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EDITORIAL

# After the Cass Report, what now for puberty blockers?

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The Cass Report on the use of puberty blockers and masculinising/feminising hormones in children and young people with gender incongruence and dysphoria (GID) is a very sobering read [1]. The report is an indictment of a system that allowed vulnerable children and young people to undergo treatment and management plans that lacked high-quality evidence by clinicians fearful of applying evidence-based management because of pressure to apply a social justice model. The purpose of the report was to inform policy position on their future use.

The report relayed poor adherence to research evidence. A published United Kingdom uncontrolled, observational study in 2020 on the use of puberty blockers from early puberty showed that there was lack of any positive measurable outcomes apart from suppressing pubertal progression, however, there was a decrease in the rate of gain in height, and of bone mineral density [2]. Despite this, puberty blockers moved from research-only protocol to becoming available in routine clinical use and they were given to a broader group of patients who would not have met the inclusion criteria of the original protocol [1]. The report rightly concluded that this was a significant departure from normal clinical practice. Overall, all studies that met inclusion criteria for their analysis were small uncontrolled observational studies with results that were of low certainty. There was lack of reliable comparative studies. Most studies did not report on comorbidities and no study reported on concurrent treatments in detail [1].

The comorbidity associated with gender incongruence and dysmorphism are multiple according to the review [1]. Many symptoms occur when a person's mental stress or distress shows itself through physical symptoms, such as pain, tics, neurological symptoms that affect their ability to function. It also highlighted that some patients with body dysmorphic disorder (BDD) experience distress about genitalia or breast, which may be difficult to differentiate from gender dysphoria. In some cases, after the end of treatment package for BDD, some young people may still have gender incongruence and proceed to social or medical transition [1]. Adverse childhood experiences were also common in these children and young adults, which included neglect, sexual, physical or emotional abuse, maternal or paternal mental illness or substance abuse, exposure to domestic violence, death of a parent, or loss through abandonment, resulting in adoption and foster care [1, 3]. The presence of autism spectrum condition (9%), attention deficit-hyperactivity disorder (10%), anxiety, depression, suicide attempts (14%), self-harm (29%), eating disorders and adverse childhood experiences were higher in this group of children and young adults than the general population [3]. A review of the first 124 cases seen by Gender Identity Development Service found that a quarter of referrals had spent some time in care, and nearly half had experienced living with only one parent [1, 4]. Gender incongruence is a result of complex interplay between biological, psychological and social factors [1].

The social and psychological factors that contributed to gender incongruence and dysphoria also contributed to detransitioning, by discontinuing medications, having surgery to reverse the effects of transition or both, later in life. In a sample of 100 people who detransitioned, reasons for detransition were multiple. They included becoming more comfortable with their biological sex (60%), worried about medical complications (49%), lack of improvements in mental health, and the discovery that gender dysphoria was caused by trauma or abuse (38%) [1, 5]. The majority (55%) felt that they did not receive adequate evaluation from a doctor or mental health professional before starting transition [5]. In another sample of 237 who detransitioned, 70% realised that their gender dysphoria was related to other issues, 62% had health concerns, 50% did not think transition helped their dysphoria, 45% found alternative ways of dealing with their dysphoria, 30% found that the mental issues related to dysphoria had resolved, and 30% were unhappy with physical changes [1, 6].

The rationale for the use of puberty blockers is to help children pass better into adulthood, extend diagnostic period, improving dysphoria and body image, and improving mental health and wellbeing [1]. However, puberty blockers have not been shown to extend the diagnostic period, nor does it improve gender dysphoria

or body image. There is insufficient and/or inconsistent evidence of the effects of puberty blockers on psychological or psychosocial health [1]. There are risks to puberty blockers. These include inadequate gender-affirming surgery in transgender men, compromise of bone density, and lagging of height gain. Long term follow-up is still needed to assess further side effects. The most important adverse outcome of using puberty blockers is that other treatment options have not been studied or developed.

