





Chemistry, Politics, Transphobia

Gender-affirming healthcare in the UK

Daira Emma Hopwood, August 2023

Discord: @dairaemma Mastodon: @daira@kolektiva.social Bluesky: @daira.bsky.social

Slides at https://github.com/daira/transhealth



Content warnings

- Discussion throughout of transphobia, obstruction of medical care, and other oppressions: racism, sexism, ableism, classism, intersexphobia, and fatphobia.
- Effects of gender dysphoria, in general terms.
- Mentions of: suicidality, disordered eating, vulnerability to COVID, breast cancer, prostate cancer, risks of a blood clot or heart attack, cancer death statistics, surgery complications, infertility, substance abuse, self-harm, unnecessary genital examinations, and unethical medical practices against intersex people.
- Quoting of openly transphobic statements made by GIC clinicians.
- News reporting of three specific trans people whose deaths by suicide have been linked to failures of UK healthcare systems. There will be a separate content warning before that slide.
- Discussion of side effect risks that may apply to medicines you're taking or planning to take.
- I use swearing when I think it's justified.

Who am I?

- I'm Daira Emma, I'm a genderqueer trans woman and my pronouns are ze/hir. I'm polyamorous and have three partners who are also trans women, one of whom I got married to in Mexico. I'm autistic, I have ADHD, and I'm clinically vulnerable. If you can wear a mask for this presentation, please do!
- Politically I'm an anarchafeminist:

"I want freedom, the right to self-expression, everybody's right to beautiful, radiant things."

—Emma Goldman, Living My Life, 1931.

I believe that strongly enough to permanently sear it into my skin. I want radical bodily autonomy for all. I want changing your body to affirm your gender to be as ordinary as modifying your body and presentation in other ways that aren't considered "medical". I want to abolish guessing gender at birth.

- I came out as bi-gender/trans in 2008, got a breast augmentation in Belgium in 2011, and at about the same time started on estradiol and spironolactone. I went through the GIC system at Leeds, and had an orchiectomy on the NHS in 2014. I'm currently taking estradiol (patches), progesterone, and ADHD meds (which were a whole other gatekeeping quest). I have a facial electrolysis session every two weeks.
 - Fifteen years after coming out, NHS incompetence and intransigence, and the effects of capitalism, are still regularly fucking up my meds.
- I used to design and program industrial control systems, and now work as a cryptographic engineer on a privacy-focussed cryptocurrency. I enjoy the unusually large amount of math involved in my job.
- I'm one of four directors of Trans Pride Manchester CIC.

Disclaimers

- I am not a medical practitioner. Statements about medicines and treatments are for background information, and are not intended as medical advice. The amount of detail it's possible to give is limited by presentation time and slide space. Actual medical advice would have to be patient-specific and take into account contraindications, interactions, intended effects, etc.
- In this presentation, I am speaking solely for myself, and not Trans Pride Manchester CIC or any other organisation I'm associated with.
- Still, I have to be careful how much I say about certain topics, in order to not get other people in trouble and to avoid anything in this presentation giving ammunition to a trans-hostile mob.
 - There's a non-negligible chance that something will get selectively quoted out of context and either turned into a universalising claim about "what trans people think", or used to prove that I'm "problematic" in some way. If it does, then as someone who saw the presentation with full context, please help me out!
- That said, I have lost all the fucks I have to give on the subject of trans healthcare in the UK, and gatekeeping in particular. This is not going to be a 101, and it is not going to pull punches about what trans people currently have to deal with.

What this presentation is about

Part I: End Gatekeeping – why gatekeeping is incompatible with good healthcare.

Part II: Navigating the System – how to get gender-affirming healthcare.

Part III: Chemistry – what HT drugs do.

- You're "trans enough" whether or not you have any gender-affirming treatments.
- I've tried to take an explicitly intersectional viewpoint that considers how other axes of oppression interact with issues of healthcare access and quality of care.

In particular, although I don't go into any intersex-specific issues, I have tried to use intersex-inclusive language and make the discussion also applicable, as far as it goes, to intersex people who need gender-affirming healthcare. Please let me know if I mess up about that or anything else.



The reality of trans healthcare in the UK

- The lack of resources for gender-affirming healthcare is and always has been a political choice, rooted in transphobia.
 - Waiting times and gatekeeping are intentionally used to deny care, which is a human rights violation.
- Starving the NHS of the resources it would need to live up to the ideals on which it was founded is also a political choice, rooted in classism.
 - Universal free healthcare access was and is a radical demand.
 - Healthcare access is class war.
- Many trans people also experience ableism, racism and xenophobia, misogyny, and fatphobia in attempting to access the healthcare system, compounded with transphobia and classism.

The reality of trans healthcare in the UK

- The medicalised model of gender-affirming care in the UK ties it to a healthcare system that suffers from rampant authoritarianism, prejudice, and obstructionist bureaucracy.
 - The NHS's problems are by no means restricted to trans patients, but we experience the confluence of those problems.
- Istrongly support the ideals of the NHS, but I have plenty to say about its execution.

 In practice, trans people often receive substandard care when they receive it at all, both for genderaffirming treatments and more generally. That applies to the NHS, but often also to private services that patients are forced to use, if they can, when the NHS fails them.
- The UK is very much an international outlier and this is explicitly acknowledged within the medical literature– in the extent of gatekeeping it does, both specifically for gender-affirming care and in general.
 - This is *not* an inevitable consequence of having a National Health Service providing free healthcare to patients. It's an independent policy choice.

The reality of trans healthcare in the UK

- Generations of politicians and policy makers, both within and outside the healthcare system, have resisted tooth-and-nail giving trans people the care we need.
 - All of the provision we have has had to be fought for through activism and legal victories often in European courts via the ECHR (European Convention on Human Rights).
 - Every so often the same malicious fuckers, and new ones, try to inject a fresh dose of transphobia into the system.
- Cis practitioners, even the "nice" ones, fundamentally do not understand the stakes involved in access to healthcare for trans people.
 - That is why they almost never push back against transphobic policy changes, and that is why they so often provide substandard care.
- If you need medical treatments, **it's worth it**. I want to make that clear despite all the discussion in this presentation of obstacles and risk.

Origins of anti-trans medical gatekeeping in the UK

- In the worldview of the cis policy-makers who constructed official trans healthcare provision in the UK, trans people are not to be trusted with bodily autonomy. In their eyes, the aim of gatekeeping was to "protect" us from health risks caused by transition, and they thought of us as having some kind of poorly-understood delusion that we are the "other" binary gender.
 - The fact that by far the greatest medical risk to a trans person is under-treatment never mattered to them, because we never really mattered to them. For example, they were legally forced into providing surgeries only because of a European Court of Justice decision.
- This deeply transphobic worldview has continued to influence policy, long after grudging official admission:
 - that being trans is not a mental illness;
 - that trans people's genders are what we say they are;
 - that neither gender nor sexual biology are binary.
 - In particular it influences policy still followed by clinicians even if they are not consciously intending to be transphobic.
- As individuals we need healthcare. We never asked to have to be activists in order to get it. It's okay to strategically appear to conform to gatekeepers' expected norms.

Examples of open transphobia from GIC clinicians

- "I break them down, you put 'em back together."
 Said by a "gender therapist" (gatekeeper for surgery) at a GIC talking to a social worker; overheard by a patient.
- "You have to remember you will never ever be a real woman."
 Said to a trans woman patient by Dr Helen Marie Greener (GMC no. 6056068), who has been a Consultant in Gender Dysphoria at the Northern Region Gender Dysphoria Service since 2010, and is still in that role.
- Referring to having an Mx title and an obviously nonbinary name as "having an agenda".
 This was said to me by Dr Amal Beaini (GMC no. 7075145), at Leeds GIC.

Gatekeeping and under-resourcing

- If you want to stop trans people getting gender-affirming care, then gatekeeping and deliberate under-resourcing are complementary strategies:
 - Gatekeeping alone wouldn't be enough. The people applying are actually trans and will get through the gate. The waiting lists wouldn't build up fast enough.
 - Under-resourcing alone wouldn't be enough. Private services and surgeons would spring up to fill the gaps in NHS provision.
- Combining these strategies was very "effective", but that still wasn't enough for transphobic policy makers. Some trans people were still getting treatment, and were increasingly able to bypass the NHS.
- So, additional strategies were employed:
 - Waste resources. Deliberately make patients attend useless, hoop-jumping appointments, and/or just completely underutilise staff and appointment capacity.
 - Attack private provision on "safety" grounds by making spurious accusations and exaggerating trivial record-keeping lapses.
 - This is what the cases against Dr Russell Reid and Dr Helen Webberley were about. Congratulations to Dr Webberley on winning her appeal.
 - Escalate the rhetoric against self-medding and grey market hormone therapy (explored in Part II).

Failure of record keeping

- While we're talking about record-keeping lapses...
- Newcastle GIC / Northern Region Gender Dysphoria Service lost years of patient records for patients of Dr Hedley Board (GMC no. 0081595), who had unreported dementia that made him incapable of keeping those records.
 - This applies to at least two of his patients; it's not clear whether it was all of them.
- When Dr Board died in 2010, these records either had never been made or were lost. In at least one case, a patient of his was simply forgotten about by the GIC for several years, and this was only discovered when the patient was re-referred.

End all gatekeeping

- Medical gatekeeping is a wider issue that affects access to all forms of medical treatment, not only gender-affirming treatments. Not all of the problems with healthcare in the UK are gatekeeping issues, but very many of them are.
- "But we don't have enough resources to treat everyone ..."

We would, if we decided to.

"The claim that gatekeeping is an effective cost containment method may be wrong. We found no significant differences in the percentage of gross domestic product spent on healthcare in countries with and without [primary care] gatekeeping. Gatekeeping is associated with delayed diagnosis and adverse outcomes."

