

Hormones for all



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

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Content warnings

- This session will involve discussion of transphobia, obstruction of medical care, and other oppressions: racism, sexism, ableism, classism, intersexphobia, and fatphobia.
- Mentions in the presentation of: vulnerability to COVID, breast cancer, prostate cancer, risks of a blood clot or heart attack, surgery complications, fertility issues, substance abuse.
- Discussion of side effect risks that may apply to medicines you're taking or planning to take.

Who am I?

- I'm Daira-Emma, a genderqueer trans woman, pronouns ze/hir. I'm polyamorous and have three partners who are also trans women. I'm autistic, I have ADHD, and I'm clinically vulnerable. If you can wear a mask, please do!
- "I want freedom, the right to self-expression, everybody's right to beautiful, radiant things."

—Emma Goldman, *Living My Life*, 1931.

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 (a whole other gatekeeping side-quest).

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 Manchester Trans Liberation Assembly or any other organisation I'm associated with.

What this presentation is about

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

Part II: Understanding Hormones – 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.
- I've 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.
- Please keep track of any questions you want to ask.



Part I – Navigating the System

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.

- 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.

Exogenous hormones are ordinary

- Exogenous hormones are just medicines, like thousands of other routinely used medicines.
- There's nothing special about them. They have side effects and interactions and (small) long-term risks, but so does every other medical treatment.
- Bio-identical hormones are some of the least risky drugs we can take, because human biology—regardless of sex chromosomes—is adapted to them at the levels that trans people (who aren't being underdosed) end up at.

They also have robust homeostatic regulation (modulo thyroid disease that also affects endogenous hormones).

- To the extent hormone treatment is perceived as “dangerous”, everything I know suggests that is for reasons of social control, not biological or medical reasons.
- Never let them gaslight you about this.

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.

End gatekeeping: an incomplete manifesto

- Guarantee access to abortion, assisted reproduction, and gender-affirming care.
- Abolish the immigration health surcharge and other immigrant-hostile policies.
- Reinforce rights of children, the elderly, disabled, houseless, and undocumented people to healthcare and bodily autonomy.
- Effective treatment and diagnosis of chronic illness. No condition “too complicated”.
- End harmful/debunked “treatments”: ABA, graded exercise for ME/CFS & long COVID, ...
- Health settings safe and accessible to disabled and immunocompromised people.
- Cheaper and more reliable access to medicines. End COVID vaccine age restrictions.
- Destigmatize opiate meds, ADHD meds, etc. Decriminalise and de-schedule cannabis.
- Full acceptance and accommodation of neurodiversity.
- Strengthen patient privacy and make it robust against political interference.
- Give all intersex people full, accurate information about their medical history.
- End medical fatphobia, including BMI thresholds for surgery (or anything else).
- Access to research –and forming research questions– for underrepresented groups.
- Properly fund the NHS as a public service, not a money-grabbing opportunity.

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, misogyny, 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 constrained by transphobic policy. (Also, “good” is not well-defined.)

The NHS can't be trusted

- Last year, I said that the current state of policies (both written and followed) had improved considerably relative to earlier decades.
- I can no longer say that. There have been further regressions, from a terrible starting point, in gender-affirming care of children and young people. The unscientific conclusions of the Cass Review, heavily influenced by anti-trans organisations, have greatly increased the possibility of regressions in adult care. 😞
- You cannot trust the NHS, period. NHS England in particular is fully on-board with the government's transphobic agenda. Its leadership don't care that they're violating trans people's rights. The rot is at the top of the NHS, and at the top of both parties that could win a general election.

If you are or will be reliant on the NHS for trans healthcare, now is the time to make a backup plan.

- I'm sorry this slide has to be so negative, but alarm is justified. There hasn't been this sharp a policy regression in over 30 years.

Strategy

- Know the written policy, and the followed policy.
- Learn the science.
- Make gatekeepers stick to the written policy when it's gender-affirming enough.
- Push for following scientific evidence whenever you need to.
- 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.
- Be selective in the information you provide to gatekeepers.
- Clinicians make mistakes. You will have to be responsible for your own health.
- You will not be told about less common options unless you actively seek them out.
- There's no magic associated with medical authority.

“Be selective in the information you provide.”

