

Caring for trans and gender-diverse patients

A quick guide for clinicians who are not specialists in trans care: in clinic, and in the emergency department and on the ward

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ABSTRACT

Background. Most healthcare for trans and gender-diverse people takes place outside gender clinics, with clinicians who have had little or no training in their care. The errors made there are predictable: hormones stopped when one drug should have been held; pulmonary embolism ruled out with a rule that counts oestrogen use; pregnancy not tested for because the record says male; results read against the reference range for the sex on file; and records written in ways that expose the patient.

Objectives. To give non-specialist clinicians in general practice, nursing, pharmacy, gynaecology, emergency medicine, anaesthesia and inpatient care a short guide to the situations they actually meet, in which every instruction can be traced to its source.

Methods. A narrative synthesis, not a systematic review. Sources are international and national guidelines, product labels and regulatory documents, laboratory-medicine guidance and primary studies, identified by targeted searching for each clinical question; 118 references are cited, 117 read in full and 1 in abstract only. Where no source states a point, the wording is labelled as Eden Openly advice. The text was tested repeatedly against a bank of 100 multiple-choice clinical questions and 20 acute scenarios, answered by testers using the guide alone, and revised after each round. Specialist review of named sections is in progress.

Results. The guide is organised as two companion sheets. Sheet 1, for the clinic, covers the first consultation and what is recorded, the hormone regimens a patient may be taking, which drug to hold and when, red flags, screening by the organs present, reading blood results, mental health, interactions, contraception and fertility, and HIV prevention. Sheet 2, for the emergency department and the ward, is organised by presentation, from chest pain, stroke and venous thromboembolism to complications after genital, chest, facial and voice surgery, sepsis and kidney injury, assault, mental health crisis, and a patient who has run out of hormones. A closing table lists clinical tools that assume one of two sexes and what to do with each. The rule that runs through the guide is to hold the drug that is causing the problem, not the hormones.

Conclusions. The guide does not set policy, and it does not replace local protocols or specialist advice. It keeps what its sources state apart from its own advice, marks the clauses still awaiting a specialist’s sign-off, and will be deposited with a DOI at version 1.0 after review.

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Publication status

This is a draft for specialist review. It is not a completed guide and should not be cited or used as one. It is published so that clinicians can read it and send corrections before version 1.0.

- **Done.** Every clinical claim is cited to a source read in full, with one exception read in abstract only. Our own wording is labelled as Eden Openly advice. The text has been tested against 100 clinical questions and 20 scenarios and revised after each round.
- **Not yet done.** Specialist review of the kidney-function lines, the surgical aftercare lines and the psychiatric-ward lines, and of the remaining HIV points; the HIV and sexual health sections have had a first specialist review. Clauses waiting for it are marked **✖**. The author's own confirmation of every claim against its source, the correction record and the claim-to-reference map will be completed before deposit.

Scope

The guide is for clinicians who are not specialists in trans care and who meet trans and gender-diverse adults in general practice, pharmacy, gynaecology, emergency departments, theatres and wards. It covers what such a clinician needs at the point of care: what to ask, what to record and what to leave out, which drug to hold, which result to distrust, and when to refer.

It does not cover starting gender-affirming hormones, care for children and adolescents, or surgical technique, and it is not a prescribing protocol. UK and US documents appear as worked examples; each country edition replaces them with local guidance. Planned editions are English, Korean, Japanese, Traditional Chinese, Thai and Malay.

If you are a patient. This guide is written for the clinicians who look after you. It is not advice about your own treatment. If something in it concerns you, take it to your prescriber or your own clinician, and do not stop or change a hormone because of it.

Declarations

COMPETING INTERESTS

The author is transgender. Declared interests are maintained in Eden Openly's public register: <https://edenopenly.com/about/declared-interests/>

ETHICS

A secondary synthesis of published sources. No primary data were collected and there were no participants, so ethical approval was not required.

FUNDING

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DATA AVAILABILITY

Sources are identified by DOI or, where they have none, by title, issuing body and date. Every external source cited is held in Eden Openly's source archive; Eden Openly's own publications are cited by DOI or web address. The manuscript and the build apparatus will be deposited with version 1.0.

PREPARATION

This guide was prepared with the assistance of a large language model (Claude, Anthropic), used for source retrieval, drafting, structural editing, checking claims against their sources, and testing the text against clinical questions and scenarios. AI assistance is not authorship, peer review or author approval. Before deposit, the author will confirm every claim, every number and every citation against its source and record any errors found in the correction record.

VERIFICATION

Of 118 references, 117 were obtained and read in full; 1 in published abstract only; 0 in an official extract, translation or summary; and 0 were not obtained. A claim-to-reference map, checking that each citation supports the claim it is attached to and not only that its number resolves, will be built before deposit.

METHOD AND LIMITATIONS

This is a narrative clinical guide. It is not a systematic review and not a clinical practice guideline developed by a guideline panel; it is not peer reviewed; it does not follow PRISMA; it uses no formal risk-of-bias instrument and no formal evidence grading. Lines marked as Eden Openly advice are editorial judgement. It is not a prescribing protocol and not a policy position, and it must not be used on its own to start, stop or withhold any treatment. Because the evidence was not identified by systematic search, the guide may say that no source identified states a point; it does not assert that none exists.

Sheet 1 · In clinic

1. The first two minutes

Negative experiences in healthcare are common, and they keep people away. In the 2015 US Transgender Survey (about 28,000 respondents):

- a third of those who had seen a provider in the past year reported at least one negative experience related to being trans;
- 23% had not sought care they needed for fear of mistreatment [35].

In a 2017 Korean national survey of trans adults, 42.7% had delayed or avoided hospital visits in the past 12 months [36]. SOC8 notes that past negative experiences are associated with avoiding care in the future [7]. The first few minutes of a consultation decide whether the patient comes back.

- **Name and pronouns.** Ask what name and pronouns the patient uses, use them throughout, and record them where your system allows [7,34]. Ask which words they prefer for their body, too [7].
- **Only the history you need.** Limit questions about gender history to what's relevant to today's problem. Patients shouldn't have to teach you [34]. In the US survey, 15% had been asked unnecessary or invasive questions about being trans that were unrelated to their visit [35]. If a question is relevant, saying why you're asking helps. *(This last point is EO advice; it isn't stated in the sources.)*
- **Records.** Where your system allows, keep the name and sex on legal documents (needed for identity checks) separate from the name and pronouns the patient uses [34]. Keep an up-to-date list of the organs present, so that screening and examination follow anatomy rather than the sex marker [7]. Treat gender history as confidential and share it only on a need-to-know basis [7].

- **Sharing.** Ask what may be shared, and with whom, and record it. Don't tell relatives or next of kin about gender history or hormones without consent, unless disclosure is justified in the public interest; being next of kin doesn't authorise disclosure [98]. In the UK, disclosing someone's gender history after legal recognition can be an offence [98].
- **Title and pronouns.** Record name, pronouns and title (or no title), and use them in letters, even where the sex field is binary [7,52].
- **What you write travels.** Records, request forms, referral letters, prescriptions and anything shared with insurers or employers may be seen by many people. In some jurisdictions, disclosing that someone is trans carries legal or safety risk. Agree with the patient how information is recorded and shared, and record the minimum necessary, accurately: the clinical fact (the hormone and dose, or the organs present) rather than the identity when that is enough. Clinically essential information, safeguarding duties and legally required reports can't be left out: explain any disclosure that can't be avoided, and use restricted-access fields where your system has them. (*EO advice.*)
 - Fear of a record drives people away from care. In the Korean survey:
 - 10 of the 61 people who had bought hormones without a prescription said they didn't want a record of treatment in their medical history;
 - 9 of the 25 who had not sought a diagnosis feared discrimination from a psychiatric diagnosis on their record [36].
 - A patient who can't trust what you write will stop telling you, or stop coming [7,35].
- **Examination.** Examine only what's relevant to the presenting problem. A respiratory infection, for example, isn't a reason to examine the genitals [34]. Explain what you plan to do and why before you start, and remind the patient they can stop the examination at any time [34]. For intimate examinations, explain why the examination is needed and what it involves. Offer a chaperone wherever possible, and don't assume the patient doesn't want one. This is professional guidance for any patient; the UK's GMC is one example [45]. If no suitable chaperone is available, or the patient isn't comfortable with the one offered, offer to delay the examination if the delay won't harm their health [45]. Let the patient choose the chaperone's gender where possible [76]. Use the smallest speculum and lubricant, and offer self-insertion or self-collected swabs where suitable [34,82].
- **If you misgender someone,** apologise briefly, correct yourself and carry on. (*EO advice.*)

2. What they may be taking

	Common options	Notes
Feminising	Oestradiol: oral or sublingual, transdermal patch or gel, or injectable: valerate or cypionate, IM [3,7] or SC, which gives similar levels [126]. Valerate is the more widely available ester [126]. Other esters, such as benzoate, are used in some countries and aren't covered by the main guidelines [126], so ask which one (<i>EO advice for the last point</i>)	Ethinylestradiol, including contraceptive pills used as hormones, should not be used. It carries the highest VTE risk [7].
	Testosterone blocker: cyproterone acetate, spironolactone or a GnRH analogue. Which one depends largely on the country: spironolactone in the US, GnRH analogues in the UK, cyproterone in Europe [7]	Most clinics prescribe oestradiol with a blocker [7]. Some patients take oestradiol alone, for example after orchidectomy, when blockers are no longer needed [44].