["Rethinking primary care's gatekeeper role." Greenfield, Foley, and Majeed. BMJ 354:i4803, 2016]

This article is referring to primary care (GP) gatekeeping of specialists. That is definitely part of the problem in gender-affirming care, but only part. Typically when this kind of gatekeeping delays a referral to a GIC, it does so by months (with some longer outliers), while the GIC system further delays treatment by years. In any case, delay is associated with adverse outcomes regardless of the source.

End all gatekeeping

- Tackling gatekeeping head-on presents opportunities for alliances in our activism, such as:
 - for guaranteed access to abortion;
 - for effective treatment and diagnosis of chronic illness;
 - to abolish the immigration health surcharge and other immigrant-hostile policies;
 - to make healthcare settings safe and accessible to disabled and immunocompromised people
 - COVID is not over, and masking + air cleaning helps for all air-transmissible diseases;
 - for cheaper and more reliable access to medicines;
 - to destigmatize all meds, e.g. opiates for chronic pain, stimulants for ADHD, etc.;
 - for full acceptance and accommodation of neurodiversity;
 - to strengthen protections for patient privacy and make them robust to political interference;
 - for all intersex people to be given full and accurate information about their medical histories;
 - against the use of BMI thresholds for surgery, and medical fatphobia more generally;
 - for equal access to research —and importantly, participation in forming research questions—for underrepresented groups;
 - to campaign for properly funding the NHS as a public service, rather than as a money-making opportunity for commercial healthcare interests.

Gatekeeping kills

- Gatekeeping kills in other fields of medicine:
 - "[This] study found a lower 1-year survival in healthcare systems with primary care-based gatekeeping. The results are highly consistent and support the hypothesis that a primary care position as gatekeeper, the use of patient lists, and primary care being the first point of contact with the healthcare system may, indeed, have adverse effects. The results even show rather large differences in cancer survival between the different systems (absolute difference: 5-7%)."

Are the serious problems in cancer survival partly rooted in gatekeeper principles? An ecologic study.

[Peter Vedsted and Frede Olesen, British Journal of General Practice 61 (549), 2011]

• "A few studies have suggested that gatekeeping causes delayed diagnoses of cancer. In the UK — a healthcare system with strong gatekeeping — poor survival rates for breast, colorectal, and lung cancers compared with other European countries have been partly attributed to delayed diagnoses."

Impact of GP gatekeeping on quality of care, and health outcomes, use, and expenditure: a systematic review [Poompong Sripa, British Journal of General Practice 69 (682), 2019]

Cancer treatment pathways in the UK have changed significantly since the studies referenced above, but the point is that at a time when access to diagnostics was strongly gatekept, outcomes were measurably worse. Cancer outcomes in the UK still lag behind those of most EU countries, largely due to another kind of gatekeeping (that also affects gender-affirming healthcare): delay in adopting new drugs and treatments.

UK cancer survival rates lag behind those of other European countries – study

[Nicola Davis, The Guardian, July 2017]

Content warning for the next slide: news reports of deaths by suicide of three named trans people (one of them a teenager).

In each case their deaths have been widely reported as being linked to failures of UK healthcare systems to provide genderaffirming care and/or mental health support.

I will wait in case anyone wants to leave the room.

Gatekeeping kills

• 'Two days before her death, the Tavistock Gender Identity Clinic informed [Sophie] Williams, a Northern Irish artist and activist, that the four years she had spent waiting for a first appointment at Belfast's equivalent service would not be recognised or count toward her wait-time at the London clinic. Taylor [assistant coronor] said this news was "devastating" for Williams and left her "raging".

NHS failures contributed to death of trans activist Sophie Williams, coroner finds. [Lu Ferreira, openDemocracy.net, March 2023]

◆ 'Finn [Hall]'s mother, Hannah Hall, told the BBC she [Hannah] had contacted their local Children and Adolescent Mental Health Services (CAMHS) team in the days before the trans 16-year-old's death, but claims she was simply referred to A&E. [...] She called for extra resources for mental health services after Finn's tragic death. "How many more children are going to be lost in this system because there's not enough funding or time or people?"

Mum of trans teen who died by suicide warns NHS funding crisis is putting lives at risk. [Emily Chudy, Pink News, November 2022]

Alice [Litman]'s experience highlights the woeful inadequacy of primary care services for transgender people, and the lack of expertise which results in doctors failing to make young people like Alice aware of their options. When Alice turned 18 she was transferred to the [Tavistock] Gender Identity Clinic which honoured her GIDS referral date, but there are currently over 11,000 people on their waiting list and new referrals far outstrip first appointments offered. [...]

'The current reality of high rates of trans suicide is not an inevitable one. The trans community keep each other alive where the state has failed, and through organising and mutual aid, demonstrate that another world is possible. The beauty of spaces like Trans Pride reminds us that trans life and joy is also possible, and exists every day.'

My sister died after 1,023 days on an NHS waiting list. This is the reality of the 'trans debate'. [Kate Litman, Pink News, July 2022]

Transphobic gatekeeping amplifies health risks (1/14)

- As might be expected from policy that is founded on transphobia rather than genuine safety concerns, this regime doesn't actually do a good job of minimising safety risks of hormone therapy or of gender-affirming surgery, even when it does provide them.
- In fact it amplifies risks and I'm going to explain in detail why.
- To do a good job at assessing potential risks from gender-affirming treatment, you need to:
 - understand the science;
 - not be motivated by transphobia, but also
 - be actively on the look-out for transphobic bias that has influenced the sources you use to understand the science, directly or indirectly;
 - take a holistic view of the potential benefits and risks of a combination of treatments, rather than a reductive one that hyper-focuses on a particular benefit or risk.
- Even the best-intentioned cis people are just not very good at this.
 - The problem, often, is that they stop when they get the answer they wanted.
- Trans people are not immune from motivated reasoning, but at least we start from a position of "How can we most safely get effective treatment?".

Transphobic gatekeeping amplifies health risks (2/14 - mental health)

- Untreated gender dysphoria is dangerous. We saw earlier one of the possible outcomes.
 It is easy to find evidence showing that gender dysphoria increases the incidence of anxiety, depression, self-harm, disordered eating, substance misuse, and suicidal ideation.
- I want to highlight that there is also evidence that the gatekeeping process itself, even if it eventually allows treatment, is an independent risk factor.
 - "It's time to stop gatekeeping medical transition." [Henri Feola, American Scientist, February 2022]
- In particular, ableist gatekeeping of patients with mental health conditions results in a catch-22, where the presence of one condition can stop or delay others from being treated.
 - "I don't think they thought I was ready": How pre-transition assessments create care inequities for transpeople with complex mental health in Canada.
 - 'We conclude that the logic underpinning pre-transition "mental readiness" assessments discredits the claim that standardized protocols optimize access to hormones and surgeries.'
 - [MacKinnon, Grace, Ng, Siccia and Ross 2020]

Transphobic gatekeeping amplifies health risks (3/14 – policy inertia)

- However, it's also the case that the medical treatments that do happen are riskier due to gatekeeping.
- Policy inertia has resulted in failure to act in a timely fashion on research that indicates some long-term health risks, e.g. for breast cancer and VTE (deep vein thrombosis or blood clots that reach the lungs) are lower with some hormone therapy [HT] treatments than others.
 - For example, my GP tried to switch me to another med that has higher long-term risks (MPA instead of micronised progesterone; we'll discuss this in Part III).
 - She also prescribed an incorrect dose, due to using the wrong section of the British Menopause Foundation's guidance on "equivalent" formulations: the section for sequential HT rather than continuous HT. This was an error that could just as easily have happened for cis patients, who can also use continuous HT. Of course, she tried to blame it on not having specialist knowledge of HT in trans people.
 - (If the NHS wanted to reduce VTE risk, it would also need to at least mandate FFP2+ masks in healthcare settings. The level of systemic, bullheaded, wilful incompetence in handling the pandemic has been just breathtaking, exposing everyone involuntarily to risks from COVID that are likely much greater than any risks of the same conditions from HT.)

Transphobic gatekeeping amplifies health risks

(4/14 – response to errors being pointed out)

Recall what I said on the previous slide about my GP switching me to a less safe (in the long term) medication at an incorrect dose. It gets worse.

As a direct consequence of pointing this out, I was told that she would "need" to refer me to Indigo, with an explicit threat that the GP practice would stop prescribing the progesterone that I've been taking for several years if Indigo didn't agree I should have it.

When I pointed out that this was gatekeeping in response to pointing out an error, she then vociferously denied that it was gatekeeping at all.

I have a family history of breast cancer, and I made sure that I was taking estradiol and progesterone in forms that don't, as far as the evidence shows, increase that risk over the baseline for a cis woman. Which is more than my GP did. We'll see if Indigo are any more competent.

• I'm stubborn and this would never stop me from reporting a prescribing error, especially one that might affect other patients. But you see the problem.

Transphobic gatekeeping amplifies health risks (5/14 – ableism and bureaucracy)

- Keeping track of bureaucracy associated with gatekeeping often seems like a full-time job. This is exacerbated for people who are disabled in (at least) any of the following ways:
 - executive function impairments (ADHD, learning disabilities, etc.);
 - difficulties in getting out of the house, e.g. agoraphobia or mobility impairments;
 - immunodeficiency or clinical vulnerability to COVID, combined with failures of healthcare settings to take adequate precautions;
 - neurodivergence that can lead to conflict avoidance, making it more difficult for patients to advocate for themselves.
- Organisations frequently lose track of requests. This very often happens in communication between orgs (at best, each one thinking the ball is in the other's court; at worst just not caring to do their job), and gatekeeping directly increases the likelihood of that. It's not easy for any patient to keep things on track, but it's especially difficult given the system's failure to accommodate any of the above impairments.

Transphobic gatekeeping amplifies health risks

(6/14 – unnecessary genital examinations)

- **Current** NHS guidelines to GPs (updated in 2012) say the following:
 - "For Female-to-Male patients, the GP should arrange for a suitably dignified gynaecological examination according to the patient's genital physiology."