- Gatekeepers lie to us all the time. They lie about waiting times, referrals, and 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 lie about being gatekeepers in the same breath as gatekeeping you.
They lie or repeat other people's lies so often — in order to avoid admitting to transphobia or complicity in transphobia — they may not 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're 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.

Taking control of your health — Interactions

- Check potential interactions between meds you take, and between meds and health conditions.
- Often clinicians will not check. They should get a automatic warning on trying to prescribe a new drug that interacts with drugs and conditions on your medical record, but mistakes are common, and your record might not be complete.
- Drugs.com allows checking interactions between three meds without an account, or more with an account.
 - To log in/register when using Strict Tracking Protection in Firefox, add an exception for drugs.com and consent to “Store and/or access information on a device”. Use a VPN if you are concerned about privacy.
- I recommend adding common painkillers, and any recreational drugs or alcohol if relevant. Information about interactions with recreational drugs may be alarmist and that should be taken into account; check with another source.
- The info may not be complete, especially for interactions with health conditions.

Taking control of your health — Side-effects

- Patient information leaflets for particular meds are almost always available online, 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.

Taking control of your health — Doses

- Check doses from several sources, regardless of where you get your meds from. Undertreatment is commonplace.
- 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.
- 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.
- Probably the closest-to-accurate "official" guide to hormone doses is the [2017 Endocrine Society guideline](#). Still, the lower end of most of its dose ranges are unlikely to be effective for anyone, and the upper end of anti-androgen ranges are arguably too high.

Trans community information sources

- Sites like Transfeminine 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 choice of sample introduce bias?
 - Does it correct for multiple comparisons when checking significance? If effects are significant, are they large enough to be important? Was the hypothesis arrived at after the results were known? Is the control group appropriate?
 - 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?
- Completely discard any paper with signs of transphobic bias or questionable statistical analysis. You don't know whether the data is also tainted.
- Be wary of confirmation bias. (But don't waste your time trying to disprove every transphobic conclusion, unless that's your thing!)

Recording appointments (any provider)

- 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. (They're much more likely to break rules 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.

Recording appointments

- 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.
- They are legally obligated to provide the data “without undue delay, and at the latest within 28 days from the date of the request”.
- 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 private providers 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

- It used to be considered important to have legally changed your name to one you intend to use after transition, as evidence of having “lived as” your transitioned gender. I don’t know whether this is still useful to get past gatekeeping, or 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.
- 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 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.

Old-style GICs are taking the piss

Waiting times

There is a high demand for appointments, which is common across other gender identity clinics around the UK.

Number of people on our waiting list	15,086
Number of referrals received in the month	406
Number of first assessments offered in the month	34
Total appointments offered in the month	738
We are currently offering first appointments to people referred in	December 2018

Most recent data from: February 2024. These numbers are provisional and may change as the data is validated.

- On the left is waiting time information for the adult Tavistock GIC. I'm showing this one because their waiting statistics are complete enough to illustrate why the GIC system is collapsing.
- This is worse on all axes than February 2023:
 - The list increased by 2,790 people; referrals by 54%.
 - First appointments/month decreased by 17%. Offered appointments/month decreased by 11%.
 - They only did 5 months worth of first appts in a year.
- The ratio of offered to first appointments is 21.7, up from 20.2 last year. Trans people referred to a GIC don't need an average of 20 appointments each; that is extremist gatekeeping that is set up to fail.
- GICs will never do enough in a first appointment to give useful healthcare within their capacity. The NHS service specification prohibits it. If this failure is not by design, it might as well be.
- This is not "high demand". It's planned under-resourcing, and planned under-utilization of capacity.

NHS Pilot Gender Services

- 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.
- From the patient reports I've heard, the GIC pilot projects are better:
 - Indigo (Manchester)
 - CMAGIC (Liverpool)
 - TransPlus (London, run by Dean Street)
 - East of England Service (Cambridge)
- Indigo are currently accepting referrals from Greater Manchester GPs. They claim their current waiting list is 33-36 months.
- None of the others are accepting direct referrals; only transfers of adult (17+) patients referred to another GIC before 31 Oct 2020 (or 28 Feb 2021 for East of England).
- Indigo and East of England "receive clinical support from the GIC at Nottingham Centre for Transgender Health" (an old-style GIC, with old-style attitudes).

NHS Pilot Gender Services

- The pilot projects still work within the NHS adult service specification: “at least two in-depth one-hour appointments with clinicians trained in assessing and diagnosing gender dysphoria”.

