Dr Asa Radix

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New York, USA

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Speaker Name	Statement
Dr Anita Radix	None
Date	**April 2015**

HIV and Vulnerable Populations: Transgender Medicine

Asa Radix, MD MPH FACP
BHIVA
24 April 2015

NYU School of Medicine
NYU LANGONE MEDICAL CENTER

CALLEN LORDE
COMMUNITY HEALTH CENTER

Learning Objectives

- Describe the epidemiology of HIV among transgender individuals
- Know the social context and challenges to the care of transgender clients
- Understand strategies to incorporate trans competent healthcare into your clinical practice
- Identify research gaps

Callen-Lorde Community Health Center, 2014

- LGBTQ clinic in NYC
- 15,000 patients, 3700 HIV+
- 3,095 patients of transgender experience
  - (1960 TGW, 400 HIV+)
  - 55% of Callen-Lorde's trans patients are persons of color
  - 15% are homeless
  - Nearly one-third (30%) are uninsured.

Who *is* TRANSGENDER?

- A person whose gender identity or gender expression differs from that assigned at birth
- Social gender ≠ biological sex
- Not the same as sexual orientation

Terminology

Transwomen/Transfemale

Birth assigned male, identifies as female

Male-to-female, MTF

Transman/Transmale

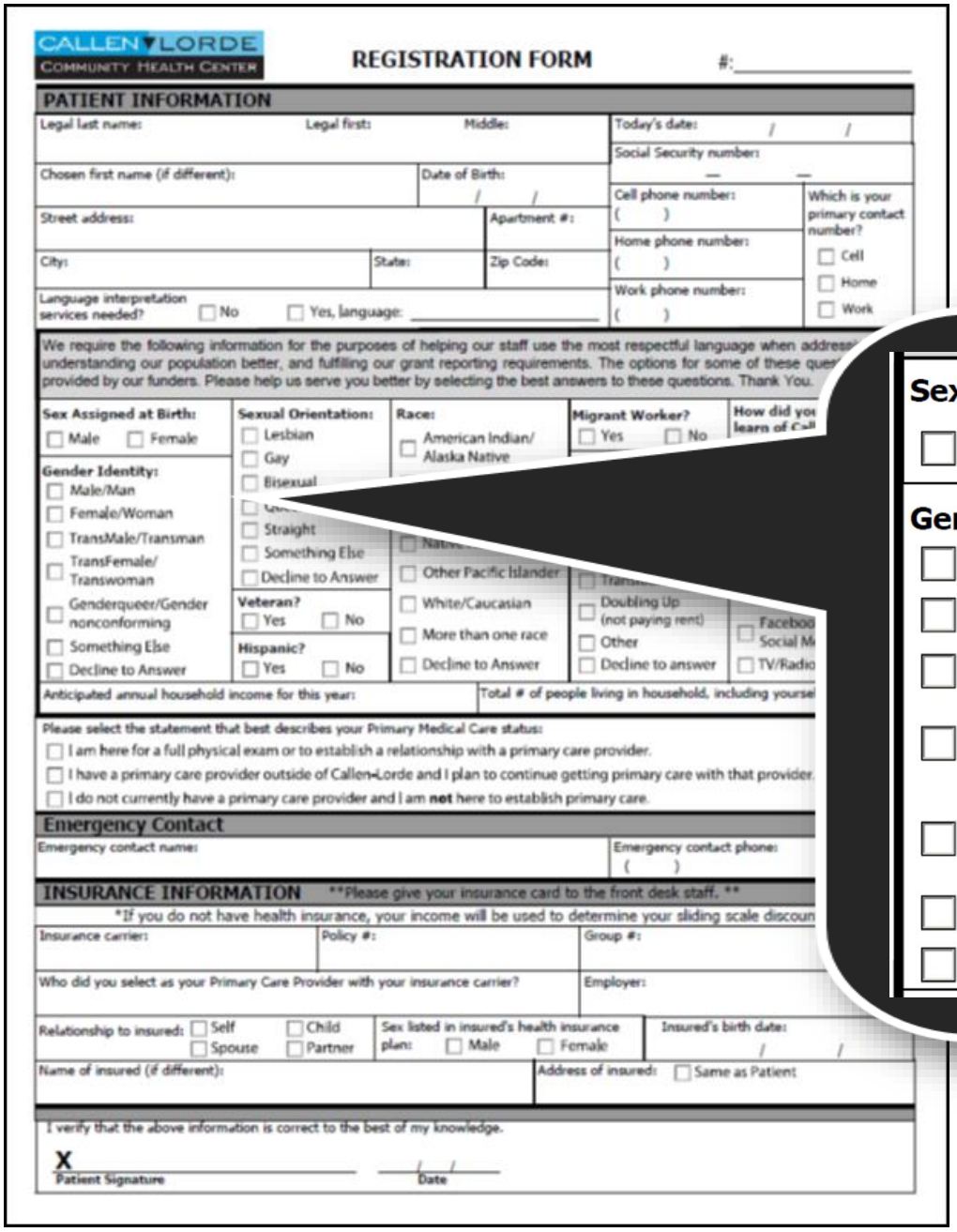
Birth assigned female, identifies as male