	Common options	Notes
	Progesterone , sometimes	SOC8 found insufficient evidence that its benefits outweigh its risks [7].
Masculinising	Testosterone : injectable (enanthate or cypionate, IM or SC; injectable undecanoate, IM, never SC), transdermal gel, or patch [3,7]	

Self-sourced hormones. Some patients take hormones bought online or obtained from friends, often because prescribed care is hard to reach. How common this is varies widely by setting:

Setting	Figure
US	2–8% of those taking hormones [35]
UK	At one gender clinic, 23% of new referrals were already taking hormones (32% of trans women, 6% of trans men), and 70% of them bought them online [37]
Korea	25% of those who had taken hormones had at some point bought them without a prescription (32% of transfeminine and 12% of transmasculine respondents), most often because they had no psychiatric diagnosis [36]

SOC8 notes that self-sourced hormones are, for many people, “the only means of acquiring medically necessary” treatment, and asks clinicians to take a harm-reduction approach [7]. Ask without judgement, check bloods and blood pressure, and help the patient move to prescribed, monitored treatment [7]. See also section 8.

Don’t stop hormones on your own. Stopping is itself an intervention:

- Stopping oestrogen can bring back distressing symptoms, including low mood and anxiety, within a few days [39].
- It may cause bone loss, and will after the ovaries or testes have been removed [7].
- SOC8 asks that any interruption be “as brief as possible” [7].

When to hold the problem drug, not the hormones. Holding a drug for a clinical reason isn’t stopping hormones. Don’t stop the oestradiol or testosterone by reflex: hold the drug that is the problem, and reassess as the situation changes, because acute illness, surgery, thrombosis or a new interaction can shift the balance. (*EO advice.*)

Situation	What to hold	What to keep
High potassium, AKI, dehydration or low blood pressure	Spironolactone [19]. UK sick-day guidance pauses diuretics during dehydrating illness [74]. Decide about any ACE inhibitor or ARB too (Sheet 2) (<i>EO advice</i>) ✖	Oestradiol. Alone, it may not fully suppress testosterone, so tell the prescriber [3,75]
Meningioma found	Cyproterone, permanently [9,12]	Oestradiol
Liver injury confirmed, with no other cause	Stop cyproterone [12]	Oestradiol; tell the prescriber, as suppression may be lost, and recheck LFTs (<i>EO advice</i>)
Confirmed DVT or PE	Cyproterone, which is contraindicated with existing thrombosis or embolism [12,106]	Continuing oestradiol on full anticoagulation is an option, after discussion with the patient and prescriber [41]

Situation	What to hold	What to keep
MI, stroke or TIA	Cyproterone: its warnings name MI and stroke [106]	Decide about oestradiol or testosterone early with the cardiology or stroke team and the prescriber. Treat the event by its usual protocol; don't start anticoagulation just to continue hormones. (<i>EO advice.</i>)
Haematocrit above about 54%, confirmed on repeat or with symptoms	Testosterone, until it falls; restart at a lower dose [86]	Discuss dose and formulation with the prescriber [25,86]
Pregnancy	Testosterone [7,51]	
Surgery	Usually nothing [58]	Testosterone [58]. Oestradiol: decide case by case [40,58]

Usual doses (an overview for checking a regimen, not a substitution calculator: products differ by country and strength) [3,7]:

Drug	Usual adult range
Oestradiol, oral	2–6 mg/day
Oestradiol, patch	25–200 µg/day
Oestradiol valerate or cypionate, IM or SC	5–30 mg every 2 weeks, or 2–10 mg weekly [3,7]. A 2024 scoping review found that these doses often give levels above the target range, and suggests starting at 5 mg weekly or less [126]
Spironolactone	100–300 mg/day
Cyproterone acetate	10 mg/day is current practice (SOC8) [7]. The 25–50 mg/day range (Endocrine Society 2017) predates the meningioma data: flag 25 mg/day or more to the prescriber [9,11]
GnRH analogue	e.g. 3.75 mg monthly or 11.25 mg every 3 months
Testosterone enanthate or cypionate	50–100 mg weekly (IM or SC), or 100–200 mg IM every 2 weeks
Testosterone undecanoate	EU/UK (Nebido-type): 1000 mg IM; the second dose may come at 6 weeks, then every 10–14 weeks, adjusted on the trough level [51]. US (Aveed): 750 mg IM, again at 4 weeks, then every 10 weeks, with 30 minutes' observation after each injection [114]
Testosterone gel	Depends on the product's strength. Guideline range 50–100 mg/day [3,7]; Testogel 16.2 mg/g: usual starting dose 40.5 mg/day, range 20.25–81 mg/day [73]

Doses are adjusted to hormone levels [7]. HIV drugs can change them (Sheet 2) [60].

- **Running out, or a prescriber's service closing:** bridge, don't stop. Continue the established regimen, on the same route where possible (Sheet 2, "Ran out of hormones") [7].
- **Starting or restarting in older age:** reassess cardiovascular and VTE risk, prefer transdermal oestradiol, start low and titrate [7,34].
- **Nonbinary patients** may want partial or lower-dose regimens. Some combinations of effects aren't achievable, so discuss what to expect [7,34].
- **Some testosterone effects are permanent,** even if it's stopped: a deeper voice, facial hair, male-pattern hair loss and genital growth [7].

3. Red flags (act or refer)

On oestrogen

VTE: unilateral leg swelling, chest pain, breathlessness. Oestrogen roughly doubles VTE risk compared with cisgender men and women, but the absolute risk is low [5]. In a 2026 Dutch cohort, trans women had about 2.4 VTEs per 1,000 person-years, about 1.8 times the rate in men of the general population [8]; the cohort is observational and spans regimens used since 1972 [8]. Ethinylestradiol carries the highest risk and should not be used [6,7]. Guidelines prefer transdermal oestradiol if the patient is **over 45 or has had VTE before** [7]. Smoking adds risk; advise stopping [7].

Stroke or MI symptoms: treat as for anyone. The arterial risk of modern oestradiol is uncertain. One US cohort found more ischaemic stroke in people starting oestrogen; a 2026 Dutch cohort found no excess over men [5,8]. In the Dutch cohort, MI in trans women was lower than in men and ischaemic stroke similar [8]; across cohorts, the stroke evidence is mixed [5,8,110]. Manage the usual risk factors, smoking above all. After an MI or stroke, cyproterone is held [106]; see Sheet 2.

Cyproterone and meningioma: new or worsening headache, visual change, hearing loss, seizures or limb weakness. Risk rises with cumulative dose and is highest at **25 mg/day or more** [9,10]. Use the lowest effective dose: 10 mg/day is current practice [7]. Flag 25 mg/day or more to the prescriber [9,11]. The studies are of higher doses, so the risk at 10 mg/day or less hasn't been quantified [10,11], and the excess falls after stopping [10]. Be alert to symptoms [9,12]; image the brain if new neurological symptoms appear (*EO advice*). Stop permanently if a meningioma is found [9].

Cyproterone and the liver: hepatotoxicity is dose-related and usually appears months into treatment. Check LFTs before starting, periodically, and if symptomatic [12].

Prolactin: headache, visual-field change or galactorrhoea. Mild rises are common, and larger with cyproterone. Prolactinoma is rare (see section 5) [3,14,15].

On testosterone

Haematocrit above 54%: the common guideline action point. (Thresholds vary: the 2017 guideline defines erythrocytosis as above 50% [3], and in men a haematocrit above 48% is a reason not to start testosterone [86].) The thresholds come from other populations and haven't been validated by outcome data in trans men [129]. If the patient is well, repeat the test (*EO advice*), then review dose and formulation (see section 5) [25,86]. If they have symptoms, assess the same day (Sheet 2).

Cardiovascular risk: in the 2026 Dutch cohort, MI was more common in trans men than in women [8]. Assess and manage the usual risk factors.

Bleeding that persists 6-12 months after testosterone has reached male-range levels (with LH and FSH suppressed): treat as abnormal uterine bleeding. Exclude pregnancy, check hormone levels, and image the pelvis, using transabdominal ultrasound if transvaginal is declined. Involve gynaecology [16]. Persistent bleeding can come from endometrial hyperplasia or malignancy, best evaluated with imaging and endometrial biopsy [16]. Bleeding can return after missed or late doses: do a pregnancy test (ovulation may resume) and discuss contraception [52,53]. Other unexplained new bleeding after amenorrhoea warrants the same work-up. (*EO extrapolation.*)

New pelvic or abdominal pain: if pregnancy is possible, do a pregnancy test first. Testosterone isn't contraception, and ovulation can happen without periods [7,16]. Consider ectopic pregnancy [16] and torsion. Then consider atrophic or infectious vaginitis, cervicitis, cystitis, STIs, adhesions or post-surgical causes, and musculoskeletal or pelvic-floor causes [16]. Vaginal atrophy: a short course of vaginal oestrogen may help; absorption is minimal and shouldn't interfere with testosterone [34].

Severe acne or scalp hair loss: expected effects, not emergencies. Acne usually starts within 1-6 months and peaks at 1-2 years. Scalp hair loss can start from 6-12 months in those predisposed [3]. Treat acne as usual. Finasteride may help bothersome hair loss, but may impair clitoral growth and facial or body hair [7].

On oestrogen

Spirolactone and hyperkalaemia: uncommon (about 2–2.5%) and usually mild in healthy users [17,18]. Risk is higher over 45, with renal impairment, and with ACE inhibitors, ARBs, NSAIDs, trimethoprim or potassium supplements [18,19].

On testosterone

Rising blood pressure, or sleep apnoea: hypertension is a recognised risk on testosterone [3]. Severe hypertension and sleep apnoea are relative contraindications [7]. Check blood pressure at reviews [3].

4. Screening: screen the organs present

The UK programme is used below as a worked example; each country edition replaces it with the local programme.