Gender dysphoria services: a guide for General Practitioners and other healthcare staff. [NHS, 2012]

- This is in a section that connects it with prescription of hormones, without reference to there being any genital symptoms or any other medical reason for an exam. There is no such thing as a "suitably dignified" gynaecological examination in that case.
- Genital examinations are necessary before genital surgery, but not before prescribing HT. No internationally accepted guideline condones doing this as part of gatekeeping.
- When a trans person's future access to healthcare depends on the outcome of a consultation, they are not in a position to assert boundaries that they would normally assert. I fully agree with the author of this article: requiring a genital examination as a gatekeeping step before prescribing hormones is assault.

'It's sexual assault': unwarranted genital examinations on trans patients.

[Hayden Moon, SBS News (Australia), 2020]

It is important to know that, despite the guidelines to GPs quoted above, you have a right to decline a genital examination without this affecting your future care:

"Genital examination may cause distress to the individual and may be declined by the patient: such refusals should be respected in all cases and the matter recorded in the clinical records of both the specialist clinic and the GP."

Good practice guidelines for the assessment and treatment of adults with gender dysphoria.

[Royal College of Psychiatrists, October 2013] (yes psychiatrists, and yes this is the most up-to-date version)

Transphobic gatekeeping amplifies health risks (7/14 – ineffective doses)

- Trans people are often given the runaround between GPs, GICs and other specialists whenever they request any change to their treatment. This harms patient care by delaying necessary treatment changes, often leaving patients on an insufficient dose or ineffective choice of medication indefinitely.
- Inappropriately low doses of HT can often cause side effects such as migraines, hot flushes, etc.
- I cannot count the number of times I've heard transfems say they've been prescribed ineffective doses of estradiol on the NHS.
 - GICs *cannot* effectively titrate doses given a turnaround time of at least months (sometimes years) between appointments. So it has to be a GP's responsibility.
 - Even cooperative GPs often get this wrong. Not because it is difficult or outside a GP's normal competence, but because they aren't given correct guidance which is a consequence of gatekeeping.

Transphobic gatekeeping amplifies health risks

(8/14 – anti-androgens without estrogen)

- Practices introduced for the purpose of gatekeeping can directly cause harm.
- For example, some providers attempt to start patients on anti-androgens signficantly before estradiol.
 This happened to me when I started hormones in 2010-11 with a private endo (now retired).

This is pure gatekeeping: the idea is that patients who are "not really trans" won't respond well to the anti-androgens, and then won't be prescribed estradiol. But the effect is to cause measurable harm to the patient's bone health.

"Nonetheless, bone turnover markers did increase during the first year in the IAAM [anti-androgen first]-group, whereas a decrease was observed in the AA + E-group. Given the observed high prevalence of osteoporosis before hormonal therapy and detrimental effects of long-term hypogonadism, prolonged used of anti-androgens in monotherapy is not advisable."

Preservation of volumetric bone density and geometry in trans women during cross-sex hormonal therapy: a prospective observational study

[Van Caenagem, Wierckx, Taes, Schreiner, Vandewalle, Toye, Kaufman, and T'Sjoen 2013]

- Note that the same study (and others) say that when starting estradiol concurrently with an antiandrogen, bone health tends to improve relative to the prior baseline in the same trans women.
 - Aside: The paper uses an inappropriate control group (cis men), which makes some of its stated conclusions
 pretty incoherent.

Transphobic gatekeeping amplifies health risks (9/14 – prescribing)

- HT drugs for transition are prescribed "off-label". In the current system, this makes prescriptions more
 prone to subjective decisions by individual clinicians about doses, formulation, and applicability.
 - There's a vicious cycle here: gatekeeping contributes to keeping trans HT off-label, and it being off-label contributes to gatekeeping, because GPs are much less likely to prescribe off-label drugs.
- Advocating for trans HT to be brought on-label probably wouldn't be a good strategy in the current regulatory system. My point is that treating trans HT as a weird exceptional case rather than as a primary indication for these drugs (which objectively it is), comes with greater risk of clinician error and suboptimal treatment.
- The solution is not further specialisation of prescribing in the hope that specialists (i.e. endocrinologists) will make fewer errors. This doesn't address the problem: the opinions of endos are just as subjective, my experience is they make almost as many errors, and it would just add to gatekeeping.
 - A better approach is to thoroughly document and spread the knowledge of how to prescribe these drugs routinely which doesn't require them to be on-label.
- Reliable knowledge that summarizes and collects research conclusions and patient experience is out there. This presentation is an attempt to spread that knowledge.

Transphobic gatekeeping amplifies health risks (10/14 – hiding information from the patient)

- Doctors sometimes hide information, often due to patronising attitudes about whether the patient would understand the detail, either by individual clinicians or by policy (e.g. routinely not giving patients full test results).
- A more sinister instance of this was the systematic policy of lying to intersex people about their medical history in order to uphold systems of binary gender. This continued as routine policy in the UK until 2012.

Doctors in the UK routinely lied to patients with disorders of sex development known as intersex conditions [Dr Faye Kirkland, BBC Radio 4, May 2017]

As well as being an abhorrent human rights violation, this deprived people of information they needed to make informed decisions about future treatment.

Transphobic gatekeeping amplifies health risks (11/14 – binary prejudice)

- Anti-nonbinary bias limits the availability of transitioning options designed for nonbinary people that might (in some cases) incur fewer risks.
 - This bias can sometimes amount to inappropriate pressure. For example, in the second opinion consultation for my orchiectomy, when the fact that I specifically wanted an orchiectomy was already completely settled, Dr Amal Beaini at Leeds GIC (GMC no. 7075145) inappropriately attempted to persuade me to have vaginoplasty instead.
- Penile-preserving vaginoplasty and nullification are example of surgeries not available in the UK.
- Options that reduce the long-term need for maintenance (e.g. dilation after vaginoplasty) are underresearched and less available because trans people's time is undervalued, and because clinicians make heterosexist assumptions about how post-surgery trans people are likely to have sex.

Transphobic gatekeeping amplifies health risks (12/14 – surgery)

- Having gender-affirming surgery and then not receiving hormones at the necessary doses after that surgery (for example, after an orchiectomy, vaginoplasty, or oophorectomy) leaves patients at risk for long-term health problems such as osteoporosis, Parkinson's disease, and dementia, as well as continuing gender dysphoria and direct short-term effects.
 - Political rhetoric used to support gatekeeping often treats it as though it only applied to "new" transitioners, without any consideration of the effects on patients who have already (quite properly) had treatments that are irreversible.
- Delays between stages of treatment directly cause harm to both mental and physical health.
- Fewer surgeons means less choice; surgeons with a greater incidence of complications or unsatisfactory results staying active for longer; and less access to surgeons trained in improved (more effective and/or safer) surgical techniques.
- Revision surgery is also subject to gatekeeping and waiting times due to under resourcing. When revision is needed, it is time-critical: delaying revisions or not having access to them can be extremely dangerous.

Transphobic gatekeeping amplifies health risks (13/14 – fertility)

- Gamete preservation is unfunded, forcing patients to choose between certain types of medical transition and preserving fertility, if they cannot pay for gamete preservation privately.
 - This is an illegally transphobic policy: normally the NHS funds gamete preservation before any NHS treatment that may compromise fertility unless it's a gender-affirming treatment. That is direct discrimination on the basis of gender reassignment under the Equality Act, which they get away with because of difficulty for trans people in accessing the law.
 - Even if gametes are preserved, it might be difficult to use them in later fertility treatment because that is also gatekept.
 - Patients who are forced into using grey-market HT rarely have the opportunity to preserve gametes.
- Patients are put into positions where they have to make suboptimal decisions about which treatments they seek and when they do so, in order to avoid "losing their place in the queue".

Transphobic gatekeeping amplifies health risks (14/14 – fatphobia)

The settled scientific consensus is that BMI is unscientific bullshit. It is an "inaccurate measure of body fat content and does not take into account muscle mass, bone density, overall body composition, and racial and sex differences."

Why BMI is inaccurate and misleading [Christian Nordqvist, Medical News Today, January 2022]

Even if it actually measured body fat content; no matter what technical fixes were made to it — it would still be unethical to use it for gatekeeping.

A research team at the University of Virginia, Charlottesville, found **better** post-surgical short-term survival rates among people with obesity than patients of "normal" weight. Patients with a BMI of 35.3 or greater were less than half as likely to die within 30 days of surgery (over a range of surgeries that included riskier ones than typical genderaffirming ones) than those with a BMI of 23.1 or less.

The Relationship Between Body Mass Index and 30-Day Mortality Risk, by Principal Surgical Procedure [Turrentine, Hanks, Schirmer, et al 2012]

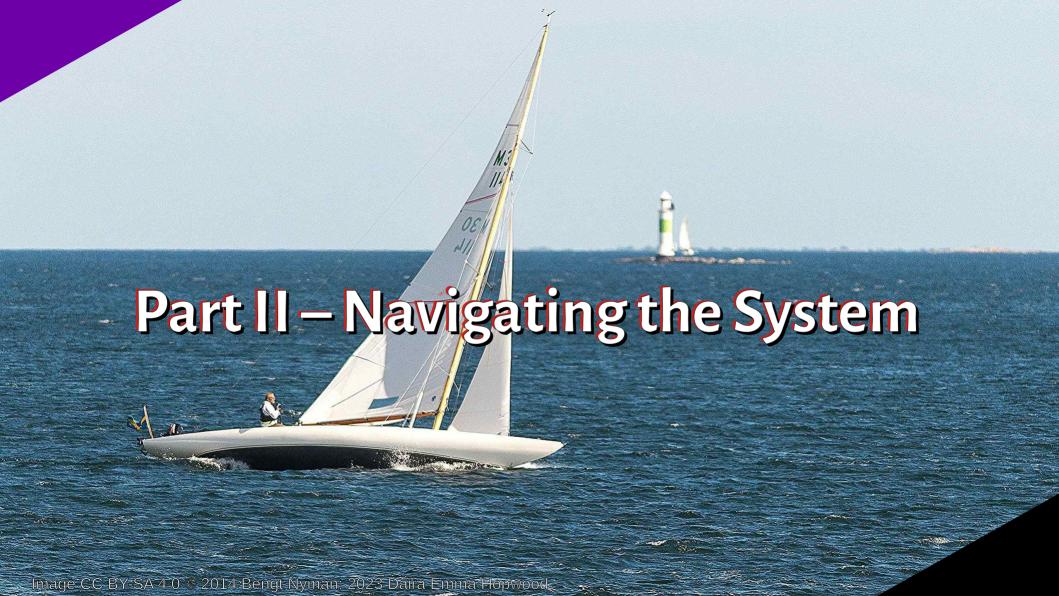
- For reference, 18.5 to 24.9 is often described as the "healthy range", 25 to 29.9 as "overweight", and above that as "obese", so this is saying that to the extent there is a correlation between BMI and short-term surgery risk, it's a negative correlation even within the supposed "healthy range".
- This negative correlation between BMI and mortality after surgery is so well-established that some researchers have given it a name: the "obesity paradox". The only "paradox" here is that the evidence provides no excuses for continuing to practice medical fatphobia.
- Using high BMI as a contraindication to surgery, as GICs are still doing, is neither scientifically nor ethically supportable. Using low BMI wouldn't be either, of course. But we can be 100% sure that the NHS BMI threshold is pure fatphobia.

