fonder sur des considérations éthiques tels que la confiance, le droit à la vie privée et l’auto-détermination. De plus, certaines normes cliniques qui incorporent les inhibiteurs hormonaux dans les soins accordés aux adolescents TG/TS sont recommandées. Il est à espérer que ces suggestions pourront améliorer l’accès aux soins par les adolescents TG/TS, permettant ainsi que ceux-ci puissent finalement être considérés en médecine et non plus “invisibles”.

December 2006

I met Jamie today.

Jamie is 14 years old and saw her pediatrician last month. He has been having ongoing difficulties with his parents for the last two years. Their divorce has not helped matters either. I think his look is what is called "emo." Dark and black. He was wearing a black t-shirt with dark skinny jeans. A leather wrist band. Cropped hair, obviously dyed black. No make-up. He looked a little pale but that could just be because of the black. I don't know.

It would be incorrect to say that I wrote "he". I actually didn't know whether he was a he or a she and in what direction he or she was going.

Quite briefly, Jamie was born biologically female but then started to have gender issues around four years. Apparently liked to play sports when he was younger. He never liked dolls.

He went to see his pediatrician because of this "emo" look which was also flagged at school. His pediatrician—one that is totally old-school—who probably regrets asking it now but I'm glad he did. He asked about Jamie's sexuality to which he said he was bisexual. That freaked him out and so I saw Jamie today.

INTRODUCTION

There is an absence of transgender and transsexual (TG/TS) adolescents in both medical literature and in clinical medicine. This is not a surprise. Transgender youth face barriers in accessing health care because of their two identities as both a TG/TS and as an adolescent. Based on a gender binary of either male or female, many cultures, especially Western culture, suppose that persons have a gender and express themselves in gender roles prescribed by their biological or phenotypic sex. The TG/TS adolescent faces two choices, either deviate from such societal norms to be stigmatized, discriminated against, and marginalized, or conform to such norms and suppress their gender issues (Burdge & Burdge, 2007; E. Lombardi, 2001; E. L. Lombardi, Wilchins, Priesing, & Malouf, 2001). Unfortunately, psychological distress is often the result in either choice.

As an adolescent, she may face harassment and discrimination by her peers because of her non-conforming gender variant behaviour. Because of her need for psychological and economic support, she may choose to conform to gender norms for a very realistic fear that she may be kicked out of her home, ostracized by her family, and/or lose her friends and employment. Moreover, her right to autonomous decision-making is often challenged and not respected. The end result is that her physician may be unaware of her gender issues and concerns. Such reluctance or fear in identifying and expressing themselves as TG/TS results in the “invisibility” of the TG/TS adolescent in clinical medicine.

This theme of invisibility is evident in clinical medicine and law by the lack of medical knowledge and legal literature concerning the TG/TS adolescent and how both domains approach the TG/TS adolescent and her medical issues and concerns. This continues despite a growing number of adolescents who identify as TG or TS (Zucker 2006, Zucker et al. 2008). Their growing number has forced clinical medicine and the law to deal with new ethical dilemmas related to the health care of TG/TS adolescents.

With new technological advances and greater experience in transgender care, the transition process for TG/TS individuals may take place before adulthood. There are many TG/TS adolescents who wish to initiate the transition process away from their assigned gender at an earlier age through “hormone-blockers” or medications that put puberty on hold. Hormone-blockers prevent secondary pubertal characteristics until the adolescent is old enough, usually considered to be eighteen years of age, to begin cross-sex hormone therapy. Hormone-blockers, long-used in children for endocrinological problems such as precocious puberty, are a relatively new medication used in TG/TS adolescents. The lack of knowledge concerning the long-term effects of hormone-blockers in addition to societal rejection of TG/TS individuals and misunderstandings concerning TG/TS has led to much controversy concerning hormone-blocker therapy. Many TG/TS adolescents have parents who disapprove of their child’s TG/TS identity and any attempt to transition from their assigned gender. The main question that I will attempt to answer in this current discussion is:

> **Can a physician *ethically* prescribe hormone-blockers to the TG/TS adolescent?**

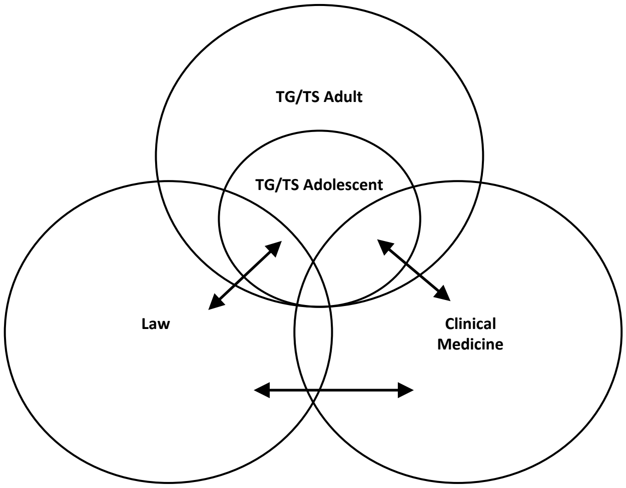
When exploring and understanding ethical questions there are always multiple embedded questions that need to be identified and appreciated. In order to give a complete and meaningful response to the above primary ethical question I will answer three fundamental questions:

1. **What are the effects of hormone-blockers on the TG/TS adolescent, particularly in regards to gender development?**

2. **Can an adolescent have the capacity to make the decision to change her gender, especially in regards to taking hormone-blockers?**
3. **Should an adolescent have the capacity to make such a decision?**

In essence the first question concerns two further issues— weighing the benefits and harms of hormone-blockers and weighing the benefits and harms of not prescribing hormone-blockers. Note that the concept of the “risk of the unknown” adds another dimension to this discussion because of the paucity of research and knowledge concerning hormone-blockers in TG/TS adolescents. The second question concerns the cognitive capacity for an adolescent to make such major medical and health-related life decisions. The third question, perhaps the most directly related to ethics, concerns the degree to which we should respect an adolescent’s capacity to make decisions that have a major impact on one’s life, especially in the face of unknown harms and, for some, opposition from parents and society.

Figure 1.



I believe the first question requires an investigation into the science or medicine involving transgender/transsexualism or “clinical medicine” whereas the second and third requires an investigation into the ethical and legal parameters of decision making of the adolescent or “the law.” These multiple relationships are represented in Figure 1 which illustrates that the relationships of this particular ethical dilemma are both complex and dynamic. It highlights the overlap of clinical medicine and the law and their effects on the TG/TS adolescent. Note that I have also included the relationship among the TG/TS adult, clinical medicine, and the law. Undoubtedly, the clinical context in which the TG/TS adolescent receives care and the way ethical decisions are made is shaped and affected by the TG/TS adult community and their experiences with clinical medicine and the law. When investigating this ethical dilemma further, I realize that an understanding of such relationships is crucial for our discussion concerning the ethical permissibility of hormone-blockers and the management of their care.

My approach in this discussion is four-fold. First, I will give a brief overview of the concept of gender and gender identity disorder (GID). In particular, I will define how clinical medicine has viewed conceptions of gender and deviations from gender and sex norms. This will allow us to understand the unique features of GID, the diagnosis given to TG/TS individuals. Second, I introduce Emanuel and Emanuel’s patient-physician relationship model to serve as the framework for our discussion involving the TG/TS adolescent, clinical medicine, and the law (Emanuel & Emanuel, 1992). I will highlight the three key criteria of the “deliberative model,” considered by Emanuel and Emanuel as the ideal patient-physician relationship model in patient-decision-making. I explore whether or not these three criteria— adequate clinical knowledge, understanding and appreciation of the health-related values of the patient, and respect of patient autonomy— are present in the TG/TS adolescent-physician relationship. To do this I will explore the harms and benefits of both prescribing and not prescribing hormone-blockers as seen in clinical medicine. I will investigate the values of the TG/TS adolescent and the ability of the physician to identify and understand such values. I will then examine the autonomy and decision-making of the adolescent in the law. Third, I will provide an analysis using ethical justifications of whether or not hormone-blockers can be ethically prescribed to TG/TS adolescents. Moreover, I propose a way we may reconcile the "unknown" harms of hormone-blockers. Fourth, as a pediatrician and adolescent medicine physician, I will provide a thoughtful set of guidelines that may be useful by medical professionals working with TG/TS adolescents.

Note that there is a paucity of written knowledge and information concerning TG/TS adolescents and the care that is provided to them. As such there are numerous instances throughout this discussion where I will cite my clinical experience as a physician who directly provides transgender care to both adolescents and adults for the last year and a half in Montreal, Quebec and Toronto, Ontario. I highlight that there are different forms of knowledge in the development of transgender care ranging from scientific literature to press reports to anecdotal evidence. I believe that each resource complements our knowledge of TG/TS adolescents and the difficulties they face. In addition, I feel my personal experiences and observations are another valuable source of information and understanding.

CHAPTER ONE:
DEFINING GENDER

Defining "*gender*" is truly a difficult task. It is certainly prudent to concisely address the terms that will be used throughout this discussion. Because of the expansive literature and theoretical frameworks concerning gender, this section will focus on definitions of gender frequently used in clinical medicine. This, in and of itself, certainly shows the complex nature of what we call "gender" and the attention that should be brought to the ethical considerations regarding hormone-blockers in TG/TS adolescents. Gender is a term that is used to refer to the psychological or behavioural characteristics associated with males and females (Ruble, Martin, & Berenbaum, 2006). John Money, famed endocrinologist who studied gender at the Johns Hopkins University and published the seminal paper on young children with gender identity problems, first used the term "gender" in what he described as "gender role" or "all those things that a person says or does to disclose himself or herself as having the status of a boy or man, girl or woman, respectively" (Green & Money, 1960; Money, 1955). Note that the term "gender" has since been, and for some incorrectly, interchanged with the term "sex" (Zucker, 2006). Many refer to the former as referring to psychological processes whereas the latter is used to biological processes (Zucker & Cohen-Kettenis, 2008).

This psychosexual framework of gender is thought to be comprised of three components—gender identity, gender role, and sexual orientation (Zucker 1995). Determinants of each of these components are thought to be biological (involving both genes and hormones) and social-cognitive (involving gender typical behaviour) (Hines, Brook, & Conway, 2004). *Gender identity* refers to a person's self-representation as male or female (or both or other) and was first used by Hooker and Stoller and Kohlberg in the mid 1960's (Kohlberg, 1966; Stoller, 1968; Zucker, 2006). *Gender role* describes the psychological characteristics that are sexually dimorphic within a general population such as toy or colour preference and other behaviours such as physical aggression. It should be noted that such behaviours, attitudes, and personality traits are socially conceived by a given culture and historical time period. *Sexual orientation* refers to the erotic interests of the individual that includes sexual behaviour, fantasies, and attractions. Most would agree that the most salient dimension of sexual orientation is probably the sex of the person to whom one is attracted sexually (Zucker, 2006).

The term *transgender* (sometimes abbreviated to *trans*) refers to a person with a gender identity that is different from their birth sex or who expresses their gender and takes on gender roles that contravene societal expectations of the range of possibilities for men and women. As such, transgender is seen as an umbrella term that may include cross-dressers, drag kings, drag queens, transsexuals, people who are androgynous, and people who are bi-gendered or multi-gendered, as well as people who do not identify with any labels (Feldman & Goldberg 2006). Note that our discussion will place particular emphasis on the *transsexual* or a person who identifies as, or desires to live and be accepted as, a member of a gender that differs to that assigned at birth.

The last term to be addressed is *sexual identity* or a person's self-representation as heterosexual, homosexual, bisexual or other. Note that there is much confusion regarding many of the terms I have just outlined. Sexual identity is often confused with sexual orientation. For example, a man may have sexual relations with other men exclusively but may not identify himself as homosexual. There are many men who do not wish to be classified as homosexual because of stigma attached to homosexuality, especially within this current era of HIV/AIDS. Note this was the primary reason why men who have sex with men (MSM) gradually replaced homosexual/gay in medical literature. In this example, sexual orientation is not congruent with the person's sexual identity. In the same way, gender identity is often confused with sexual orientation. Before proceeding, the reader should appreciate the major differences between the gender identity and sexual orientation as they are not interchangeable. A colleague of mine who is an adolescent medicine physician recently passed on a story of a TG/TS adolescent who was able to succinctly differentiate the differences between the two. The adolescent stated, "Sexual orientation is about who you sleep 'with' and gender identity is who you sleep 'as'." I do not think I could provide a better example.

It is at this point that I would like to draw attention to other frameworks of sex and gender outside of clinical medicine. For example, in "The Five Sexes: Why male and female are not enough," Fausto-Sterling, a professor of Biology and Women's Studies at Brown University, comments on the sex binary of male and female that exists in North American culture (Fausto-Sterling 1993). She highlights that in addition to "men" who have testes and external male genitalia and "women" who have ovaries and external genitalia, there are hermaphrodites or "herms" who have both male and female gonads in addition to "merms" who have testes and some aspects of female genitalia and "ferms" who have ovaries and some aspects of male genitalia. In her opinion, these five sexes challenge our understanding and definition of sex by showing the arbitrary, subjective, and incorrect nature of the sex binary of male and female. She comments "sex is a vast, infinitely malleable continuum that defies the constraints of even five categories (Fausto-

Sterling 1993).” In a similar light, gender can also be a spectrum comprised of numerous gender roles and expectations that are culturally specific and dominated by both stereotypical female and male roles. Many academics and scholars specializing in gender feel it is truly impossible to truly categorize gender as male or female (Wilchins 2004).

I raise this important point because this particular discussion at hand focuses on hormone-blocker therapy as one management strategy for TG/TS adolescents before they choose or do not choose to “transition.” Within clinical medicine, this process assumes that it is female to male (FTM) or male to female (MTF). It is for such reasons that much of the scientific literature will use “transitioning to the opposite gender.” In my opinion, such terminology is incorrect for assuming that there are only two genders. This automatically constrains the discussion because the only other option for transitioning by default is the one other gender.

I have yet to find an appropriate phrase to resolve this dilemma but I will describe the process of changing one’s gender as “transitioning from one’s assigned gender.” In doing so, it is clear that the individual is changing her gender. At the same time it also avoids the gender binary of female and male because I am not stating to what gender she is transitioning. This opens up the possibilities that the individual may take on a gender with more or less stereotypical female or male gender roles that represents her preferred gender. Moreover, “assigned gender” brings to light that a particular gender was designated, for whatever reason (the majority of times I would assume was based on the presence of stereotypical female or male characteristics of external genitalia) at birth and expected to maintain for her lifetime. This avoids other terms such as “biological gender” or “natal gender” that are sometimes used in scientific literature. For example, I was at a recent talk given by Dr. Kenneth Zucker who used the term “biological gender” in the introduction of a psychiatric grand rounds on TG/TS adolescents (Zucker, 2010). If one believes that gender is a social construct then “biological” or “natal” preceding gender is incorrect. I also have misgivings towards phrases such as “cross-gender identification” for similar reasons but will use these phrases in future appropriate sections as they were the original terminologies used by their respective authors.

One can easily see that even attempting to provide a classification for gender is a large discussion topic in itself. The act of outlining the different definitions and the problems they bring, however, is both an academic and pragmatic exercise in understanding and appreciating how truly complex gender is. Trying to find appropriate definitions has also affected me as a clinician in the words I use to speak with my patients and teach medical students and residents about gender. One can only imagine how even more complex the situation becomes when the gender with which one identifies does not correspond to the one assigned at birth.

Creating Gender

Our fascination with gender began long ago, most likely sparked by the story of Hermaphroditos in Greek oral tradition. In Ovid’s Metamorphoses, the fifteen year old son of Hermes and Aphrodite rejected the romantic pursuits of a nymph who wrapped herself around his body and asked the gods to never separate them (Ovid, Raeburn 2004). The gods granted this wish and their bodies were blended together forming the *intersex* body— a body of both sexes. Like many stories in Greek mythology, there was some truth to a body having both male and female characteristics.

In her book “Hermaphrodites and the Medical Intervention of Sex,” Dreger, a professor at Northwestern University, investigates how numerous technological advances have shaped the way in which we view gender and sex and the way clinical medicine views such conceptions[1] (Dreger, 2000). Gynecologic care first arose after the medical physician gradually usurped the midwife in the care of pregnant women. The medicalization of labour and delivery ultimately resulted in greater attention of newborns born with “ambiguous genitalia”— or genitalia viewed by a physician as being compatible with neither male nor female norms. With the inception of the medical journal, physicians could now document such rare medical cases and disseminate such “case reports” to other physicians in the medical community. Affected by a society that needed to identify one as either male or female, physicians now had a venue to address such “problems” and come up with solutions to “treat” such individuals (Dreger, 2000).

Up to this point, gender and sex were synonymous and assignment was based on external genitalia. The presence of a penis meant the young baby would grow into a man and take on stereotypical male roles. The presence of a vagina meant the young baby would grow breasts and become a woman and take on stereotypical female roles. Such a classification was challenged when other means of classifying sex were discovered. Using Dreger’s analysis, I believe the latest influences affecting the way we classify gender and sex (or in a certain sense, make it more problematic) were the discovery of sex chromosomes and the technological advancement of laparoscopy.

Through observations and analyses of male and female insect chromosomes, scientists in the early 1900s discovered that most, but not all, chromosomes were present

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[1] Note that her use of hermaphrodite in her title loosely refers to anyone with an intersex condition, not strictly for hermaphrodites

equally in male and female fruit flies (Hake and O'Connor 2008). These additional unequally distributed chromosomes were later found to be the sex chromosomes we know today. Gender, as defined by physicians at least, could now be classified and based on chromosomal make-up. Chromosomal testing, however, may have lead to more problems than was expected. Regular convention would hold that individuals with female genitalia and those with male genitalia would possess karyotypes with XX and XY respectively. This, however, was not always the case. Extremely feminine looking individuals with external female genitalia were found to possess an XY karyotype. This condition known as "androgen insensitivity syndrome" will be discussed later. Moreover, other individuals would yield atypical karyotypes such as XO and XXY, later to be classified as Turner's and Klinefelter's syndrome respectively while other individuals would be found to have a mixture of both XX and XY, later to be classified as mosaicism. Chromosomal testing forced clinical medicine to rethink the way we classify sex.

Although its initial purpose was to decrease the need for open surgery, laparoscopy or the use of small cameras that can be inserted into the body cavity, greatly changed our conceptions of gender and sex. Up to this point in time, the ability to examine gondal tissue only occurred when a person had expired. Samples of gonadal tissue could now be excised by the surgeon and given to a pathologist who could then identify such histological samples as ovarian or testicular tissue and classify the individual as either female or male. It should be underscored that, depending on the condition, gonadal tissue may or may not necessarily correlate with chromosomal analysis or external genitalia.

Conferring Gender

The discovery of sex chromosomes and technological advances like laparoscopy allowed us to identify various conditions that challenged our preconceived notions of sex and gender. In addition to further advances in identifying and measuring levels of various hormones, clinical medicine was able to identify disorders of gonadal (both testicular and ovarian) development, disorders in androgen synthesis or action, androgen excess and abnormalities due to other syndromes. Many of these conditions result in intersexuality or a wide range of anatomical conditions in which an individual's sexual anatomy involves both masculine and feminine features. Such individuals may be called *intersexual* and the more common term used in clinical medicine, *ambiguous genitalia*, as described above. There are three conditions that I will discuss in this section: congenital adrenal hyperplasia, hermaphroditism, and androgen-insensitivity syndrome. While I will not discuss each of these conditions in much detail, the way in which clinical medicine approaches these intersex conditions is quite telling. It helps our understanding of the differences between sex and gender and, more importantly, gives insight into the way clinical medicine views, confronts, and reacts to gender.

Children who present at birth with ambiguous genitalia are considered a medical emergency. Note that this is for both medical and social reasons. With the presence of ambiguous genitalia at birth, the physician may suspect the presence of congenital adrenal hypersplasia (CAH), a disorder causing androgen excess. Androgen excess results in either the masculinization of female genitalia or hyper-masculinization of male genitalia in addition to electrolyte disturbances that can cause potentially life-threatening heart dysrhythymmias. What should be noteworthy is the immediate action of the physician to quickly assemble a team comprised of specialists (general pediatricians, pediatric endocrinologists, pediatric urologists). Even though the physician must rule out CAH, simple blood tests can reassure that the neonate is stable and is in no danger of such adverse heart effects. It is more likely that such an emergent concern and response is for the social well-being of the parents (and perhaps the physician herself). The job of the newly assembled team is to quickly decide the gender of the baby.