- **Cervix present** (trans men and nonbinary people): offer cervical screening as for cisgender women [7]. People registered as male may not be invited automatically and may need to opt in (NHS England) [20].
 - On testosterone, unsatisfactory samples are about ten times more common, and more so the longer it has been taken [16]. Screening can be uncomfortable or painful [20].
 - A smaller (paediatric) speculum helps, as long as it isn't so short that it needs excessive pressure. A small amount of water-based lubricant on the outer speculum also helps [16,20].
 - Vaginal oestrogen for about a week beforehand is listed as one anecdotal option [16].
 - Testosterone use helps the lab interpret the sample [16]. Agree with the patient whether to note it on the form: for someone registered as male, it discloses that they are trans (see the section 5 tips). Screening should never be a condition of testosterone treatment [16].
 - HPV self-sampling may suit some patients [7].
 - After vaginoplasty there is no cervix, so no cervical screening [89].
- **Breast tissue:**
 - Trans women on long-term oestrogen: screen as for cisgender women, taking hormone duration and age into account [7]. UCSF advises not starting screening before at least 5 years of feminising hormones, nor before age 50 [34]. In the UK this is ages 50–71, every 3 years. Patients registered as male are referred by their GP [20].
 - Trans men without chest surgery: screen as for cisgender women [7].
 - A new lump goes on the usual urgent pathway. Breast cancer risk on oestrogen is higher than in men, lower than in women [91]. If the sex marker blocks a referral or test, override it or escalate [71].
 - After chest masculinisation: after reduction only, screen as for cisgender women. After mastectomy, no screening approach is validated [34]. A new lump still needs investigating: mammography may not be feasible, so ultrasound or MRI may be needed [34]. This is for investigating a lump, not for screening.
- **Prostate:** always retained after vaginoplasty. It can be examined via the neovagina, where it lies on the anterior wall [7]. Screen according to individual risk [3]. PSA is markedly suppressed on oestrogen, so a “normal” PSA doesn't reassure (see section 5) [21,22].
- **Bone density:** hormone therapy itself isn't an indication for DXA [7]. Consider DXA:
 - after gonadectomy, especially with gaps in hormones or after stopping them [3,7];
 - in long-term low sex-hormone states [7];
 - with the usual risk factors.

For low-risk trans women on hormones, the Endocrine Society suggests screening from age 60 [3].

- For DXA Z-scores, use the reference database for the person's gender identity (for nonbinary people, sex recorded at birth). For FRAX, there's no evidence on which sex to enter, so state which one you used [90].

- **Sexual health:** test for STIs at every site used for sex. After vaginoplasty there's a prostate but no cervix [89]. The neovagina and neovulva can still be infected, for example with gonorrhoea, chlamydia or herpes, and a urine test may be more useful than a neovaginal swab for gonorrhoea and chlamydia [127]. For PrEP, see section 8.
- **Cardiovascular:** check blood pressure, lipids, glucose and HbA1c, weight and smoking, as for anyone [3,7].
 - No risk calculator is validated for people on hormones. Use the sex assigned at birth, the affirmed gender or an average of the two, depending on age at starting and duration, and consider running both [7,34].
 - SOC8 suggests the affirmed gender is likely most appropriate if hormones started around puberty [7].

5. Reading the bloods

The rule of thumb: after about 12 months on stable hormones, many results behave like those of the patient's *affirmed* gender. Some don't. The lab report usually flags against the legal sex on file, so the flag can be wrong in either direction. (*"Stable" in the reference-interval studies means at least 12 months on hormones [23,24].*)

Test	Which range to use (stable therapy, at least 12 months)	Notes
Haemoglobin, haematocrit, red cells	Affirmed gender: female range on oestrogen, male range on testosterone	Values were "not clinically different" from cisgender ranges [23]. ADLM says they align by about 6 months on testosterone [59]. Monitoring: every 3 months in the first year, then once or twice a year [3,7].

Test	Which range to use (stable therapy, at least 12 months)	Notes
Haematocrit on testosterone	Male range. Above 54% is the level guidelines treat as needing action [86,129]; the 2017 guideline defines erythrocytosis as above 50% [3]	<p>Expect a rise: typically about 3–7 percentage points over the first year, steepest in the first 3 months [128]. Most people stay below the thresholds, but some cross them: in a cohort of 1,073 trans men, 0.5% exceeded 54% on two measurements (2.2% once) [25].</p> <p>What the number is: the thresholds are drawn from other populations; no trials have tested outcomes of acting on them in trans men [129], and the risk at different cut-offs is still to be studied [128]. An unvalidated threshold isn't a wrong one, so keep monitoring and act on it, but explain it honestly to patients. <i>(EO advice for the last sentence.)</i></p> <p>In a well patient, repeat an isolated high value before acting, just before the next injection (trough) and with the patient well hydrated. <i>(EO advice.)</i> A patient with symptoms needs same-day assessment (Sheet 2). The factors linked to erythrocytosis are smoking, long-acting undecanoate injections, higher BMI and lung conditions; switching to transdermal testosterone is one option [25].</p>
Creatinine	Not simply the affirmed range. In cross-sectional data, creatinine sat in the cisgender male range in both cohorts, with no shift towards the female range on oestrogen [24]	One review recommends affirmed-gender ranges for creatinine after 3 months on hormones [26]. The sources disagree, which is a further reason not to rely on creatinine-based eGFR for decisions.
eGFR (decisions)	Calculate it with both the male and the female setting and use the range [59,62]. If it's below 60, consider additional markers of kidney function: cystatin C (or a combined creatinine–cystatin C eGFR) and, where dosing depends on it, a measured GFR, to clarify filtration; urine ACR assesses kidney damage, not filtration [59,62]	No consensus exists on which sex to use [59]. Cystatin C also shifts with hormones, inflammation, steroids and thyroid disease [62]. After 12 months on oestradiol plus cyproterone acetate, cystatin C eGFR rose by about 7 mL/min/1.73m ² , and on testosterone it fell by about 6; these are point estimates [27]. In acute illness or AKI, see Sheet 2 [61,62].
ALP, ALT, AST, GGT	Generally shift towards the affirmed gender	Cross-sectional data [24].

Test	Which range to use (stable therapy, at least 12 months)	Notes
HDL cholesterol	Lower on testosterone than in cisgender women, often below the female target (≥ 50 mg/dL) but above the male one (≥ 40 mg/dL)	Interpret cardiovascular risk accordingly [24]. Triglycerides may rise. The effects are small [34]; manage with standard cardiovascular risk assessment [3].
HbA1c, electrolytes, urea, hsCRP	Little change; use standard ranges	In reference-interval data, spironolactone slightly shifted sodium but not potassium [24]. That isn't reassurance about hyperkalaemia risk (section 3).
PSA	Very low on oestrogen. The usual 4 ng/mL cut-off is "likely far too high" [21]	In 210 trans women over 40 on oestrogen: median 0.02 ng/mL, 95th percentile 0.6 ng/mL, undetectable in 36% [21]. No validated cut-off exists. Finasteride and dutasteride roughly halve PSA again: use a baseline taken on treatment and look for a confirmed rise from the lowest value [108] (<i>EO review</i>). The 0.6 ng/mL figure is a cohort percentile, not a reference interval or a referral trigger [22], and a 'normal' result under 4 doesn't reassure. Discuss a confirmed rise, or an unexpectedly high value, with urology, taking account of age, prostate history, 5 α -reductase inhibitors and the patient's wishes. (<i>EO advice.</i>)
Oestradiol	Guideline convention: 100–200 pg/mL (about 367–734 pmol/L), with testosterone below 50 ng/dL (about 1.7 nmol/L) [3,7]	The Endocrine Society says oestradiol "should not exceed" this range [3]. A 2025 systematic review of 49 studies found no evidence that it improves outcomes [28]. Treat it as a guide, with testosterone suppression and clinical progress as the more meaningful markers [28]. Oestradiol assays don't measure ethinylestradiol or conjugated oestrogens: a low result on these doesn't mean low exposure, so never raise the dose on it [34]. On injections, record the ester and the days since the last injection: levels peak about 2 days after valerate, and most studies report trough levels, taken just before the next dose [126]. Read a level against its timing, and discuss a high trough with the prescriber. (<i>EO advice for the last sentence.</i>)

Test	Which range to use (stable therapy, at least 12 months)	Notes
SHBG	Not routinely needed	Oral oestradiol raises SHBG: about 45% higher than transdermal at 3 months [30]. A high SHBG alone doesn't mean treatment is failing [29,31] (<i>EO review</i>). If testosterone isn't suppressed despite apparently adequate oestradiol, calculated free or bioavailable testosterone (from SHBG and albumin) can help [29,31]. Free oestradiol has no established clinical role [29]. (<i>EO review</i> .)
Testosterone (trans men)	Male range: target 400-700 ng/dL (about 14-24 nmol/L) [3,7]	Injectable enanthate or cypionate: measure midway between injections. Undecanoate: measure just before the next injection; if below 400 ng/dL, adjust the interval. Gel: measure after at least 1 week of daily use, at least 2 hours after application [3,7].
Testosterone (trans women)	Below 50 ng/dL (about 1.7 nmol/L) [3,7]	If it isn't suppressed, check adherence, the oestradiol level and whether an anti-androgen is needed.
LH, FSH	Trans-specific intervals needed; cisgender ranges don't apply [32,33]	In trans women, spironolactone lowers LH, FSH and progesterone and raises AMH [32]. In trans men, these are best interpreted by a specialist [33].
Prolactin	Trans men: cisgender female range, though this depends on the assay [33]. Trans women: mild rises are common, and larger with cyproterone [14,15]	In one cohort, prolactin rose on cyproterone and fell after it was stopped [14]. Prolactinoma is rare [15]. Routine monitoring is contested: the Endocrine Society suggests periodic checks [3]; SOC8 makes no recommendation [7]. Investigate persistent or marked rises, or symptoms. Repeat a mild rise on a sample taken without venepuncture stress [99]. Antipsychotics, especially risperidone, commonly raise prolactin [99]. Above about 250 µg/L (about 5,300 mIU/L; 1 µg/L ≈ 21.2 mIU/L) raises concern for a prolactinoma but isn't diagnostic: check medicines and, where appropriate, macroprolactin [99]. With headache or visual symptoms, arrange MRI and formal visual fields [14,99], and refer to endocrinology. A mild rise alone doesn't need MRI. (<i>Referral and last point: EO advice.</i>)

Test	Which range to use (stable therapy, at least 12 months)	Notes
Troponin	Serial measurements. If your lab uses sex-specific cut-offs, the affirmed-gender cut-off is provisionally recommended [59]	In one cohort, affirmed-gender thresholds didn't significantly reclassify patients [70]. Data are limited [26].