Effects of transphobic gatekeeping on health research

- Coercive requirements to participate, such as the proposal to force trans kids to enrol in research as a precondition to blocker or hormone treatment, may result in research that is resented by some or all of its participants.
 - That proposal contravenes the Declaration of Helsinki and GMC ethical guidelines. It directly harms the participants, is likely to compromise the accuracy and generalisability of the conclusions, and could by itself cause the results to be disputed.
 - The written ethical standards are effectively not being enforced now, but if that were to change, such research might have to be abandoned, papers withdrawn, or the data that has been collected with questionable consent deleted.
- Consensual research involving trans people is underfunded.
 - For all that "we need more research" is a common excuse for gatekeeping, no-one who uses it that way wants to pay for it (or wants anyone else to pay for it).
- What we know about risks of HT is based largely on extrapolation from cis populations (e.g. postmenopausal women, and cancer patients). This is partly a consequence of the pool of "officially" medically transitioned trans people being artificially small because of gatekeeping. While we can make some pretty robust extrapolations if we understand the underlying mechanisms and whether they might be affected in trans people, it's more difficult and prone to error than having direct research results.

End all gatekeeping

- Your right to transition is not theirs to place conditions on.
 It never has been, for any trans person, and it never will be.
- No-one's right to healthcare is theirs to place conditions on.
 It never has been, for any person, and it never will be.
- Gatekeeping is a fundamentally illegitimate and unjust practice. It is based in prejudice, and it reinforces cis supremacy, white supremacy, and ableism.
 - I want to be very clear: **gatekeeping is discrimination**. It is a stain on society that should shame the medical profession.
 - "Until we are all free, we are none of us free."
 - —Emma Lazarus, 1883.



Navigating the system

- **Everyone** who medically transitions encounters substantial transphobia always at the policy level and very often from individual clinicians.
- It's common to also encounter ableism, racism, and other bigotries. These can be embedded in healthcare systems, which is no less a problem than when they come from individual clinicians.
- Be prepared for this. You have no obligation to start from a position of trust and only modify it when
 people are actively and visibly bigoted. The fact is that the system is stacked against you, and even "good"
 clinicians will be following transphobic policy. (Also, "good" is not well-defined.)
- That said, the current state of policies (both written and followed) has improved considerably relative to earlier decades, especially for the pilot gender services.
- People medically transitioning now need to take into account the possibility of future regressions in policy or escalation of anti-trans hostility. I would strongly recommend combining an "official" route with a backup plan.

Strategy

- Know the written policy.
- Know the followed policy.
- Learn the science.
- Make gatekeepers stick to the written policy when it's (sufficiently) gender-affirming.
- Push for following scientific evidence whenever the policy applied to you isn't gender-affirming.
- Be prepared to switch providers if necessary and practical.
- You have a right to access your medical records, and it's often useful to do so.
- Record appointments.
- "Put on your own oxygen mask first."
- Be selective in the information you provide to gatekeepers.
- Clinicians make mistakes. You will have to be responsible for your own health.
- Assume that you will not be told about less common treatment options unless you actively seek them out.
- There's no magic associated with medical authority.
- Have a backup plan.

"Put on your own oxygen mask first."

- In case you're not familiar, commercial aircraft flight safety instructions always say something like "Be sure to adjust your own [oxygen] mask before helping others." This is because, in a situation where oxygen levels suddenly drop, you could pass out while trying to help someone else.
- I'm taking for granted that we all want to improve trans healthcare in general. Sometimes that can involve taking stands that may risk your own access to healthcare, because of potential retaliation or because it involves revealing information that could show that you're in a group that is more likely to be discriminated against.
- There's no right answer in such situations, not least because taking the strong stand sometimes helps yourself.
 - But, think carefully. Will taking a stand really help? If the consequences could substantially delay your transition or damage your mental health, it may not be the best strategy.
- I have been in this situation and I decided to take a stand. It worked out. I'm still not sure it was the sensible thing to do.

"Be selective in the information you provide."

- Gatekeepers lie to us all the time. They lie about waiting times. They lie about having submitted referrals. They lie about the motivations for their policies. They lie about the rationales for using particular drugs or doses. They lie about side effects; about dose response curves; about human biological processes; I've heard them lie to my face about basic physics and chemistry. They even lie about being gatekeepers in the very same breath as gatekeeping you as my GP did last month.
 - They lie or repeat other people's lies so often in order to avoid admitting to transphobia or complicity in transphobia that they don't even realise they're doing it.
- You have a right to healthcare, including gender-affirming care. No gatekeeper has a legitimate right to know things you suspect they are going to use to discriminate against you getting that healthcare. If you know the written policy and the followed policy, that will help you to know what information might be in that category.
- Some of that information will have no legitimate medical relevance. Do what you will, including making up whatever stories they need to hear ("why of course I always used to play with dolls!").
 - Your gender is your own, not theirs to decide on.
- Obviously I can't recommend withholding information that could be medically relevant. What I can say here is that ultimately you will have to be responsible for your own health. That includes:
 - Checking potential interactions between meds you take (prescribed or not), and between meds and health conditions. Often clinicians will not check, so you need to do this.
 - Checking doses. Undertreatment is, unfortunately, commonplace.

Don't waste your time waiting for the old-style GICs

Recent waiting list figures:

Please note: due to a national outage of the patient records system we are still working on restoring our activity data and validating some discharge data. The data provided below is subject to revision when data recovery has been completed.

- Number of people on our waiting list: 12,296
- Number of referrals received in the month: 264
- Number of first appointments offered in the month: 41
- Total appointments offered in the month: 827
- We are currently offering first appointment to people who were referred in: July 2018

The data above is for **February 2023**. We update this page every month, adding the latest validated data. This validation process takes some time, so the data on this page will lag the current date by a couple of months.

- On the left is the waiting time information for the adult Tavistock GIC.

 I'm showing this one just because their waiting statistics are complete enough to illustrate why the GIC system is collapsing. (Stats for other old-style GICs don't contradict anything below; most I could find are worse.)
- Notice the ratio of offered appointments to first appointments is over 20.
 Obviously no-one actually needs 20 GIC appointments. Some of this is an ineffectual attempt to clear backlog. But it's a strategy designed to fail.
 - First appointments must keep up with referrals. Otherwise, waiting lists will grow without bound. Which is in fact what is happening.
- At least in the case of the Tavistock, it's not primarily a capacity problem. 827 app'ts/mo with 264 referrals/mo would be enough to give every new referral a first app't within the 18-week <u>statutory</u> waiting time, leaving a capacity of 563 other app'ts/mo to clear backlog (prioritizing patients in urgent mental health difficulty).
- But old-style GICs will never analyse the problem like this. And they will never actually do enough in a first appointment to make it possible to give useful healthcare within their capacity. The NHS service specification prohibits it, in fact.
- Do not waste your time. They've had many, many, years to fix their ways. If this failure is not by design, it might as well be.
- If you're on an old-style GIC waiting list with no end in sight, don't panic. You may be able to transfer somewhere that will see you quicker.

Other Gender Services

Apparently, from the patient reports I've seen, the GIC pilot projects are better:

Indigo (Manchester)

CMAGIC (Liverpool)

TransPlus (London, run by Dean Street)

East of England Service (Cambridge)

These still work within the NHS adult service specification, which "requires at least two in-depth one-hour appointments with clinicians trained in assessing and diagnosing gender dysphoria". That is, they won't diagnose on the first appointment. However, it is possible to be both diagnosed and prescribed HT on a second appointment in at least some cases.

Make sure to read all the available info on the service's website. To minimise the time to treatment, you'll need to make sure you're doing everything possible in each appointment and are not missing information, consents, or test results they need.

- Indigo and East of England "receive clinical support from the GIC at Nottingham Centre for Transgender Health".
- At time of writing, none of these services are accepting direct referrals. They only accept transfers of patients who were referred to another GIC before 31 October 2020, or (in the case of Indigo and East of England) from a "holding list" at NCTH.
- You also have the option of using private provision, if you can afford it.
- You can mix private and NHS provision. I know this is feasible because I had my breast implants done privately (BeClinic in Belgium), and I got my first HT prescription privately (from an endo who has since retired). This didn't interfere with other NHS treatment referred by Leeds GIC, and in fact may have speeded it up.

Other Gender Services

- If you are being referred to an NHS service, you have the right to decide which one. I would suggest starting with the Gender Construction Kit's UK service wait times page. It gives detailed information on all of the NHS and private gender services, with their current wait times and policies for transferring from another service.
- Here are the private options listed by the Gender Construction Kit with wait times of 3 months or less:

Harley Street Gender Clinic (London; 2-3 months)

Gender Identity SW (Exeter; 3 months)

GenderDoctors (London; 1-2 months)

Gender Plus (London, Birmingham, Dublin; 1-2 months)

The Gender Clinic (London; 1 month)

YourGP (Edinburgh; 1 month)

I've excluded Kelly Psychology because that appears to be a duplicate of Gender Plus.