This approach utilizes an anatomically strict psychosocial theory of gender identity which assumes that gender identity is formed from psychosocial factors as opposed to biological ones. This nurture-over-nature theory assumes that children must have a gender identity fixed at a very early age. If not, the parents of a child born with ambiguous genitalia would be consumed with anxiety over their child's intersexed genitals that could be conveyed to their child and lead to psychological problems in adolescence and adulthood. To relieve such stress, the assembled team of pediatric specialists will construct male or female genitals. If the child is deemed to have enough tissue to make an "adequate" penis then the child is assigned the male gender. If not, the child is assigned the female gender. It is hoped that the medical team will provide the anatomical component of the chosen sex while the family will contribute to the psychosocial rearing of the intersexed child.

A very similar approach has been used in approaching hermaphrodite children and adults. The use of laparoscopy allowed the medical physician to classify the gonads of children presenting with ambiguous genitalia. "True hermaphrodites" may have one testis and one ovary that grow separately or the two may be combined in the same organ (ovo-testis). Sometimes one gonad may properly develop and secrete appropriate levels of functional hormone. “Pseudohermaphrodites”, on the other hand, possess either two testes or two ovaries with XY and XX chromosomal make-up respectively. Their external genitalia, however, do not match their chromosomes or gonads. As such, pseudohermaphrodites with testes and XY chromosomes have a vagina and clitoris and will develop breasts at puberty and pseudohermaphrodites with ovaries and XX chromosomes may have a penis and develop facial hair in the future. But regardless of whether the individual is classified as “true” or “pseudo”, the response by clinical medicine is to classify them as male or female. Many children are not told of their condition so as to not to lead to psychological distress, only to be aware of the condition later on in adulthood.

The last condition I will briefly address is androgen-insensitivity syndrome (AIS). The condition was gradually detected when young females presented to their physicians for amenorrhea or cessation of menstruation. With ultrasounds looking for intra-abdominal pathology, extremely feminine-acting and looking women were found to have no ovaries but testes. Glands and other tissue were eventually found to have defective androgen receptors due to a mutation in the protein making it insensitive to testosterone. As such, these individuals have a feminine phenotype yet are chromosomally male and possess testicular gonadal tissue. For all intents and purposes, despite having male genes and gonads, women with AIS are socially and legally considered women.

This brief summary into the clinical approach to disorders of sexual differentiation highlight a few key issues concerning sex and gender in clinical medicine. First, there has always been a great need to determine one’s sex and gender, even so far as using surgical interventions to go straight to an internal source— gonadal tissue. Dreger even describes the years in which such tissue was treated as the only way to assess one's status as either female or male as the "Age of Gonads" (Dreger, 2000). Second, the concept, definition, and classification of sex and gender became more problematic with technological advances. Previously sex and gender were synonymous. Male sex corresponded with having a male gender. Female sex corresponded with having a female gender. Diseases of sexual differentiation such as AIS where male gonadal tissue is present but a female gender is assumed challenge this notion and suggest that sex should be a separate classification from gender. Third, if biological structures dictate sex, which biological substrate do we use: chromosomes, gonadal tissue, appearance of external genitalia, or none of the above? Fourth, a sex and gender binary of male and female continues to dominate the discussion so far. Individuals with intersex conditions have to be one or the other. For example, hermaphrodites were shunned from society, especially if they did not live up to the gender role expected of them. Punishment could even result in death (Fausto-Sterling, 1993). Babies with ambiguous genitalia are to be classified as male or female and, equally important, as soon as possible. Today, a number of hermaphrodites question whether or not they have to choose a gender at all. Many hermaphrodites believe that a separate classification should be made while others feel that one's classification as male or female should be made by the child herself at a later date (Intersex Society of North America 2008).

Intersexual conditions are therefore particularly salient in our discussion concerning TG/TS adolescents because they give a glimpse of how clinical medicine came to realize how one's gender identity did not necessarily coincide with one's biological sex (as determined through chromosomes, gonadal tissue, or external genitalia) and continues to approach individuals who do not fit gender norms. Two key messages need to be emphasized. First, gender is important. Second, one is either female or male and should stay that way.

Gender Trouble

There have been many accounts of deep struggles concerning gender dating as far back as the 19th-century. Harry Benjamin, the famed endocrinologist after whom the criteria for gender transitioning is named, published such cases in medical journals. “Gender dysphoria” was the term used to describe the discomfort felt in the gender role congruent to their anatomical sex and the desire to possess the body of the opposite sex (First, Frances, & Pincus, 2000). In 1953, Hamburger, another endocrinologist, published his work on a patient named Christine Jorgenson, a Danish male-to-female transsexual (Hamburger, 1953). The Jorgenson case could be seen as a vital turning point in TG/TS history because it gave the public an example of how the degree of discontent and discomfort in one’s gender could be so unbearable that it would lead to a person to physically change her gender (Zucker, 2006). Another public figure, Billy Lee Tipton, great American jazz musician and bandleader, was found to be a transsexual after paramedics tried to save him in 1989 (Middlebrook, 1998).

With more persons discovering and identifying their own gender concerns, it did not take too long for clinical medicine to discover GID in children and adolescents. Through life history interviews, numerous TG/TS adults identified their gender dysphoria originating in childhood and worsening in adolescence. Interest in child and adolescent

GID started to increase and has since become a mainstay in the media. In 2007, Oprah Winfrey featured several prepubertal "transgender" children and their families (Winfrey, 2007). A similar show in 2007 featuring both TG/TS children and adolescents was presented by Barbara Walters in a 20/20 special entitled "My Secret Self: A Story of Transgender Children." She later received an award by the Gay & Lesbian Alliance Against Defamation (GLAAD) (Goldberg & Adriano, 2007). Dr. Phil McGraw recently followed suit in 2008 with a show entitled, "Gender-Confused Kids" (McGraw, 2008). Anecdotally, Ms. Winfrey and Ms. Walter's specials have been a recurrent theme in my clinical assessment of adolescents and young adults with gender dysphoria. Many youth have reported that they realized they were transgender after watching either of these two episodes.

Besides public personalities, TG/TS persons have had much exposure in the media on both the small and large screen. They have been featured on multiple medical dramas such as *ER* and *Chicago Hope* (Heath, 2000; McCrane, 2002). Earlier this year in 2009, *Law and Order* featured transgender pubertal adolescents who were using cross-sex hormones (Leto, 2009). In 1999, Hilary Swank won an Oscar for her performance in *Boys Don't Cry* as Brandon Teena, a female-to-male transsexual who was raped and murdered by two friends who had discovered he was an assigned female (Peirce, 1999). *Transamerica*, a movie released in 2006 that features a transsexual woman who meets her long lost son who is a teenage runaway, won the GLAAD Media Aware for Outstanding Film and Felicity Huffman was nominated for an Oscar for best performance by an actress in a leading role (Tucker, 2006).

But perhaps the largest recent influence in raising the visibility of the transgender community for adolescents and younger adults was “Isis”, a MTF transsexual contestant who appeared on Tyra Banks’s reality television show *America’s Next Top Model* in 2008 (Banks, 2008). The presence of a transsexual on the reality television show allowed adolescents and youth to have their own modern-day and urban “Christine Jorgenson”. After meeting with transgender health care providers at a major clinic in New York City during a recent work-related visit, I was told there was an increase in the number of adolescents and younger adults seeking transgender care after her television appearance.[2]

Our fascination around TG/TS adolescents comes from more than just an expectation that a male boy or adolescent remain male. No one would really pay attention to TG/TS adolescents if they did not have the ability to choose from a variety of medical and surgical management options. Greater medical and technological advances have stimulated interest in transgender care and have raised the possibility of the TG/TS adolescent making major life decisions that include both medical and surgical options. In the past, the dysphoria experienced by a TG/TS adolescent could only be conservatively managed. There were simply no alternatives or options. The individual could either conform to gender norms, experiencing much gender dysphoria, or challenge such norms and be excluded from society. The use of estrogen and testosterone, long-used as replacement therapy for a variety of medical conditions including menopause, generally became an option for the induction of female and male characteristics in TG/TS individuals. Advances and refinements in both vaginoplasty and phalloplasty made surgery a feasible and practical option for those wanting more than medical treatment.

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[2] Interestingly enough, many MTF also became upset at her presence on the show as they felt she had taken the opportunity of being the first transsexual supermodel.

Because TG/TS adolescents are not viewed to be developmentally and physically ready for cross-sex hormones and surgery, pediatricians and other specialists began looking for options that could help their gender dysphoria until they reach adulthood. In theory, a hormone-blocker such as Lupron was a potential option. Up to that point, hormone-blockers were primarily used to treat precocious puberty in younger children. It made sense that this medication could be also used to put puberty “on hold” for their older TG/TS adolescent counterparts. As pediatricians and pediatric endocrinologists in the Netherlands and the United States began using hormone-blockers in TG/TS adolescents, greater attention was brought to the care that was now provided to this at-risk group. Decisions now had to be made in determining if and which treatments could be given to adolescents and at what age adolescents could receive such treatment. As a result, physicians and other health care professionals had no choice but to address these new ethical dilemmas.

CHAPTER TWO:
ENCOUNTERING THE TRANSGENDER/TRANSSEXUAL ADOLESCENT

For many TG/TS individuals, gender dysphoria may start early in childhood. They may have had a propensity to have behaviours and interests of the opposite gender as young children (Brill & Pepper, 2008). They may have even stated that they were members of another gender and have gotten upset if not allowed to partake in gender atypical behaviours. As the child gets older, they may stop talking about their gender atypical feelings due to shame and show less behaviours to conform to societal norms. Assigned males who look or behave feminine are frequently teased and bullied by their peers (E. Lombardi, 2001; E. L. Lombardi, Wilchins, Priesing, & Malouf, 2001). Assigned females are usually teased less often for behaving masculine. This can be easily seen by comparing the more acceptable “tom-boy” to “sissy-boy.”

Whether or not such feelings are experienced in childhood or through adolescents, much gender discomfort is especially felt during puberty in adolescence (de Vries, 2006). The growth of breasts and the commencement of menstruation can cause much distress in TG/TS adolescents who were assigned female (Okabe et al., 2008). Facial and body hair may cause similar anguish in TG/TS adolescents who were assigned male. The presentation of such anguish may differ in the adolescent and her unique circumstances. The first encounter between the TG/TS adolescent and clinical medicine may take place for a variety of reasons. Some adolescents may express they are members of another gender and/or have had cross-gender preferences (de Vries, Cohen-Kettenis, & Delemarre-van de Waal, 2006). Such adolescents usually express much disappointment or unhappiness if not allowed to act on these preferences. Pre-pubertal adolescents may eventually stop expressing such sentiments and try to conform to gender roles. Very often assigned males, in particular, with feminine behaviours may be bullied or teased, have poor school performance, seem depressed or have a change in mood. This often leads to the physician exploring biological and psychosocial reasons for such behaviours which would lead to further exploration of the adolescent's gender and sexual identities (Brill & Pepper, 2008). There are other TG/TS adolescents who have already taken steps to express their cross-gender identification and take age-appropriate developmental steps in doing so whereas others may conform to social norms until adulthood (Zucker & Bradley, 1995).

The presence of the diagnosis of GID first appeared in the DSM-III in 1980 as separate diagnoses for Gender Identity Disorder of Childhood and Transsexualism, the former used for children and the latter used for adolescents and adults (American Psychiatric Association, 1980). In the present DSM-IV the two diagnoses have been collapsed into Gender Identity Disorder (American Psychiatric Association, 2000).

DSM-IV-TR **Diagnostic Criteria for Gender Identity Disorder (in Adolescents)**
(American Psychiatric Association, 2000)

A. A strong and persistent cross-gender identification (not merely a desire for any perceived cultural advantages of being the other sex). In adolescents and adults, the disturbance is manifested by symptoms such as a stated desire to be the other sex, desire to live or be treated as the other sex, or the conviction that he or she has the typical feelings and reactions of the other sex.

B. Persistent discomfort with his or her sex or sense of inappropriateness in the gender role of that sex. In adolescents and adults, the disturbance is manifested by symptoms such as preoccupation with getting rid of primary and secondary sex characteristics (e.g., request for hormones, surgery, or other procedures to physically alter sexual characteristics to simulate the other sex) or belief that he or she was born the wrong sex.

C. The disturbance is not concurrent with a physical intersex condition.

D. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Code based on current age:

302.85 Gender Identity Disorder in Adolescents or Adults
Specify if (for sexually mature individuals):
Sexually Attracted to Males
Sexually Attracted to Females
Sexually Attracted to Both
Sexually Attracted to Neither

Using the DSM-IV as can be seen above, there are four criteria in making the diagnosis of GID. Point A criteria includes four indicators of a "strong and persistent cross-gender identification": (1) stated desire to be the other sex, (2) frequent passing as the other sex, (3) desire to live or be treated as the other sex, or (4) the conviction that he or she has the typical feelings of the opposite sex. Point B criteria has two indicators of a "persistent discomfort with his or her sex or sense of appropriateness for the gender role or that sex": (1) preoccupation with getting rid of primary and secondary characteristics or (2) the belief that one was born the wrong sex. For example, assigned females may state the desire to have a penis, masculinize their bodies via cross-sex hormones, and/or have a bilateral mastectomy; others may also indicate the desire for both a hysterectomy and oopherectomy. Assigned males may state the desire to have their penis and testes removed, have the creation of a neovagina and clitoris, feminize their bodies with cross-sex hormones, and/or reduce the size of their Adam's apple.) As can be seen Points C and D assume that the disturbance is not concurrent with a physical intersex condition and the condition causes clinical significant distress or impairment in social, occupational, or other important areas of functioning (American Psychiatric Association, 2000).

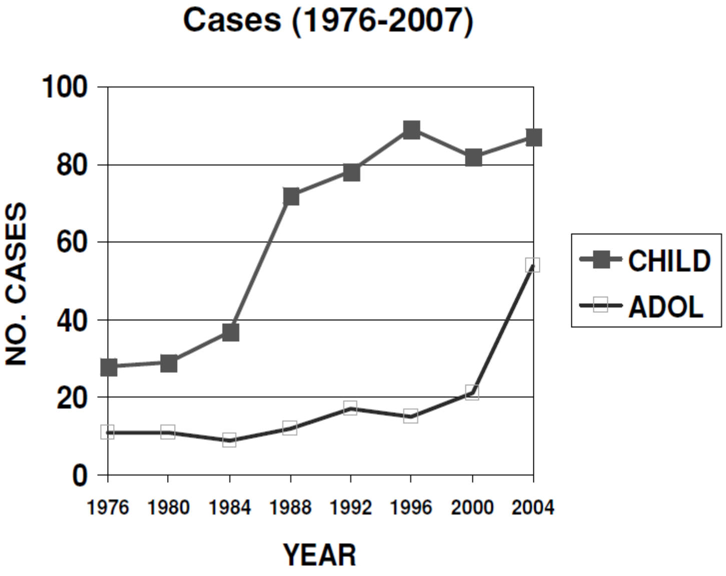
A Growing Number

There is no reliable data for the prevalence of transgender and transsexualism in children and adolescents. The DSM-IV quotes that roughly 1/30,000 assigned adult males and 1/100,000 assigned adult females seek sexual reassignment surgery in the USA. The most reliable estimate is likely from the Amsterdam Gender Dysphoria Clinic which has followed more than 95% of Dutch transsexuals. In their study, van Kesteren found 1/11,000 assigned adult males and 1/30,000 assigned females (Bakker, Van Kesteren, Gooren, & Bezemer, 1993). There are others that suggest that the rates are much higher. Olyslager and Conway suggest that the prevalence is much higher, quoting between 1/1000 and 1/2000 (Olyslager & Conway, 2007). Using more recent incidence data and other methods for estimating prevalence, the authors found that the lower bound on the prevalence of transsexualism was at least 1/500 and possibly higher.

There are no proper epidemiological studies that have been performed to estimate the prevalence of GID in children. That being said, we can assume that the estimates for adults are probably lower than those for children and adolescents as one would expect that not all adults may have attended clinics for hormonal and surgical reassignment. Perhaps one of the best indicators of prevalence in children can be learned from Zucker's study using the Child Behavior Checklist, a parent report behaviour questionnaire, to investigate boys who were not followed in gender clinics. Two items (out of 118 questions) concerned gender identification—"Behaves like the opposite sex" and "Wishes to be of the opposite sex." Ratings used a three point scale from 0=not true, 1=somewhat or sometimes true, and 2=very true or often true. Among non-referred boys from 4-11 years, Zucker et al found that 3.8% received a rating of 1 and 1.0% received a rating of 2 for "Behaves like the opposite sex." Only 1.0% received a rating of 1 and 0.0% received a rating of 2 for the item for "Wishes to be of opposite sex." The comparable percentages for non-referred girls were 8.3%, 2.3%, 2.5%, and 1.0% respectively (Zucker, Bradley, & Sanikhani, 1997).

A similar study was conducted in the Netherlands which found that the percentage of boys and girls who wished to be the opposite sex was quite low ranging from 0.9% and 1.7% (van Beijsterveldt, Hudziak, & Boomsma, 2006). The difficulty with such studies is that they do not properly assess for true cross-gender behaviour. The majority of prepubertal children attending a gender clinic are biologically male. This is thought to be due to lower acceptability of boys displaying cross-gender behaviour. For many, being a "sissy boy" is more negative than being a "tom-boy" (Bradley & Zucker, 1997; Cohen-Kettenis & Pfafflin, 2003).

Figure 2.



Number of cases assessed between 1976 and 2007 (blocked at 4-year intervals) as a function of age group (children vs. adolescents)

At the present time there are no reliable statistics for the prevalence of TG/TS adolescents. A recent commentary from Dr. Kenneth Zucker, psychologist-in-chief at the

Centre for Addiction and Mental Health and one of the world's leading experts in GID in children and adolescents, reports a greater number of adolescent referrals to their Gender identity clinic as seen in Figure 2. While the number of referrals for GID in children seems to have reached a plateau, the number of referrals for GID in adolescents has increased dramatically since 2000 (Zucker et al., 2008). Zucker does not have a firm answer on why there seems to be an increase but feels likely contributors include greater attention in the media to transgender issues that may provoke parents to seek the help of mental health professionals, an environment where more adolescents feeling comfortable in "coming out" as transgender, and an increase in the number of Internet sites and chat rooms concerning GID and gender issues and concerns that help youth with their own gender struggles.

Approaches to the Transgender Adolescent

The approach and management of children and adolescents expressing gender variant behaviour and who may be TG/TS is controversial. A recent feature in NPR contrasted the vastly different approaches to a child presenting with gender atypical behaviour (Spiegel 2008). The feature highlights that some parents seeking advice from medical professionals are told to force their children to express gender behaviours congruent with their biological or phenotypic sex. They are taught by distressed family members to abandon their gender variant behaviour (Mallon 1998). Boys are told to not play with dolls and girls are told to not participate in masculine sports such as football and soccer. They remind their children and themselves, that such gender variant behaviour is only a "phase" and will soon pass. This approach is controversial, especially to proponents who say that such an approach is destructive to the child's sense of self and well-being.

On the other hand, there are parents who are told to encourage their children to discover their own gender identity. Boys are free to dress in girl's clothes and vice versa without fear of being disciplined. These parents believe that, as young adults, they will be able to find their "true" gender identity. This gender identity may or may not be congruent with their assigned gender. This nurturing approach is criticized by those who suggest that parents are causing more confusion and that such behaviours may be incorrectly attributed to GID when they are, in fact, suggestive of other diagnoses such as homosexuality.

The situation is more tenuous as the TG/TS adolescent's issues may manifest in a multitude of ways. They may be withdrawn, possibly resembling depression, whereas others may act out (Brill & Pepper, 2008; Zucker & Cohen-Kettenis, 2008; Zucker 2006). In such situations it may be difficult to distinguish between normal adolescent behaviour and concerns regarding one's gender or sexuality. Anger and resentment may occur if the TG/TS adolescent expresses her cross-gender identification to her parents or chooses to take on an atypical gender role. Some TG/TS adolescents have very supportive parents who are accepting but there is usually an initial shock or discomfort. Parents are often unaware of their child's gender issues, frequently thinking that their adolescent has issues concerning sexual identity. Many parents often think their adolescent will identify themselves as homosexual rather than as transgender (Bockting & Goldberg 2007). From speaking with a number of parents of my TG/TS adolescent patients, many parents would find homosexuality much easier to accept than transgender/transsexuality.