Practical tips

- **Take blood away from gel sites** (use the other arm, or another site if gel goes on both). Gel on the skin can falsely raise testosterone or oestradiol. If a result looks implausibly high, check LH and FSH [59].
- **After gonadectomy**, raised LH and FSH with low sex steroids suggest under-replacement [34].
- **If a system blocks a test because of the sex marker**, ask the laboratory to override it, and don't drop the test [59,71].
- **Interpret the result yourself.** The lab flags against the sex on file. Read the result against the ranges in this table rather than relying on the flag.
- **Agree with the patient what goes on the request form.** Forms and results are seen by many people. In some jurisdictions, disclosing that a patient is trans carries legal or safety risk. If lab input would help, give the clinical fact, not the identity: for example, "on oestradiol 4 mg/day since 2023". Never withhold what the laboratory needs for a safe result. Where disclosure risk is real, agree the minimum with the patient, and record your own interpretation of the result in the notes. (*EO advice.*)
- Before acting on an "abnormal" flag, ask whether it's actually expected on hormones.
- Before 12 months, or during interruptions, values sit somewhere in between, so interpret with care.

6. Emergencies and inpatients

See **Sheet 2 · In the ED / on the ward.**

7. Mental health

- **Higher rates, and why.** Depression and anxiety are more common in trans people than in the general population [7,46]. Being trans is not a mental illness. SOC8 links the higher rates to stigma, discrimination, violence and trauma, often called "minority stress" [7,46,47]. Most of this evidence comes from cross-sectional surveys, so it shows association, not proven cause [46,47]. Social support is linked to better mental health [7].
- **Not a condition to treat away.** Attempts to change someone's gender identity ("conversion practices") don't work. They are linked to depression, suicidal thoughts and suicide attempts [7].
 - SOC8 says they should not be offered [7].
 - The UN Independent Expert on SOGI calls them "by their very nature degrading, inhuman and cruel". He found that they cause "profound psychological and physical damage" and has recommended that States ban them (§83, §86, §87(a)) [48].
 - As of May 2025, 15 countries banned them nationwide by law, and 14 more did so indirectly through executive circulars and directives [49].
 - *Each edition's local reviewer should check the position in their country.*
- **Support, not gatekeeping.** Offer or refer to mental health support that respects the person's gender. Don't make therapy a condition of routine or gender-affirming care [7]. Depression or anxiety isn't a reason to delay treatment, unless it affects the person's capacity to consent [7].

If they're admitted for mental health reasons, continue their hormones unless there's a medical reason not to, and use their name and pronouns on the ward [7].

- **Ask directly** about thoughts of suicide, plans and means. Don't use risk scales to predict suicide [96].
- **Abuse can target identity:** threats to out someone, misgendering, and denying their identity [93,101]. Ask when the patient is alone [96]. Controlling how someone presents is a recognised tactic [105]; controlling or hiding their hormones is one form of it. (*EO advice.*) Refer to specialist LGBT+ domestic abuse services where available (in the UK, for example, Galop). Standard safety plans may not fit, and sharing information can out the person [105]. Confidentiality is subject to local safeguarding and mandatory reporting law; assess immediate danger. (*EO advice.*)
- **If capacity is lost** (for example dementia), keep using the person's established name and pronouns [7]. Decisions about hormones follow local capacity and best-interests law, any advance decision and the person's known wishes; a relative's preference isn't authority on its own. Involve the original prescriber where possible. (*EO advice.*)

8. Pharmacists

Interactions to check

Drug	Interaction
Enzyme inducers (carbamazepine, phenytoin, primidone, barbiturates, rifampicin, rifabutin, nevirapine, efavirenz; possibly also St John's wort)	May reduce the effect of oestradiol. Induction can persist for about 4 weeks after stopping [50]. They also reduce hormonal contraception: see section 9 [104].
Strong or moderate CYP3A4 inhibitors (azole antifungals, macrolides, verapamil, diltiazem, grapefruit juice; for HIV boosters, see the next row)	Can raise oestradiol levels [50].
HIV antiretrovirals	Not a contraindication to hormones [7]. Unboosted integrase inhibitors (dolutegravir, bictegravir, raltegravir) don't interact; cobicistat-boosted elvitegravir does. Cabotegravir has no predicted effect on hormones, but high-dose testosterone with exercise training may lower long-acting cabotegravir and rilpivirine levels by the end of the dosing interval; consider drug-level or closer viral-load monitoring [60]. Oestradiol: ritonavir-boosted PIs, efavirenz, etravirine and nevirapine are predicted to lower it; cobicistat-boosted regimens, unboosted atazanavir and fostemsavir to raise it. Cyproterone and testosterone: all boosted regimens and unboosted atazanavir raise them (lenacapavir raises cyproterone only); efavirenz, etravirine and nevirapine lower them [60]. Where cyproterone levels may rise, review with the prescriber or pharmacist. Don't copy the chart's absolute cyproterone doses: they start at 25 mg/day, above the 10 mg/day used in current practice (section 2), so never increase an established low dose to match them. (<i>EO advice.</i>) Check every regimen on the Liverpool HIV interaction checker (hiv-druginteractions.org), and check levels if in doubt [7,60].

Drug**HIV PrEP****Interaction**

Daily PrEP works for trans women who take it [88]. Hormones modestly lower PrEP drug levels (by about 12–32% in small studies), and PrEP didn't lower oestradiol levels in those studies [66,87]. Tell patients that PrEP doesn't affect their hormones [112]; worry about an interaction can affect adherence. (*EO advice for the last point.*) Use daily, not event-driven, PrEP with oestradiol [81,87]. **Receptive vaginal or front-hole sex** (including trans men): daily TDF/FTC. Advice on time to protection differs: WHO says to start 7 days before exposure [81]; CDC notes that time to maximal protection is unknown, but pharmacokinetic data suggest daily TDF/FTC reaches maximum levels in cervicovaginal tissue after about 20 days (about 7 days in rectal tissue) [112]. Neovaginal tissue hasn't been studied. Event-driven dosing isn't for them, and TAF isn't recommended for vaginal exposure [7,81]. Injectable cabotegravir is the alternative [112]. **Before starting, confirm HIV-negative status:** a negative laboratory antigen/antibody test within the past week and no symptoms of acute HIV (add an HIV RNA test after a recent exposure). Repeat testing (antigen/antibody plus RNA) at least every 3 months on oral PrEP, and at 1 month and then every 2 months on injectable cabotegravir [112]. **Oral tenofovir PrEP:** check renal eligibility with the measure the drug requires. CDC uses Cockcroft–Gault creatinine clearance: ≥ 60 mL/min for TDF/FTC, ≥ 30 mL/min for TAF/FTC [112] (*US example*). eGFR isn't interchangeable with it. Cockcroft–Gault uses sex, so calculate it both ways and involve a pharmacist when the result decides eligibility [63]. (*EO advice for the last point.*) CDC doesn't require creatinine testing for injectable cabotegravir [112]. **Hepatitis B:** screen before oral tenofovir PrEP, but don't delay starting while waiting for the result; vaccinate people who aren't immune. Hepatitis B doesn't rule out PrEP, but stopping tenofovir can cause a hepatitis flare, so prescribe and stop it with a clinician experienced in hepatitis B [112]. Injectable cabotegravir: no expected interaction with oestradiol [60]. The chart's high-dose testosterone caution is for long-acting cabotegravir plus rilpivirine as HIV treatment; its relevance to cabotegravir-only PrEP isn't established, so check the interaction checker. (*EO advice.*) **Injectable lenacapavir** (every 6 months) is now recommended by WHO [119] and CDC (a strong recommendation, for people weighing at least 35 kg) [118]. Do a laboratory HIV antigen/antibody test on the day of each injection (or within the previous 7 days), plus an HIV RNA test at the start if available; don't delay the first injection for the RNA result [118]. Starting isn't injection-only: day 1 is a 927 mg injection plus 600 mg by mouth, and day 2 is 600 mg by mouth [123]. If HIV RNA testing wasn't available at the start, repeat a laboratory antigen/antibody test at 4 weeks [118]. Missed doses and protection after stopping need HIV-specialist advice. (*EO advice.*) No dose change is expected for oestradiol or testosterone [119]. Lenacapavir is predicted to raise cyproterone levels [60]: review with