There is also Gender GP; I think they are not listed on the Gender Construction Kit page because they are not a UK-based service (they are now registered in Singapore). They claim a wait time of 4 weeks to prescribing if "you are sure of your gender and the steps you wish to take, [and] have access to blood tests and support".

Recording appointments

- Ask to record important appointments where gatekeeping may occur. Asking is a courtesy, but the main reason to explicitly ask is that a medical professional knowing that an appointment is being recorded keeps them honest and following the rules. (You do want them to follow the rules, not because the rules are good, but because they're much more likely to break them to your detriment than to your advantage.) Covert recording doesn't have that benefit.
- Good healthcare providers should have no problem with recording. The British Medical Association has a page about it which says "We believe there is significant benefit for both patients and doctors in supporting consensual recordings." and gives a bunch of specific advantages. It may be useful to point them to that page.
- If they refuse, request recording as a reasonable adjustment under the Equality Act. You don't need a diagnosis of any disability to do this.
- If they refuse on the grounds of privacy regulations, that's wrong. You're the patient, privacy regulations protect medical records and what is said in consultations from unauthorized parties, not from you.
- It may be relevant to know that covert recording by a patient of their medical consultation is entirely legal. Again quoting the BMA: "Information disclosed during a consultation is confidential to the patient, and a covert recording is not therefore a breach of confidentiality. Similarly, where a recording is made entirely for personal reasons it is unlikely to engage the Data Protection Act. [...] Where a patient makes a recording without permission, doctors have no legal redress."
- If you will be using your own recording device, test it as far as possible, to see whether volume and clarity is adequate. For online consultations, make sure to test recording with the same video call software you'll be using.
- Listening to the recording later often helps to catch anything you missed.

Accessing medical records

- You can request your medical records held by any healthcare provider.
- You don't need to specify why you're asking.
- Providers don't routinely share all records with each other. So it isn't redundant to, say, request records from your GP practice, a GIC, and a private provider that you've used.
- I can practically guarantee your records will have interesting information that clinicians didn't tell you.
- You also may find that important things are missing entirely, since the quality and thoroughness of record-keeping varies wildly between providers.
- The records are also very likely to have mistakes. Try to correct any that might be important in the long term.
- Requesting records "too often" is likely to piss people off, so do it at strategic times.

Changing your name

- Having legally changed your name to one you intend to use after transition, used to be considered important evidence of having "lived as" your transitioned gender, and therefore useful to get past gatekeeping. It may still be; I don't know whether GICs are more flexible now.
- If you're able to legally change your name before obtaining treatment, I suggest doing this as soon as it makes sense for you. We have Change of Name Deed forms at the Proud Trust, and a solicitor to stamp them (which some organisations require, even though they shouldn't) on the day of Trans Pride Manchester.
- Of course, there are no such things as "male" and "female" names. That hasn't stopped some GICs from having old-fashioned and binarist notions about what counts as a name change sufficient to pass their gatekeeping.
 - For example, I experienced discrimination from Leeds GIC in 2012-13 about having a name (not my current one) and title that made it obvious I'm nonbinary. (They only wanted me to change my name to suit them and implied it might affect funding if I didn't. The fucking cheek. I sent them a strongly worded letter and they backed down.)

What if a GIC discharges you and you still need care?

- Good question. You have to basically say to your GP "the GIC discharged me and I still need <treatment>, what are you going to do about it?"
- If the GIC discharged you because you had genital surgery (as they often do), then you're probably okay because
 very often that surgery requires that you have continuing hormones.
- If the GIC discharged you because of transphobia or ableism (e.g. missing appointments), you'll probably have to raise a complaint. Solidarity and good luck!
- You can usually argue that the GP has an obligation to provide care. They may be reluctant, but if you're sufficiently persistent then you can make the path of least resistance be to do what you want.
 - It really helps in this situation if you know your stuff. Support your case with evidence from the medical literature and from policy documents as applicable. You can use SoC 8 or Endocrine Society guidelines here even though the NHS doesn't follow them in general.
- If they want to get advice from somewhere, make sure you decide where.
 - Whatever you do, don't let them put you back on your old GIC's waiting list as though you were a new patient.
 - I point-blank said that to my GP that Leeds GIC was transphobic and that I would not be referred back to them under any circumstances.

Clinicians make mistakes

- Clinicians have a chronic time shortage that limits their ability to provide good healthcare. This includes challenging their own biases or thinking critically about a potentially transphobic policy. (This is not a defence of any clinician's individual transphobia or lack of competence.)
- In the UK, GP appointments are typically 10 minutes. This isn't enough time to look anything up (if they try then they will make mistakes, as would anyone trying to do so in a rush). Only the most dedicated GPs will ever do so beforehand or in their own time.
- Despite appointments with specialists and gatekeepers being longer, it's also rare for any other type of clinician to look up medical information during an appointment. Specialists sometimes do outside appointments.
- So, when they are making decisions about your healthcare, GPs (essentially always) and other clinicians (usually) are completely dependent on what they can remember and what you tell them. They are lacking the practical ability to use a basic tool of the modern world: access to the Internet, including the medical literature, patient reports, etc., with the time to use that access effectively.
- For all that some clinicians derisively talk about "Dr. Google", this is a fundamental information asymmetry that will often mean you know more than the clinician about things you've been able to research in advance. Make full use of it, to combat gatekeeping and to improve your health.
- Assume, unless demonstrated otherwise, that clinicians are utterly clueless about interactions between trans healthcare and disability or chronic health conditions.

We shouldn't have to be our own doctors. But we do.

- Suppose there's an interaction or side effect that might be a problem for you taking a particular combination of meds, but you really need them for your transition. Let's say that your doctor has missed the potential problem.
- Unfortunately, because of gatekeeping, you might see problems in just trusting them with all the information:
 - They're likely to underestimate the importance of transition to you, especially (but not only) if they're cis.
 - They may overestimate the adverse effect. It's difficult to tell because you won't know whether they have absorbed anti-trans biases that are hidden, are ignorant, or are relying on out-of-date or inapplicable information.
 - They may be trying to give you the best advice, but use biased sources, such as NICE guidelines that put cost above patient care, or outright transphobic information from GICs.
 - They often won't tell you what information they're relying on.
 - They might be personally transphobic or ableist and just waiting for an excuse to gatekeep you. You can't assume they're not; people can hide attitudes like that very well.
 - More subtly, they can have other personal biases and misconceptions about particular classes of adverse effect.
 - Some of the information might be about self-medding, use of illegal drugs, etc., that could be used against you (see next slide).
 - They might have forgotten to gatekeep you, and pointing out the issue reminds them.
- But you obviously don't want to take something that actually exceeds your risk/reward tolerance. This means you
 effectively have to be your own doctor, in order to even know what to tell your doctor.
- This really sucks! You might not be good at biochemistry; you might not have friends who are good at biochemistry. We shouldn't have to be our own doctors, and the fact that we do is itself ableist, classist, and transphobic.

On information that can be used against you

- Every official source will tell you that it's safe to tell your doctor about illegal drug use. In the US there are somewhat robust confidentiality protections for patients who tell their doctors about illegal drug use, but in the UK the situation is a lot murkier, and there are some situations where a doctor would legally have to disclose that information:
 - Confidentiality: good practice in handling patient information Disclosures for the protection of patients and others. [General Medical Council guidance, www.gmc-uk.org, accessed July 2023]
- Testosterone is a controlled substance. Other commonly used HT meds are not. But self-medding is stigmatized in either case, and many medical practitioners take the position that it is inherently unsafe.
- The decision about telling a doctor about self-medding is complicated by the fact that telling them may be advantageous in order to obtain a "bridging prescription". More about that on the next slide.
- In any case, information about either illegal drug use or self-medding may leak to other practitioners who are also gatekeepers for your medical transition. This is entirely legal (in the UK) and there is nothing you can do to stop it.
- Telling anyone that a minor is self-medding is also definitely not subject to any legal protection: the current government's proposals on gatekeeping of trans healthcare for minors imply the opposite, i.e. that this could be treated as a "safeguarding" issue resulting in a call to child protection services or similar.

Bridging prescriptions

- Bridging prescriptions are basically the only way that the NHS can even pretend to not be committing a major human rights violation by effectively denying trans people care.
- They work basically like this: you threaten to self-med, and your GP gives you hormones for "harm reduction".
- It is usually (but not always) sufficient for the purpose of obtaining a bridging prescription for someone to say that they would self-med if the desired med(s) were not prescribed, but are not currently doing so. They might consider this a safer thing to say.
- It is possible, of course, for someone to say they would self-med when in fact they wouldn't, e.g. because they can't afford it or are concerned about lack of monitoring.
- It is also possible for someone to already be self-medding but fail to mention that, and only say that they would if meds were not prescribed.
 - Don't take "baseline" blood tests while self-medding, because this might either be obvious to a gatekeeper, or lead to under-dosing.
- If you have been self-medding and stop in order to take a blood test (with or without the knowledge of gatekeepers), I suggest waiting at least four times the elimination half-life of the meds you've been taking before having the test. The elimination half-life depends on administration route, which we'll talk about in Part III.

Bridging prescriptions

- The dance that I'm obviously doing with wording is partly for legal reasons, but also I'm genuinely not giving advice about what anyone should do. For any trans person faced with this deeply flawed system, it will be a complicated decision that will depend on their situation: confidence in their doctor, position on a waiting list, extent of dysphoria, attitude toward the healthcare system, etc.
- The name "bridging prescription" is chosen to imply a temporary measure before you can get a GIC to recommend prescribing. However, given current waiting times, you may be on a bridging prescription for years.
- Self-medding is stigmatized because the gatekeepers claim it is unsafe. Nevertheless, they've constructed a system where you essentially have to say you will self-med in order to get a basic standard of care i.e. the standard that the NHS is legally required to provide in the vast majority of cases for non-gender-affirming care.
- So, the current position of the government and NHS England appears to be that trans people have to credibly threaten to self-med but not actually do so, in order to receive timely care and in order for the NHS to meet its undisputed legal obligations.
- This regime is clearly abusive and transphobic. There's nothing wrong with harm reduction. But the pretence that "harm reduction" substitutes for everyday healthcare for a disadvantaged group is indefensible bullshit. It shames the NHS, and it directly violates several key principles of the NHS Constitution.
- If trans people had equal access to the law, requiring this rather than an informed consent regime would probably have been found to be illegal discrimination. For now, it is what we have.