Female-to-male, FTM

Gender non-conforming/Genderqueer

Range of identities that lie outside binary

Kuper 2012, Lombardi 2001, Operario 2010


CALLEN LORDE
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REGISTRATION FORM #:

PATIENT INFORMATION

Legal last name: Legal first: Middle:

Today's date: / /

Social Security number: — —

Chosen first name (if different): Date of Birth: / /

Cell phone number: ( )

Which is your primary contact number? ☐ Cell ☐ Home ☐ Work

Street address: Apartment #:

Home phone number: ( )

City: State: Zip Code:

Work phone number: ( )

Language interpretation services needed? ☐ No ☐ Yes, language: _____

We require the following information for the purposes of helping our staff use the most respectful language when address
understanding our population better, and fulfilling our grant reporting requirements. The options for some of these que
provided by our funders. Please help us serve you better by selecting the best answers to these questions. Thank You.

Sex Assigned at Birth: ☐ Male ☐ Female

Gender Identity: ☐ Male/Man ☐ Female/Woman ☐ TransMale/Transman ☐ TransFemale/ Transwoman ☐ Genderqueer/Gender nonconforming ☐ Something Else ☐ Decline to Answer

Sexual Orientation: ☐ Lesbian ☐ Gay ☐ Bisexual ☐ Straight ☐ Something Else ☐ Decline to Answer

Veteran? ☐ Yes ☐ No

Hispanic? ☐ Yes ☐ No

Race: ☐ American Indian/ Alaska Native ☐ Other Pacific Islander ☐ White/Caucasian ☐ More than one race ☐ Decline to Answer

Migrant Worker? ☐ Yes ☐ No

How did you learn of Call

☐ Doubling Up (not paying rent) ☐ Other ☐ Decline to answer

☐ Facebook Social M ☐ TV/Radio

Anticipated annual household income for this year:

Total # of people living in household, including yourse

Please select the statement that best describes your Primary Medical Care status:

☐ I am here for a full physical exam or to establish a relationship with a primary care provider.

☐ I have a primary care provider outside of Callen-Lorde and I plan to continue getting primary care with that provider.

☐ I do not currently have a primary care provider and I am **not** here to establish primary care.

Emergency Contact

Emergency contact name: Emergency contact phone: ( )

INSURANCE INFORMATION **Please give your insurance card to the front desk staff. **

*If you do not have health insurance, your income will be used to determine your sliding scale discoun

Insurance carrier: Policy #: Group #:

Who did you select as your Primary Care Provider with your insurance carrier? Employer:

Relationship to insured: ☐ Self ☐ Child ☐ Spouse ☐ Partner

Sex listed in insured's health insurance plan: ☐ Male ☐ Female

Insured's birth date: / /

Name of insured (if different): Address of insured: ☐ Same as Patient

I verify that the above information is correct to the best of my knowledge.

X _____ Patient Signature _____ / / Date

Sex Assigned at Birth:

☐ Male ☐ Female

Gender Identity:

☐ Male/Man

☐ Female/Woman

☐ TransMale/Transman

☐ TransFemale/ Transwoman

☐ Genderqueer/Gender nonconforming

☐ Something Else

☐ Decline to Answer

Sexual Orientation:

☐ Lesbian

☐ Gay

☐ Bisexual

☐ Queer

☐ Straight

☐ Something Else

☐ Decline to Answer

Veteran?

☐ Yes ☐ No

Hispanic?

☐ Yes ☐ No

How Many People are Transgender?

Equality and Human Rights Commission 2012, UK

- 1% gender variant
- 539,000 trans people in England
- 2500 people being referred yearly to GIC

Based on gender identity (BRFSS-MA), USA

- 0.5%

Glenn F & Hurrell K, EHRC 2012 (www.equalityhumanrights.com); Conron K, AJPH 2012;102(1):118-22

Transition

The process of changing gender

- Social transition
  - Appearance
  - Gender marker
  - Name
- Medical/surgical transition