Drug	Interaction
	the prescriber or pharmacist, and don't raise an established low dose. (<i>EO advice.</i>) Moderate and strong CYP3A4 inducers (such as rifampicin, rifabutin, carbamazepine, phenytoin and phenobarbital) can substantially reduce lenacapavir levels and need supplemental lenacapavir doses [118,119]. The label's supplemental doses apply only when an inducer is started in someone already on lenacapavir (a strong inducer no sooner than 2 days after the first dose); it gives no dosing for starting lenacapavir in someone already taking a moderate or strong inducer [123]. In that case, seek HIV pharmacist or specialist advice rather than improvising a dose. (<i>EO advice.</i>) Because lenacapavir inhibits CYP3A4, it can raise levels of some other drugs for up to 9 months after the last injection, so dose adjustment and monitoring may be needed [118,119,123].
Lamotrigine	Oestrogen-containing contraceptives lower lamotrigine levels and may reduce seizure control. The oestradiol SmPC says the effect hasn't been studied but is expected [50]. In one drug-monitoring study (79 women on mostly oral, menopausal-dose oestradiol or estriol), lamotrigine concentration-to-dose ratios were significantly lower than in matched controls, by about a sixth; ethinylestradiol lowered them by about a third [117]. (<i>Percentages are EO calculations.</i>) Feminising doses and transdermal or injectable routes haven't been studied [107]. Stopping oestrogen can raise lamotrigine levels (shown with contraceptive pills): watch for toxicity and consider a level [72]. Take a baseline level, and recheck after starting, changing or stopping oestradiol [72]. Starting lamotrigine in someone already on oestrogen: follow the normal dose escalation; don't speed it up [72].
Levothyroxine	Oral oestrogen raises thyroid-binding globulin. People on thyroxine may need a higher dose: recheck TFTs after starting or changing oestrogen [50,54].
Testosterone	Increases the effect of warfarin and other coumarin anticoagulants: monitor INR closely, especially when testosterone starts or stops [51,73]. Can lower insulin or anti-diabetic requirements. With SGLT-2 inhibitors, the risk of erythrocytosis is higher: monitor haematocrit and haemoglobin [51].
Testosterone gel	Wash hands after applying, and cover the dry site with clothing. Wait at least 1 hour before showering. Wash the site before skin contact with others. Keep children and pregnant people away from the site; transfer can virilise others. Not on the genitals [73].
Spironolactone	Severe hyperkalaemia can occur with ACE inhibitors, ARBs, NSAIDs, heparins, other potassium-sparing diuretics, potassium supplements or salt substitutes, and with co-trimoxazole. It also reduces lithium clearance [19].

Injections

- Testosterone enanthate and cypionate can be given subcutaneously or intramuscularly [3,7]. Injectable undecanoate is intramuscular only, never subcutaneous (an oral undecanoate also exists); follow the exact product's protocol. **Nebido** (EU/UK): inject very slowly, over two minutes, and observe the patient during and immediately after each injection for pulmonary oil microembolism [51]. **Aveed** (US): inject over 60–90 seconds, then observe in the healthcare setting for 30 minutes after every injection; it is supplied only through a restricted programme (REMS) [114].
- Teach technique and give sharps disposal advice.
- Never share needles. Sterile equipment protects against blood-borne infection [7].

Self-sourced products. The dose and content may be unknown, and injectables may not be sterile [7]. For injected oestradiol, ask which ester, the dose, how often, and the date of the last injection. (*EO advice.*) Contraceptive pills used as hormones contain ethinylestradiol, which carries the highest clot risk [7]. Don't refuse care. Take a non-judgemental history and help the patient towards prescribed, monitored treatment [7].

9. Fertility and contraception

- **Testosterone is not contraception.** Pregnancy can happen on testosterone, even when periods have stopped, and after long-term use [7,52,53]. Testosterone may harm a developing fetus, so it should be stopped before trying to conceive and throughout pregnancy [7,52].
- **Contraception for people on testosterone.** All current methods can be considered, subject to the usual medical contraindications [53]. Progestogen-only methods and IUDs (copper or hormonal) are often preferred, and progestogens can also stop bleeding. Oestrogen-containing methods aren't ruled out, but are usually avoided unless there's a clear reason [53]. Progestogen-only methods aren't thought to interfere with masculinisation [52], though data are limited [53]; the copper IUD contains no hormones [53].
- **Emergency contraception on testosterone:** levonorgestrel, ulipristal or a copper IUD (the most effective). It's unlikely to interfere with testosterone [53].
- **Enzyme inducers** (see section 8; they include efavirenz and nevirapine) reduce the effect of combined methods, all progestogen-only pills and the implant, during use and for 28 days after stopping. Use a copper IUD, LNG-IUS or injectable instead [104]. **Emergency contraception with an enzyme inducer:** copper IUD first (it can be fitted up to 5 days after unprotected sex [113]), and anyone referred on for a copper IUD should be given oral emergency contraception at the time of referral in case it can't be fitted [113]; if an IUD isn't possible, levonorgestrel 3 mg (a double dose, off-licence, as is any levonorgestrel use after 72 hours [113]) within 96 hours, explaining that its effectiveness in this situation is unknown [104,113]. FSRH's interaction guidance allows a single standard dose of ulipristal, with advice that effectiveness is unknown [104], but its emergency contraception guideline says ulipristal isn't recommended in this situation [113]: prefer the copper IUD or levonorgestrel. Never double the ulipristal [104]. For other HIV drugs, including boosted regimens, use the Liverpool checker before choosing contraception [60,104]. An inducer affects only the person taking it, not their partner's contraception. (*EO advice.*)
- **Feminising hormones are not contraception either.** They reduce sperm production but don't reliably stop it. If pregnancy is possible, use condoms or another method [7].
- **Fertility preservation.** Discuss fertility before starting hormones, and refer for egg or sperm storage if wanted [3,7]. Fertility often returns after stopping hormones, but this can't be guaranteed: long-term data are limited [3,7]. Sperm production can return after stopping hormones, sometimes only after many months, and quality is often reduced (9 cases) [92]. Storage before starting remains advised [7,92].

10. Words that help, words that hurt

Ask which terms the person prefers, including for their body [7]. The pairs below come from a US media style guide [55,56]. Each edition's local reviewer will check the equivalents in their own language.

Prefer	Avoid
Trans woman, trans man, nonbinary person ("transgender" as an adjective)	"Transgendered", "a transgender", "transgenders" [55]
"She is a trans woman"	"Identifies as a woman"; "male-to-female" [55]
Assigned male or female at birth, used only when there's a clear reason to mention it	"Born a man", "biologically male" or "biologically female" [55]
Pronouns ("What pronouns do you use?")	"Preferred pronouns" [55]
Transition; gender-affirming care [7,55]	"Sex change", "pre-op", "post-op" [55]
Their name	Their birth name. Don't disclose it without permission [56]; record it only where it's needed for identity matching

11. Where to get help

- Local gender services and referral routes (*a country-specific panel for each edition*).
- Community organisations (*country-specific*).
- The Eden Openly evidence reviews: ER-005 (feminising hormone therapy), ER-008 (hormone monitoring and target ranges), ER-023 (erythrocytosis), and the companion Evidence Notes.
- Ask a Colleague: the clinician-to-clinician consult network (*link once live*).

Sheet 2 · In the ED / on the ward

For emergency doctors, ward nurses, anaesthetists and hospital pharmacists. Find the presentation, act on the first lines, and use the clinic sheet for background. Numbers in [] refer to the shared source register.

Before anything else

1. **Name and pronouns.** Ask what the patient uses and use them throughout [7,58]. The wristband and labels may carry the legal name, so link it to the name used [59,71], and confirm identity by your local positive-identification policy (for example date of birth and hospital number), including at handover. (*EO advice.*)
2. **Ask which organs and surgeries are present.** Pregnancy testing, catheterisation, screening, transfusion and reference ranges all depend on it [7].
3. **What you write travels.** Agree with the patient how forms, referrals and reports are worded, and record the minimum necessary: the clinical fact (the hormone and dose, the organs present) rather than the identity, when that is enough. This can't override essential clinical documentation, safeguarding or legally required reports. (*EO advice; see Sheet 1, section 1.*)
4. **Pregnancy test whenever pregnancy is possible** (a uterus and ovaries, and a possible exposure), whatever the sex on file and even on testosterone or without periods. Offer it before surgery (see Surgery), before imaging or drugs that could harm a pregnancy, and in abdominal or pelvic pain [7,16,58]. Never delay resuscitation or life-saving treatment for it. A bedside urine test avoids system blocks. Systems that use legal sex can block these orders [59,71]: ask the laboratory to override, and don't drop the test. (*EO advice.*)
5. **Don't stop hormones by reflex.** Hold the drug that is the problem, and reassess if the situation changes (*EO advice*). See "When to hold the problem drug" in Sheet 1, section 2. Ask

about self-sourced hormones too.

6. **Tools that assume one of two sexes.** Many scores and cut-offs do. See the table at the end of this sheet.
7. **Blood transfusion.** Compatibility is set by ABO, RhD and antibody testing, as for anyone. The blood bank also needs the sex assigned at birth, or whether the patient could become pregnant, to choose RhD status [59]. As for anyone who could become pregnant, an RhD-negative patient with a uterus should get RhD-negative red cells, including in emergencies [59]. Trans women can receive RhD-positive blood if needed [59]. Tell the transfusion service on a need-to-know basis, explaining why: this is sharing for direct care [58,98]. Never delay an emergency transfusion for this: follow the local emergency protocol. K-negative red cells and anti-D follow local policy for anyone who could become pregnant. (*EO advice.*)
8. **VTE:** assess every admission as soon as possible [97]. Count oestrogen as a risk factor [50]; it isn't a reason to withhold prophylaxis [97].

By presentation

CHEST PAIN OR SUSPECTED MI

- Treat as for any patient.
- **Troponin:** use serial measurements. If your lab reports sex-specific cut-offs, ADLM provisionally recommends the one for the affirmed gender [59]. In one cohort, affirmed-gender thresholds didn't significantly reclassify patients [70]. Data are limited [26]; interpret a borderline result against the trend, the ECG and the clinical picture [26].
- **ECG:** new ST elevation at the J-point in at least two contiguous leads, without LV hypertrophy or LBBB, suggests acute coronary occlusion. The V2-V3 thresholds differ by sex and age, and the lowest is ≥ 1.5 mm [116,121]. Using ≥ 1.5 mm in V2-V3 for everyone is a conservative choice for escalation, not a validated trans-specific rule. Where fibrinolysis rather than PCI is the reperfusion route, confirm with cardiology before treating on this threshold alone. (*EO advice.*) An ECG below threshold doesn't rule out an occlusion MI: use serial ECGs, troponin and the clinical picture.
- **PE on the differential:** oral hormone use is a PERC criterion, so PERC can't rule out PE in someone taking oestrogen [68]. Don't use PERC for anyone on oestrogen, by any route. (*EO advice.*) Go to Wells and D-dimer or imaging.
- **If MI is confirmed:** hold cyproterone [106]. Don't stop oestradiol or testosterone by reflex: decide early with the cardiology team and the prescriber, considering the hormone, its route and dose. (*EO advice.*)

STROKE OR TIA

- Treat on the usual stroke pathway. Hormone therapy isn't listed among the conditions that weigh against IV thrombolysis in current US guidance [124], nor in its 2019 predecessor [103].
- **Hold cyproterone** [106]. Decide about oestradiol early with the stroke team and the prescriber (route, dose, cause of the stroke, bleeding risk); don't stop it by reflex or continue it unreviewed. (*EO advice.*)
- Consider cerebral venous sinus thrombosis (see Headache) [67].