Prescription meds (regulated)

- The UK has a registration system for pharmacies, regulated by the General Pharmaceutical Council, currently under the The Human Medicines Regulations 2012 ("HMR2012"), which implemented European Directive 2001/83/EC in UK law.
- For a pharmacy to be UK-registered, it must undertake to check that the patient has a valid prescription in order to receive prescription-only medicines such as hormones.
- For any medicine, there is a pharmaceutical company that designs the formulation and takes reputational responsibility for the quality of meds produced under that brand. It's primarily that company that you are relying on to only licence manufacturers that will make the meds under adequate quality control (although the manufacturers are also separately regulated).

Prescription meds (grey market)

- Disclaimer: I am not a lawyer and am not giving either legal or medical advice. Some of this is a simplification.
 I said this on the first slide but just to reiterate: I am speaking only for myself.
- In general, a "grey market" is a market in goods sold through distribution channels not explicitly authorized by their brand licensors.
 - This doesn't mean that the manufacturers/licensors don't know about grey market channels, and it doesn't mean they don't take them into account for manufacturing quotas.
 - The terms "grey market" and "black market" were coined to make a distinction between genuine ("grey") goods not sold through an authorized channel, and illegally distributed ("black") goods.
 - So, strictly speaking, grey goods are by definition not counterfeit. To avoid a "No True Scotsman" fallacy, we'll
 concede that it's possible to think you are getting grey goods, but actually they are counterfeit.
- When we talk about the grey market in prescription meds, we are typically talking about Internet pharmacies that are not UK-registered, and that will mail meds to a consumer without requiring them to show a valid prescription. (They will still only mail medicines that would otherwise be legal in the UK to UK addresses.)
 - Often they have the patient state that they either have a prescription or have been prescribed the meds previously, but they do not check.

Prescription meds (grey market)

- Meds obtained from grey-market pharmacies are sometimes made in a different country from the meds you would get from a UK-registered pharmacy. But any genuine branded product is manufactured under license from the brand holder, and is an entirely equivalent product regardless of where it's made or sold.
 - That is, it will be manufactured to exactly the same specifications and be subject to the same quality control. And if there were any problem with production quality, the same pharmaceutical company would be responsible.
- Let's demystify this with an example. You used to be prescribed Estradot patches on the NHS, but you can't get them any more (a pity, because they stick better than other brands).
 - You buy Estradot patches from, say, PacificIslandPharmacy.example (they're out of stock right now, but you could). They are manufactured under license from Novartis. They have "Aust" on the packaging and in the product name, indicating that they're manufactured for the Australian market. They are indistinguishable from the patches that users of the official Australian healthcare system get. There's also no difference between them and the NHS patches you used to get, because they're the same product design, and their production lines were built to the same specifications.

Novartis know full well that the wholesaler is selling to Internet pharmacies. Each box of patches has an official batch number. If you were to find a manufacturing defect, Novartis would be responsible — but in practice you could contact PacificIslandPharmacy.example giving them the batch number and they would handle reporting it, which is the same thing you'd do with a UK-registered pharmacy. If you wanted to report any "adverse event" directly to Novartis, you'd do it at the same place: https://www.novartis.com/report

The NHS uses the grey market

- It calls it "Parallel Import", and restricts it to medicines manufactured in the European Economic Area (this hasn't changed after Brexit).
- The NHS's "Dictionary of medicines and devices" (dm+d) database is public.
 - If we look up "Suppliers for Estradiol 100micrograms/24hours transdermal patches", we find two suppliers to the NHS for Estradot patches. One is Sandoz Ltd which is currently part of Novartis, the brand licensor. The other is Sigma Pharmaceuticals Plc, which is a "Parallel Import" supplier. They relabel meds on a site in Watford, so that those manufactured for other EEA countries look like they were manufactured for the UK market.
 - (There's also a SNOMED CT database which should allow you to query for other parallel imports, but I couldn't grok its query language in time for this presentation. It's well documented, so I'll figure it out.)
- I'm not casting any aspersion on Sigma Pharmaceuticals (which is just an example) or the NHS for providing or using parallel imports. On the contrary, I think they should be used more often. Relabelling is sometimes necessary if the original packaging and patient information leaflet is not in English.
- Granted, the parallel import scheme requires licensing by the MHRA. But the point is, using distribution channels
 not authorized by the brand licensor turns out not to be a fundamental distinction between NHS-supplied meds and
 "grey market" meds.
 - That leaves "Does the pharmacy enforce that the patient has a prescription?" as the main practical distinction.

The NHS is shit at reliably supplying meds

- There are reasons why someone might use grey market pharmacies even if they could (eventually) get a prescription:
 - To work around NHS supply problems.
 - To work around unreasonable "anti-hoarding" restrictions that in practice lead to them running out of meds.
 - Both of these are huge practical problems.
- The NHS institutionally, by policy, doesn't trust us. It especially doesn't trust trans patients, but really it doesn't trust any patients.
 - Many GP practices have a policy that repeat medications can only be re-ordered a few days before they run out. And then the pharmacy can't get that medication within a few days. Only last time I went to a pharmacy, a mother was distraught that this had led to a gap in provision of a *life-saving* medication for her child.

End all gatekeeping.

Sometimes critical meds are not even on repeat. This is a disaster for patients, because they can't get appointments reliably either.

The NHS is shit at reliably supplying meds

- HRT products are often in short supply. The failures to ensure supply of HRT used by women, trans people, and their intersection, are consequences of misogyny and transphobia.
- We're fobbed off with vacuous non-explanations like "supply chain issues".
 - In reality, leadership in the NHS simply doesn't give enough of a fuck about women's or trans people's healthcare to treat this problem with the seriousness it deserves. Instead that leadership has stuck its collective head in the sand and pretended that "the market" will inevitably fix it, or blamed technical manufacturing problems when there is clearly a wider issue with manufacturers' incentives.
- More generally, the NHS, and health systems globally, have systematically failed to address medicine supply problems over many years. Under capitalism, manufacturers are treated as black boxes and if they don't make the needed product, or sell it at an unreasonable price, then we just throw up our hands. The UK media has failed to adequately hold the NHS to account as being responsible for ensuring supply for UK patients.
- Many strategies would have helped:
 - preparing contingency plans for products becoming unavailable;
 - spreading usage more evenly over manufacturers;
 - being more flexible with prescriptions to simplify switching between roughly equivalent brands when necessary, while still taking into account patient-specific intolerances;
 - being prepared to pay more;
 - not leaving the EU, and using the purchasing and regulatory powers of the EU to strong-arm manufacturers;
 - commissioning HRT manufacturing and/or nationalising manufacturers;
 - deregulating testosterone.

"Fake meds"

- No reputable pharmacy wants to sell "fake" / falsified medicines, and they wouldn't be in business very long if they did. Even a single verifiable instance of a pharmacy selling a falsified medicine would tank their reputation and bring down a legal sledgehammer.
 - If you're scammed by an Internet pharmacy, not receiving any product is much more likely than receiving a fake one.
 - In particular, sites that try to scam you by impersonating a real site don't gain any benefit from sending fake goods, because they don't get much if any repeat custom. They already have your money.
- There's no magic in having bricks-and-mortar premises; being online doesn't prevent a pharmacy from verifying manufacturers and wholesalers with the same thoroughness that any bricks-and-mortar pharmacy would.
 - In particular, some (not all) Internet pharmacies guarantee to only source products from registered suppliers.
- If you think about it, there's a rhetorical trick being used in scare stories about "fake meds from online pharmacies", which is to conflate whether a pharmacy checks that the patient has a prescription, with how that pharmacy establishes and verifies its supply chains. But those are independent.

Precautions for Internet commerce in general

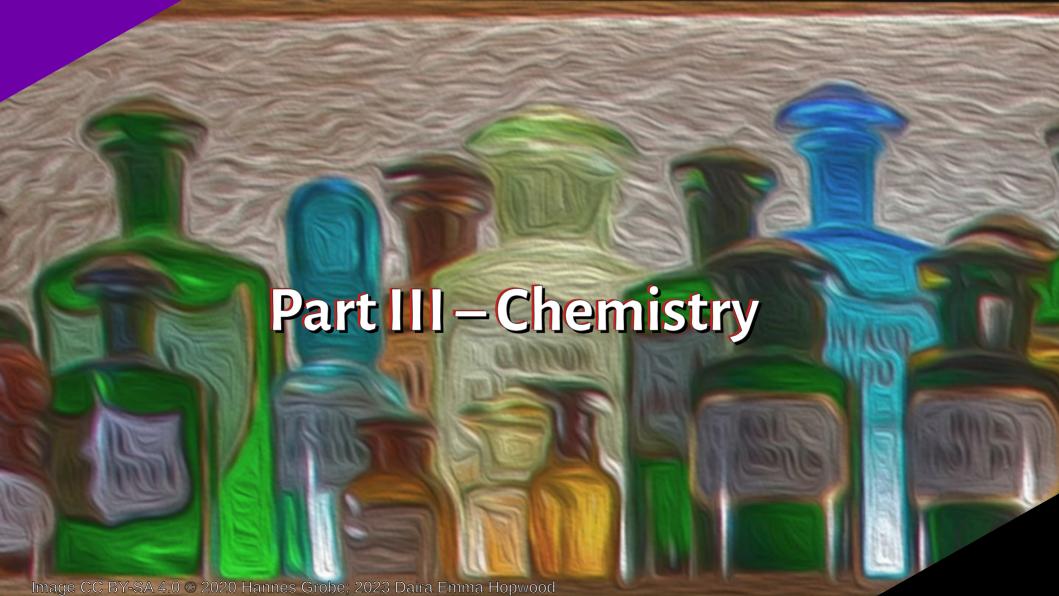
- As with any Internet purchase, it is possible to fall for a fake site that is pretending to be some other site.
- Never click on links in an email (even an email that appears to be genuine); always type into the URL bar or follow a link from a site that you have another reason to trust.
- Web browsers now have an option to force use of https, and https is common enough for that setting to actually work for everyday browsing (even if you occasionally have to click through a warning for sites where it doesn't matter). Https doesn't prevent all attacks; you still need to make sure you're visiting the right site, but it prevents connection hijacking.
- Data breaches are possible, and may leak password hashes. This is worse if using a low-entropy password. There have been data breaches directly on pharmacy sites, e.g. the Spanish site Promofarma. Alternatively, a data breach on another site could leak a password reused on a pharmacy site, if you reuse passwords.
- The easiest and least error-prone way to use unique, strong passwords for each site is to use a password manager—either a browser's built-in one (simplest if you use a single browser) or an external one.
- You will see a wider variety of brands available from Internet pharmacies than from official sources. If a brand is unfamiliar, you'll need to do some research to tell whether it is actually equivalent. If you want to reduce risk by only using brands that you know you could have got from an official source, that's a reasonable position.
- Remember, you are relying on the reputation of the pharmaceutical company. That is also what the NHS is doing!