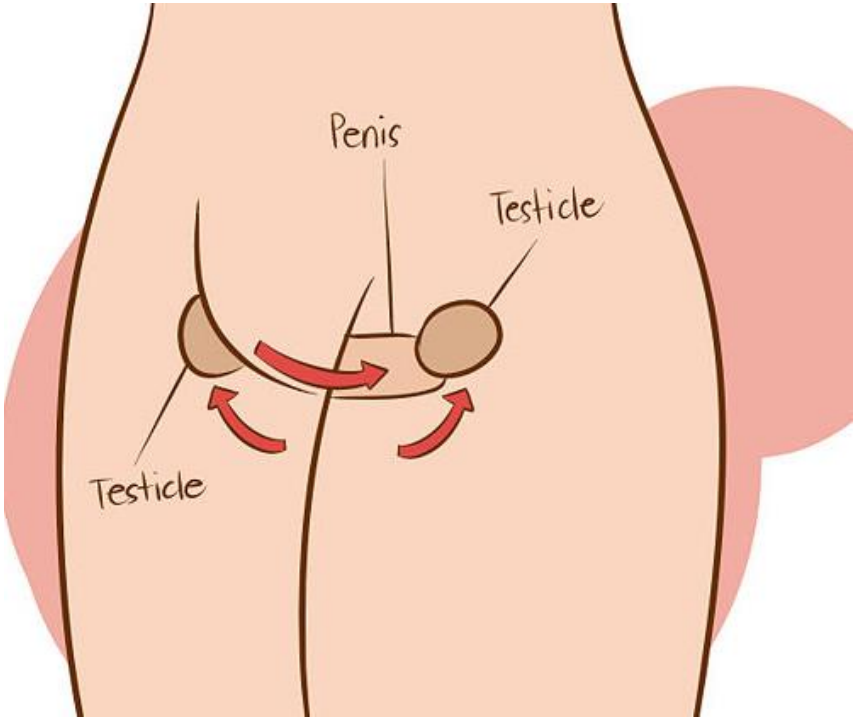
Social Transition

- Social transition may include changing the appearance to align with the preferred gender

Binding & Complications

Genital Tucking

- Advise to avoid adhesive tape
- Examine for skin tears, infections & balanitis



Soft Tissue Fillers

Image. Fox, L. J Am Acad Dermatol, 2004

Medical and Surgical Transition

MTF – Feminizing

- Hormones (oestrogen)
- Androgen blockers
- Breast augmentation
- Vaginoplasty & labiaplasty
- Orchidectomy
- Tracheal shave
- Facial bone reduction
- Rhinoplasty

FTM – Masculinizing

- Hormones (testosterone)
- Chest masculinization
- hysterectomy, salpingo-oophorectomy
- Phalloplasty
- Metoidioplasty
- Vaginectomy
- Scrotoplasty
- Urethroplasty
- Testicular prostheses

Case Presentation - Maria

27 year old transgender female attended the Sexual Health clinic with 5 days rectal burning & discharge

- Condomless receptive anal sex with one male partner
- Unemployed, previous sex work
- HIV screening <3 years ago – negative
- Socially transitioned at age 20
  - CEE (premarin®) & spironolactone for 5 years (internet)
  - No gender affirming surgery (SRS)

Case Presentation - Maria

Anal exam (anoscopy)