SUSPECTED OR CONFIRMED DVT OR PE

- **Suspected DVT or PE:** assess on the usual clinical-probability pathway (Wells score, then imaging or D-dimer), giving interim therapeutic anticoagulation if results will be delayed, as your local protocol directs [125]. **Confirmed:** anticoagulate as standard [125]. Hormones aren't a reason to delay any of these steps. (*EO advice for the last point.*)
- **Confirmed VTE and hormones:** oestradiol is a joint decision with the patient and prescriber. Continuing it on full-dose anticoagulation is a recognised option, and if oestrogen continues,

anticoagulation shouldn't be stopped [41,110]. SOC8 notes acute VTE as a rare reason to suspend hormones [7]. Review route, dose and adherence before deciding; SOC8 suggests transdermal oestradiol after a VTE [7]. (*EO advice for the order of steps.*)

- **Cyproterone:** hold it. It is contraindicated with existing thrombosis or embolism [12,106].
- Check for self-sourced ethinylestradiol or contraceptive pills [7].
- **On testosterone:** check haematocrit.

HEADACHE, VISUAL CHANGE OR SEIZURE ON HORMONES

- **First:** assess airway, breathing, circulation and consciousness, and look for red flags. Don't let fundoscopy or visual-field testing delay imaging or referral for stroke, seizure, thunderclap headache or raised pressure; check fundi and fields when feasible. (*EO advice.*) Sudden focal signs: see Stroke or TIA.
- **Cerebral venous sinus thrombosis:** gender-affirming hormones, oestrogen or testosterone, are listed risk factors [67]. With red flags, image the brain urgently by the usual pathway: a sudden severe (thunderclap) headache needs immediate non-contrast CT for haemorrhage; add CT or MR venography if sinus thrombosis is possible; MRI is preferred for suspected meningioma. (*EO advice for the imaging order.*)
- **Meningioma** (cyproterone, especially long-term use or 25 mg/day or more) [9,10]: new focal neurology, seizures or visual disturbance need urgent standard assessment and imaging, usually MRI. There's no routine screening MRI for people without symptoms. (*EO advice.*) If a meningioma is found, stop cyproterone permanently [9,12]; discuss oestradiol with the neurosurgical team and the prescriber, and tell them about the cyproterone. (*EO advice.*) 25 mg/day or more marks higher observed risk, not a level below which risk is absent: flag it to the prescriber [9,11,109]. Some meningiomas regress after stopping [11].
- **Pituitary:** check prolactin. A prolactinoma is rare [15]. With visual symptoms or a markedly raised prolactin, arrange MRI and formal visual fields (Sheet 1, section 5) [14,99].
- **Testosterone:** check haematocrit (see below).
- **Lamotrigine:** oestradiol is expected to lower its levels, and limited data support this [50,117]. Check a level and discuss the dose with neurology [72].

ABDOMINAL OR PELVIC PAIN, IF THE PERSON HAS A UTERUS OR OVARIES

- **Unstable** (shock, peritonism): resuscitate and call emergency gynaecology or surgery at once. If pregnancy is possible, treat as a ruptured ectopic until proven otherwise, but consider other bleeding and torsion. Don't wait for a pregnancy test. (*EO advice.*) With high suspicion, a negative urine test doesn't exclude pregnancy: send serum hCG. (*EO advice.*) In acute bleeding, follow the haemoglobin trend and the physiology; on testosterone the normal range is the male one [23].
- **Pregnancy test first.** Testosterone doesn't reliably prevent pregnancy, and ovulation can occur without periods [7,16].
- Consider ectopic pregnancy [16] and the usual surgical causes, including ovarian torsion. Ovaries kept after hysterectomy can still develop disease [7].
- Then consider: atrophic or infectious vaginitis, cervicitis, cystitis, STIs, adhesions or post-surgical causes, and musculoskeletal or pelvic-floor causes [16].
- If the test is positive with pain or bleeding, it is an ectopic pregnancy until proven otherwise: same-day gynaecology assessment. (*EO advice.*) Stop testosterone and refer [7,51].
- Offer a choice of ward or a side room. (*EO advice.*)

VAGINAL BLEEDING ON TESTOSTERONE

- With heavy bleeding or instability: resuscitate, hold anticoagulants and reverse them per the local major-haemorrhage protocol, and see "Before anything else" for transfusion. (*EO advice.*)

- Check observations and haemoglobin (male range on testosterone) [23]. Exclude pregnancy, check hormone levels, image the pelvis (transabdominal if transvaginal is declined), and involve gynaecology [16]. Ask about missed doses, changes in interval or formulation, and new medicines. (*EO advice.*)
- Differential: missed or late doses, pregnancy, coagulopathy or anticoagulants, and structural causes; involve gynaecology [34,73].

ACUTE SCROTAL PAIN (TESTES PRESENT)

- Suspect torsion. Admit as an emergency to urology for exploration; don't wait for imaging. Repair is ideally within 6 hours [34,100].
- Torsion can still happen on feminising hormones. (*EO advice.*)

AFTER VAGINOPLASTY

Presentation	Action
Can't pass urine	Confirm retention with a bladder scan; decompression is urgent [43]. Involve the operating team or urology early [57]. The urethral meatus usually sits where it would in a cisgender woman, but healing can place it anywhere from just below the clitoris to inside the vaginal canal [57]. Catheterisation should be by an experienced clinician: a temporary catheter is the usual first step [57], and a small catheter or coude tip may help [44]. Confirm urine flows before inflating the balloon, and never inflate it in the neovagina; send urine for culture. (<i>EO advice.</i>) Don't make repeated or blind attempts: if it's difficult, urology places a urethral or suprapubic catheter [44,57]. No urology on site: escalate or transfer, without letting it delay decompression. (<i>EO advice.</i>)
Bleeding	Resuscitate if unstable; check observations, haemoglobin, clotting and any anticoagulant. (<i>EO advice.</i>) Some bleeding is expected early on; soaking through pads or a large haematoma needs action [57]. Bleeding often comes from the urethral edge: apply direct pressure [57]. Further steps (packing the canal and re-examining at 48-72 h; silver nitrate, cautery or suture) are surgeon-led or surgeon-directed [57]. Late heavy bleeding suggests hypergranulation or a tear and needs surgical examination [57].
Discharge or spotting, still able to dilate	Often hypergranulation tissue, treated with silver nitrate [57]. Non-urgent. Refer to the surgical team.
Can't insert the dilator at all	Contact the operating team the same day. (<i>EO advice: no source gives a deadline.</i>) There is no role for urgent re-canalisation in the ED [57]. Never force it: dilation injury can cause a rectovaginal fistula [43]. With analgesia and lubricant, the patient may try a thinner dilator and work back up [57]. If still unable, the canal may be packed until the surgeon reviews, under surgical direction [57]. Never advise stopping dilation [57].

Presentation	Action
Stool or gas from the vagina	Rectovaginal fistula. Usually stable at presentation [57], but refer urgently to the operating surgeon or colorectal surgery, and assess for sepsis or peritonitis. (<i>EO advice.</i>) Imaging (CT with rectal contrast or MRI) and initial management, which may include faecal diversion, are specialist-led; dilation usually continues, as the surgeon directs [57].
Urine leaking into the vagina, or new incontinence	Possible urethrovaginal fistula (up to 4% of patients). Refer to urology for cystoscopy; early cases may be managed with a catheter [57].
Fever, pain, swelling	Treat infection with antibiotics, and consider drainage [57]. Krakowsky classes a UTI as complicated because the prostate is still there, which affects antibiotic choice and duration; follow your local antibiogram [57].
Prolapse	Make sure the urethral opening isn't obstructed. Contact the surgical team [57].

Refer back to the operating surgeon, or to a local reconstructive urologist if surgery was abroad [57]. Keep the dilation schedule during any admission, unless the surgical team says otherwise [57].

AFTER PHALLOPLASTY OR METOIDIOPLASTY

- **Retention:** bladder scan, then urology [43,57]. Non-urologists shouldn't attempt blind urethral catheterisation [43,44]. If the bladder needs decompressing, a suprapubic catheter is placed by an experienced clinician [44,57].
- The vaginoplasty catheter advice (coudé tip) doesn't apply. (*EO advice.*) If a suprapubic catheter is in place or was recently removed, check, flush or re-site it through that tract first; otherwise a suprapubic catheter by an experienced clinician, ideally ultrasound-guided. Decompression shouldn't wait for a transfer: if transfer would delay it, the most experienced clinician available places a suprapubic catheter under ultrasound, with phone advice from urology; if urology isn't on site, escalate or transfer. (*EO advice.*)
- **Weak stream, dribbling, straining, recurrent UTI, or leaking from a new opening** suggest a stricture or fistula: refer before retention develops [57].
- **Strictures** usually form at a join in the new urethra, most often between its fixed part and the part within the phallus, typically 6–36 months after surgery [44,57].
- Ask which stage of surgery they're at and where they pass urine from. (*EO advice.*)
- **Erectile implant** that is red, hot or exposed: urology the same day (*EO advice*). Infection can occur at any time, and treatment is usually removal [57].