"But it might be the wrong dose"

- I will buy a free drink for anyone attending this talk who got the right dose of hormones from the NHS without significant cajoling and persuasion.
 - It's fine to titrate the dose over a short period; that's not what I'm talking about. I'm referring to systematic underdosing of patients over long periods due to ignorance, stubborn following of transphobic policy, or transphobia from individual clinicians.
 - The most plausible explanation is that there is a widespread attitude among NHS clinicians and policy makers that "under-dosing of HT is okay", unlike dosing that is too high. Under-dosing is **not** okay.
- I have no doubt that some people who self-med HT are taking too much, or not taking it in the optimal form. The effect of this is to increase their long-term risks.
 - But in practice, trans people who self-med learn as they're doing it. They are strongly incentivized to increase their knowledge and they typically have a lot more time to do it, which allows them to optimize the dose over time.
- If there is a genuine safety issue with self-medding, it is lack of access to affordable blood tests. (There are a whole bunch of private companies who will do these tests, with no questions asked about why you need them but they're quite expensive. You'd need to know which tests are relevant and how to interpret the results, which is not rocket science but is also not trivial. GPs also have difficulty interpreting the results by the way.)
 - Policy makers who are invested in gatekeeping don't want to say that because there would be an obvious answer: make cheap blood tests available.
- Of course it would be preferable for more people to be on correct doses and optimal administration routes from the start. Ending NHS gatekeeping would be far more effective in doing that than attacking grey-market HT.

"DIY HRT"

- "DIY HRT" means HT made from raw ingredients, such as estradiol valerate bought in bulk. Making it is essentially
 doing what a compounding pharmacy does.
- Almost all self-medding is grey-market, not DIY.
- My opinion: DIY is not a useful strategy to get any significant number of trans people hormones.
 - You cannot feasibly make the safest formulations (patches, micronised progesterone, or any injectables).
 - It's unambiguously illegal without a license, which raises serious *practical* issues for distribution.
 - Proper quality control is actually hard.
 - You'll have a very hard time convincing potential users that it is safe.
 - Many of the sites you would get raw ingredients from are extremely dodgy.
 - It turns out that, because you lose the economies of scale available to commercial manufacturers, you can't produce DIY HRT that is very much cheaper (if at all) than grey-market.
 - Here's the kicker: if there were a clampdown on importing grey-market meds, there would also very likely be a clampdown on importing raw ingredients. The latter are *easier* to clamp down on, because they're already black market.
 - (There are other arguments, but these are probably the ones that speak loudest to people who would actually consider making DIY HRT.)
- If you do make DIY HRT as a learning exercise: I strongly suggest throwing away what you make, not using or distributing it.



More disclaimers

- Repeating the disclaimer from the start of this talk:
 - I am not a medical practitioner. Statements about medicines and treatments are for background information, and are not intended as medical advice. The amount of detail it's possible to give is limited by presentation time and slide space. Actual medical advice would have to be patient-specific and take into account contraindications, interactions, intended effects, etc.
- My personal preference is to know as much as I possibly can about every medication I'm taking and their potential interactions.
 - This presentation is biased toward that preference, but I know this approach isn't for everyone.

Trans community information sources

- Sites like Transfemine Science (transfemscience.org) and Gender Analysis (genderanalysis.net) provide a synthesis of medical info from an explicitly trans point of view.
- Transfeminine Science is astounding. The level of detail and thoroughness blows every other source out of the water. A lot of the information in this presentation that I didn't already know was taken from there, and a lot of the information I thought I did know was corrected or double-checked. It is never not worth listening to, even when I disagree with certain conclusions.
- For testosterone-based HT, Hudson's FTM Resource Guide (ftmguide.org) is excellent.

The medical literature

- Medical papers that are not open-access are often available on Sci-Hub. Search the title, find the DOI, paste it into https://sci-hubtw.hkvisa.net/ (The sci-hub.<country-domain> domain names are blocked from most ISPs in the UK. If sci-hubtw.hkvisa.net gets blocked, ask me for another one.)
- Treat papers with skepticism. Does it have a large enough sample size, and might the method of selecting that sample be biased? Does it correct for multiple comparisons when checking significance? If effects are significant, are they large enough to be important? Are there hints of anti-trans bias in the analysis or framing of research questions? Do stated conclusions accurately reflect the rest of the paper? What is missed out?
- Just completely discard any paper with signs of transphobic bias; you don't know whether the data is also tainted.
- Where there are no available studies specifically on trans people, it's often necessary to infer information from studies of the same meds used in cis people for a different indication. This requires some understanding of the biology in order to determine whether there are relevant differences. For example, do the risk factors depend on tissues that are not present in trans people taking this medication? Does the condition for which the medication is being used in cis people bias the sample population (for example, by age or by a disease that they have)?
- The abstract or conclusions of a paper are not enough information to determine whether it is sound.
- Systematic reviews, where available, are often a more reliable source of information than individual studies. Not only is the overall patient sample larger, but methodological flaws and errors in statistical analysis of particular studies carry less weight. Note that reviews do not typically re-analyse original data; the advantage here is just in diluting the effect of errors.

Drug side-effects or interactions

- Drugs.com can be used to check interactions and side effects. It supports checking 3 meds without an account, or more when logged in.
 - If you're concerned with leaking information about your meds, you can create an account using a throwaway email, then accessing it in a Private / Incognito window, ideally with a VPN.
- Patient information leaflets for particular meds are almost always available on-line, if you don't have a
 printed one.
 - Bear in mind that all uses of medication for trans HT are off-label, and patient leaflets will usually reflect the original licensed indication(s). This means that what constitutes a "side effect" is often skewed and described from a ciscentric point of view.
- These sources can include quite alarming side effects in some cases. It's important to consider what the incidence of those side effects are. If they're very rare or the incidence is unknown, then it's possible they might not be caused by the medicine at all.

Routes of administration

- "Pill" means a tablet or capsule.
- There are several possible routes of administration for a medicine:
 - oral (a pill or liquid that is swallowed),
 - sublingual (a pill held under the tongue until it dissolves),
 - buccal (a pill held between the cheek and gums),
 - rectal (a capsule or suppository put into the rectum via the anus until it dissolves),
 - transdermal (patch or gel absorbed through the skin),
 - intramuscular injection (into a muscle), or intravenous injection (into a vein).
- The "strength" of a pill or injection is the stated mass of active ingredient delivered in that pill/injection. The strength of a patch is the estimated amount that will be absorbed in a given time period if the patch is worn *continuously and fully in contact* with the skin. The strength of a gel is the amount in some measured portion of the gel (e.g. a sachet, or per action of a pump).
- The "dose" is the amount a patient takes over time (typically per day). This might include treatment breaks, e.g. for cyclic HRT.

Oral, sublingual, buccal, and rectal routes

- Medicines taken by the oral route need to be metabolized by the liver and/or kidneys. This converts some portion of the active ingredient to its biologically effective form; the rest is essentially wasted. So the oral route is the least efficient in getting the active ingredient absorbed by the body: the lowest "bioavailability".
- Typically, using an administration route with higher bioavailability reduces side effects, because the side effects are often (not always) caused by metabolism in the liver or kidneys. If you have liver or kidney disease, it can be important to know how a particular medicine is metabolized.
- The bioavailability ratios between different administration routes are not necessarily the same for different meds.
- For pills taken by sublingual or buccal routes, some of the medicine is absorbed into the bloodstream via mucus membranes in the mouth, and the rest goes by the oral route. This generally increases bioavailability by a factor of two to four (depending on how efficient the oral route alone is).
- For the rectal route, the medicine is absorbed via mucus membranes in the rectum. There are a lot of blood vessels close to the surface there, so this also increases bioavailability. Some capsules designed for oral use can also be taken rectally.
 - Empty your bowels before taking a med this way, and wait an hour before doing so again. See the patient information leaflet for the particular medicine for a more precise time.

Transdermal route

- Medicines can be absorbed through the skin either by wearing a patch, or applying a gel. (I don't have any
 experience of, or much information about gels, sorry.)
- Patches are made of a plastic backing, coated with a mixture of the medicine and an adhesive.
- Brands of patches for the same medicine vary significantly in size, how well they stick, how much glue residue they leave, and how much irritation they can cause. Irritation and stickability can vary between individuals, but some brands are just bad for everyone. We'll go into more detail for estradiol patches later.
- A given brand of patch has a claimed absorption rate: the dose that is supposed to be absorbed per day, and a length of time for which it is supposed to be applied.
 - It is just too much of an oversimplification to think of a patch as providing a constant dose for the claimed time. A more useful model is to give a "dose response curve" of the patch's contribution to serum levels of the active ingredient over time. You may be able to find this curve in the paper that describes testing of the patch.
- A patch that has partly come away from the skin will provide less of the medicine, roughly in proportion to the area that is still fully in contact. A rule of thumb is that if more than about a third of the patch has come away, throw it out and apply another one.
 - The patient information leaflet will tell you to replace the patch again on its normal schedule. You don't have to do that as long as you have a reliable way to keep track of how long it has been since you changed it. I use alarms on my phone.
- Patches can be cut or doubled up to adjust the dose.