- Fissure noted, purulent blood-streaked discharge

Differential

- Gonorrhoea
- Chlamydia / Lymphogranuloma venereum
- Syphilis

Tested: anal, urethral & pharyngeal GC & CT (NAAT), HIV & syphilis serology

Treated: ceftriaxone 500mg, doxycycline 100mg bd

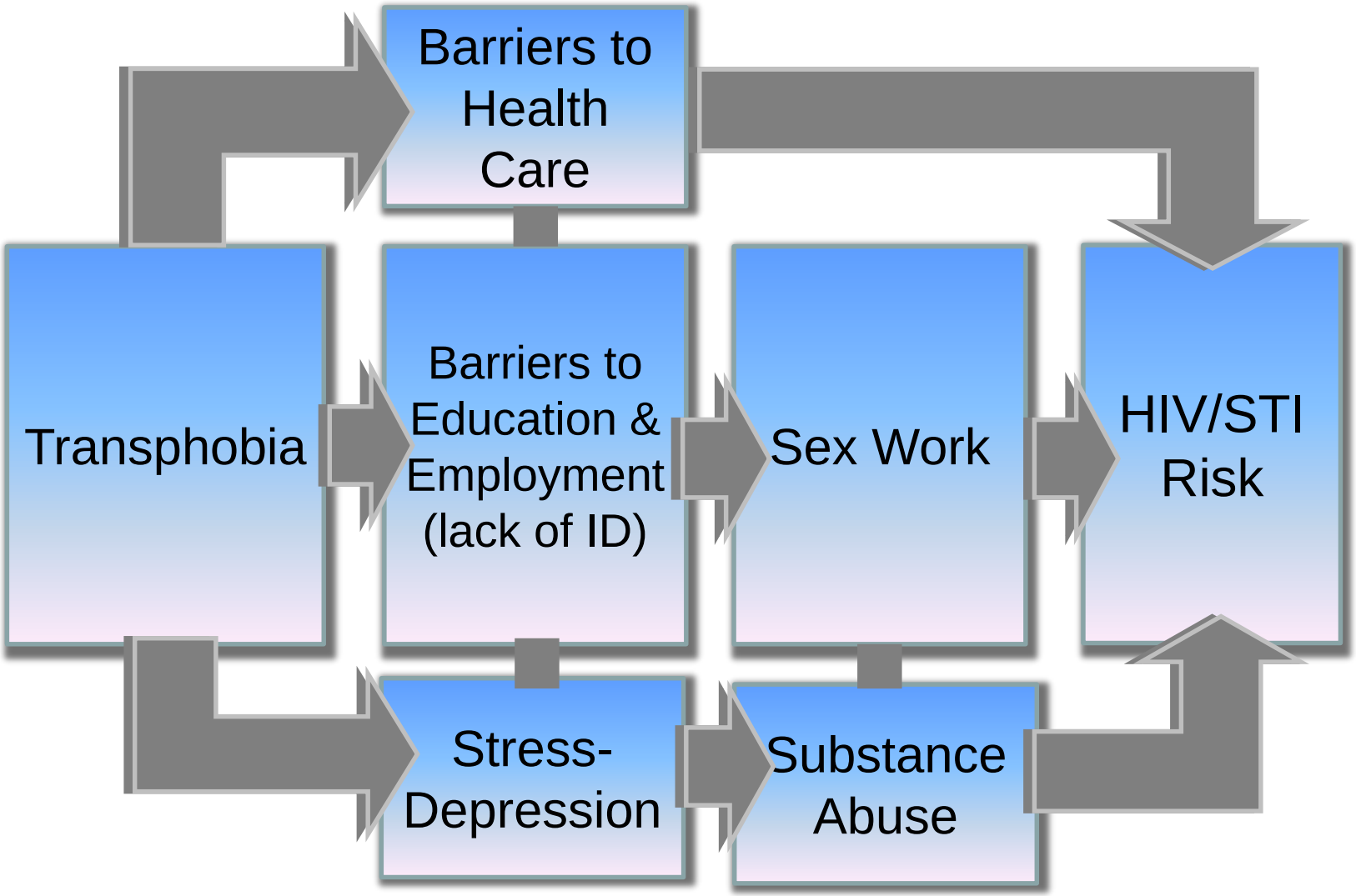
Laboratory results

- Anal: *N gonorrhoeae*
- Urethral: *C trachomatis*
- POC HIV test: positive

Transgender Persons & HIV

What's different?

Vulnerability to HIV



Whittle, S., Turner, L. and Al-Alami, M. (2007); Berredo, 2011;Grant, NTDS 2010; Lambda, 2011

1,509 reported killings of trans and gender variant people in 61 countries worldwide from 2008-2014

(Trans Murder Monitoring Project)