So they won't diagnose at the first appointment. You can be both diagnosed and prescribed HT at the second appointment in some cases.

- Read all info on the service's website, and make sure you do everything possible in each appointment and aren't missing information, filled out consent forms, or test results.
- Communication between a GIC and GP practice often stalls, and this is no different for the pilot projects. You need to cajole both the GIC and the GP along; they can't be trusted to treat your case with urgency.

Private Gender Services

- Here are the private services listed by TransActual's [Choosing a gender service](#) that seem not to be duplicates or overhead (i.e. just referring you to someone else):
 - Harley Street Gender Clinic (London; unclear)
 - Gender Identity SW (Exeter; "[temporarily closed to new bookings](#)")
 - GenderCare (various; "[tends to be months rather than weeks](#)")
 - GenderDoctors (London; "[4-8 weeks](#)")
 - Gender Plus (Birmingham & Dublin; "[typically 2-3](#)" appointments)
 - Northern Gender Network (Leeds & Nottingham; unclear)
 - The Gender Clinic (London; "[within three weeks](#)" + 10 working days for report)
 - The Gender Hormone Clinic (London; initial video consultation + "[2-5 weeks](#)")
 - Waterside Clinic / YourGP (Edinburgh; unclear)
- These services are expensive and I recommend you thoroughly investigate pricing.
- There is also Gender GP; I think they are not listed on the Gender Construction Kit page because they are not UK-based (they now prescribe from the EU). They claim that "For most people who are secure in their gender identity and able to give informed consent, the process should only take a couple of weeks [plus time for blood tests if necessary]".

Mixing NHS and private provision

- The NHS will not normally allow patients to mix NHS and private provision within a single “episode of care” (unless the NHS is outsourcing to the private provider). However, it is often possible to do this mixing between separate “episodes of care”.
- 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.
- If you are being referred to an NHS service, you have the right to decide which one. I would suggest starting with TransActual’s [Choosing a gender service](#) 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.

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

- 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. Don't let them put you back on your old GIC's waiting list as though you were a new patient.

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”.
- 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 II.
- 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.

Bridging prescriptions

- Self-medding is stigmatized because the gatekeepers claim it's unsafe. But they've constructed a system where you 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.
- 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.
- 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.
- 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.

- 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 “[Dictionary of medicines and devices](#)” (dm+d) database can be used to find out which brands are parallel-imported.

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. Sometimes critical meds are not even on repeat, which is a disaster for patients because they can’t get appointments reliably either.
- 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. One 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.

The NHS is shit at reliably supplying meds

- HT products are often in short supply. The failures to ensure supply of HT 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 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.

“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.

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. 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.

Home compounding

- “Home-compounded” HT means HT drugs made from raw ingredients bought in bulk. This is essentially doing “at home” what a compounding pharmacy does.
- Almost all self-medicine/DIY gets meds from the grey market, not home compounding.
- Disadvantages of home compounding:
 - You cannot feasibly make the safest formulations (e.g. patches, 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.
 - You lose the economies of scale available to commercial manufacturers, so you can’t produce DIY HRT that is very much cheaper than grey-market.
 - If there were a clampdown on importing grey-market meds, there would also very likely be a clampdown on importing raw ingredients.

Breakout discussions: 15 minutes

- Some prompts:
 - How does this relate to each of our experiences?
 - What are we hoping to get out of today?
 - Is there anything you want to learn about in more detail? Someone in this room might know!
- Please keep track of any questions you want to follow up on.



Part II – Understanding Hormones

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.

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.

Oral, sublingual, buccal, and rectal routes

- 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 (the information leaflet may give a more precise time) before doing so again.

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.
- A patch does not really provide 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.

Transdermal route

- 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]

Estradiol

- 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 taken orally, 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 anyway.

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.

Progesterone

- 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 (“5 α RIs”). 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.

- 5 α RIs 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 \rightarrow DHT conversion by use of 5 α RIs.
- However, they can still be useful as a hair loss treatment for example.

Anti-androgens and blockers

- I ran out of time for the slides here, sorry.
- Mention controversy about cyproterone acetate dosing.
- Mention GnRH antagonists (“hormone blockers”).

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 transmasculine 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 transmasculine 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.

Testosterone

- 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]

Testosterone

- The 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.)

Hormones for all



Daira-Emma Hopwood, May 2024

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