Under ideal circumstances the TG/TS adolescent is frequently referred to a specialist in gender issues by herself, her family, or her teacher. The TG/TS adolescent, working with her physician, may discuss the various approaches to GID. Such approaches are varied at best. Some health care professionals are uncomfortable working with TG/TS adolescents and issues concerning gender. From my experience, they may not adequately address such issues because of personal reasons, usually religious, or lack of knowledge. Such issues will be discussed further below. Most health care professionals will attempt to provide appropriate TG/TS care, almost always having some sort of psychotherapy involved in addition to approaches that may be used to express her true gender identity such as change of dress, hormone-blockers, cross-sex hormones, and/or surgery (Edgerton 1984).

Table 1. Management Approaches to the TG/TS adolescent

Conservative
• No psychotherapy • Psychotherapy • Change in dress, behaviour, voice, and/or name
Medical
• Hormone-blockers • Cross-sex hormones
Procedural / Surgical- Female to Male
• Mastectomy • Hysterectomy +/- oopherectomy • Vaginoplasty
Procedural / Surgical- Male to Female
• Electrolysis • Facial plastic surgery • Phalloplasty

There are numerous approaches to managing the gender dysphoria of the TG/TS adolescent. These range from conservative to medical to surgical management as indicated in Figure 3. Conservative management assumes no medications or surgical interventions and is therefore less invasive. Psychotherapy and counseling accomplishes the tasks of clarifying and confirming cross-gender identification and dysphoria, learning strategies of “coming out” (if needed), and acknowledging other medical and non-medical issues that may be affecting her psycho-social wellness and well-being. Other conservative measures for transitioning from their assigned gender would include change of name, dress, and/or behaviour that is more gender typical. Usually this may include a name change at home or school with some adolescents asking their parents to “rename” their child with a new gender typical name. The TG/TS adolescent may behave and use more gender typical mannerisms. I wish to highlight, however, that there are some TG/TS adolescents who do not identify with any gender, referring to themselves as *gender queer* or *queer radical.* They may also not take on any typical gender by combining both typical female and male gender roles. The lay public would likely classify such adolescents as “androgynous.”

Medical management includes the use of hormone-blockers. Hormone-blockers are typically started before the age of sixteen years provided that hormonal puberty had started and had progressed past the initial stages of puberty. Such medical management will be explained further in our discussion but, quite briefly, other criteria generally used by many gender clinics would also include: (1) a presence of gender dysphoria from early childhood, (2) an increase in gender dysphoria once after the first pubertal changes, (3) an absence of psychiatric comorbidity that interferes with the diagnostic work-up and treatment, (4) adequate psychological and social support during treatment, and (5) a demonstration of knowledge and understanding of the effects of hormone-blockers.

When the TG/TS adolescent is able to give consent or reaches the age of majority she may choose to start cross-sex hormones such as estrogen or testosterone.

Surgical management for females-to-males (FTM) would include mastectomy, hysterecomy with or without oopherectomy, or phallosplasty. Again, there are many FTMs do not opt for surgical management. Surgical management for male-to-females (MTF) includes vaginoplasty. Other surgical interventions include electrolysis or hair removal and facial plastic surgery for reshaping of the Adam's apple and jaw line (Bockting, McGee, & Goldberg, 2007).

Most physicians would begin with conservative approaches and gradually include medical approaches as needed. Psychotherapy, in addition to addressing gender dysphoria, would have the dual purpose of determining the appropriateness of hormone-blockers in addition to surgical management. The latter would be extremely unlikely before the age of eighteen years. Drawing from my own clinical experience, there is no doubt that many physicians prefer conservative strategies concerning the TG/TS adolescent. There are only a handful of pediatricians and pediatric endocrinologists who are willing to treat TG/TS adolescents, the majority of whom practice only in major urban centers such as Vancouver, Toronto, Los Angeles, New York City, and Boston. While I agree that the main benefit of conservative management is its "reversible" nature, one also has to look at the concurrent harms that also take place if only conservative management is used. The harms and benefits of hormone-blocker therapy and not using hormone-blocker therapy will be discussed after exploring the patient-physician framework in which they are or are not prescribed.

CHAPTER THREE:
PATIENT & PHYSICIAN DECISION-MAKING

One of the key difficulties frequently shared in accessing appropriate TG/TS care is the establishment of the patient-physician relationship. Only once such a relationship has been developed can both the patient and physician decide what treatment and management should be undertaken. It makes sense that we try to understand the patient-physician relationship and the qualities that allow us to make such decisions. Emanuel and Emanuel, two physician-bioethicists, developed various models of the patient-physician relationship that are helpful for such an analysis. These models are classified by (1) the goals of the physician-patient interaction, (2) the physician's obligations, (3) the role of patient values, and (4) the conception of patient autonomy (Emanuel & Emanuel, 1992). These models provide us with insight into how specific questions are formulated and how important health care decisions are made. Differences in the degree of the presence of these four core areas result in the various models. I propose that using the criteria for the most ideal patient-physician relationship will help us determine whether the patient and physician have a therapeutic relationship that allows the patient and physician to approach and make important ethical decisions. For the purposes of this discussion, this would include the question of whether or not to prescribe hormone-blockers. But before we delve into such matters a better understanding of their patient-physician models is necessary.

According to Emanuel and Emanuel, the *paternalistic model* asserts the physician decides the best course of treatment and delivers this information to the patient as a guardian-type figure. This model assumes that the values and other core concepts are in concordance with the physician and her recommendation. In the *informative model* the physician conveys medical knowledge so that the patient can select a particular treatment the patient feels is most appropriate. Autonomy is preserved but the importance of the patient’s values is diminished. In the *interpretive model* the physician clarifies the patient’s values and, using such information, the patient chooses the best treatment. In doing so, the physician does not impose her thoughts or feelings. Lastly, the *deliberative model* results in the physician transmitting information regarding the patient’s clinical situation and then aids the patient in determining which health-related values are present in the various options of care. Physician and patient then deliberate as to the merits and importance of these health-related values. The physician outlines what she conceives would be the best option using moral persuasion. As per Doukas, articulation of a patient’s values by a physician can remove physical, cognitive, psychological, and social constraints in the decision-making process (Doukas & McCullough, 1991, Doukas 1992, Doukas et al., 1992). By outlining and deliberating these values, moral self-development occurs, manifesting in patient autonomy.

In outlining these different patient-physician models one can see that no one model is the ideal. Different scenarios require different patient-physician relationships. For example, the paternalistic model is likely more effective in an emergency than the interpretive model. The emergency room requires the physician to make decisions quickly and competently. Time would be wasted if a physician were to ask a semi-unconscious patient questions regarding her values. Such an action would be futile and compromise care. Under non-emergent conditions, however, such a paternalistic approach is denounced and would even be considered unethical (Emanuel and Emanuel 1992).

It is posited by many, including Emanuel and Emanuel themselves, that the deliberative model is the ideal relationship for making health care decisions between the patient and her physician. In my interpretation of the deliberative model, there is a dynamic exchange between the patient and physician that acknowledges both the values of the patient and physician. Although the autonomy of the patient is paramount, we should be reminded that such a decision ultimately comes from this exchange between patient and physician. Deconstructing the deliberative model, I summarize my interpretation of the key criteria of this model:

(1) The physician has adequate clinical knowledge concerning the patient's clinical situation
(2) The physician has the ability to understand and appreciate the health-related values of the patient
(3) The patient's autonomy is respected by allowing the patient to critically assess her own values and preferences

In the following sections I will address each of these three key criteria concerning the TG/TS adolescent and the use of hormone-blocker therapy. In doing so we are able to better understand the ethical dilemma faced by the TG/TS adolescent and her healthcare provider concerning if and when a TG/TS adolescent can commence hormone-blocker therapy. Criterion one and two are inherently related to clinical medicine whereas the third is associated with ethics and the law. I will address the first key criterion by investigating the harms and benefits of both prescribing and not prescribing hormone-blocker therapy. I will address the second criterion by exploring how clinical medicine categorizes GID and adolescent identity and behaviour. I will use the last criterion to investigate the autonomy and rights of the adolescent. If the physician and patient are able to fulfill all three criteria then a proper assessment concerning the ethical permissibility of hormone-blocker therapy can be made.

CRITERION NUMBER ONE:
The physician has adequate clinical knowledge concerning the patient's clinical situation

Clinical Knowledge

GID is naturally a controversial topic for discussion for many reasons. From a societal point of view, there is much transphobia or fear and resentment towards TG/TS individuals (Namaste 2000). In managing GID, conservative measures that are non-medical and non-surgical are often ineffective. Psychological management is not particularly successful in changing gender identity once it is consolidated which seems to be fixed in most individuals after puberty. Changing the body to match the preferred gender is often therefore the only management choice for adults with much gender dysphoria (Zucker, 2006).

The management of adolescents who persist with cross-gender identification and identity as TG/TS with GID has caused, not surprisingly, much controversy within clinical medicine. Although it is generally agreed that adults are able to make major life decisions, there is much reservation and concern when an adolescent wishes to do so. As stated above, the outcome for children is far more variable than for adults. Gender dysphoria in children may spontaneously resolve and disappear or another diagnosis may be made such as homosexuality. This fact is salient in that many may feel, and possibly rightly so, that the adolescent may simply change her opinion later on in the future. Pediatricians, pediatric endocrinologists, and pediatric psychiatrists, therefore, continue to debate the merits of if, when, and how a TG/TS adolescent should begin to transition. Just as there are many dissenting opinions on this matter, there are an equal number of pediatric clinics that address such transgender issues in many ways. The most controversial topic within this group, outside of cross-sex hormone therapy and surgical reassignment, is the commencement of hormone-blockers in TG/TS adolescents.

Because of the above-explained developmental variability, there is much clinical consensus that pre-pubertal children with GID should not be offered any medical treatment such as medications (hormone blockers and cross-sex hormones) and gender reassignment. Because of the irreversibility of surgical reassignment, most medical professionals would not consider such surgery before the age of eighteen years. Having an arbitrary age of eighteen years is also quite controversial as achieving an age limit does not necessarily translate into having the capacity to understand the harms and benefits of surgical sexual reassignment. This particular aspect will be discussed later in the section concerning who should be able to make such decisions.

In terms of hormone-blocker treatment, there are currently three different approaches to transgender care (de Vries, Cohen-Kettenis, & Delemarre-van de Waal, 2006):

> **<u>Approach #1</u>**
> **No physical treatment, including hormones, should be given before adulthood. In most cases adulthood is defined at eighteen years of age. Under this view, the adolescent should experience all physical puberty stages and fully experience their adult physical characteristics. Only under such circumstances can the adolescent fully appreciate their gender identity and be capable of deciding any physical treatment.**
>
> **<u>Approach #2</u>**
> **Adolescents should experience puberty to at least Tanner Stage 4 or 5 (typically 15-16 years of age). In conjunction with reaching Stage 4, the adolescent would also have had a strong cross-gender identity from an early age, psychologically stable, and live in a supportive environment. Hormone-blockers would then be given to prevent further pubertal physical development. Depending on the medical professional, cross-sex hormones could be given soon after or at the age of eighteen years. Studies performed in the Netherlands have found positive results with such a policy—gender dysphoric feelings disappeared, psychological status improved, and, most importantly, no regret was made regarding the assignment.**
>
> **<u>Approach #3</u>**

> **Adolescents may be eligible for hormonal suppression of puberty after Tanner Stage 2 or 3 (typically 12-13 years of age). In addition to having a strong cross-gender identity from an early age, are psychologically stable, and live in supportive environment.**

With approaches two and three, the adolescent continues hormone-blockers until eighteen years of age. If the adolescent decides to stay with her assigned gender the hormone blockers are stopped and puberty continues as usual. If the adolescent wishes to transition from the adolescent's assigned gender, the adolescent can take cross-hormone therapy such as estrogen or testosterone that will be needed for the rest of her life. Once one decides to start hormone-blockers the next question is when. The main difference between Approach #2 and Approach #3 is the age at which one starts hormone-blocker therapy. When physicians started prescribing hormone-blocker therapy for TG/TS patients, it was initially at later ages such as fifteen or sixteen years. As physicians became more comfortable with their prescription, younger TG/TS adolescents started to present with similar concerns (de Vries, Cohen-Kettenis, & Delemarre-van de Waal, 2006). The next question faced by adolescent transgender care providers gradually transformed from "if" to "when" would you recommend hormone-blocker therapy. This is best captured by Dr. Kenneth Zucker who, at a recent grand rounds, stated that the controversy around TG/TS adolescents and hormone-blockers has resulted in the question— "How low do you go?" (Zucker 2010).

The health supervision of TG/TS adolescents concerning hormone-blocker therapy has been best documented by Dr. Cohen-Kettenis and her colleagues in the Netherlands. The first phase of assessment for GID consists of interviews with the adolescent and her parents. The interviews explore the general health and gender development of the adolescent, the way the family has dealt with the adolescent's gender identity, and the family backgrounds of the parents. Sexuality, screening for co-morbid disorders, and past and current social problems are also addressed. A psychodiagnostic assessment is also performed with specific measures for body image and gender dysphoria. If GID is felt to be the primary diagnosis, the adolescent begins the second diagnostic phase. To qualify, the TG/TS adolescent must have had lifelong and extreme gender dysphoria with such dysphoria increasing during puberty. Moreover, the clinic requires that the TG/TS adolescent is psychologically stable and have a supportive family.

This second phase involves the start of the “real-life experience” that is supported by hormone-blockers. Real-life-experience requires the TG/TS adolescent live full-time in the desired gender role. The speed of transition is dependent on the individual. There are some that may wish to pass as the desired gender right away thereby experiencing the advantages and disadvantages of another gender all at once whereas others are more cautious and may choose to only express certain stereotypical gender roles and behaviours in certain environments. Living in the preferred gender is also complemented by hormone-blocker therapy. As reported above, the Danish team headed by Dr. Cohen-Kettenis has currently shifted their practice from Approach #2 to Approach #3, thereby starting hormone-blockers at a younger age. Of note, as per the Harry Benjamin Standards of Care Criteria, once a TG/TS adult has had real-life experience in the desired gender they may be eligible for consideration for surgical management (World Professional Association for Transgender Health 2001).

It should be stressed that, despite the fact that many TG/TS adolescents wish to have gender reassignment, this is not always the case. Not every TG/TS adolescent will ask for hormone-blocker or cross-sex hormone therapy. One fourteen year old FTM presented to me with a variety of medical problems which I assumed was secondary to gender dysphoria. He turned to me during one follow-up visit and said that being TG/TS was the “last of my worries” and that he wanted me to focus on his non-gender problems first. In his case there was an ambivalence to gender reassignment and felt his initial desire for gender reassignment was due to peer pressure to “fit in” with his FTM peers. Others may express a strong desire for gender reassignment but may simply change their minds. They may opt for purely non-medical and non-surgical strategies such as change in name and/or dress. As stated above, there are some adolescents who neither assume the female nor male gender. For example, I had one patient who took the minimal amount of testosterone to lose her menstrual periods and have minimal facial hair. Some adolescents may confuse gender with sexuality while a smaller number may have a co-existing medical condition that may lead to gender dysphoria.

Benefits and Harms of Prescribing Hormone-Blocker Therapy

Hormone-blockers are medications that decrease the amount of pubertizing hormone or block hormone receptors so that pubertizing hormones cannot attach and affect certain glands and tissue. The end result is the suppression or delay of puberty. The two most frequently utilized hormone-blockers are gonadotrophin-releasing hormone (GnRH) antagonists and androgen antagonists.

GnRH antagonists competitively and irreversibly bind to GnRH receptors in the pituitary gland, blocking the release of luteinizing hormone (LH) and follicle-stimulating hormone (FSH) from the pituitary. These two hormones are needed for a hormonal cascade that results in the production of various amounts of estrogen and testosterone. In men, the reduction in LH subsequently leads to rapid suppression of testosterone release from the testes and in women it leads to suppression of estrogen release from the ovaries. GnRH antagonists are therefore used in a variety of clinical conditions such as prostate cancer, fertility treatment, hormone-sensitive breast cancers, and other disorders such as endometriosis and uterine fibroids. GnRH antagonists have an immediate onset of action, rapidly reducing sex hormone levels.

Spironolactone is a synthetic steroid that prevents aldoesterone, a hormone that acts on the kidney, from attaching to aldosterone receptors. This results in its main use as a diuretic. In addition, Spironolactone has anti-androgen activity by binding to androgen receptors thereby reducing the production of testosterone. Because of these two pharmaceutical properties, it is readily used for a variety of clinical conditions such as heart failure, ascites in patients with liver disease, and certain types of hypertension. Anti-androgen effects make it especially useful for hair loss and acne in women, and can be used topically to treat male baldness in addition to its use as a hormone-blocker.

Table 2. Benefits and Harms of Approaches to the TG/TS Adolescent

	No intervention	***Psychotherapy***	***Hormone-Blockers***	***Cross-sex Hormones***
Benefits	• No side effects secondary to medications • “Natural” puberty • Decreases misdiagnosis	• No side effects secondary to medications • “Natural” puberty • Decreases misdiagnosis	• Reversible • Free of stress secondary to secondary sexual characteristics • Diagnostic tool for GID • Better outcomes in adulthood	• Faster transition
Harms	• No management of gender dysphoria	• Secondary characteristics of puberty still present • Poorer transition in adulthood	• Hyperkalemia • Lower bone density	• Irreversible • Cardiovascular effects • Liver dysfunction

There are several advantages for adolescents with GID receiving hormone-blockers. First, hormone-blockers often provide immediate psychological relief. The TG/TS adolescent is free from the psychological distress brought on by secondary sexual characteristics. For example, hormone-blockers will block menstrual periods that are often the cause of much distress for FTM TG/TS adolescents (Okabe et al., 2008). As will be explained later, such changes during adolescence may lead to extreme gender dysphoria that may manifest into psychological problems that include depression, suicidality, anorexia, or social phobias (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008). These co-morbidities may affect the adolescent's intellectual, psychological, and social development.

Second, delaying puberty gives the adolescent more time to find and identify her gender without the stress of biological pubertal changes. In doing so, the adolescent, with the help of her physician or other health professionals, can come to reflect and appreciate whether or not she identifies with her assigned gender and allow her to focus on psychotherapy. This ultimately allows other diagnoses to be ruled out thus increasing the certainty of the GID diagnosis (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008).

Third, hormone-blockers can be seen as a diagnostic tool. A decrease in gender dysphoria after the commencement of hormone-blockers is therefore in keeping with the diagnosis of GID. This can be a reassurance to both the patient and her physician that her psychological concerns are due to gender dysphoria.

Fourth, the ultimate goal of the TG/TS persons is to "pass" or to not be perceived as their assigned gender (Bockting, McGee, & Goldberg, 2007). Postoperative psychopathology in TG/TS adults was primarily associated with physical factors that made it difficult for postoperative transsexuals to “pass” as their new gender or that reminded them of their previous assigned gender (Ross & Need, 1989). If hormone-blockers are used early enough to block puberty and cross-sex hormones (either estrogen or testosterone) are used immediately afterwards, the TG/TS individual has a much higher chance of “passing”. For example, many MTF TG/TS adults have difficulty passing as women because of stereotypical masculine features such as a wider muscular build, Adam’s apple, and deep voice. If anti-androgens are prescribed during puberty, the amount and degree of these secondary sexual characteristics is much less. The importance of “passing” must be underscored as the ability to be perceived by a gender other than their assigned gender can compromise the safety of TG/TS adolescent by making them easy targets for violence, even more so in adulthood.

Fifth, the TG/TS adolescent has a greater chance of reducing the number and invasiveness of future surgeries with the commencement of estrogen and progesterone after early use of hormone-blockers. Some studies have found that unfavourable postoperative outcome was related to later than earlier start of the sexual reassignment (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008). For example, the amount of breast reduction and maxillo-facial surgery is decreased in FTMs and MTFs respectively who have medically transitioned earlier. Thus, there is a much higher likelihood of resembling the preferred gender and a decrease in the number and invasiveness of surgeries in the future (if surgical intervention is so desired) if hormone-blockers are started earlier.