UK Data

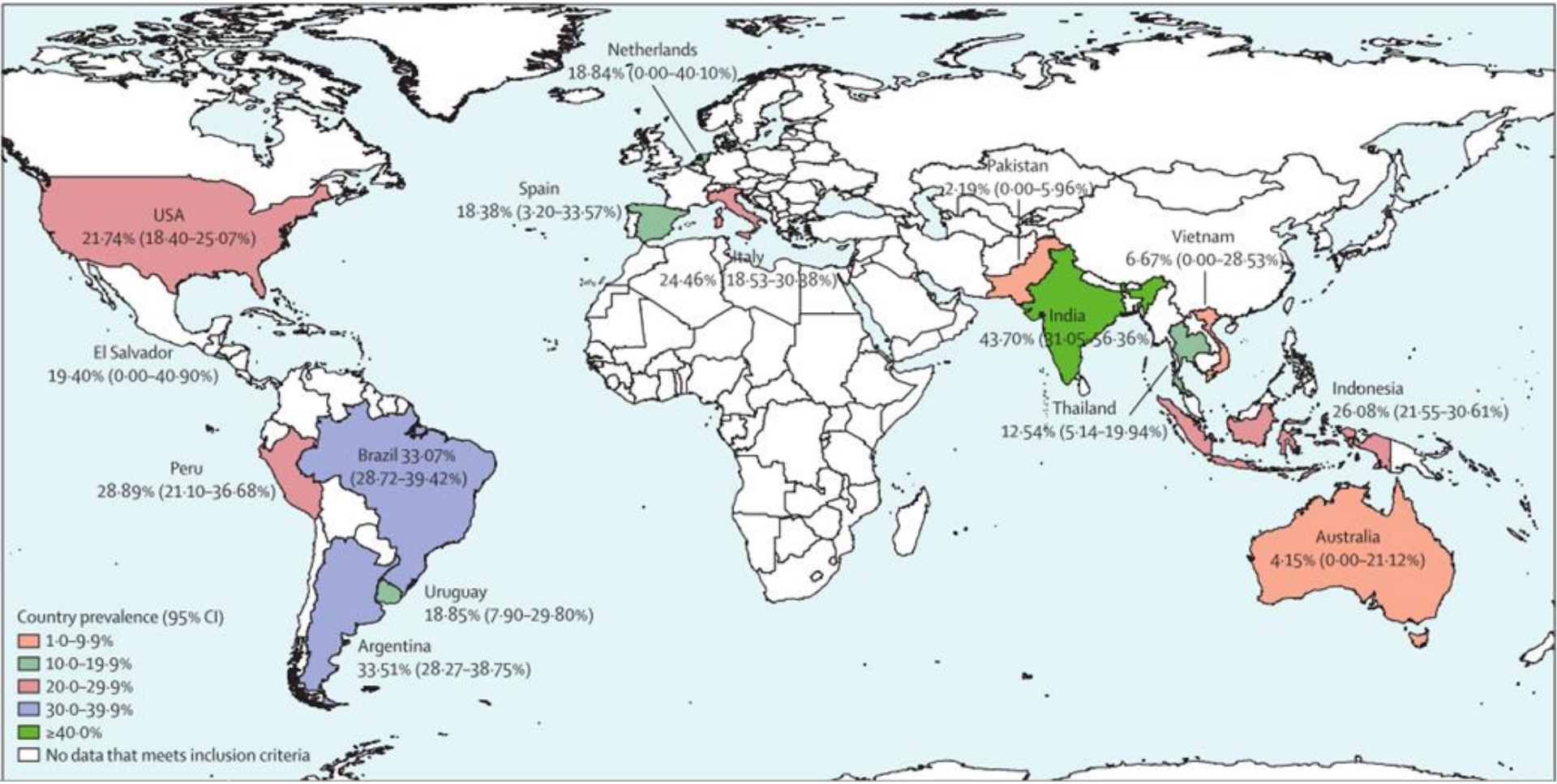
Stigma & discrimination

- 65% trans persons faced harassment in the last year
- 10% were victims of threatening behaviour in public
- 26% felt discriminated against when accessing health & 17% refused healthcare services
- Up to 64% bullied at school

> *"I find most problems I face come from strangers in public spaces. I don't think I'm very obviously trans but quite a few people – particularly teenagers – spot me."*
> (Transsexual, 39, United Kingdom)

Stephen Whittle (Equalities Review) 2007; Morton J, (Scottish Transgender Alliance)2008; EU LGBT Survey, 2012

HIV Prevalence in TGW



Baral, Lancet 2012

HIV+ & Transgender in the UK

- 37.5% HIV prevalence among TSWs (n=24) attending GUM clinic
  - Country of origin: South America, Asia, Caribbean Europe, UK
  - 29% syphilis, 42% substance use
- HARS now asks “2-step” question
  - Gender at birth, current gender identity

Hill SC, et al. IJ STD & AIDS 2011;22:686-687

HIV Incidence

Transwomen:

- 3.4-7.8 per 100 P-Y (USA)
- 10.7 per 100 P-Y (TSW, Argentina)

MSM:

1.9-2.4 per 100 P-Y (USA)

2.3 per 100 P-Y (MSW, Argentina)

*Transgender women are 2-7 times more likely to acquire HIV than MSM

Simon P, 2000; Kellogg T, 2001; Qiang Xia, 2011; Sol dos Ramos Farias, M, 2011.

Factors linked to HIV risk among TGW

- Behavioral
  - High rates of sex work (>40%)
  - Lower rates condom use (financial, primary partner)
  - Needle sharing for hormones/silicone?
- Biological
  - Anal receptive sex
  - Neovaginal sex - penile inversion vs. sigmoid colon loop
- Increased rates of STIs
  - TGW vs. MSM
  - Syphilis, HPV, Hepatitis B & C, HSV, chlamydia