Estradiol

- The form of estrogen used in HRT is called estradiol ("E2"). It is usually taken in the form of estradiol valerate ("EV") for pills or patches, or either EV or estradiol cypionate ("EC") for injections. It is metabolized to the two other forms of estrogen, estrone and estriol, in the liver. Estrone would be too weak for use directly in HRT and estriol is not licensed to be used for it.
- There is a systematic problem with undertreatment using estradiol. GPs and endos are terrified of the stuff and are very likely to undertreat you unless you push back. I've seen so many transfems suffering dysphoria due to undertreatment, or unnecessary side effects as a result. Because there is a lot of individual variability in the response to a given dose, you really need blood test results to tell you the resulting serum level. Your E2 serum level should be in the range 100–200 pg/mL (367–734 pmol/L).

Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society Clinical Practice Guideline

[Hembree, Cohen-Kettenis, Gooren, Hannema et al 2017]

- The safest forms of E2 for HRT are EV patches or EV/EC injections. As previously mentioned, patches and injections result in greater bioavailability than pills. In the case of EV this reduces the needed dose from between 4 mg/day and 8 mg/day for pills, to between 100 mcg/day and 200 mcg/day for patches (rated absorption for a patch worn continuously and fully in contact with the skin).
 - 100 mcg is 0.1 mg, so you can see the huge difference (roughly a factor of 40) that the greater bioavailability makes. For injections, 2 mg/week would be typical, so the average dose over time is roughly on the same order as for patches (285 mcg/day of EC in that case, although EV and EC doses are not quite comparable).

Estradiol, continued

- The purpose of using EC for injections is that it acts as a delayed release mechanism, smoothing out the curve of E2 level in the blood over time. This is particularly important if you suffer from migraines.
- That said, the cardiovascular risk of oral EV at 4 to 8 mg/day is still very low, especially in people under 40. Even more so for sublingual/buccal EV at 1 to 4 mg/day.
- Some clinicians may have a perception that the risks of transfem HT are higher than they actually are. This is probably due to the WHI study, which came to this scary-sounding conclusion:
 - "The Women's Health Initiative (WHI) study reported increased risks of myocardial infarction [heart attack], stroke, invasive breast cancer, pulmonary emboli, and deep vein thrombosis in postmenopausal women (50 to 79 years of age) during 5 years of treatment with oral conjugated estrogens (CE 0.625 mg) combined with medroxyprogesterone acetate (MPA 2.5 mg) relative to placebo."
 - Oral conjugated estrogens (such as Premarin) are not typically used in transfem HRT. MPA is a progestin but is used less often in transfem HT than an alternative, micronised progesterone (we'll get to that later).
- If cardiovascular risks are nevertheless a concern (e.g. in people over 40 or who have a heart condition), EV patches may be preferable. Actually I would recommend patches in any case.

Estradiol patches

- Patch strengths go up to 100 mcg/day, but note that this isn't necessarily enough. To calibrate the dose, start by wearing one 100 mcg/day patch and check your E2 level with a blood test. You may need to wear two 100 mcg/day patches simultaneously (I do).
- The main problems with patches are failure to stick (especially in hot weather or after a shower), and skin irritation. This varies a lot between brands:
 - The unrivalled best brand for sticking without irritation is Estradot, but it's difficult to get currently due to supply problems (although I did recently get them on the NHS).
 - FemSeven and Climara Forte are pretty good. These are "7-day" patches but they might not actually last 7 days.
 - Evorel sticks but can cause irritation at the edge of the patch and leaves a lot of residue.
 - Estramon caused serious irritation for me.
 - Estraderm basically doesn't stick at all.
- It's only the area of the patch that is firmly stuck to your skin that is providing estradiol. Partially unstuck patches will cause inconsistent dosing (and consequent migraines in some people). If you're forced to use a brand that doesn't stick, you can use a transparent film bandage over it. These are sometimes sold as tattoo aftercare bandages.

Progesterone

- The use of progesterone for transfem HT is more controversial than in my opinion it should be. Progesterone is obviously present in cis women, and although there are few studies (because of transphobia!), anecdotal evidence shows that progesterone in trans women has benefits for:
 - Breast size, shape, softness, and areolae development.
 - Sleep patterns.
 - Overall mental health and relief of dysphoria.

Personally I've found that estradiol alone does not relieve my dysphoria to the extent that estradiol + progesterone does.

Less well known is that progesterone (like testosterone, and opposite to estradiol) tends to decrease QT interval.

"Studies of menopause hormone therapy in the form of estrogen-alone therapy (ET) and estrogen plus progesterone therapy (EPT) have suggested a counterbalancing effect of exogenous estrogen and progesterone on the QT. Specifically. ET lengthens the QT while EPT has no effect."

Sex Hormones and the QT interval: A Review [Sedlak, Shufelt, Iribarren, and Merz 2012]

Long QT is associated with increased cardiovascular mortality, and so this can be considered a benefit except in patients with already short QT.

- Also, there is some evidence that progesterone increases muscle protein synthesis, and that estrogen and progesterone work synergistically to protect muscle and bone health.
- Typical doses are 100-300 mg/day of micronised progesterone.

Transdermal E + Micronised Progesterone

• Given the emphasis of gatekeepers on long-term VTE risk in transfems, it may be useful to know that there is evidence that the combination of transdermal estradiol + micronised progesterone does **not** increase this risk.

"In women using opposed estrogen, results were highly heterogeneous due to important differences between the molecules of progestogen. In transdermal estrogen users, there was no change in VTE risk in women using micronized progesterone (RR 0.93, 95% CI 0.65–1.33), whereas norpregnane derivatives were associated with increased VTE risk (RR 2.42, 95% CI 1.84–3.18). Among women using opposed oral estrogen, there was higher VTE risk in women using medroxyprogesterone acetate (RR 2.77, 95% CI 2.33–3.30) than in those using other progestins."

Progestogens and venous thromboembolism in menopausal women: an updated oral versus transdermal estrogen meta-analysis

[Scarabin 2018]

This does not hold for MPA, which is unfortunate because British Menopause Society guidelines give MPA as an alternative for micronised progesterone (of which there have been recent shortages).

Finasteride and dutasteride

- These are 5-α reductase inhibitors ("5αRIs"). 5-α reductase is an enzyme naturally present in some tissues (skin, hair follicles, and prostate) that converts testosterone into DHT.
 - These meds are used to treat loss of hair from the scalp in all genders, hirsutism (undesired facial and body hair), and prostate enlargement.
- 5αRIs are not effective as a general anti-androgen, because of the tissue specificity of 5-α reductase. Also, testosterone levels are usually sufficiently reduced in people taking anti-androgenic / estrogenic HRT that it is not necessary to inhibit testosterone → DHT conversion by use of 5αRIs.
- However, they can still be useful as a hair loss treatment for example.

Testosterone

- Testosterone is an androgen that is converted to dihydrotestosterone (DHT) by, as discussed in the previous slide, 5-α reductase*. DHT is a much more potent androgen than testosterone is directly.
- The perception of testosterone is politically charged; it is frequently blamed for all kinds of societal ills essentially any bad thing that people associate with men can be, and often is, attributed to testosterone. In the popular (and TERF) imagination, testosterone makes you aggressive and scary-strong and confers magical advantage in sports.
 - This is a biological essentialist viewpoint disconnected from reality: no hormone actually works like that. FTM Resource Guide has a discussion of such myths written from a transmasc perspective.
- This feeds into widespread misconceptions about T's safety profile and to it being classified as a controlled substance. To some extent, toned down versions of these misconceptions are common also within the trans community.
- I want to be very clear about how bad the standard of discourse about T is outside specifically transmasc communities. The common standard of evidence for talking about negative side effects of testosterone isn't very much better than "making shit up", and this unfortunately extends to some clinicians.

^{*} I made an embarrassing error on the slide as originally presented and said "5-α reductase inhibitors" here.

Testosterone

- The actual evidence shows that:
 - T/DHT does not increase the risk of heart attack, stroke, or other cardiovascular disease.
 (Typically trans and/or intersex people seeking treatment with testosterone start with very low T levels. Although we don't have good data on trans men specifically, it is justified to use studies of hypogonadal cis men to assess cardiovascular risk.)
 - This is despite the fact that T can increase haemocrit count, which has been associated with cardiovascular disease in cis men. Haemocrit count should be monitored, though.
 - Testosterone can increase risk of prostate cancer, but that would not affect trans men. (It needs to be taken into account for transfems taking testosterone, but that is normally only done at low levels.)
- I am going to just refer to the FTM Resource Guide for dosing and administration routes of T.
 - Sorry, this is partly due to lack of time, but also that page is already at a similar level of detail as I used in this presentation for estradiol and progesterone, and I don't have direct experience.
 - Since it isn't covered in the FTM Resource Guide, I will also mention that transfems sometimes use T to increase libido, especially but not only after orchiectomy or GRS.
 - Sexual Desire Changes in Transgender Individuals Upon Initiation of Hormone Treatment: Results From the Longitudinal European Network for the Investigation of Gender Incongruence [Defreyne, Elaut, Kreukels, Fisher et al 2019]







Chemistry, Politics, Transphobia

Gender-affirming healthcare in the UK

Daira Emma Hopwood, August 2023

Discord: @dairaemma Mastodon: @daira@kolektiva.social

Bluesky: @daira.bsky.social

Slides at https://github.com/daira/transhealth