Hormone-blocker therapy is not without harm. As with all hormonal therapies, GnRH antagonists are commonly associated with hormonal side effects such as hot flushes, headache, nausea and weight gain. When used in fertility treatment they can also be associated with abdominal pain and ovarian hyperstimulation. Subcutaneously administered agents are also associated with injection-site reactions. Spironolactone is associated with an increased risk of bleeding from the stomach and duodenum. When taken as an anti-androgen, possible side effects noted in MTFs were elevated levels of potassium, renal insufficiency, hypotension, and rash (Futterweit, 1998; Prior, Vigna, & Watson, 1989). Hormone-blockers may theoretically lower the peak bone mass achieved and there is also a possibility of body segment disproportion. A Dutch study did suggest that some TG/TS adolescents did have initial slowing in bone maturation (Delemarre van de Waal 2006). There was, however, significant catch up in bone maturation once cross-sex steroid hormone treatment was started.

In addition to the known harms of hormone-blockers, many physicians oppose hormone-blockers in TG/TS adolescents because of the paucity of information regarding their use and effect. Perhaps the greatest objection to hormone-blockers comes from the lack of knowledge concerning their long-term effect on the adolescent brain and development. Unfortunately, because the use of hormone-blockers in TG/TS adolescents is a relatively new management, long-term efficacy and safety studies have not been performed. As noted by Cohen-Kettenis, however, clinically-speaking there have been no effects on social, emotional, and school functional (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008).

Of course, the most feared concern after providing hormone-therapy or other TG/TS interventions is that the adolescent may change her mind later on in the future and regret taking hormone-blockers (Bodlund & Kullgren, 1996). Even though hormone-blockers are “reversible” biologically, the TG/TS adolescent may have made other major life changes and decisions. Whereas many TG/TS adolescents may view hormone-blockers as a means to put puberty on hold and serve as a diagnostic tool for GID, other TG/TS adolescents may view hormone-blockers as a precursor to transition and gender reassignment. This latter view is emphasized by the Dutch protocol that suggests real-life experience at the same time as hormone-blocker therapy. Such adolescents may therefore commence gender typical behaviour and dress quickly once hormone-blockers are started. This may place the TG/TS adolescent at risk for discrimination and harm from her peers, family, and friends.

There are individuals who object to hormone-blocker therapy on religious grounds. They quote the chapters of *Corinthians* and *Genesis* in the Holy Bible, emphasizing that humans are made in God’s image and therefore the body is a holy temple that should not be touched or modified (Zondervan New International Version Study Bible, 2002). To change one’s physical body is therefore disrespectful as it would suggest that God’s image is imperfect. Moreover, many TG/TS individuals may lose their reproductive ability through medications or surgery. To not procreate and have sexual relations without the intent of procreating to this group of individuals, which is seen as a religious obligation, is seen as sinful.

There have only been a handful of studies addressing biomedical interventions in adults and even fewer in adolescents. In a Dutch study, Cohen-Kettenis and van Goozen studied thirty-three adolescents presenting with gender dysphoria (Cohen-Kettenis & van Goozen, 1997). Twenty-two consecutive adolescent transsexual patients who were recommended for sexual reassignment surgery were initially assessed with a baseline mean age of 17.5 years. Twelve of the twenty-two had been prescribed some form of hormone treatment consisting of hormone-blockers with or without subsequent cross-sex hormone therapy between sixteen and eighteen years of age. Three of the thirty-three adolescents were diagnosed with GID but had severe psychopathology and/or adverse social conditions and were therefore not recommended to transition. The remaining eight adolescents were not diagnosed with GID and were not recommended to transition.

The twenty-two adolescents were interviewed pre- and post-operatively by an independent psychologist and filled out a questionnaires concerning their psychological, social, and sexual functioning. Post-operative assessments were conducted at least one year after the sexual reassignment procedure with a mean of 2.6 years and were compared to pre-operative assessments. The adolescents all scored in the normal range with respect to a number of different psychological measures such as increased extrovesion and decreased feelings of inadequacy. About 21% of the adolescents were unemployed and not in school. More importantly, all of the nineteen adolescents who agreed to participate in the follow-up assessment were no longer experienced gender dysphoria and none of the nineteen adolescents regretted sexual reassignment. Cohen-Kettenis and van Goozen therefore concluded that starting sex reassignment before adulthood results in favorable postoperative functioning, provided that “careful diagnosis takes place in a specialized gender team and that the criteria for starting the procedure early are stringent” (Cohen-Kettenis & van Goozen, 1997).

Another cohort of Dutch adolescents was also examined by Smith, van Goozen, and Cohen-Kettenis (Smith, van Goozen, & Cohen-Kettenis, 2001). A prospective follow-up study was done with twenty adolescents with GID who were treated with hormone-therapy and subsequent sexual reassignment. They were compared to twenty-one non-treated adolescents and six delayed-treatment adolescents. Similar assessments were conducted as above into the psychological, social, and sexual functioning of the adolescent patients. There was no data on seven of the twenty-one non-treated adolescents. The mean age of the treated group was 16.6 years at baseline and 21.0 years at follow-up. Of the twenty treated adolescents, ten patients had started on hormone-blocker therapy and/or cross-sex hormone therapy. The mean age of the non-treated group was 17.3 years at baseline and was 21.6 years at follow-up.

Comparing data from baseline and follow-up, the twenty treated adolescents were no longer gender-dysphoric. None of the adolescents regretted the decision to undergo sex reassignment and, as per the authors, all were psychologically and socially functioning quite well. Of the fourteen non-treated patients, only one patient was found to have seriously regretted not having sex reassignment. It should be noted that the degree of gender dysphoria also decreased in the non-treated group although they also had higher scores at baseline. As above, the authors conclude that strict criteria are needed to correctly diagnose TG/TS adolescents and only when such a careful diagnosis is made can the physician justify hormone treatment in TG/TS adolescents. Moreover, the Dutch team states that even though non-treated adolescents may actually have gender identity disorder, higher levels of psychopathology require prudent decision-making on part of the physician of whether or not to commence hormone-blocker and cross-sex hormone treatment. One study that included both adolescent and adult subjects taking hormone-blockers and/or cross-sex hormones found similar results as above with TG/TS individuals treated with medical therapy no longer experiencing gender dysphoria. The vast majority functioned quite well psychologically, socially and sexually (Smith et al., 2005).

Although these first two studies including hormone-blockers have shown favourable results with hormone-blocker therapy in TG/TS adolescents, one has to be cautious. Even though they utilized an independent psychologist, both studies were authored by the same team of transgender care providers. The sample size of TG/TS adolescents investigated was extremely small with forty-two adolescents in total. These were compared to a total of twenty-two control adolescents making true comparisons between the two groups both challenging and problematic. In addition to methodological flaws, such studies have only investigated psychological and behavioural measures. Long-term direct medical effects secondary to hormone-blocker use have not been defined and addressed.

Benefits and Harms of Not Prescribing Hormone-Blocker Therapy

The main reason cited for opposing hormone-blocker therapy is the interference of these medications in the normal gender development of the adolescent. From a developmental standpoint, there are those who feel that depriving the adolescent of puberty is unjust, taking away a process that should be guided by the effect of endogenous or naturally produced hormones. They point out that going through such a stage allows the adolescent to either re-affirm or negate their gender identity “naturally” as opposed to using “medical” means. Letting puberty follow its typical trajectory may also be seen as a “diagnostic tool” to diagnosing GID. As stated above, there may be a few adolescents who may view hormone-blockers as a start to transitioning as opposed to simply a diagnostic tool in making the diagnosis of gender dysphoria and GID. Those who start transitioning without gaining proper knowledge and support may have their safety compromised if it is done too early, quickly, and without proper guidance.

Other opponents of hormone-blocker therapy suggest the focus with adolescents with gender dysphoria should be placed on how to use strategies to adapt and not physically change their bodies in regards to their gender dysphoria. Those who hold this view feel that the real world will require them to develop strategies to handle a transphobic society. Adolescents need to appreciate how to handle sentiments now as they will likely face them in the future as adults.

At the same time, not using hormone-blocker therapy in adolescent may result in ongoing, and perhaps worsening, gender dysphoria. During such time the adolescent may develop other co-morbid conditions such as depression and anxiety and participate in at-risk behaviours such as drug and alcohol use. Note that TG/TS adolescents do not show more psychopathology than other adolescents (Cohen et al. 1997, Cohen-Kettenis & Van Goozen, 1997). This behooves us to appreciate the multiple aspects of the TG/TS adolescent’s environment that shape her health and well-being and that may lead to maladaptive behaviours.

I believe the best source in truly understanding the TG/TS adolescent’s social environment comes from the First National Climate Survey on Homophobia and Transphobia in Canadian Schools (Égale Canada, 2009). The survey administered on-line and in four school boards was developed by the University of Winnipeg and Égale Canada to document the experience of high school students about homophobia and transphobia in Canadian schools. The results are based on more than 1700 responses from high school students across Canada. Although the survey is still on-going, preliminary data was released in 2009 concerning the school environment of the TG/TS adolescent.

The survey found eighty-seven percent of transgender students felt unsafe in at least one place at school such as change rooms, washrooms, and hallways. Ninety percent of transgender students were verbally harassed because of their expression of gender and close to forty percent of transgender students reported being physically harassed due to their expression of gender. Such harassment at school has had negative impacts on such transgender adolescents. More than nine-five percent of transgender students felt unsafe at school compared to only twenty percent of straight students. Almost half of transgender students skipped school because they felt they were unsafe compared to less than ten percent of non-LGBTQ students. Alarmingly, more than thirty percent of transgender students agreed that they sometimes feel very depressed about their school and that they do not belong there.

The inclusion of this survey in this discussion is not to state that hormone-blockers will increase school safety or reduce transphobia but to illustrate why TG/TS adolescents are a highly vulnerable group and are predisposed to taking part in risky and maladaptive behaviours. The findings from the Canadian study are similar to a study in New York City which found that more than half of transgender adolescents contemplated suicide (Grossman, D'Augelli, Grossman, & D'Augelli, 2006, 2007). These TG/TS adolescents were more likely to experience verbal and physical harassment by their school peers and teachers and less likely to pursue any post-secondary education. We should also note that such problems do not only occur in the school environment. The New York study found that TG/TS adolescents reported greater relationship difficulties with their parent or guardian, have higher rates of homelessness, and face frequent employment discrimination (DiCeglie, Freeman, McPherson, & Richardson, 2002; Kosciw & Diaz, 2006; Minter & Daley, 2003; New York City Association of Homelessness and Street-Involved Youth Organization, 2004).

Although many TG/TS adolescents are resilient in adapting to their negative psycho-social environments, the main and very realistic concern of many physicians is that some TG/TS adolescents may medically manage their gender dysphoria without proper health supervision. If hormone-blockers are not offered or are denied by their physician, TG/TS adolescents will opt for and improperly use cross-sex hormones such as estrogen and testosterone. This can affect their pubertal growth and lead to harmful medical conditions. Concentrations of hormones such as testosterone and estrogen balance the vertical growth of an adolescent. Taking too much cross-sex hormones can prematurely close growth plates leading to stunted heights. Improperly used and abused cross-sex hormones may result in serious health problems. Both cross-sex hormones are metabolized in the liver and may lead to hepatic dysfunction and dyslipidemias. Non-medically managed hormone therapy puts them at risk of Type II Diabetes in addition to cardiac ischemia and stroke because of higher incidences of venous thromboembolism (Feldman & Goldberg, 2006). As such, medical surveillance is very much needed when one is taking cross-sex hormones.

Cross-sex hormones may be improperly accessed, either stolen or bought through the internet (De Gascun, Kelly, Salter, Lucey, & O'Shea, 2006). The content of such medications is questionable when accessed through unregulated means. Vials or pills packaged as hormone-blockers may contain no hormone-blocker or, worse, other substances. There are also numerous medical complications indirectly related to cross-sex hormones. For example, TG/TS may share contaminated needles and put others at risk for HIV and other blood-borne infections. Such risk is augmented further with certain at-risk behaviors such as exchanging money for sex to buy hormones (Clements-Nolle, Marx, Guzman, & Katz, 2001; Edwards, Fisher, & Reynolds, 2007). Many TG/TS have lower level of AIDS knowledge and may not be appropriately tested (Kenagy, 2002; Nemoto et al., 2006). Lastly, TG/TS may participate in at-risk behaviours such as improper injection of silicone and genital self-mutilation leading to both morbidity and death (Baltieri, de Andrade, Baltieri, & de Andrade, 2005; Clark, Cantrell, Pacal, Chen, & Betten, 2008; Russell et al., 2005).

As can be seen there are multiple factors that come into play concerning the benefits and harms of hormone-blocker therapy and not prescribing hormone-blocker therapy. The disagreement between those who prescribe and do not prescribe hormone-blocker therapy may be based on the particular framework being used. Opposition to hormone-blocker therapy has focused mostly on the particular patient—her biological and psychological development. Whereas those advocating for hormone-blockers seem to use another framework involving the larger picture which includes the TG/TS adolescent and her environment including her peers, friends, and family. A further investigation of how we balance these two frameworks into making a decision concerning hormone-blockers will take place after we finish the other two criteria of the deliberative model.

CRITERION NUMBER TWO:
The physician has the ability to understand and appreciate the health-related values of the patient

Armed with current knowledge concerning the latest research and outcomes of TG/TS patients, the physician has to ultimately look at the needs of and care for the TG/TS adolescent. In doing so, she has to understand and cannot deny the important influence of her patient's values in providing patient-centred care. I define value as the degree of personal importance one places on a particular person or object whether physical or abstract. Note that the latter could refer to an abstract object such as an action—both active and passive, ie. the insertion or withdrawal of a feeding tube. Exploring a patient's values continues to be a topic of interest for many exploring "values-based medicine", a framework that places emphasis on values as opposed to evidence, thus countering the ever popular and widely used framework in medical school curriculum of "evidence-based medicine" in clinical decision-making (Brown, MM., Brown, GC. & Sharma, S., 2005). It should be stressed that understanding someone's values transcends ethical debate and enters the realm of practicality. Although there is a paucity of research in this field, one would assume that decisions taking into account values, in addition to evidence, would result in better health outcomes as such decisions are patient-defined and most likely to be carried out.

There are many barriers to fully understanding the health-related values of the patient. Very often a physician is so engrossed in evidence-based medicine that such facts may supersede those to understanding the patient's values. For example, a chemotherapeutic drug that has excellent outcomes in clinical trials may cause numerous side effects such as nausea and vomiting. Although most patients may tolerate such side effects there may be some who find such side effects unbearable and not fill the prescription. This lack of or mis-communication has ultimately occurred because of a lack of understanding of each other's values. Sexuality and gender are two issues that are often not addressed by the physician and equally not brought up by the patient (Tsimtsiou et al. 2006). Very often, values concerning sex may not be explored because of a lack of comfort for both the patient and physician (Sack et al, 2002). Other barriers that prevent an understanding of a patient's values concerning sexuality and gender may include "inadequate training and insufficient knowledge of sexual health, time constraints, lack of privacy, and personal factors such as conservative sexual beliefs, age, and gender of both the physician and the patient, and fear of intrusion (Tsimtsiou et al. 2006)."

In this section, I will draw from my personal clinical work in exploring how clinical medicine understands the values of the TG/TS adolescent. I investigate how clinical medicine conceptualizes gender identity and, more importantly, what happens when there is a discordance in this interpretation. There are fundamentally three issues that I will explore. The first issue concerns clinical medicine's conception of transgender falling under the taxonomy of the DSM IV as gender identity "disorder". I investigate the possible etiology behind this and the implications it has on the patient-physician relationship. The second issue concerns the identity of the adolescent. In particular, I suggest that clinical medicine continues to confuse GID of childhood with GID of adolescence. Third, I highlight clinical medicine's gross error of mistaking adolescent behaviour for identity and its effects on the care that is provided and received.

GID: A real disorder?

The etiology of gender dysphoria and the inclusion of GID in the DSM IV as a mental disorder continue to be controversial (Bartlett et al 2000, Burgess 1999, Langer & Martin 2004, Minter 1999, Newman 2002, Wilson et al. 2002). As stated above, the guidelines of the DSM IV classify individuals with GID as having a sense of inappropriateness in the gender role of that sex with “clinical significant distress or impairment in social, occupational, or other important areas of functioning.” The above authors highlight, however, that the distress felt by TG/TS may not necessarily arise from one’s gender dysphoria itself but society’s fixation on persons conforming to socially constructed gender behaviours and roles. Thus the gender roles expressed by certain individuals and the distress they experience in expressing them are due to the reactions of others and not directly to their identification with a gender different from their assigned gender. If they are correct, TG/TS persons would not have gender dysphoria if one lived in a society that did not espouse strict gender roles and allowed one to transition from their assigned gender.

An interesting framework of why clinical medicine has had a difficult time in accepting those with gender variant behaviour comes from academics and scholars specializing in queer and gender theory. They highlight the inherent nature of “order” in medicine and society in general as evidenced by strict social and sexual borders (Nestle et al. 2002; Wilchins 2004). Knowledge of sexual and gender roles in other cultures gradually challenged the adequacy of these sexual and gender binaries that are present in North American society in addition to Western concepts of feminism and homosexuality (Herdt 1994, Nanda 2000, Wilchins 2004). For many feminist/queer theorist academics and members of lesbian, gay, queer, and transgender organizations, the resulting distress TG/TS individuals face is thus reactionary and secondary to a transphobic genderist community. GID, from their point of view, is a misnomer because it is not directly related to gender identity.

Another point of contention besides the etiology of gender dysphoria is the classification of gender dysphoria as a "disorder" and its inclusion in the DSMIV (Bartlett 2000). In her article challenging the classification of GID as a mental disorder, Bartlett highlights that "pathologies" related to gender were present in the late 19th century but it was only after Christine Jorgensen's sex-change operation in 1952 that psychiatrists became concerned over the rise in those requesting such operations. By the late 1960s and early 1970s, a number of psychiatrists designed "programs to identify, study, and treat children "at risk" for developing adult transsexualism" (Bartlett 2000). Such programmes directly targeted children who displayed gender variant behaviors. The term gender identity disorder (GID) eventually appeared in the medical lexicon in 1980 (American Psychiatric Association 1980).

The classification of GID as a disorder and its inclusion in the DSMIV has concerned many health professionals providing transgender care (de Vries et al, 2006). The word "disorder" may denote "treatment" for many health professionals. This may ultimately affect the way in which the physician approaches the TG/TS adolescent and the goals for their management. For example, medical professionals may invoke "conversion" or "reparative" strategies for these adolescents (Brill et al, 2008). For example, there are many health care professionals who suggest strict parenting that reinforces gender norms (Spiegel, 2008). Boys are to be masculine and not play with dolls, girls are to be feminine and not play hockey. Adolescents are also encouraged to take on gender roles consistent with societal norms. With no access to hormone blockers or hormone therapy, many adolescents who are transgender are left to face the tumultuous task of experiencing puberty with a body that is not congruent with their gender. They are to abandon such thoughts and feelings. Although well-intended, such strategies may lead to increased shame experienced by the TG/TS adolescent and further compromise her psychological health. In addition to medical professionals, parents may also view the goal of treatment as minimizing the gender variant behaviour adding even more stigma to such behaviours.

Using the same framework of feminist and gender theorists in addition to Dreger's reference to clinical medicine usurping the role of midwifery, medicalization of gender allowed the display of gender variant roles to be pathologized (Dreger 2001). Once deemed a pathology such behaviour could be eradicated. Although, those in clinical medicine may view such an analysis as far-fetched, one only has to look at the dominant management strategy concerning children and adolescents with gender variant behaviour— prohibition of gender variant behaviour. This allows us to question if gender variant behaviour should even fall under the care of physicians and clinical medicine if it is just a variant of normal human behaviour. As a transgender care provider, however, it would be remiss to not also explain that its classification as a disorder and presence in the DSMIV highlights the significance of such gender dysphoria. With some of my patients I have felt that is has decreased stress by finally giving such feelings a "label" or "diagnosis." Lastly, it is a reality that a diagnosis of GID may be pragmatically needed to access services within one's medical service jurisdiction and health care system. The diagnosis of GID is often needed to access therapy and counseling for gender and transitioning issues in addition to receiving medical and surgical management.