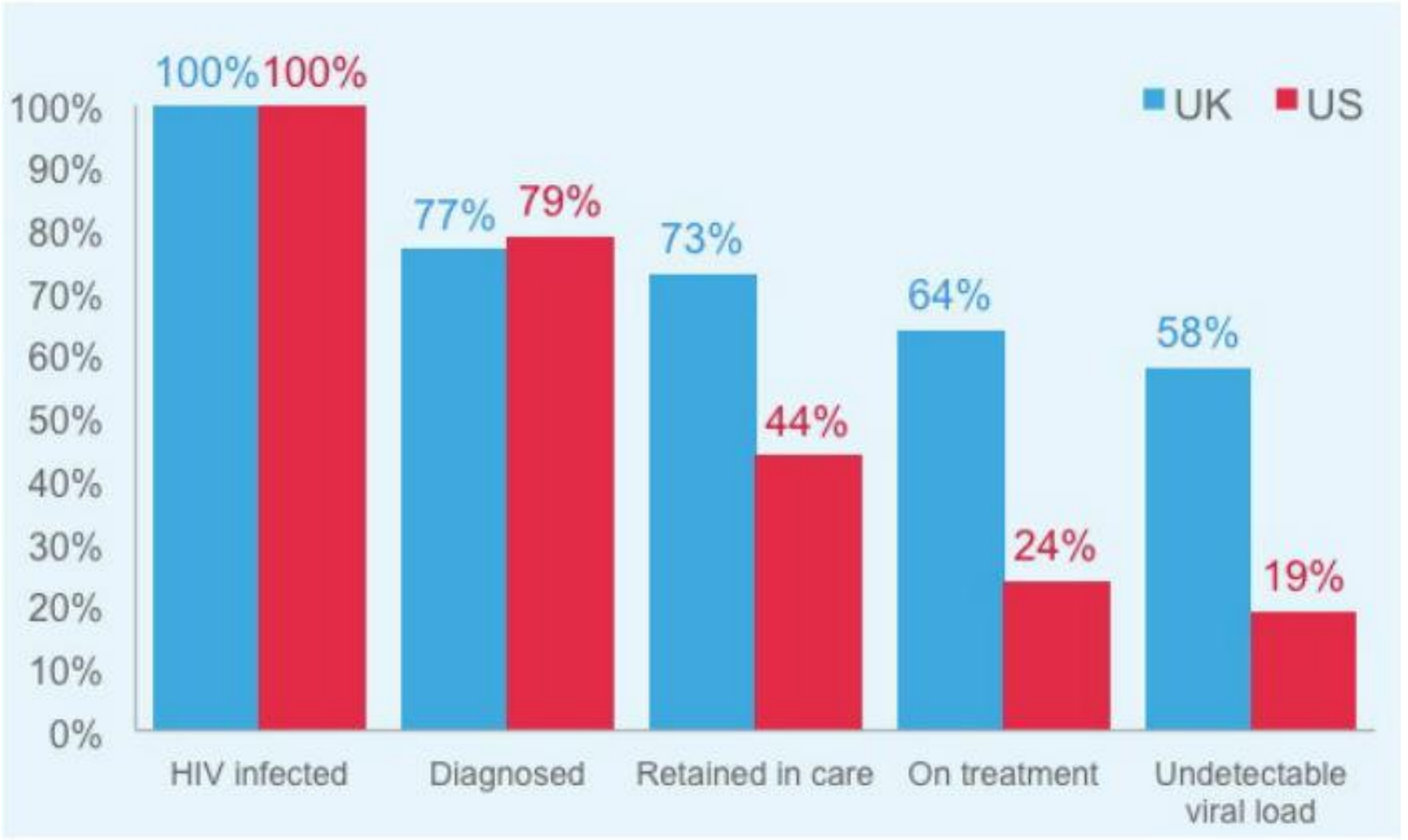
Schulden, Pub Health Rep, 2008; Bockting, Health Ed Res,1998; Nuttbrock AJPH 2011; Toibaro, Medicina 2009; Sol dos Ramos Farias, M, 2011;Hernández et al., 2010; Tabetet al., 2002

Factors linked to HIV risk among TGW

- Gender Identity Discrimination (linked to):
  - Condomless anal receptive sex
  - Depression
  - Substance use
- Non-inclusion in STI/HIV campaigns
- HIV prevention is a low priority
  - Safety, survival, emotional
  - Gender validation

Schulden, Pub Health Rep, 2008; CDC 2007;Nuttbrock AJPH 2011; Harawa 2005; Operario 2010

HIV Continuum of Care



Gardner et al, CID 2011; Public Health England

Higher Risk But Less HIV Screening

Transgender persons avoid medical care

- 28 % delayed care when ill
- 33% delayed preventive care
- Low rates of HIV screening (46% never tested)
- 45-65% HIV+ TGW unaware of HIV status

Grant, NTDS 2010; Clements-Nolle Am J PH 2001; Lambda, 2011;; Bauer, BMC Pub Health 2012; Herbst AIDS Behavior, 2008

Engagement & Retention in Care

Delays in care related to

- Fear of disclosure of gender identity (12%)

Barriers

- Treated poorly by staff for being transgender
- Providers not familiar with transgender needs
- HIV low priority

Ashman, AIDS Care, 2010; Houston Area Ryan White Planning Council Report 2013

Initiation of ART

Transgender women

- **Less likely** to receive ART than a nontransgender person (59% vs. 82%)
- **More likely** to report lower adherence
  - 51.5% vs.68.4% ($p<0.05$)
  - Detectable HIV VL (63.6% vs. 52.4%)
- Higher HIV-related mortality

(Melendez et al, APJH 2005; Sevelius et al, JANAC, 2010;
San Francisco DPH HIV/AIDS Epidemiology Annual Report, 2008

Community viral load (CVL) San Francisco, 2005–2008

	N	%	Mean CVL
San Francisco	12,512	100	23,348
Sub-populations			
Transgender	291	2	64,160
Non-transgender	12,221	98	22,376
Latino	1822	15	26,744
African American	1825	15	26,404
IDU	1011	8	33,245
MSM-IDU	1791	14	36,261
Not on treatment	2924	23	40,056

Das M, Chu PL, Santos G-M, Scheer S, et al. (2010) PLoS ONE 5(6): e11068. doi:10.1371/journal.pone.0011068

Providing Trans-affirming HIV Care

Initial Assessment

- Do not assume gender identity or sexual orientation
- How do I know which pronoun to use?
  - Ask politely
  - What's the presenting gender?
  - Echo the language you hear
  - Make an effort to use the correct pronoun consistently

Initial Assessment- Transition History

1. Transition
   - How long has patient been living in the gender with which they identify?
   - Social transition (binding, tucking)
   - Hormone use, dose, duration, obtained “on the street” or prescription
   - Silicone
   - Future plans for surgery/hormones
2. Sexual History (sex with men, women, both)
3. Psychosocial issues: depression, PTSD, intimate partner violence, support network, employment, sex work and substance use
4. Legal concerns: Gender recognition certificate, ID