AFTER CHEST MASCULINISATION SURGERY

- Early, one-sided, tense swelling and pain, sometimes with bruising, is a haematoma until proven otherwise. Most need evacuation, so get urgent surgical review [34].

AIRWAY AND ANAESTHESIA AFTER FACIAL OR VOICE SURGERY

- Airway assessment is unreliable after facial or neck procedures. Jaw reduction can crowd the oropharynx, chin implants make thyromental distance unreliable, and a tracheal shave makes front-of-neck landmarks harder to find [58].
- **After cricothyroid approximation** (a voice-raising operation), there may be no cricothyroid membrane, so standard emergency front-of-neck access may not be possible. Plan an alternative in advance [58].

- **Within 8–12 weeks of voice surgery**, avoid instrumenting the airway unless absolutely necessary. If anaesthesia is needed, prefer regional or sedation, then a supraglottic airway. If intubation is unavoidable, use a microlaryngeal tube (internal diameter 5–6 mm) [58]. Afterwards the glottis may stay smaller (glottoplasty can narrow it by up to a third): use the smallest suitable tube [58].
- Discuss with the gender-affirming surgeon where possible [58]. For surgery near the larynx (for example thyroid surgery), tell the operating surgeon about any previous voice or laryngeal surgery and get the operation note. (*EO advice.*)

SURGERY, ELECTIVE OR EMERGENCY

- **Hormones:** don't delay emergency surgery over hormones. (*EO advice.*) For elective surgery, testosterone is generally continued [58]. Oestradiol is an individual decision, considering route, previous VTE, the procedure and thromboprophylaxis [58]; in older patients, some withhold or reduce it temporarily [41]. Agree the plan between anaesthesia, surgery and the prescriber. (*EO advice.*)
- **Offer a pregnancy test** to anyone with a uterus and ovaries aged 12–55, whatever their contraception (UK anaesthesia guidance; follow your local policy) [58]. This is the perioperative rule; outside surgery, test whenever pregnancy is possible.
- **VTE:** assess VTE and bleeding risk with the usual tool; oestrogen isn't a reason to withhold prophylaxis [97]. NICE's general advice is to consider stopping oestrogen-containing contraceptives or HRT 4 weeks before *elective* surgery [97]. Trans-specific guidance favours an individual decision about oestradiol [41,58]. No study we identified shows that routinely stopping it before surgery reduces VTE [110] (*EO review: an absence of evidence*).
- **Other drugs follow the usual perioperative rules, which differ by country.** For SGLT-2 inhibitors, UK guidance omits them on the day before and the day of surgery and checks blood ketones daily [94]; US labels say to withhold them for at least 3 days before surgery (ertugliflozin at least 4), and to restart once the person is clinically stable and eating [120,122]. After emergency surgery, watch for ketoacidosis, including euglycaemic ketoacidosis [122]. Follow your local protocol.
- **Sugammadex** counts as one missed pill for oral contraceptives, including progestogen-only ones: follow the missed-pill advice. Non-oral hormonal methods need extra non-hormonal contraception for 7 days [95,104]. Testosterone isn't contraception. Its effect on oestradiol therapy is unclear [58].
- **Chest binder:** remove it before anaesthesia, with the patient's consent, and agree when it goes back on [58].
- **Spironolactone:** watch for hyperkalaemia and AKI [19,58].
- **Haematocrit** on testosterone: use a recent full blood count where your preoperative-testing policy calls for one. (*EO advice.*)
- **Ward:** ask the patient where they would feel safe, follow local policy, and offer a side room where possible [58].
- **Transfusion:** see "Before anything else", point 7.

SEPSIS, AKI AND DRUG DOSING

- **In AKI, eGFR is unreliable** [61]. Use the change from baseline, and adapt doses while function is unstable [61,62].
- **Loading doses:** don't automatically reduce an indicated antibiotic loading dose just because renal function is uncertain; follow drug-specific protocols. (*EO advice.*) For vancomycin in critically ill adults with suspected serious MRSA infection, consensus suggests 20–35 mg/kg by actual body weight, maximum 3 g, then AUC-guided monitoring; follow your local protocol [115].

- **Maintenance doses:** once kidney function is stable, calculate eGFR with both the male and the female setting to show the uncertainty [59]; there's no agreed method [59,62]. eGFR and Cockcroft–Gault creatinine clearance aren't interchangeable: use whichever the drug's label specifies. Female-based equations may underestimate kidney function in trans adults on either hormone [63]. Dosing weights (ideal or adjusted body weight) are sex-based too. Involve a clinical pharmacist and use drug levels. (*EO advice, following [62].*) ✖
- **Then adjust by drug levels** wherever you can (for example aminoglycosides) [61,62].
- **Contrast:** don't withhold contrast needed for diagnosis because of a sex-dependent eGFR. Use the range and the clinical trend. (*EO advice.*)
- Cystatin C also moves with hormones, inflammation, steroids and thyroid disease, so it isn't a fix in acute illness [62].
- **Spirolactone:** hold it during the illness (sick-day rule) [19,74].
- **VTE:** assess as for any medical admission; offer prophylaxis if VTE risk outweighs bleeding risk [97].

HIGH POTASSIUM, DEHYDRATION OR LOW BLOOD PRESSURE ON SPIRONOLACTONE

- Treat hyperkalaemia as standard.
- **Hold spironolactone** [19]. Decide about an ACE inhibitor or ARB by the potassium level, renal function and why it was prescribed. (*EO advice.*) ✖ Treat severe hyperkalaemia, with ECG monitoring, per your emergency protocol. Also review NSAIDs, heparins, co-trimoxazole (trimethoprim) and potassium supplements [19]. Its active metabolites last 14–17 hours, so recheck potassium after stopping [19].
- **Keep the oestradiol going.** Oestradiol alone may not fully suppress testosterone, so tell the prescriber, who will choose what to restart [3,75].

HAEMATOCRIT ABOVE ABOUT 54% ON TESTOSTERONE

- **Unwell** (headache, visual change, chest pain, neurological signs or signs of a clot): assess urgently. Check BP, hydration and oxygen saturation, and look for thrombosis, including venous sinus thrombosis [67], and other causes. Discuss with haematology: venesection is an option for selected patients, not an automatic emergency treatment [86]. (*EO advice.*)
- Guidelines advise holding testosterone until the haematocrit falls, looking for hypoxia and sleep apnoea, and restarting at a lower dose. Venesection is an option [86]. With undecanoate, "hold" means deferring the next injection. Levels fall slowly, so check the trough before the next dose [51,86]. Switching formulation is a prescriber decision. (*EO advice.*)
- Other causes: smoking, lung disease and high BMI [25]; sleep apnoea [86]; SGLT-2 inhibitors [51]. If the rise is unexplained, consider a primary cause and discuss with haematology. (*EO advice.*)
- The thresholds come from other populations and haven't been validated by outcome data in trans men [129]; an unvalidated threshold isn't a wrong one. (*EO advice for the last point.*)

HIV: ANTIRETROVIRALS, PREP AND PEP

- HIV treatment is not a reason to stop hormones [7].
- **Check every regimen** on the Liverpool HIV interaction checker (hiv-druginteractions.org) [60].
 - Unboosted integrase inhibitors (dolutegravir, bictegravir, raltegravir) don't interact. Cobicistat-boosted elvitegravir does. Cabotegravir doesn't affect hormones, but high-dose testosterone with exercise training may lower long-acting cabotegravir and rilpivirine levels [60].
 - **Oestradiol:** ritonavir-boosted PIs, efavirenz, etravirine and nevirapine are predicted to lower it; cobicistat-boosted regimens, unboosted atazanavir and fostemsavir to raise it [60].

- **Cyproterone and testosterone:** all boosted regimens and unboosted atazanavir raise them, so review the dose with the prescriber or pharmacist, and don't raise an established low cyproterone dose to match the chart (*EO advice*); lenacapavir raises cyproterone only; efavirenz, etravirine and nevirapine lower them [60].
- Check hormone levels if in doubt [7].
- **PrEP:** daily PrEP works for trans women who take it [88]. Hormones modestly lower PrEP drug levels (about 12–32% in small studies); PrEP didn't lower oestradiol in those studies [66,87]. Use daily, not event-driven ("2-1-1"), PrEP for anyone on oestradiol [81,87]. For receptive vaginal or front-hole sex, baseline HIV testing and injectable options, see Sheet 1, section 8 [7,81].
- **PEP:** start as soon as possible, ideally within 24 hours and no later than 72 hours. Continue for 28 days. Preferred regimens: bictegravir/emtricitabine/tenofovir alafenamide, or dolutegravir plus tenofovir (TAF or TDF) plus emtricitabine or lamivudine [111]; neither interacts with hormones [60]. Take a baseline HIV test (rapid if available), but don't delay the first dose for laboratory results. PEP isn't recommended when the source has HIV with sustained viral suppression; if it isn't known whether the source has HIV, decide case by case [111]. Retest with antigen/antibody plus HIV RNA at 4–6 weeks (this can be skipped if PEP started within 24 hours, no doses were missed and PrEP isn't starting) and finally at 12 weeks after exposure, and offer PrEP if exposure risk continues [111]. Check interactions [60].
- **Contraception with enzyme-inducing HIV drugs** (efavirenz, nevirapine): see Sheet 1, section 9 [104].
- **STIs:** test every site used for sex. After vaginoplasty there's a prostate but no cervix [89]; the neovagina can still be infected, and a urine test may be more useful than a neovaginal swab for gonorrhoea and chlamydia [127]. Some laboratories reject specimens labelled "neovaginal": agree the labelling with your laboratory in advance. (*EO advice for the last point.*)