In sum, if the TG/TS community feels that being transgendered or transsexual is not a mental pathology yet physicians respond to cross-gender identification by diagnosing it as a “disorder” and “treat” it by eradicating the TG/TS behaviour, then there is certainly a very large discrepancy concerning the conceptions of gender, gender dysphoria, and gender identity disorder between the patient and her physician. In the case of many TG/TS adolescents, they simply do not match. The ability to understand a patient’s values is ultimately compromised along with the level of care received.

GID of childhood *vs* adolescence, Gender Identity *vs* Sexual Orientation

Another barrier to understanding what it means to be TG/TS stems from a misunderstanding of GID in children and adolescence. This is an absolutely crucial point because this affects many primary care physicians such as family physicians and pediatricians and the way they approach GID. Although it is true that children and adolescents with GID share many characteristics, their trajectories are vastly different. This is not only important for diagnosis but the individual’s prognosis and the way gender dysphoria is diagnosed and managed.

Although there are only a few studies investigating the long-term follow-up of children with GID, there are general trends. In his book *Sissy Boy Syndrome*, Green shares findings from his extensive interviews and psychological tests on 66 extremely “effeminate” and 56 control boys (Green, 1987). They were initially assessed at the mean age of 7.1 years and were then followed up at a mean age of 18.9 years with 44 of the 66 effeminate boys available for follow-up. This study then ranked their sexual orientation using the Kinsey rating from 0 (exclusive heterosexuality) to 6 (exclusive homosexuality). At follow-up more than 75% of the previous effeminate boys were either bisexual or homosexual versus 0 to 4% of the controls. Only 1 of the 44 effeminate boys at 18 years of age had gender dysphoria and was requesting gender reassignment surgery. It should be noted the study did not use but it is likely would have met the DSM IV criteria for GID. Thus, Green concluded that feminine behaviour was much more predictive of sexual orientation than gender dysphoria or gender identity disorder.

Trajectory studies in girls are far less clear with a larger range of outcomes. Cohen-Kettenis studied a sample of eighteen girls with a mean age of nine years and followed them to adolescence. Of the eighteen girls, eight (44.4%) requested reassignment and all had homosexual orientation (Cohen-Kettenis, 2001). Drummond found that three out of twenty-five girls with GID in childhood were judged to have GID or gender dysphoria after a mean follow-up of 8.8 years. Regarding sexual orientation, eight participants were classified as bisexual/homosexual in fantasy and six participants were classified as either bisexual/homosexual in behaviour (Drummond, Bradley, Peterson-Badali, & Zucker, 2008).

It is important to remember that the three studies mentioned above investigated GID in children, not adolescents. The DSM IV created a different classification of GID for children and adolescents/adults because of different trajectories in development. For the purposes of this discussion, childhood studies of GID provide interesting background but do not affect the current question on the ethical permissibility of hormone-blockers.

What should be noted is that while children with GID are likely to eventually identify as homosexual in adolescence or adulthood, temporally speaking, one would posit that GID persisting into or beginning in adolescence would be more predictive of GID in adulthood. This is based on the assumption that gender identity begins early in life and is theorized to "crystallize" during adolescence (de Vries et al, 2006). Unfortunately, the lack of research investigating the persistence of GID in adolescence into adulthood does not help matters. The differences between GID of childhood and GID of adolescence are not readily mentioned in the medical information that is given to the lay public. I feel strongly that such knowledge would help clarify major concerns by opponents or those who are simply unsure. GID in adolescents is very different from that in children and must be approached differently.

Besides differences between GID of childhood and GID of adolescence, another point of contention concerns the differentiation between gender identity and sexual orientation. If we look at the field of pediatrics, many gender variant children and adolescents receive the same "treatment" as those whose parents believe their child or adolescent is gay or lesbian—emphasizing stereotypical heterosexual and masculine behaviours for boys and heterosexual and feminine behaviours for girls. This is another example of the inability of the medical community to comprehend the differences between gender and sexual orientation. Again, the former concerns the identification of one's gender as male or female (or other) whereas the latter concerns one's sexual preferences. Such occurrences remind us that physicians do not properly comprehend the basic knowledge of gender and the problems that may arise in TG/TS. Such misappropriation of sexual orientation for gender identity also highlights the extension of homophobia of present-day society into clinical medicine. Equally important, such studies are used as fodder for those who oppose hormone-blocker therapy. These studies are often quoted in the media, particularly on TV shows such as Oprah, by opponents who state that hormone-blockers are unnecessary in adolescents because they are most likely to be homosexual (Winfrey 2007).

Adolescent Phases, Brains, Behaviour, & Identity

Perhaps the largest challenge to understanding the values of the TG/TS adolescent stems from her identity as an adolescent. This can be easily illustrated by one of my colleagues who recently asked me, “Couldn’t it just be an adolescent thing? Many adolescents also say they are bisexual.” Besides illustrating the problem of confusing gender identity for sexual identity, the question was a valid one. Could wanting hormone-blockers just be a poor impulsive decision?

It has been shown that adolescence is a developmental period characterized by suboptimal decisions. For example, more than seventy percent of adolescent deaths are secondary to motor vehicle crashes, unintentional injuries, homicide, and suicide (Eaton et al., 2006). Adolescents engage in behaviours that increase their likelihood of death by drinking and driving, driving with others who drink, and/or not wearing their seat belts. These adolescents may also use illegal substances and engage in unprotected sexual contact resulting in unwanted pregnancies and sexually transmitted infections (Eaton et al., 2006).

From an evolutionary perspective, such suboptimal behaviours make sense. In order to find a partner to increase the genetic pool one needs to venture away from one’s home and village. Such a process happens to occur at the same time that hormone levels rise during puberty and drive the commencement of sexual activity and maturation. There is much evidence to support this bio-evolutionary theory. For example, adolescence is a period in which young persons acquire independence skills to protect them after family separation (Kelley, Schochet, & Landry, 2004; Rubia et al., 2000). They learn these skills even though they may result in harmful circumstances such as injury, depression, anxiety, drug use, and addiction. But we are also aware that the acquisition of such skills is concurrently affected by peer relations that may also drive the propensity for risk-seeking behaviours (Engels & ter Bogt 2004).

What are the mechanisms for such suboptimal decision-making? There are currently a number of neurobiological hypotheses to answer such a question. In a recent review of literature on adolescent brain development, adolescence was seen as a period of greater efficiency and control of cognitive capacities (Yurgelun-Todd, 2007). Such capacities have been directly correlated to maturation of the prefrontal cortex. MRI scans showed increased activity in this area while there was less activity in irrelevant brain regions (Brown et al., 2005; Durston et al., 2003; Tamm, Menon, & Reiss, 2002). Critics of this theory postulate, however, that the adolescent brain is more complex then just the maturation of the prefrontal cortex. If this theory were true then there would be more adolescents who partake in more suboptimal decisions. Moreover, children would have even poorer decision-making than adolescence and partake in such behaviours. To such critics, this linear theory of development requires another model to explain such observations.

Another model proposed by Casey conceptualizes adolescence as a transitional period where one transitions into and out of adolescence (Casey, Getz, & Galvan, 2008). To Casey, decision-making made in adolescence is characterized by impulsivity and risk-taking. They account for these two characteristics by positing two different neurobiological models. In this model, the limbic and subcortical regions are responsible for impulsivity whereas the prefrontal cortex is responsible for risk-taking. Casey theorizes that the limbic and subcortical regions are more mature than the prefrontal cortex in adolescence whereas in children both are underdeveloped. As such, individual genetic differences accounting for the development of the limbic and subcortical regions would account for the heterogeneity of decision-making among adolescents. The immaturity of both limbic and subcortical regions and the prefrontal cortex would account for the differences in decision-making between children and adolescents.

Although one could attribute this perceived need or urge to start hormone-blockers or cross-sex hormone therapy as an impulsive and/or poor decision, I argue the opposite from both theoretical and biological perspectives. From a theoretical perspective we have to differentiate behaviour from identity. When we are speaking about adolescents and suboptimal decisions we are talking about core issues related to behaviour. Alcohol use, drug use, and sexual activity are all examples of what an adolescent “is doing”, not who an adolescent “is”. For example, sexual relations with members of both sexes are a display of one’s sexual orientation but says nothing about their perceived sexual identity. One’s gender identity, however, relates to their sense of self or personhood. Studies have shown that the development of the awareness of one’s gender starts as early as two years of age and is theorized to “crystallize” during adolescence (de Vries et al, 2006, Yule 2000). In my view, it is therefore imperative that clinical medicine understand the differences between the phase of adolescence where suboptimal decision-making takes and the way an adolescent understands who they are, who they will be, and their place in society.

There is also evidence to suggest that there may be a biological basis for gender dysphoria and GID. A study by Cohen-Kettenis found that the cognitive patterns in forty-four pre-hormonal male-to-females (MTFs) were closer to female control responses than male control responses in listening, verbal memory, and spatial ability testing while thirty-four female-to-male (FTMs) also displayed a pattern of performance away from their biological sex (Cohen-Kettenis, Van Goozen, Doorn, & Gooren, 1998). Using PET scans with MRI, Berglund found that the hypothalamus, amygdala, and insular and cingulated cortexes were activated in MTFs and heterosexual women when given androgens but not in heterosexual men (Berglund, Lindstrom, Dhejne-Helmy, & Savic, 2008). Post-mortem brains of MTFs and one FTM found that the nucleus of the stria terminalis, one of the sex-dimorphic brain nuclei, demonstrated cross-sex differentiation (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008). These differences provide biological brain evidence that there are differences between the TG/TS and non-TG/TS brain. In addition to the biological evidence suggesting differences between TG/TS and non-TG/TS individuals, there is also evidence suggesting that such differences may take place much earlier than adolescence.

Most people understand that the major hormones responsible for secondary sexual characteristics originate in the gonads and a few other organs with testosterone and estrogen being the major hormones involved. Although both men and women produce both hormones, they do so in different ratios. It was thought that sexual differentiation of the brain was secondary to the influences of these two hormones. Because men have testes, it was thought that increased levels of testosterone would account for male characteristics and, taken further, male identity. The same would be said for women and ovaries producing estrogen. Animal studies, however, suggest that brain gender differentiation takes place much earlier than expected.

A recent article published in Nature highlighted two animal studies suggesting that the brain begins to develop in males and females much earlier than previously thought. Arthur Arnold, neurobiologist at UCLA, examined a rare zebra finch that was genetically male on the right side of its body with bright plumage and testis and genetically female on the left side of its body with less fanciful plumage and ovary (Agate, 2003). The finch was still found to have more neural circuits that controlled male song patterns on its right side (the phenotypically male portion of the brain). Assuming that both parts of the brain were exposed to the same amount of female and male hormones, one would have expected both parts of the brain to be the same. Gahr, a neuroscientist in the Netherlands, surgically switched the forebrains, the part of the brain that controls sexual behaviour, of Japanese quail embryos before the gonads developed (Gahr, 2003). Assuming that the gonads and their hormones were responsible for brain sexual development one would assume that the type of gonads, whether female or male, would dictate the birds’ sexual behaviour. Although this was the case in the quails with female gonads, this was not the case for those with male gonads. This suggests that a genetically male brain is required to complete the proper development of gonads that would lead to typical male reproductive behaviour. These studies therefore suggest that genetic influences may set gender in motion much earlier than expected and in opposition to external hormonal influences.

Although there may be many who discount the above for involving animals, one human study does suggest that brain gender differentiation may actually take place *in utero*. Sajjad and Quenby, two urologists from England, investigated the distribution of androgen receptors (AR) in male and female embryos at nine to twelve weeks (Sajjad, Quenby, Nickson, Lewis-Jones, & Vince, 2004). They found that ARs were equally distributed in the genetically male and female embryos, even in the urogenital sinus and the genital tubercle which eventually give rise to the bladder, urethra, and phallus. The only model that would account for the biological differences we later see between genetic men and women would be the assumption that the distribution of ARs was different between male and female embryos *before* eight weeks. The difference in distribution in ARs would therefore "prime" the embryo for either male or female differentiation of the urogenital sinus. This would, therefore, assume that a difference in AR distribution would need to be present in the brain in *utero*. Using this model, the brain cannot be seen as being completely malleable as it would need to be prepared for the increased amounts of testosterone and estrogen that are eventually released by the gonads. Male and female brains must be different from a very early age. This particular model is further supported by the fact that the hypothalamic-pituitary-gonadal axis which is responsible for luteinizing hormone (LH) and follicle-stimulating hormone (FSH) that lead to testosterone and estrogen release is fully functional before the gonads are even formed.

Such animal and human evidence supports Dr. SW Ecker, a urologist at Georgetown University, who postulates that TG/TS may be the result of a disruption of the number or function of various receptors such as the androgen receptor. Endocrine disruptor chemicals (EDCs) would lead to an imbalance of hormone receptors resulting in cross-gender brain differentiation. For example, individuals with male gonads would possess a brain with decreased or affected androgen receptors possibly leading to gender dysphoria with his assigned gender because of her female gender identity. Although TG/TS is likely multifactorial, a genetic predisposition for these EDCs may be the cause of such gender dysphoria and cross-gender identity. Multiple case reports of TG/TS concordance in twins supports this genetic predisposition (Green, 2000; Sadeghi & Fakhrai, 2000; Zucker & Bradley, 1995).

While I certainly agree that suboptimal decision-making takes place in adolescents, I have difficulty in questioning an adolescent's self-reported gender identity. As a physician, one needs to distinguish both the theoretical and biological differences between behaviour and identity. While behaviour is in flux, particularly if one is entering and leaving the adolescent phase, identity, in my opinion, is stable and follows a genetic trajectory. I believe both the theory and evidence I have outlined are important for two reasons. First, they provide insight into the etiology of TG/TS. Second, for the purposes of this particular section, they frame the way in which clinical medicine views the TG/TS adolescent.

What do we do with all of these studies and theoretical models for the purposes of this discussion? If the physician simply views TG/TS as the result of a misguided teen lacking decision-making ability then she cannot possibly appreciate the values the TG/TS adolescent holds important. I believe that gender identity, having started at such a young age, might take time to develop but can be generally confirmed by the teenage years.

Behaviour is not so consistent. So whilst I believe a physician can question the TG/TS adolescent asking for hormone-blockers I would have an extremely high threshold in questioning an adolescent who states she is TG/TS. Of course there are exceptions such as adolescents with co-morbid conditions such as Asperger's and other psychiatric disorders. A full psychiatric and medical assessment would help clarify these issues.

So how do we deal with behaviour? How do we approach the TG/TS adolescent asking for hormone-blockers? There are many physicians who are skeptical of TG/TS adolescents wanting to take hormone-blockers. Many may believe that the TG/TS adolescent may be making an impulsive decision. She may have just visited a personal webpage of a transgender or transsexual or have gone to a workshop put on by the local TG/TS community and feel the sudden need to start hormone-blockers. She may feel pressured by her friends or the TG/TS community to start the gender reassignment process. These are all legitimate reasons why one should not begin hormone-blockers. At the same time, one can easily investigate which are or are not important by simply following a TG/TS adolescent over time. A physician should never think of prescribing hormone-blockers to a TG/TS adolescent on her first visit. Multiple visits, however, provide better insight into the thoughts, feelings, and social and physical environment of the TG/TS adolescent and what is in her best interest. From my clinical experience, a TG/TS adolescent who is consistent in her decisions is probably making a decision that she really wants and a decision in which she believes. This will be discussed in the following section. Regardless, the purpose at this point of section is to highlight that there are numerous barriers to appreciating the values of the TG/TS adolescent— the way we understand and appreciate TG/TS adolescents both in terms of the etiology of TG/TS and their behaviour which ultimately affect the way we view the TG/TS adolescent.

CRITERION NUMBER THREE:
The patient's autonomy is respected by allowing the patient to critically assess her own values and preferences

Through the help of her physician, clinical knowledge concerning a particular medical concern is transmitted to the patient. This not only includes the clinical information regarding the medical concern but also the risks and the magnitudes of the harms and benefits of the various treatment or management options. Further interactions directly and indirectly related to the medical concern allow the physician to understand the patient's values. Through this thoughtful process, the patient is able to make an informative decision through the removal of cognitive, social, and psychological constraints. In doing so, the patient's autonomy is enforced and respected. Although this model does seem appropriate it is nonetheless incomplete.

One criticism I have of Emanuel and Emanuel's models on the physician-patient relationship is that much of the model is unidirectional, from the physician to the patient. The physician transmits knowledge to her patient. The physician interprets and understands the values of her patient. Although I do agree these processes occur, we must remember that there are numerous factors that affect the physician and extend into the physician-patient relationship. The law is one such important factor that shapes clinical medicine and the patient-physician relationship.

The particular rights of the adolescent have continually been an area of contention in both clinical medicine and the law. For the most part, such disputes arise when the wishes of the adolescent conflict with those of her parents. The physician pragmatically turns to the law for guidance to settle such issues. Although the law has set precedents concerning the rights of the adolescent involving matters such as sexual and reproductive health, new health care management and technologies create unique situations that raise new ethical dilemmas. The use of hormone-blocker therapy in the TG/TS adolescent is one ethical dilemma where the actions of the physician are undeniably affected by the law. The physician actively turns towards the law if she wishes to prescribe hormone-blocker therapy for her adolescent patient or passively allows the law to affect her practice by invoking a defensive clinical practice and not prescribing hormone-blocker therapy for fear of litigation.

Because much of the law involves the appreciation and protection of individual rights there is much overlap between the law and ethics. I will modify Emanuel and Emanuel's third criterion to also involve an exploration of how the decision-making autonomy of the TG/TS adolescent may be compromised because of her identity as an adolescent. To do this I will first briefly explore how adolescent rights have evolved within the law, highlighting and exploring, in particular, the use of the term *mature minor* and *mature minor rule.* Second, I investigate the direct application of the mature minor approach in court rulings, in particular, cases concerning the "consent to" and "refusal of" treatment. Note that this section will serve as further background to the ethical analysis that will take place later on in the discussion.

Adolescent Rights

Exploring the adolescent's decision-making capacity within the law and clinical medicine would not be complete if we did not explain the evolution of an adolescent's rights. Historically, under English common law, children were considered to be the property of their parents (Thompson, 1999). Such a sentiment was also present across the

Atlantic with much child labour in the United States. The recognition that children needed protection first arose from the exploitation of children during the industrial revolution in the nineteenth century. In the United States, earlier societal concerns for such protection were rooted in education as many children were not receiving even a modest education after working in polluted and dangerous factories (Kerschner JR & Child Labor and Special Employment Team, 2000). This gradually shifted in the protection of child rights through labour laws in the United States such as the Fair Labor Standards Act in 1938 which attempted to ensure that a child's employment did not "interfere with their schooling and …health and well-being" (FLSA 1938). I believe this clause was one example of how the conception of the child/adolescent and the fact that her rights needed to be protected resulted in a shift towards parental responsibility to support and act in the best interests of their children. This extended into clinical medicine by requiring that minors, who were deemed by society to be incompetent in making medical decisions, needed the consent of their parents to access health care. As such, it would not be uncommon fifty years ago for a minor to require parental consent for any type of medical treatment. This requirement for parental consent has been gradually challenged over the last fifty years with the awareness that there are a number of adolescents with the capacity to make major life decisions much earlier.

The evolution of the rights of minors in Canada first began with the conception of the *emancipated minor* and, later on, the *mature minor doctrine* (Rozovsky, 2003). The recognition of the rights of minors was first based in the protection of hospitals and physicians against minors who suffered under their care. In *Booth v. Toronto General Hospital*, a nineteen year old with his father sued the Toronto General Hospital for permanent disability after complications post-nose surgery. The child and his father stated that the surgeon had not obtained parental consent for the surgery. The Ontario Superior Court under Falconbridge CJKB stated that it was the child's consent, not the father's, that mattered. Although Falconbridge CJKB did not use the word emancipated he did draw upon aspects of the child's life such as working ten hours a day as a labourer. Under such life circumstances, Falconbridge CJKB argued that he was able to take care of himself and therefore able to have consented to the operation. The case's frame of thinking is represented in the *emancipated minor* rule which states: "if a young person is living independently of his or her parents or is married, but is under the age of majority, then for all intents and purposes, that individual should be deemed an adult for consent to treatment" (Rozovsky, 2003).