Overall, the review did not find that puberty blockers are necessary in transgender males because they masculinise well on testosterone, and there is no obvious benefit particularly as its use in puberty causes a slower increase in height. In transgender females, puberty blockers benefit in stopping irreversible changes such as lower voices and facial hair, but this is at the expense of inadequate penile growth that is necessary for vaginoplasty. The report concluded that there is a very narrow indication for the use of puberty blockers in biological males.

While the use of masculinising/feminising hormones is well established and their actions predictable, the use in under 18s is a recent development, and there is a lack of high-quality research of hormone interventions in adolescents and few studies that undertake long-term follow-up [1]. The report found that some clinicians feel under pressure to support medical pathway base on reports that gender affirming treatment reduces suicide risk. However, in their review, suicide risk in this group is similar to other your people with similar range of mental health and psychosocial challenges [1].

During the lifetime of the review, an egregious finding was the lack of response by the Gender Identity Development Service (GIDS) to participate in an international survey and to provide audit of its work. The unwillingness of GIDS to participate in this core aspect of clinical governance was an abdication of its responsibilities, and its duty of care to the children and young people who have already been failed by a system that eschewed evidence-based practice.

It is difficult to see how informed consent can be achieved for life altering treatment, when the efficacy is uncertain, and risks and adverse effects are not adequately understood. This is compounded by the fact that treatment at that stage is the beginning of a process that could last many years into adulthood and have life-long changes and consequences for the child. While it is arguable that a 13-year-old or under cannot understand the psychological problems that could arise a decade after commencement of treatment, a ruling by the Court of Appeal in *Bell and another vs The Tavistock and Portman NHS Foundation Trust and others, 2021*, ruled that the judgement of clinicians as to the competence of the individual child according to Gillick competency is all that is necessary [7]. It is however arguable that the consent taken in some cases may be clinically negligent according to Montgomery test in *Montgomery vs Lanarkshire Health Board, 2015* `[8] as alternative treatments are poorly explored, and comprehensive complication list of any future treatment were not adequately addressed which may deter the child at the beginning [5].

The review concluded with 32 recommendations which started with take this out, "*Given the complexities of this population, these services must operate to the same standards as other services seeing children and young people complex presentations and/or additional risk factors.*" Recommendation 6 advises the establishment of a puberty blocker trial which should be part of a program which evaluates outcomes of psychosocial interventions and cross-sex hormones. Recommendation 8 asked for a clear clinical rationale for providing sext hormones before the age of 18. Recommendation 10 advises fertility counselling before going onto a medical pathway. These four recommendations, as well as most of the others, speak to the failure of the Gender Identity Development Service.

There is now a pause of new prescriptions of puberty hormone suppressants and cross sex hormone medication for young people in Scotland until a review of the safety and clinical effectiveness is established [9]. The United Kingdom has also put a temporary ban in place outside the National Health Service and those taking part in research in England and Northern Ireland, and it is pushing ahead with a clinical trial to assess efficacy of puberty blockers [10]. The pledges by both the UK and Scottish governments are very welcome, but to have meaningful evidence for efficacy of puberty blockers, and the use of cross-sex hormones in teenagers would involve adequately powered control trials with medium to long term follow-ups. After a lost decade or so, a pause for at least five years is the minimum necessary to address the issues of evidence as outlined in recommendations six and eight. The research work necessary is more extensive than in the recommendations.

The Cass Report was comprehensive and its recommendations were evidence based, exhaustive and pragmatic. However, on the basis of its findings, there are no arguable intellectual reasons for puberty blockers to continue. Furthermore, despite the very narrow window in biological males and its conflicting outcomes identified by Professor Hillary Cass and her excellent team, there is no robust medical evidence to support puberty blockers. Notwithstanding Gillick competency, and in view of the multiple associated social and psychological factors with gender incongruence and dysphoria, and the same factors involved in detransitioning, it is arguable that cross sex hormones should not start until the age of eighteen.



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