SELF-SOURCED HORMONES, INJECTIONS AND SILICONE

- **Ask, without judgement:** what was taken, how, and from where [7]. Check hormone levels when the result will change a decision. (*EO advice.*)
- **Injection abscess:** culture the pus and check tetanus status. (*EO advice.*) A septic abscess, or one at a hormone injection site, follows usual management: imaging mustn't delay drainage. (*EO advice.*) Where silicone or filler was injected, ask what was injected: nodules can evolve into sterile abscesses or fistulas, and granulomas can form [34]. Ultrasound, CT or MRI can help [34]; image first and involve the surgical team before incising, since surgical excision may be needed [34]. (*EO advice for the order of steps.*) After silicone or filler injections, abscesses can involve *M. abscessus*, so send AFB culture [34,102].
- **Shared needles or non-prescribed injections:** offer HIV, hepatitis B and hepatitis C testing, and hepatitis B vaccination [80].
- **Silicone or "filler" injections ("pumping"):** ask specifically.
 - Sudden breathlessness, low oxygen, fever or confusion soon after injection suggests silicone embolism. It can be fatal, and neurological involvement carries the worst outlook [34,77]. Give oxygen and escalate early to critical care. (*EO advice.*)
 - Later problems: hard lumps and granulomas, infection, migration and high calcium [34,102]. Check calcium if there are symptoms or extensive granulomas. (*EO advice.*)
 - It's common in some settings: in one San Francisco sample, one in six trans women had had filler injections [78].
- Help the patient move to prescribed, monitored treatment [7].

ASSAULT OR VIOLENCE

- Trans people experience high rates of violence [35], including 1.7–2.5 times the rate of intimate partner violence [93]. Ask in private, as you would any patient. Abuse can target

identity: threats to out someone, misgendering, denying their identity and controlling how they present [93,101,105]. Refer to specialist LGBT+ domestic abuse services where available [105].

- **Sexual assault:** emergency contraception and HIV PEP are time-sensitive: start PEP within 72 hours, without waiting for test results, and continue for 28 days with follow-up testing (see HIV) [111]. Offer post-rape care: emergency contraception and a pregnancy test if pregnancy is possible, PEP, STI prophylaxis and hepatitis B vaccination as your local protocol indicates, and psychosocial support [80]. Offer forensic examination with consent, by a trained team per local protocol. (*EO advice.*) Use a trauma-informed approach [127]: say what you are going to do before each step, ask consent for each part of the examination, and offer self-collected swabs for STI testing where suitable. (*EO advice for the steps.*) Sample the sites the person is concerned about [59]; after vaginoplasty, use the smallest speculum or an anoscope with lubricant [82]. There is no cervix [89]. Neovaginal and atrophic tissue tear more easily [82]. Trans survivors may find exposing their body very difficult [105]; offer a choice of examiner gender where possible. (*EO advice.*)
- **Police:** the patient decides. Don't share with the police without consent unless required by law or justified in the public interest [98].
- In police and safeguarding reports, share only the minimum legally or clinically necessary; trans status is often not needed. (*EO advice.*)
- **Document every injury fully**, including what was said. "Minimum necessary" applies to gender history, not to injuries. (*EO advice.*)
- After facial surgery, tell the radiologist about any implants or previous facial or laryngeal procedures. (*EO advice.*) Facial injuries after facial or voice surgery: see **Airway** [58].
- **Ward:** ask the patient where they would feel safe, and offer a side room where possible [58].

MENTAL HEALTH CRISIS

- Do the standard risk assessment, as for anyone. Ask directly about thoughts of suicide, plans and means; don't use risk scales to predict suicide [96].
- Don't attribute the crisis to being trans, and don't use it to question the person's identity. Being trans isn't a mental illness [7].
- **Continue hormones** on admission unless contraindicated, and use the person's name and pronouns [7].
- Searches and intimate care: offer staff of the gender the patient prefers, where safe and possible. Make an individual plan for dilators and binders with the patient and the psychiatric team (and the surgical team after recent surgery), weighing stenosis risk against ligature and safety policy, rather than removing them by default; dilation is time-critical after recent vaginoplasty [57]. (*EO advice, except the dilation point.*)
- **Binders** restrict breathing [58], so plan ahead of restraint, sedation or rapid tranquillisation: remove them with consent where possible, by the least restrictive approach, and follow your rapid-tranquillisation protocol. (*Extrapolated from anaesthesia; there are no psychiatric data.*)
- Antipsychotics commonly raise prolactin [99].
- **Overdose** of spironolactone or oestradiol: manage as in each SmPC (section 4.9) and with your poisons service [19,50].
- **Psychotropics:** spironolactone reduces lithium clearance [19]; enzyme-inducing anticonvulsants lower oestradiol [50]; lamotrigine levels shift with oestrogen [72].
- **Ward:** ask the patient where they would feel safe; offer a side room where possible [58].

FRACTURE AFTER GONADECTOMY OR A LONG GAP IN HORMONES

- After a **low-trauma** fracture, assess as a fragility fracture: bone profile, falls assessment and osteoporosis treatment. (*EO advice.*) DXA is indicated after gonadectomy or prolonged hypogonadism [90].

- **Re-establish hormone therapy:** first ask why hormones stopped (a clot, a hormone-sensitive cancer, a meningioma, access or choice), then refer back to the prescriber. (*EO advice.*) After gonadectomy, hormone replacement is needed [3], and anti-androgens are for those who haven't had an orchidectomy [58]. Over 45, transdermal oestradiol is suggested [7].
- **FRAX:** there is no evidence on which sex to enter. State which one you used [90]. T-scores use the female reference database for everyone [90]. Screen for secondary causes as usual [90]. DXA Z-scores use the database for the person's gender identity (for nonbinary people, sex recorded at birth) [90].

BREAST LUMP

- A clinically suspicious lump goes on the local suspected-cancer pathway, whatever the sex marker; don't route it as gynaecomastia. (*EO advice.*) Breast cancer is more common in trans women on oestrogen than in men, though less common than in women [91]. The breast radiologist chooses the imaging: after chest surgery or with implants, mammography may not be feasible, and ultrasound or MRI may be needed [34].
- If the sex marker blocks a test or referral, override it or escalate. Don't delay [71].
- Note any implants or silicone injections: injected silicone can make mammography ineffective [34]. Ask about family history. Don't stop oestradiol while awaiting a diagnosis; if cancer is confirmed, hormones are a decision for the breast team, patient and prescriber. (*EO advice.*)

RAN OUT OF HORMONES, OR SELF-SOURCED SUPPLY ON THE WARD

- **First, is there a reason to hold a drug now** (Sheet 1, "When to hold the problem drug")? If so, don't bridge that drug; call the prescriber. (*EO advice.*)
- **Bridge, don't stop.** Verify the regimen (product, route, dose, schedule, last dose) from prescriptions, packaging or pharmacy records, and continue it if it's clinically appropriate; SOC8 supports maintaining existing hormones on admission [7]. Substitute only with pharmacy or the prescriber: formulations aren't dose-equivalent, and the Sheet 1 dose table is an overview, not a conversion chart. Don't reproduce an unverified self-sourced dose; if it can't be verified, bridge with a formulary product in the usual range (section 2) rather than give nothing. (*EO advice.*) **✗** Never substitute ethinylestradiol or a combined pill [7].
- If the patient is nil by mouth, oestradiol can be given as a patch, gel or injection [3,7].
- **Injectable oestradiol:** a verified injection schedule continues on the ward: give the due dose rather than skip it. Valerate and cypionate can be given IM or SC [126]. (*EO advice for the first point.*)
- **Testosterone is a controlled drug in many countries**, including the UK (Schedule 4 Part II) and the US (Schedule III) [83,84]. Check local rules before prescribing or supplying it.
- Self-sourced products usually can't be given on the ward; follow local patients'-own-drugs policy, and replace them with a prescribed equivalent. Contact the home prescriber, and take baseline bloods as the clinical situation needs. If a blocker is unavailable, oestradiol alone short-term is reasonable, though testosterone suppression may be lost; tell the prescriber [3,75]. (*EO advice, except where cited.*)
- **Lamotrigine:** if oestrogen stops, lamotrigine levels may rise. Watch for toxicity and consider a level [72].
- **Warfarin:** monitor INR closely when testosterone starts or stops [51,73]. Anticoagulated: consider subcutaneous rather than intramuscular injection, for testosterone esters and for injectable oestradiol [126]. (*EO advice.*)

Tools that assume one of two sexes

Tool	What to do
PERC rule	Can't rule out PE on oestrogen by any route (hormone use is a criterion) [68].
hs-troponin cut-off	Serial measurements. Affirmed-gender cut-off provisionally recommended [59].
ECG STEMI criteria (V2-V3)	New J-point elevation in at least two contiguous leads; ≥ 1.5 mm in V2-V3 as a conservative escalation threshold, never a rule-out [116,121]. (<i>EO advice.</i>)
eGFR, creatinine clearance (Cockcroft-Gault), dosing weight	Compare both sex settings; eGFR and Cockcroft-Gault aren't interchangeable. Use drug-specific loading regimens; set maintenance with a pharmacist and drug levels where available [59,62,63].
Haemoglobin, haematocrit	Affirmed-gender range on stable hormones (at least 12 months in the reference studies [23]; ADLM says by 6 months [59]).
FRAX, DXA	FRAX: no evidence on which sex to use; state which you used. T-scores: female database for everyone [90].
Cardiovascular risk calculators	No calculator is validated; use the sex assigned at birth, the affirmed gender or an average, and consider running both [7,34].
Blood bank	Sex assigned at birth, for product selection [59].

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Numbering follows the working source register and will be put into citation order at version 1.0. Every reference was obtained and read in full unless its entry says otherwise.

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