A deeper understanding of the rights of minors in the law shifted from their use simply in liability claims to a framework which directly appreciated the maturity of the minor. In *C v Wren*, a sixteen year old child who was living at home in Alberta became pregnant by her boyfriend (A.J 1986). She moved out of her parent's home and searched for a physician to perform an abortion. The physician received approval by a therapeutic abortion committee as required by the Criminal Code at the time. Her parents sought out an injunction against the physician to prevent the therapeutic abortion, claiming that parental consent was not obtained. At the Queen's Bench, MacLean J vacated the injunction and ruled that she was a *mature minor* and therefore did not require parental consent. The judge, and later by appeal, also upheld the judgment stating the she was capable of consenting to a therapeutic abortion on her own behalf.

Although the minor was living outside of the home at the time of the court proceedings (and was therefore an emancipated minor), Justice MacLean addressed the minor's characteristics that made her capable of making such a decision regarding her therapeutic abortion. Justice MacLean described her as "mature, intelligent, [and] cognizant" and that she "fully appreciates the nature and consequences of the decision that is made before her." During the Court of Appeal, Kerans JA highlighted the framework utilized by Lord Scarman in *Gillick v. West Norfolk and Wisbech Area Health Authority*, a British case concerning the prescription of contraception to a child sixteen years or younger without parental consent, given one year before in 1985:

> **As a matter of Law the parental right to determine whether or not their minor child below the age of sixteen will have medical treatment terminates if and when the child achieves sufficient understanding and intelligence to understand fully what is proposed.**

C. was deemed to fully understand the case at hand, addressing both matters related to medical care and those related to her family. *C vs Wren* extended the law's understanding and approach to a minor's rights because it was not simply based on life experience as set forth in *Booth v. Toronto General Hospital* but on the actual maturity of the adolescent. Because she was found to be sixteen years old and of normal intelligence she was able to make her own decisions and, therefore, could not be contested by her parents.

As can be seen, a separation has been made between adults and minors. Most would agree that infants and children do not have the capacity to make major informed decisions regarding their care. They need the support and care of their parents. As such, we acknowledge that parents should make decisions for their children and that a proxy make such decisions if parents are not present or are unfit to make such decisions themselves. The industrial revolution lead to greater emphasis on protecting the rights of the minor. Such protection not only protected them from child labour but physical and sexual abuse in addition to matters concerning sexual and reproductive health. These rights eventually addressed the maturity of the minor herself in decision-making, moving beyond issues concerning hospital and physician liability, through the *mature minor doctrine:*

> **When a minor is considered to be a mature minor, the minor is to be treated as an adult as far as making a decision regarding care or treatment. Parental consent is not required. Any disagreement between the mature minor and her parents is irrelevant. Parents cannot overrule decisions made by their mature minor children (Rozovsky 2003).**

As such, the mature minor doctrine recognizes that the change from a minor's total dependence on her parents to full capacity to direct her own life does not take place acutely. It is a gradual process where greater age and life experience leads to greater maturity. Along such a process, there are some minors who develop the capacity to make informed major decisions regarding their life and health care. In doing so, the law has addressed individuals who are not chronologically an adult yet have adult-like capacity to make major life decisions.

Although the law, in theory, has recognized the range of capacities of minors, we must be cautious in our assumptions that the law is using these designations properly and consistently. Theory differs from practice. Although the intent of the mature minor doctrine was to protect the rights of adolescents who had reached a level of maturity to make such decisions, I argue that a deeper analysis into court rulings of the law concerning mature minors should be undertaken.

It should be stated from the very onset that there is a paucity of cases concerning the use of the mature minor and mature minor doctrine in health law. Most dilemmas are solved internally in the clinical medicine setting among the patient, her family, and the treating team and physician. This resulting patchwork of cases in Canadian common law results in an undeveloped framework concerning the rights of the mature minor. That being said, there are a number of cases that highlight the complexities of adolescent decision-making in the law in general and the use of the mature minor doctrine. These can be explored in cases relating to the "consent to" and "refusal of" treatment.

As discussed above, the mature minor's capacity to "consent to" treatment was established with *C vs Wren*. This was followed by *Johnston vs Wellesley Hospital,* a case involving a 21 year old male who unsuccessfully tried to sue the hospital over substandard cosmetic surgery. The court ruled that he was able to give consent and therefore the surgeons did not require parental consent. These two landmark cases ultimately led to various acts enacted by certain provinces to define under what circumstances a minor can consent to treatment. Examples of such legislation include the *Medical Consent of Minors Act* of New Brunswick and the *Infant Act* of British Columbia (SNB 1976, RSBC 1996). Such cases and legislation, however, have not cleared the issue of whether such decision-making capacity also extends to the "refusal of" treatment by the mature minor. It would be remiss to not address that many in clinical medicine and the law assume that ultimate decision-making ability is present when an individual can both consent to and refuse life-saving treatment.

A significant number of cases involving the refusal of treatment have involved adolescent Jehovah's Witnesses and the transfusion of blood products. At a superficial level, the law has inconsistently applied the mature minor doctrine. For example, there have been cases in which the court has deemed an adolescent a "mature minor" but has overruled their “refusal of” treatment. In *B.(S.J.) v. British Columbia (Director of Child, Family, and Community Services)* a fourteen year old Jehovah’s witness’ suffering from osteogenic sarcoma was found by a child psychiatrist to “clearly be able to understand and appreciate the nature and consequences of her illness, of treatment with and of treatment without a blood transfusion” (2005). Despite this, ME Boyd J overruled her appeal and ordered that she was to receive a blood transfusion and chemotherapy. This is just one of many cases where the law overruled the decision of the mature minor because they were acting in the “best interests” of the mature minors. “Best interests” in the law almost always refers to choosing the option that would result in preserving the life of the individual.

At the same time, however, we must also point out that there have been cases where the law has apparently accepted a mature minor’s refusal. *Y.(A.)* was also a fifteen year-old Jehovah’s Witness with leukemia. His oncologist felt that a blood transfusion was needed for a rapid decline in his health status. That being said, his oncologist also practiced a holistic approach to medicine and felt that it was in *Y.(A.)*’s best interest to not have the blood transfusion as it would compromise his positive frame of mind. In the end, the Court declared *Y.(A.)* a “mature minor” and was allowed to receive medical treatment without blood products. How do we make sense of the seemingly contradictory application of the mature minor doctrine in the cases involving *S.(J.B.)* and *Y.(A.)*?

Deeper analysis of these cases suggests that they do not contradict each other but, on the contrary, highlight that such decisions were made using an outcomes-based framework ultimately negating the mature minor doctrine and a mature minor’s decision-making capacity. It should be stressed that the decline in *Y.(A.)*’s health status prompted the court proceedings. His leukemia was aggressive and chemotherapy could only slow down its progression. The chance of complete recovery was extremely small. Moreover, *Y.(A.)*'s poor prognosis was also coupled by the fact that his death was imminent. Overall then, *Y.(A.)*'s prognosis was so decidedly poor that it did not matter whether or not his refusal of treatment was accepted— he would likely die in either case and very soon. Such facts suggest the court's decision to respect *Y.(A.)*'s wishes was due to futility with or without treatment and not his capacity as a mature minor to make such a significant decision. This begs the question if the law's decision would have changed if his prognosis had not been so poor and his death not imminent. In essence the seemingly contradictory judgments are not contradictory. *S.J.B.* and *Y.A.* readily show us that the law has respected the "best interests" (ie. preserving life) of the adolescent as opposed to respecting their capacity for decision-making.

It is not surprising that such a decision process utilizing "best interests" is made in the law. Such sentiments are shared by arguably the foremost legal American scholar concerning adolescent rights, Angela Holder. In a chapter exploring the limitations on the right of an adolescent to make decisions about her own health care, the very blunt legal expert comments on her own experience as an ethicist at the Yale School of Medicine (Holder, 1989).

> **Pediatric oncologists learn how to deal with [non-cooperative] patients so well that rarely do we have persistent non-cooperation from a patient, but in the few cases in which we have had, I have had no hesitation in advising that the patients should be told that they are going to have chemotherapy whether they like it or not. In a different situation, where the likelihood of success from the chemotherapy is really quite limited and that patient is almost certainly going to die even if treatment is continued, of course, concern for the patient, regardless of age, means that his or her wishes should be respected.**

The most complete investigation concerning the rights of mature adolescents to refuse medical treatment as seen through the law in Canada was recently decided on June 26, 2009 when the Supreme Court upheld Manitoba legislation where a child was given a court order to receive a blood transfusion contrary to her religious beliefs. *A.C. v. Manitoba (Director Child and Family Services)* is the most significant case ruled by the Supreme Court regarding adolescent rights. First, the case laid the foundation for adolescent-decision making concerning a condition that was not necessarily life-threatening but had the potential to do so. Second, the case forced the law to directly address the application of the "mature minor" in difficult situations.

A.C. v. Manitoba (Director Child and Family Services)

The case involved a *A.C.* a 14 year 10 month old devout Jehovah's witness who was admitted to hospital for internal bleeding caused by Crohn's disease. Before admission she had signed an advance medical directive stating she did not want to be given blood products under any circumstances because her religion requires that she abstain from receiving blood. It was no surprise then that she refused the transfusion recommended by her doctor who believed the internal bleeding was a serious risk for her health and perhaps her life. A brief psychiatric assessment took place at her hospital the night after her admission. Further assessments by two other psychiatrists concluded that the patient understood the consequences—both benefits and harms— of receiving the transfusion.

The adolescent was apprehended by the Director of Child and Family Services as a "child in need of protection" and an order was sought under the *Child and Family*

Services Act under section 25(8) by which a court may authorize medical treatment that it considers to be in the child's best interests. The applications judge ordered that *A.C.* receive the blood transfusions by concluding that there were no legislated restrictions of authority on the court's ability to order medical treatment in the child's "best interests" when the is child under the age of sixteen years. *A.C.* and her parents appealed the decision to the Manitoba Court of Appeal on the basis that the provisions of the statute infringed her right to freedom of religion (section 2a), life, liberty and security of the person (section 7) and equality rights (section 15) under the *Charter of Human Rights and Freedoms.*

While the religion of *A.C.* was certainly taken into account, the case and resulting decision focused less on religious freedom and more on an adolescent's refusal of medical treatment when she is under the age of sixteen years. The ruling took into account the role of "capacity" in making medical decisions and the magnitude and degree of risk of such danger to her health and life. Six of the seven Supreme Court judges who heard the case upheld the Manitoba legislation with one dissenting opinion. It should be noted that even though the majority chose to uphold the original decision, the rationale for their decision was for two separate reasons.

Of the majority decision, four justices decided that the *Child and Family Services Act* was constitutional provided that the child's best interests are "interpreted in a way that sufficiently respects his or her maturity in a particular medical decision-making context." The majority note that determining the "maturity" of an adolescent was difficult with there being no "eureka" moment at which one is mature. As such, a proper assessment of maturity is required in determining the adolescent’s best interests. A key phrase from the majority’s opinion reads:

> **It is a sliding scale of scrutiny, with the adolescent’s views becoming increasingly determinative depending on his or her ability to exercise mature, independent judgment. The more serious the nature of the decision, and the more severe its potential impact on the life or health of the child, the greater the degree of scrutiny that will be required.**

In essence, the majority felt that greater maturity is needed by the adolescent the greater the consequences and risk of such consequences. In order to determine an adolescent’s degree of maturity “with respect and rigour,” Madam Justice Abella provided a set of questions/factors:

- **What is the nature, purpose and utility of the recommended medical treatment?**
- **What are the risks and benefits?**
- **Does the adolescent demonstrate the intellectual capacity and sophistication to understand the information relevant to making the decision and to appreciate the potential consequences?**
- **Is there reason to believe that the adolescent’s views are stable and a true reflection of his or her core values and beliefs?**
- **What is the potential impact of the adolescent’s lifestyle, family relationships, and broader social affiliations on his or her ability to exercise independent judgment?**
- **Are there any existing emotional or psychiatric vulnerabilities?**
- **Does the adolescent’s illness or condition have an impact on his or her decision-making ability?**
- **Is there any relevant information from adults who know the adolescent, like teachers or doctors?**

The four justices reviewed international case law concerning the “mature minor,” especially from Australia, Britain, and the United States of America. Madam Justice Abella stated, “while courts have readily embraced the concept of granting adolescents a degree of autonomy that is reflective of their evolving maturity, they have generally not seen the “mature minor” doctrine as dictating guaranteed outcomes, particularly when the consequences for the young person are catastrophic.” In their closing remarks the four justices found that the best interests test, properly interpreted, provides a young person with a degree of decision autonomy commensurate with his or her maturity. It “reflects a proportionate response to the goal of protecting vulnerable young people from harm, while respecting the individuality and autonomy of those who are sufficiently mature to make a particular treatment decision."

The other two justices who agreed with the overall decision of the majority cited different reasons for their rationale. Chief Justice McLachlin and Mr. Justice Rothstein did not readily address the "mature minor" rule but instead pointed out that the *Child and Family Services Act* was a complete code in protecting adolescents. The maturity as assessed by a judge or physician was one of many determinative factors. Referring back to *A.C.*, the *Child and Family Services Act* did deprive her "liberty" but this was based on rational grounds and was made arbitrarily. Chief Justice McLachlin also went further and stated that the age of sixteen was an appropriate marker for other purposes such as attending school, where children live when their parents divorce, or deciding to marry. Where the two justices did agree with the other four of the majority is the acknowledgement that there is a gradual progression of the ability to make decisions with time and that more ability is required for greater decisions. Judgment, as to these justices, is a "function, not only of intellectual understanding of treatment and the consequences of refusing it, but of experience and independence" that requires "ethical, emotional maturity."

Mr. Justice Binnie, the one dissenting judge, had very strong opinions regarding A.C. and its representation of adolescent rights. He writes:

> **The state's interest in ensuring judicial control over the medical treatment of "immature" minors ceases to exist where a "mature" minor under sixteen demonstrates the lack of need for any such overriding state control. In such cases, the legitimate object and basis of state intervention in the life of the young person, has by reason of the judge's finding of maturity, disappeared. Whether judges, doctors and hospital authorities agree or disagree with C's objection, the decision belongs to her, as the Charter is not just about the freedom to make the wise and correct choice;**

> **it also gives her the individual autonomy and the religious freedom to refuse forced medical treatment, even where her life or death hangs in the balance, regardless of what the judge things is in her best interest.**

Mr. Justice Binnie felt that an adolescent should be able to make autonomous decisions that may even lead to death once capacity is achieved and recognized. He would have given full weight to the wishes of the child once she was found to have capacity. He noted that this would be irrespective of whether or not her wishes accorded with her best interests as determined by clinical medicine or the law.

True Decision-Making Capacity

The dissenting opinions of the Supreme Court justices exemplifies how truly difficult it is to assess maturity and at what level of maturity do we confer the ability to make a particular decision of particular seriousness. Key observations can be made from the judgment. First, the law has appreciated and recognized that adolescence is a stage of growth and development of both physical and emotional maturity. It recognizes that such a stage is a gradual and continual process. The law has therefore appreciated that with greater maturity the adolescent has greater capacity to make more complex decisions.

Second, with the above knowledge, the law has attempted (note I did “not” say succeeded) to take steps to appreciate the rights of minors, the ultimate exemplar being the “mature minor doctrine”. That being said, we easily see that its direct application is problematic. The definition of the mature minor rule fails to inform us under what conditions it should apply and to what degree of importance it holds. As seen in the cases cited above, we are still unsure whether the mature minor involves the consent to and/or refusal of treatment. While some Justices have used the mature minor rule as only one of many factors to consider in granting decision-making others have used it as an overall tool that once achieved automatically confers full decision-making power and authority. This lack of definition leads to inconsistency in its interpretation and application.

Third, the law, on the surface, has appreciated the rights of the adolescents through the mature minor rule. But I would argue that adolescent rights are not consistently respected as the law continues to use a consequence-based framework of “best interests” when respecting (or more precisely, not respecting) the rights of adolescents. This consequence-based framework is much different from the knowledge-based framework used in adults. The majority of court rulings overruling and the few upholding a mature minor’s refusal of treatment are not contradictory. They both have looked at the consequences of treating and not treating and have overruled when treatment was not futile and upholding when futile—both to preserve the “best interests” of the adolescent. If one practices the mature minor rule accordingly then an adolescent who meets its criteria has the capacity to make major life decisions, regardless of the consequences involved. This ultimately undermines the mature minor rule, making it, in fact, artificial. The use of the mature minor doctrine does not clarify matters concerning an adolescent’s decision-making.

The adolescent’s ability to make major decisions concerning her medical care is compromised by the law’s rejection of the capacity to make important life decisions. In my opinion, the ensuing defensive clinical practice results in more psychological distress experienced by the TG/TS adolescent. From my perspective, Madam Justice Abella’s framework of questions provides us with an opportunity to address such concerns through an informative, although certainly not novel, approach to understanding the capacity of an adolescent to make decisions within the law.

In sum, we cannot deny the large influence of the law on the medical practice of physicians. As we readily see, the law adds another dimension into understanding the complex web of relationships that concern the TG/TS adolescent and the TG/TS adolescent-physician relationship in clinical medicine. In the following section I will summarize the present state of the TG/TS adolescent-physician relationship using my interpretation of Emanuel and Emanuel's three criteria of the deliberative model followed by an ethical analysis on the permissibility of hormone-blockers.

January 2007

I saw Jamie for the second time. He's not doing so well.

He failed last semester and may have to repeat a grade. Nobody knows about his gender issues at school. He told me that he just sits outside on the soccer field and reads. No one bothers him. He has no friends.

At the last visit we talked about his childhood. He remembers never feeling that he fit in. Nothing was ever "right." Her older sister used to ask her to play with Barbies but she was never interested.

His relationship with her sister is "okay." It's hard because relationships between siblings can be strained. It may have nothing to do with her gender. It could just be normal growing pains, right?

His parents are still fighting. Jamie is worried they may get a divorce.

Jamie has been going on the internet to look at trans websites. He's starting to gather information. He asked me point blank today, "What can you do for me? All we do is talk." I told him that I have to know more about his situation. I think I was just stalling.

I will see him in one month.

CHAPTER FOUR:
AN ETHICAL ANALYSIS OF HORMONE-BLOCKERS & THE TG/TS ADOLESCENT

So far we have used Emanuel and Emanuel's ideal framework— the deliberative patient-physician relationship— to help us understand this complex relationship and, in doing so, investigate how prepared both parties are in making decisions regarding the TG/TS's care. The criteria of this ideal framework has allowed us to have a deeper understanding of not only the type and characteristics of this relationship but also the complicated decisions made by the patient and physician against the backdrop of the powerful influences of clinical medicine and law.

If we are to use the criteria for the deliberative model where a physician has adequate clinical knowledge, understands the values of the patient, and preserves a patient's autonomy, I believe that a truly informed decision cannot be made. In my opinion, none of the criteria are fully met for having a meaningful relationship that allows a patient and physician to make major medical decisions. From the first section of this thesis we clearly see the lack of clinical knowledge regarding TG/TS by clinical medicine. It is easy to see why. TG/TS itself is already viewed negatively by many and is therefore unlikely to get government or pharmaceutical funding for further research. When there is a lack of research then there is even less knowledge to develop standardized protocols for best care practices for the patient. One only has to look at the discrepancy in protocols concerning cross-sex hormones across Canada and the United States as one example.

Many cross-sex hormone protocols exist in numerous urban centres and even differ from physician to physician. Dosages and differences in availability of medications prove to be a point of contention for those undergoing hormone therapy. Depot drugs that can be injected and taken every one to two weeks are more readily acceptable than daily pills that may act as constant reminders of “treatment” for their condition. Protocols rightly address the absence of research trials regarding the effects of hormone replacement therapy on transsexuals and ask that physicians make inferences from studies such as the Women’s Health Initiative Hormone Replacement Therapy Study (WHI HRT) (Rossouw, 2002). Some may ask, however, if such inferences are too broad. Can we assume that the effects of estrogen in post-menopausal women are the same in an eighteen year-old MTF transsexual? In many ways, such a situation is similar to women taking new medications when they have only been investigated in men. Feminists have been critical in exclaiming that women have become “guinea pigs” for the pharmaceutical industry and clinical medicine (Crosthwaite, 2001). One may also question if a similar situation has occurred with the TG/TS and hormone therapy.