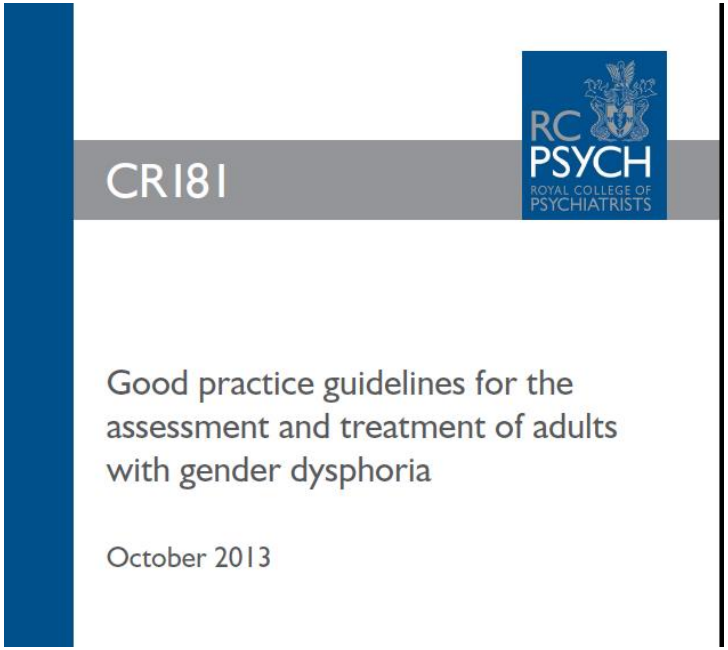
Medical Assessment – Best Practices

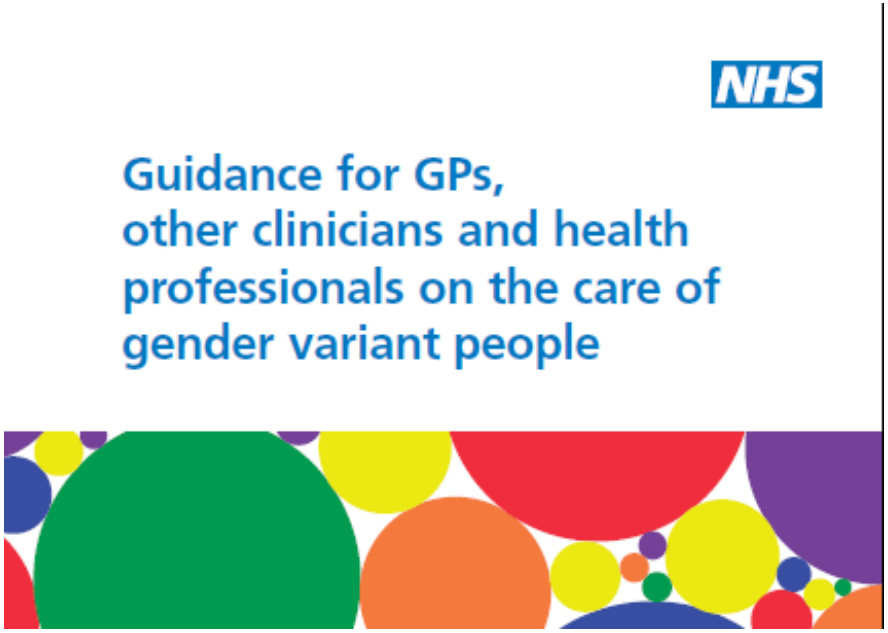
Keep in mind:

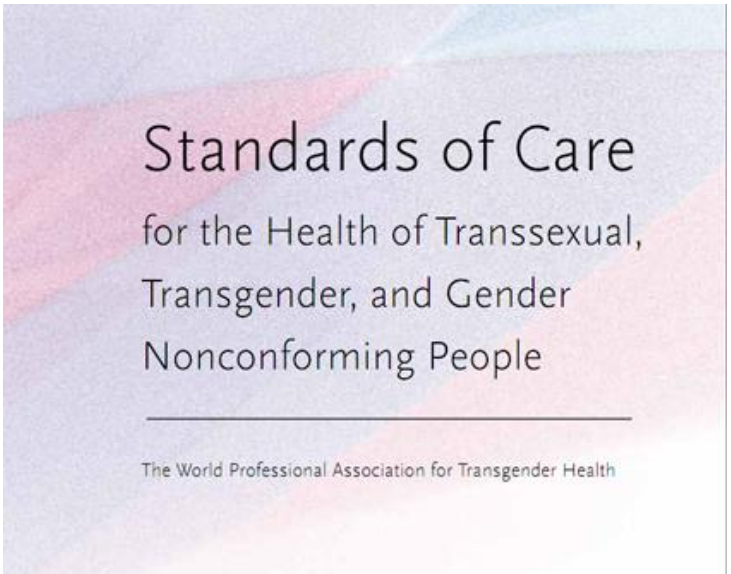
- Transgender patients may have had previous negative healthcare experiences
  - (70% mistreatment, >19% denied care)
- Developing trust and rapport may take longer than you are used to
- Different priorities
- Pay attention to pronouns
- Avoid genital and rectal exams on first visit, if possible
- Avoid using “pre-op” and “postop”