Concerning TG/TS adolescents, the current state of knowledge is extremely limited. I have already highlighted the fact that the long-term risks of hormone-blockers are not known despite the comfort that many physicians have in prescribing them. In some respects, TG/TS adolescents are similar to such women taking HRT. TG/TS adolescents are also taking a drug that has been given for years but to a different population— children with precocious puberty. We also do not know the effects of cross-sex hormones on the adolescent body. For example, elevated levels of cholesterol or dyslipidemias are one side effect of taking cross-sex hormones because of their effect on the liver. The long-term consequences of taking cross-sex hormones for an extended period of time, essentially from puberty until death, are also not known. There is simply a lack of clinical knowledge.

In the second section we investigated the physician's ability to understand and appreciate the health-related values of the patient. There are numerous barriers to a full and comprehensive understanding of the health-related values of the patient. Framing the relationship between patient and physician under the diagnosis of "gender identity disorder" results in a certain antagonism towards the TG/TS adolescent. Such gender dysphoria, in my opinion, is a result of another person's denial of the adolescent's gender identity. If the TG/TS adolescent lived in a society that accepted or tolerated cross-gender identification as expressed through atypical gender roles then it is likely that such individuals would not have gender dysphoria. We see other disconnects between patient and physician secondary to misappropriation of poor decision-making for gender identity and gender dysphoria. Although I agree that adolescent behaviour is quite variable and, at many times, suboptimal, adolescent gender identity is relatively stable, consistent, and needs to be properly respected and addressed. Although age-specific values for adolescents indicate that decisions are frequently based on physical appearance, I feel that a careful assessment of gender is not the result of an impulsive decision but is one that is capable of being well intended and thought out.

The third criterion relies on the physician helping and clarifying clinical information and values so that the patient can make a thoughtful and informative decision. I argue, however, that there are numerous barriers to achieving this, namely the influences of the law on clinical medicine and the individual patient. Although the law believes it has respected the rights of adolescents through the conception of the mature minor rule, we see that such attempts have not been translated and enacted into their protection.

From this quick synopsis of our discussion so far we easily see that the relationship between TG/TS and physician has much more room for improvement. Personally, I would describe this relationship as lacking and misguided. Because of such characteristics I would also argue that both patient and physician are not in an optimal position to understand, discuss, and deliberate on the difficult clinical situations involving ethical matters. In my opinion, the largest concern of the three criteria is the lack of clinical knowledge concerning GID and hormone-blockers which ultimately affects the appreciation of patient values and autonomy. In particular, the unknown risk into the harms and benefits (moreso of the former) of hormone-blocker therapy raises the greatest concern.

In this section, I summarize the major ethical arguments that support hormone-blocker therapy as an effective therapy in treating TG/TS adolescents. I argue that such arguments do not place enough attention on the TG/TS adolescent and her ability to make decisions and in the current context in which she make decisions regarding her health care. I argue hormone-blocker therapy can be ethically administered to a mature adolescent using the concepts of respect for persons and integrity of the body utilizing considerations of trust, privacy, and self-determination. Lastly, I argue that therapy with even an unknown risk of harm can still be ethically administered to a TG/TS adolescent when done in a manner that attempts to minimize such risk.

Defending Access to Hormone-Blocker Therapy

There have been many ethical justifications supporting hormone-blocker therapy. Giordano is probably the most published ethicist concerning TG/TS adolescents. In her paper concerning Gender Atypical Organisation in Children and Adolescents[3], Giordano provides practical advice concerning the use of hormone-blockers in TG/TS adolescents (Giordano, 2007). Giordano has four main justifications for the ethical use of hormone-blockers in TG/TS adolescents. First, she writes that there are certainly many adolescents who meet the criteria for having the capacity to make major medical decisions. Competency should therefore not be based solely on age. Second, she goes on to note that although physicians are not obliged to provide medical treatment upon request, there lies some moral responsibility for the physician to also take into account what would happen if treatment is not administered. The physician thus needs to take into account the harms and benefits of the given therapy and choose the better option of the two.Third, in investigating the nature of the role of the family giving consent, Giordano writes that physicians should be open to the possibilty of treating children and adolescents without parental consent "unless it can be shown that parental consent is always essential to successful adaption to gender reassignment." Parents, in her opinion, may not always serve or even understand their children's best interests and therfore major medical decisions hsould be made in the best interests of the child. Fourth, she asks for consistency. If the main argument against the use of hormone-blockers in TG/TS adolescents is the unknown harms of such therapy then similar rules should be applied to adults as well, regardless of the age of the adolescent. She comments there have been many times in clinical medicine that medications were prescribed without knowing their

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[3] "Gender atypical organisation" is another term for "gender identity disorder"

full efficacy and side effects. Surgeries were performed without truly understanding the complications that could have arisen. She writes that had physicians and surgeons not attempted to make such decisions then there would be no advancement in science and medicine.

Richard McCormick provides another ethical analysis in terms of adolescents making decisions involving unknown harm. Although the Catholic theologian would likely be in a disagreement with TG/TS, my interpretation of his general argument for the use of child subjects in research to our discussion is based on the possibility that the use of hormone-blocker therapy in TG/TS adolescents would provide a greater good for future TG/TS adolescents. This assumes that there are certain sacrifices that members of a community should make because it is in their best interest to do so (McCormick, 1970). By using hormone-blockers, TG/TS adolescents are generating knowledge concerning their harms and benefits which could be used for other individuals. A similar argument is shared by my bioethicist colleagues who suggest that speculating what the child/adolescent would want or choose in the future can justify their participation in research with some risk of harm.

Whilst Giordano and McCormick do provide a framework for answering, their justifications, in my opinion, are problematic. Giordano's views are sound for making practical and pragmatic decisions but do not directly utilize nor are grounded in an ethical framework to justify their use. Her notion of consistency and ageism is particularly insightul but because she has to rely on comparisons between adolescents and adults, she draws attention away from her main argument which emphasizes the ability of some TG/TS adolescents to make their own decision. Glass and Speyer-Ofenberg criticize “solidarity ethics” suggested by McCormick’s arguments by noting that such a justification is based purely on “presuppositions concerning human nature” that may or may not be accurate (Glass & Speyer-Ofenberg, 1996). In a similar light, assuming what a child or adolescent would do in the future is also just as problematic. As one can see, McCormick’s justifications also do not focus on the “present” individual making the decision. From their perspective, utilizing a treatment with unknown harm and/or risk is ultimately for others or for one’s “future” self. It says nothing about what is happening to the patient and why and how a decision should be made for her at the present time. This calls for a better understanding of the ethical grounding for an individual bearing an unknown risk of unknown harms.

I argue that the major argument for providing biomedical interventions with unknown harms and risks requires us to focus on the present adolescent at hand and appreciate and respect her autonomy. This notion of adolescent autonomy has already been explained previously through an investigation of the third criterion of the deliberative model but may be further justified utilizing the concept of respect for persons, as seen through the integrity of the body, as exemplified through the ethical considerations of trust, privacy, and self-determination.

First, trusting the adolescent is based on the expectation that the she is able to reflect on a given dilemma, identify the possible options, and choose the better option. It would be expected that the adolescent would choose the option that would minimize the opportunity for harm while maximizing benefits. Because the adolescent has evolving capacities, with greater capacity to make more complex decisions at an older age, we should trust that the adolescent will have a better ability to discern which options are more ideal than others as she gets older. There would be an inverse relationship with guidance from others so that such an increase in ability in decision-making would occur with decreasing assistance from others. We have to appreciate that adolescence is a time in which mistakes will likely be made and that they will learn from their mistakes. Adolescents therefore need practice in making such decisions so that they can make better decisions, ideally before, reaching adulthood. As pointed out by psychologist Erikson, adolescence evolves over time with greater psychological growth resulting in emancipation and individuation. This ultimately results in greater sense of identity and self-esteem that will include career and life-style goals (Erikson, 1959). We therefore need to trust that the adolescent will learn from such experience so that she is able to make decisions as if she was an adult. I should reemphasize that just because a given situation is a major life decision does not mean that an adolescent cannot make such a decision. Moreover, I would also emphasize that just because many decisions of adolescents are unpopular does not necessarily assume that they are wrong.

Second, adolescence is a time in which they are finding and reaffirming various identities. In order to accomplish such a task, the adolescent needs a certain amount of privacy, free from institutions and government involvement. Why? If such outside agencies interfered with an adolescent’s privacy then no personal, cognitive, or moral development would occur. In my opinion, this leads directly to preservation of the integrity of the body. I do not refer to the integrity of the body as meaning to leave the body untouched as in the books of *Corinthians* and *Genesis*. Instead, I refer to the integrity of the body as an adolescent’s conception of being a person that represents who she is biologically and psycho-socially. Through such a tumultuous period, it is even more of an utmost importance that the adolescent is able to make decisions on her own without outside interference. This ethical consideration is deeply linked with trust in that giving the adolescent privacy to make such decisions inherently requires one to trust her during such a process.

Finally, I believe that self-determination is central to respect for persons as any competent person should have the right to make any decision concerning her body. As already explained elsewhere in our discussion, if a given patient is transmitted adequate clinical information and understands the nature and risks of the harms and benefits of a given intervention then she is able to make an informed decision regarding her care. Note, as echoed by Giordano, this does not coincide with age. Although one would expect that one is more mature with increasing age, this is not always the case. I point out that there are many minors who have a maturity surpassing many adults. In the same manner, I would also emphasize that there are numerous adults who make very poor decisions. Insofar as the adolescent is able to face and live by the consequences of this said decision and not hold others liable for negative consequences, in my opinion, the adolescent should be able to make her own decisions. This would also include major medical decisions that could potentially be irreversible.

In their article, Diamond and Beh address the intricacies involved with medical decisions involving sex and gender. In particular they address the tenet of “relieve pain and suffering” that is used in clinical medicine to address the needs of TG/TS individuals (Diamond & Beh, 2006). The authors cite the concept of individual freedom as advocated by John Stuart Mills to allow the ultimate decision to under go a given procedure should be left to the “competent and mentally mature individual involved regardless of whether doing so is in keeping with the desires or advice of the public, any specified institution, or involved professionals (Mill, 1978)". In their paper, they reference a study performed investigating post-tubal ligation regret in women. Schmidt found 14.3% of women who had undergone tubal sterilization will eventually have some degree of regret years later as measured by information requests for sterilization reversals (Schmidt, et al., 2000). Younger adult women aged 18-24 years of age, in particular, were more than three times more likely to request reversal information than those over 30 years of age. Diamond and Beh point out that despite this statistic, no one would ever suggest that women should not be sterilized as they are more likely to regret having undergone the procedure. The two authors therefore feel that self-determination does not only involve making correct decisions concerning one's self and body but pushes this concept further. As per Diamond and Beh, "every individual has a right to be self-determining; everyone has a right to even be wrong." Notice that this thought process does not refer to age. Bringing such concepts of self-determination and individual freedom to our discussion, the TG/TS adolescent should have the right to make a decision to receive hormone-blocker therapy and face the negative consequences should they arise as long as her physician identifies the nature and risk of negative consequences and counsels her accordingly.

Approaching Unknown Risk

Now that we have addressed the ethical grounding of hormone-blocker therapy through the ethical considerations of trust, privacy, and self-determination, a pragmatic approach would incorporate such ethical concerns in clinical practice. Looking back on the main question of whether or not a physician can ethically prescribe hormone-blockers, the fundamental question that is involved concerns the effects of both prescribing and, equally important from my point of view, not prescribing hormone-blockers. As discussed, one of the main concerns concerning hormone-blockers is their direct physical effect on the adolescent and, to a greater extent, their indirect effect on development. Some argue that blocking endogenous hormones can negatively affect the vital functions that such hormones play, particularly in brain maturation and development. This begs the question, how do we approach risk in the TG/TS adolescent? How do we ethically respond to unknown harms and the risk of such harms occurring? Before we can answer such questions we need to define "risk."

Although developed to show the connections between risk and philosophy, Hansson summarizes five major specialized uses and meanings of "risk" that are widely used across a variety of disciplines. First, risk can be simply thought of as an unwanted event that may or may not occur. eg. Lung cancer is a risk for smokers. Second, risk can be the cause of an unwanted event which may or may not occur. eg. Smoking is a major risk for lung cancer. Third, risk can be the probability of an unwanted event which may or may not occur. eg. The risk of dying from lung cancer in a smoker is fifty percent higher than in a non-smoker. Fourth, risk is a fact that a decision is made under conditions of known probabilities. Fifth, risk is the statistical expectation value of an unwanted event that may or may not occur (Hansson 2007). This last definition is of particular importance to our discussion.

The statistical expectation value of a negative event has been calculated since the 17th century but was only recently introduced into risk analysis through the introduction of the Reactor Safety Study (Rasmussen 1975). The report was used to compare the radiological consequences and probabilities of such consequences occurring if a serious accident were to take place a nuclear reactor plant. The study utilized this definition of risk which involves a calculation involving the probability of the negative event occurring and the degree of its severity. For example, there is a vast difference between a chemotherapeutic drug resulting in 90% of its patients experiencing nausea and another drug which results in 90% of its patients dying. As noted by Hansson, there are many risk analysts who state that this is the only definition of risk that should exist.

It should be noted that this description of risk involving probability and severity is readily used in clinical medicine and research. This can be seen by the definition of "minimal risk" by the Tri-Council Policy Statement, a summary of the policies for conducting research of the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC) (Interagency Advisory Panel on Research Ethics 1998):

> **"…if potential subjects can reasonably be expected to regard the probability and magnitude of possible harms implied by participation in the research to be no greater than those encountered by the subject in those aspects of his or her everyday life that relate to the research, then the research can be regarded as within the range of minimal risk."**

In the case of hormone-blocker therapy, we must therefore balance the risk of prescribing hormone-blocker therapy and not prescribing hormone-blocker therapy, taking into account the benefits and harms of each. As stated earlier in our discussion, the largest concern of those questioning hormone-blocker therapy in TG/TS adolescents is its effect on adolescent brain and development. How do we approach the unknown risks of hormone-blocker therapy?

In “Gene Transfer and the Ethics of First-in-Human Research: Lost in Translation” Kimmelman, a professor of ethics at McGill University, investigates the concepts and approaches to risk in gene transfer research (Kimmelman, 2009). One of the risks of gene transfer is insertional mutagensis or injury caused by the insertion of a genetic element in a genome. This could lead to a lymphoproliterative disorders or a type of cancer where lymphocytes, a type of cell that helps create antibodies, continually replicate and divide. Research involving gene transfer is difficult as the benefits for current and, particular future, patients and their families must be weighed against the harm of cancer through the risk of insertional mutagenesis. I must underscore that the risk of the latter is virtually “unknown” therefore making this balance even more difficult to appreciate and understand. The goal of such research is to maximize the benefit of gene transfer while minimizing the risk of insertional mutagenesis.

Scientists and physicians have utilized different strategies in approaching and reducing the uncertainty in gene transfer research. First, one can choose and utilize the intervention strategy or treatment of less risk. Certain vectors can be altered to decrease their risks of immunogenicity. Second, research subjects can be cautiously selected. Generally speaking, participants with poorer prognoses or who do not respond to treatment should partake in gene transfer protocols more than healthy participants. Third, trial design should invoke a gradualist approach. Instead of using higher doses of drugs on a given amount of participants, one can increase doses of drugs gradually to avoid side effects and only include a limited number of participants. If there are no or minimal side effects, than more participants can be included. Fourth, studies can closely monitor participants in protocols with greater uncertainty of their treatments. This would allow for better detection and surveillance of the negative outcomes concerning gene transfer therapy.

Much can be learned from Kimmelman by applying such strategies to the TG/TS adolescent. First, when Kimmelman writes about choosing the strategy of less risk he is ultimately suggesting a harms-and-benefits comparison among strategies. In the case of the TG/TS adolescent the various strategies as seen in Figure 2 are no intervention (no medications, no psychotherapy), no psychotherapy, hormone-blocker therapy, and cross-sex hormone therapy. (I would underscore, however, that the hormone-blocker and cross-sex hormone approaches would almost always have some sort of psychotherapy involved.) Of the four strategies, I feel that the extremes of intervention— no intervention and cross-sex hormones— are questionable in regards to the TG/TS adolescent. I will briefly highlight them here but will spend more time concerning the other two.

No intervention would mean that neither psychotherapy nor medications would be available for the adolescent with gender dysphoria/GID. The harms of this strategy are quite clear. We already know that TG/TS adolescents are at higher risk for behaviours including drug and alcohol use and suicidal ideation and attempts. The benefits of this particular strategy are that the adolescent can experience puberty free of medications, free from potential medical side effects. Although this is frequently done consciously and subconsciously by many good-willed health care professionals, ignoring gender dysphoria is not a benefit. By not addressing the medical problem, the physician is not fulfilling her duties in the patient-physician relationship.

The other extreme of psychotherapy is the commencement of cross-sex hormones. The benefit of cross-sex hormone therapy is that the TG/TS adolescent would be allowed to transition much sooner. This would not only allow for the disappearance of secondary sexual characteristics of the native gender but would also include the characteristics of the chosen gender as well. In doing so one would infer (as seen in adult studies) better satisfaction rates amongst adolescents started on such hormones. There are, however, two main reasons why such an approach would not be used. First, the irreversibility of cross-sex hormones has to be considered. Some of the effects (both intended and non-intended) are not reversible such as hair distribution and infertility. Second, there are numerous side effects with each medication. Testosterone and estrogen can both cause liver dysfunction and hypercoaguable states leading to cardiac arrest and stroke. Again, as I have repeatedly stated elsewhere, the long-term side effects are clearly not known. Because the magnitude of negative consequences is so high along with the high degree of probability of such consequences, I do not see this as an option until the TG/TS adolescent is over the age of majority.

Psychotherapy and hormone-blockers with psychotherapy are the two options that are often used in clinical medicine. Psychotherapy is a useful strategy in attempting to deal with gender dysphoria. Through therapy and counseling, the patient and health care professional have further understanding of the degree and quality of gender dysphoria and whether the adolescent meets the criteria for GID. Such therapy may also lead to coping mechanisms on how to handle such feelings and emotions. This is also an opportunity to identify other co-morbid conditions that may co-exist with the gender dysphoria.

The benefits of psychotherapy alone include the progression of the adolescent through puberty “naturally.” In this way many physicians feel more confident that the adolescent truly has GID and avoids unnecessary side effects of mediations such as hormone-blockers or cross-sex hormones. Supposing that the adolescent, however, does have gender dysphoria or GID, the harms of providing only psychotherapy is that puberty will still take place and may pose unnecessary added stress during therapy and counseling. The discordance between the gender identity with which the adolescent identifies and her physical appearance may result in so much stress that it interferes with the psychotherapy that is offered. This is probably the most pressing issue that I have seen in my own clinical practice. The psychological stress experienced by the TG/TS adolescent may manifest in other difficulties including co-morbid conditions such as depression and risky-behaviours such as alcohol and drug use and truancy. From the perspective of weighing the benefits and harms of psychotherapy (no hormone-blockers) and my own clinical experience, I feel both the magnitude and likelihood of such harms including depression, suicide, and at-risk behaviours outweighs both the magnitude and likelihood of its benefits. From this point of view then I feel that psychotherapy alone is insufficient and inadequate to meet the needs of most TG/TS adolescents.

The benefits of hormone-blockers are many. Perhaps the most encouraging characteristic of hormone-blockers is its reversibility. If hormone-blockers are prescribed and then stopped, puberty will proceed as normal. Assigned females will grow breasts and menstruate. Assigned males will develop facial hair and muscle mass. It is this reversibility in outcomes that makes it very different from the risk involved with new medications where the outcomes are unknown. Again, puberty is delayed with the commencement of hormone-blockers but will resume with its cessation. The use of cross-sex hormones (if transitioning is wanted) or the natural rise in endogenous hormones (if cross-sex hormones are not used) will lead to further pubertal changes. The adolescent therefore has more time to further explore the issues around her gender dysphoria and the way she may wish to manage such feelings and emotions. This characteristic of simply halting a natural process and letting it proceed once the medication is stopped has resulted in some centres including Vancouver's Transgender Health Care Programme viewing hormone-blockers as a "diagnostic tool" and not a treatment (Dahl et al., 2006). If gender dysphoria decreases with hormone-blockers then GID is likely present.

The harms of hormone-blockers include acute concerns such as direct effects such as electrolyte disturbances and stomach ulcers. Chronic concerns are lower bone density (although this is reversible). There are also indirect risks for the TG/TS adolescent. For example, she may feel that the commencement of hormone-blockers is not enough and may transition through other means such as dress. Marked changes in appearance could then compromise her personal safety. But perhaps the largest concern of physicians is the effect of hormone-blockers on the developing adolescent. We have already discussed previously that there is much evidence supporting a theoretical and biological basis for gender dysphoria and that cross-gender identification is not likely the result of impulsive or suboptimal decision-making.

Summarizing all this information I believe the magnitude and certainty of the benefits of hormone-blockers are extremely high. If we look at the harms of hormone-blocker therapy the magnitude of acute harms such as electrolyte imbalances is certainly high but the probability of such harms, in my opinion, is quite low. Although I concede that we do not have long term studies looking at the effects of hormone-blockers on other aspects of adolescent development, the current research available to us including theoretical models on adolescent behaviour and development would suggest that the magnitude and risk of chronic harms is low.

From our discussion so far, the comparison of hormone-blocker therapy versus only psychotherapy results in multiple benefits of hormone-blockers with very few harms noted. The risk of such benefits is also high. Looking at psychotherapy alone with no hormone-blockers we see that the harms outweigh the benefits with a high risk of such harms. To reunite these two arms of treatment into a clinical and ethical decision, I believe there is adequate information that hormone-blockers are ethically permissible and would benefit many TG/TS adolescents. Moreover, I have shown the lack of clinical knowledge regarding the long-term effects of hormone-blockers does not necessarily and automatically negate their ethical permissibility. When followed by a medical professional who uses a hormone-blocker protocol designed to reduce the risk of potential harms, a TG/TS adolescent should be able to take part in the decision process to receive hormone-blocker therapy and such a decision should be considered ethical. To this end, I conclude that hormone-blocker therapy should be seriously considered as a standard of care for TG/TS adolescents.

I believe Kimmelman’s remaining suggestions are straightforward from this point on. Careful screening by a physician experienced with GID would ascertain whether or not they truly have gender identity disorder. A gradualist approach with hormone-blockers would be undertaken with lower doses used and titrated until the desired effect. Trial design is comparable to the way a team and clinic is organized. Having specialists in different fields such as social work, nursing, psychology, and medicine strengthens the ability of the team to address the different problems and concerns that may arise both related and not related to GID. As suggested elsewhere, follow-up would be done consistently and closely to monitor and treat side effects and to address issues the numerous psycho-social aspects that are equally important in the TG/TS adolescent's care. Because there are unknown harms, follow-up would not only include medical follow-up but continual re-evaluation of consent for hormone-blockers and the preparedness for consent in further medical (eg. cross-sex hormones) or surgical management.

Providing Care

This discussion has focused on the ethical permissibility of hormone-blocker therapy in TG/TS adolescents. As I stated in the last section, from an analysis of the relationship of the TG/TS adolescent with her physician as influenced by clinical medicine and the law, the benefits of hormone-blockers combined with the harms associated when they are not prescribed make hormone-blockers a helpful, practical, and valuable diagnostic tool for the adolescent presenting with gender dysphoria. The characteristic of the medication's reversibility make hormone-blockers particularly effective and informative for the diagnosis of GID. At this point, however, I would also like to make it clear that I am not saying that hormone-blockers should be used in every TG/TS adolescent. Although the discussion so far seems to duly support and advocate for adolescent rights and autonomy I also have to state that what the capable and informed adolescent may desire may not be in their best care.

I should extrapolate what I mean by care. There is a very blurry line that divides the desires and interests of the patient versus providing the best care for the patient. Although they may overlap, I argue that they may be in opposition to each other and may actually be mutually exclusive. The "desires" or "interests" of the patient, in my opinion, expresses what the patient truly feels and wants. In my opinion the desires of the adolescent take place in an ideal world. In the context of transgender care, this amounts to a patient coming out and transitioning as soon as possible in a society accepting of TG/TS individuals. Hormone-blockers would be given to all adolescents and cross-sex hormone therapy started soon thereafter. I view "care", on the other hand, as that represented by the deliberative model we have used in dissecting and reuniting the

TG/TS adolescent and her relationship with her physician— taking into consideration the multiple layers involved in the decision process and the pragmatic positive and negative consequences of achieving such goals.

Providing the “best care” is different from simply fulfilling the desires of the patient. For example, just as it may involve starting hormone-blockers and even cross-sex hormone therapy it may also include not recommending hormone-blocker or cross-sex hormone therapy. The TG/TS adolescent may have abusive parents or live in a small town that is not tolerant of TG/TS individuals. At the psychosocial level, the use of hormone-blocker therapy may complicate the family situation. Having a child or adolescent who is TG/TS may be difficult for many family members who may be uncomfortable and upset at both the adolescent and the medical team. A family that is not in agreement of hormone-blocker therapy cannot provide the psychological support that is needed for the TG/TS adolescent and could place the TG/TS adolescent more at-risk. “Caring” for the patient may therefore result in disagreeing with and overruling such desires of the TG/TS adolescent. To determine what type of care the patient should receive, the physician has to make sense of the situation and determine the benefits and harms of the various treatment options and the risk of such outcomes. The physician may then conclude why one particular treatment should be chosen over another, the latter also including no hormone-blockers and only psychotherapy.

Finding Care in Clinical Medicine and the Law

Besides the intimate relationship between patient and physician, I believe I have shown the complexity of this relationship under the influences of clinical medicine and the law. How then do we find care in these two domains? The number of instances involving the law concerning individual medical cases is far fewer than the number of legal and ethical dilemmas that clinical medicine handles itself. Although clinical medicine should be applauded in its ability to reconcile such dilemmas, greater communication between the clinical medicine and the law is needed. There is simply a lack of case law to develop a general framework of legal rules that can be applied to resolve individual cases. Judges and lawyers may not fully understand how decisions are routinely handled in the pediatric setting concerning adolescents and their decision-making. Such knowledge is invaluable towards a deeper understanding of clinical medicine and, most importantly, the mature minor. Other characteristics to describe this relationship are immediate and urgent.

Too often, clinical medicine and the law only meet when an emergency situation arises. Earlier communication between the two spheres can avoid, if not decrease, the tension between the two. For example, besides having a better understanding of a mature minor’s rights, clinical medicine could have teams of social workers with legal training assigned to working with adolescents during disputes with her parents or treating team. The inclusion of such teams and an ethics committee earlier during particular cases with representation from the law can be used to explain protocols regarding patient care in terms of consent to and refusal of treatment. Often it is too late to find consensus and agreement when an individual case evolves without guidance from such sources. In doing so, clinical medicine and the law can work together and take a proactive stance concerning dilemmas involving mature minors.

In addition to strengthening the medical and legal relationship, both medical and laws also need to address problems consistent in their domain. Physicians should emphasize the bio-psycho-social model in appreciating the individual differences and needs—both biological and psycho-social— of each patient. Understanding the complexity of the relationships between the TG/TS and their loved ones, family, and friends is central to building mutual trust and respect. The focus of the encounter should not just focus on gender issues but primary care. In order to increase a physician's knowledge, research must be conducted to examine the benefits and potential harms of hormone blockers and cross-sex hormone therapy in adolescents and adults. By giving them knowledge directly from TG/TS research, the physician is able to truthfully answer and manage the questions, concerns, and health needs of TG/TS thereby maximizing the autonomy of the patient. But equipping physicians with more knowledge concerning gender identity issues and knowledge extends further than the physician-TG/TS relationship. Such research is useless if the inequalities in the health care of TG/TS are not addressed within the medical institution such as the medical school and hospital.

The care of TG/TS should begin with proper training of physicians. Although the aim of medical school is to train future physicians who are aware of the issues facing vulnerable and marginalized populations, well intentions often result in the promotion of stereotypes in medical school curricula. This is certainly true concerning sexual and gender minorities. Homosexuality is addressed during lectures on AIDS/HIV. HIV is thus seen as a primarily disease of gay men. Similarly, transgender and transsexuality are either non-existent or only mentioned when medical students are taught psychiatry. Gender variance is thus seen as a condition you do not need to know or something you “treat.” Solutions include presenting TG/TS issues during family medicine modules that emphasize primary and preventative care. This would emphasize the need to meet the TG/TS’s basic health needs like any other patient and could serve as a means to normalize gender variant behaviour and identity. As stated above, the inclusion of GID in the DSM IV, although challenged by many TG/TS, is also reluctantly embraced since a diagnosis is needed for medical or psychiatric therapy and other health services. Keeping GID, however, for the sole means of obtaining coverage for such services and billing should not maintain its inclusion in the DSM IV. The classification only portrays the discordant health values of TG/TS hoping to express their appropriate gender and the physician who are trying to treat their “disorder.” The use of GID does not address greater issues such as transphobia and genderism and should therefore be removed from the DSM IV and future versions.

Although it has been said many times elsewhere, there should be greater acceptance of gender variance both inside and outside of clinical medicine. A common theme I hear from younger adult TG/TS is that they did not have the words to describe their gender issues when they were younger. They too confuse gender and sexual identity as the only words they know are gay or lesbian for anything not “normal.” Teaching terms regarding gender such as transgender or transsexual will give them the ability to discuss gender issues. Addressing gender issues at an earlier age, such as during sexual education, could help many youth and their non-TG/TS peers become more accepting and learned of transgender and transsexuality.

Clinical medicine also has to increase its knowledge of the legal rights of the mature minor and invoke policies within their care institutions to represent such ideals.

Although position statements concerning the involvement of adolescents in decision-making are published by major medical organizations such as the Canadian Pediatric Society, most professionals are unaware of such literature (Bioethics Commitee, 2004). After performing literature searches in law databases articles indexes, I was not able to find any case where a physician has been successfully sued concerning consent to treatment in mature minors in Canada. Holder reports that there have been no recovered damages from any parent to those over fifteen years of age in the United States (1991). This, of course, does not mean that physicians should prescribe medication or perform surgery on whomever they see but highlights the fact that physicians need not practice a defensive clinical practice because of fear of litigation. Psychological evaluations determining maturity and comprehension of medical treatment should be standardized so that assessments deeming an adolescent as not mature are not simply due to physicians promoting their own medical preferences.

Lastly and most germaine to our discussion at hand, hormone-blocker therapy is a safe management strategy for adolescents and should be considered as one option in providing care to the mature and capable adolescent diagnosed with gender dysphoria. This naturally leads to determining the rights of the minor in the law. Although the law has been consistent with respects to consent to treatment, the refusal of treatment by the minor is an issue that is very unclear and has to be explored more fully. By refusing a mature minor’s refusal to treatment, the law inevitably neglects the integrity of a mature minor and her capacity to make a reasonable informed decision and compromises her ability to apply her own health values in making such choices. As expressed throughout this discussion, the artificial application of the mature minor rule has ramifications both inside and outside clinical medicine and the law.

March 2008

Jamie is 15 years old today. It was bittersweet birthday.

His hair is shorter. He said he likes it short and spiky. His sister gave him a black leather bracelet. He was so happy to show it to me. I said he was very lucky.

He asked me again whether or not he could start hormone-blockers. Apparently he chatted with another TG/TS adolescent on the internet in California who is actually on cross-sex hormones, not even hormone-blockers. I asked him if they were really cross-sex hormones and he said yes. It seems a little too early for me. I don't know.

Things continue to be unstable at home. His parents have finally separated so at least it's a little quieter at home for him.

Jamie's father is a lawyer. He-mailed Dr. S last week and said he would sue the entire clinic and hospital if he prescribed hormone-blockers to Jamie.

When I saw Jamie this time I tried listening to his heart but it was different. When I did I heard dull heart sounds. His chest was hard. I asked him, "Are you wearing a binder?" He said yes.

He took it off. There are multiple pimples on his back-- heat rash from the binder. He told me it cost $60 on the internet. A modern day corset I guess but this time to make the breasts non-existent. He put the binder back on.

I told Dr. S that Jamie has started to get breasts. I said, "I think I see some breast development." I was hoping he would start hormone-blockers. Dr . S said we should wait.

I said good-bye to Jamie. He didn't respond. He didn't make eye contact me. He put his delicate hands in his pockets. He looked down at the floor. He walked out the door.

I'm not sure if I will ever see Jamie again.

CHAPTER FIVE:
THEORY TO PRACTICE

So far we have investigated the medical and legal concerns regarding TG/TS adolescents and hormone-blocker therapy. As a pediatrician working with TG/TS adolescents, it would be remiss to not make recommendations to facilitate the care of the TG/TS adolescent. It is my hope that these recommendations will lead to a statement in endorsed by the Canadian Pediatric Society regarding cross-gender identification and gender dysphoria in adolescents.

Practical Recommendations & Guidelines

1) **Comprehensive health care aimed at promoting normal adolescent development, social and emotional well-being, and physical health should be available to adolescents of all gender identities.**

2) **Health care providers should stay informed about resources in their communities for transgender adolescents.**

3) **Health care providers should be aware of the risks to health and development in these youth, including those from transphobia.**

4) **If a health care provider has personal barriers to providing nonjudgmental care and information, they should refer patients to another health care provider.**

5) **TG/TS adolescents or adolescents with gender issues should be seen by a health care provider specializing in gender issues.**

    a. **Transgender health care is extremely complex and requires knowledgeable staff in providing adequate and safe care.**

6) **Transgender health care should involve a multi-disciplinary team.**

    a. **This team should be comprised of physicians, nurses, psychologists, and social workers.**
    b. **The multi-disciplinary team should have experience and access to address issues that may arise during the TG/TS adolescent's care, this includes family issues both related and not related to gender, medico-legal rights to hormone-blockers.**

7) **The family should be involved in much of the care as possible.**

    a. **TG/TS adolescents benefit from the support of family and friends. The inclusion of these persons will facilitate the care received by the TG/TS adolescent.**

8) **Psychological counseling should be part of all TG/TS adolescents care.**

   a. **Psychological counseling may facilitate earlier understanding of one's gender identity for those who are questioning their biological gender.**
   b. **Psychological counseling provides strategies for the TG/TS adolescent with dealing with gender issues in an environment that may not be accepting towards TG/TS persons.**
   c. **Psychological counseling is also part of the WPATH Standards of Care.**

9) **The TG/TS adolescent should be reminded that each individual's case is unique and will thus require care and management appropriate to that patient.**

   a. **Explanation that each case will be handled individually avoids frustrations over therapy that is perceived as being "too slow".**

10) **If hormone-blockers are deemed helpful for the individual TG/TS adolescent then the TG/TS adolescent should be reminded of her legal right to access therapy.**

    a. **A TG/TS adolescent's access to hormone therapy should not be compromised for fear of litigation.**
    b. **Physicians should be cognizant of the legal rights of mature minors concerning consent to treatment.**

11) **If hormone-blockers are to be pursued by the TG/TS adolescent with parental disapproval, a team knowledgeable in adolescent rights should be involved as soon as possible.**

    a. **Respecting the autonomy of the TG/TS affirms her integrity to make decisions concerning her health.**
    b. **Knowledgeable persons can give valuable advice to the multidisciplinary team when difficulties arise between the TG/TS adolescent and her parents.**

12) **If the multidisciplinary team is not successful in reaching an agreement then the ethics committee should be contacted and informed.**

    a. **An ethics committee may provide a more "objective" view as perceived by the parents disapproving of hormone-therapy for their TG/TS adolescent.**

13) **In making their decision, the multidisciplinary team should be aware of their obligations to their patient and the psycho-social consequences if hormone-blockers are and are not prescribed.**

    a. **A harm reduction approach may be beneficial in assessing the medico-psycho-social needs of the TG/TS adolescent.**

14) **Greater research should take place investigating the long-term effects of hormone-blockers and TG/TS adolescents.**

15) **Greater research should take place investigating strategies in reducing at-risk behaviours such as suicide, drug ingestion etc. in TG/TS adolescents.**

CONCLUSION

Through the application of Emanuel and Emanuel's deliberative model to the TG/TS patient-physician relationship we are able to further understand the relationship between the TG/TS adolescent and her physician and through such an understanding discern their preparedness concerning the management of GID, in particular, the prescription of hormone-blockers. The lack of clinical knowledge concerning TG/TS adolescents and hormone-blockers, barriers to understanding and appreciating the values of TG/TS adolescents, and the influence of the law limiting the decision-making ability of the TG/TS adolescent challenges our ability to make an informed decision concerning the prescription of hormone-blockers for TG/TS adolescents. We cannot deny that there are many unknowns concerning the effect of hormone-blocker therapy and the effects of such medications on the future development of the adolescent. Numerous factors such as the inclusion of cross-gender identification and dysphoria as a "disorder" in the DSMIV and the confusion regarding GID of childhood and adolescence raise multiple barriers for the physician to understand the values of the TG/TS adolescent. Lastly, there are many adolescents who have the maturity necessary to make significant decisions concerning their health and well-being. There is no doubt that there are certainly many TG/TS adolescents denied hormone-blockers because of a defensive clinical practice secondary to fear of litigation. But even though this relationship has many areas for improvement this does not negate our ability to judge whether or not hormone-blockers can be ethically prescribed to the TG/TS adolescent.

In the analysis of the dilemma at hand, I have shown that the above concerns can be approached using the benefit-harm analysis that takes into account the magnitude and risk of each benefit and harm. I conclude that the magnitude and risk of benefits concerning hormone-blockers and the magnitude and risk of harms concerning psychotherapy alone outweigh the magnitude and risk of the harms of hormone-blockers. As such, this analysis provides supports the prescription of hormone-blocker therapy for TG/TS adolescents. Such decisions, however, should also include the psycho-social environment of the TG/TS adolescent. The physician must be diligent in understanding the numerous psycho-social factors that include the TG/TS adolescent's peers, friends, and family in addition to the acute and long-term consequences of hormone-blockers that may or may not support their prescription. While adolescent autonomy should be respected, we also have to acknowledge that what an adolescent desires may not be part of the best care that should be provided.

I will end this discussion by stating that hormone-blockers should certainly be considered as an ethical management strategy in every adolescent presenting with gender dysphoria. My purpose in exploring this issue is to try to ensure these medications are not withheld but cautiously explored as a viable option in the management of gender dysphoria and GID. I acknowledge that such steps will not be easy. As a pediatrician, I have readily experienced and continue to experience such difficulties. But they are necessary if we are to achieve our ultimate goal as physicians and medical professionals in appreciating the self-determination and resilience of TG/TS adolescents so that they are neither invisible patients nor invisible persons.

May 2009

Jamie is back at home now. He told me he is happy.

He is now 18 years of age. I am seeing him in an adult clinic where I also work.

We did fasting blood work. His lipids are okay. His liver function tests are okay.

I called him to come in to start.

I remember meeting him years ago. We cannot use hormone-blockers anymore. He wishes to start male hormones.

I look at him. I am nervous. He had the vial of testosterone in his hand. I look through the file. I see my last note. "To start testosterone when ready."

He said he was ready. I see the consent form for transgender cross-sex hormone therapy. I asked him if he wants me to go over it. This would be the fourth time with me going over this form. He said, "If it's going to help you then you can." I said it was okay.

I put the consent form back into the file. I had already placed a 23 gauge needle in a 3ml syringe on the table with alcohol swab and band-aid. I asked him to put down his pants. I saw his unshaven thigh, not that really muscular. A woman's thigh. I circled the outer aspect of the thigh with the alcohol swab. It seemed like a long time. I squeezed a good portion of thigh muscle with my left hand and placed the needle 90 degrees into the muscle. I could feel him wince his eyes. I withdrew the stopper. No blood. It was safe to push. I pushed on the stopper to inject the testosterone. It was coming out slowly. I pushed on the syringe hoping that the testosterone would go in faster. It didn't. When it was done I withdrew the needle.

I placed a gauze on the injection site and pressed down. "Could you hold the gauze in place? Okay. Push down." I looked at Jamie's face. He was smiling.

Now that I was finally doing this after all these years, I didn't think I would feel this way. I looked at him blankly.

I asked him, "How are you feeling?"

He replied, "Happy."

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