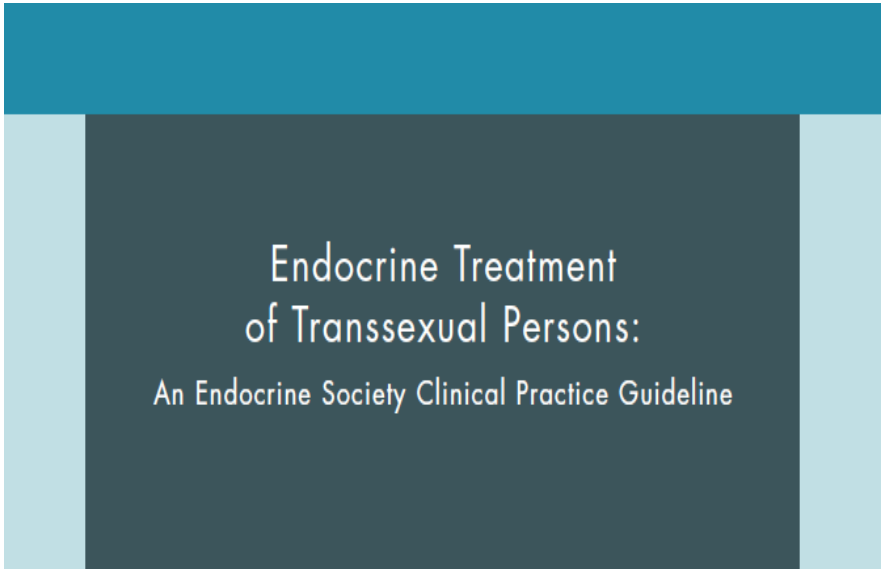
Grant, NTDS 2010; Lambda, 2011

Trans Health Guidelines









Feminising (MTF) Regimens

Oestrogens +
Anti-androgens

Usually therapy is with combinations of anti-androgens or “blockers” and oestrogens

Hembree, JCEM 2009, 94(9):3132–3154

Oestrogens

Hormone	Starting Dose	Average Dose	Maximum Dose
Oestradiol oral	2mg daily	4mg daily	8mg daily
Oestradiol gel	0.75mg bd	0.75mg tds	1.5 mg tds
Oestradiol patch (preferred over 40, smoker)	25 mcg daily	50 mcg-100mcg daily	150 mcg daily
Conjugated oestrogen Premarin®	1.25-2.5mg daily	5mg daily	10mg daily
Ethinylestradiol Not recommended			

- Maintain oestradiol (<200 pg/ml)
- ½ dose post gonadectomy

Adapted from UK Good practice guidelines for the assessment and treatment of adults with gender dysphoria, 2013 & Hembree, JCEM 2009, 94(9):3132–3154

Androgen Blockers

Anti-androgen	Starting Dose	Average Dose	Maximum Dose
Spironolactone	50mg daily	150mg daily	400mg daily
Finasteride	2.5 mg daily	2.5mg daily	5mg daily
Cyproterone Acetate	50 mg daily	150 mg od	150mg od
Goserelin	3.6mg/month	3.6mg/month	3.6mg/month
Leuprolide acetate	3.75mg/month	3.75mg/month	3.75mg/month

- After orchidectomy - stop androgen blockers
- Maintain serum testosterone level <55 ng/dl

Adapted from UK Good practice guidelines for the assessment and treatment of adults with gender dysphoria, 2013 & Hembree, JCEM 2009, 94(9):3132–3154

Effects of feminizing therapy

- Breast development
- Slowing of androgenic hair loss
- Fat redistribution (smaller waist, wider hips)
- Testicular atrophy
- Decrease in erections
- Reduction in prostate size
- No effect on beard hair - electrolysis required

8 months on CGHT

20 months on CGHT

Adverse effects

Oestrogens

Venous thrombosis/pulmonary emboli (ethinylestradiol)

Hypertriglyceridemia

Elevated blood pressure

Gallbladder disease

Macroprolactinoma

Spironolactone

Hyperkalemia

Hypotension

Cyproterone

Hepatic toxicity

Meningioma

Depression

Hembree, JCEM 2009, 94(9):3132–3154

Lab Monitoring on CGHT

Periodic laboratory testing

(Initially every 2-3 months for 1 year, then q 6-12 months)

- MTF: fasting glucose, lipid profile, liver function, potassium, haemoglobin, serum oestradiol, testosterone, prolactin (less than 400 mU/l)
- STI screen (3 months)

Adapted from UK Good practice guidelines for the assessment and treatment of adults with gender dysphoria, 2013 & Hembree, JCEM 2009, 94(9):3132–3154

Antiretroviral Therapy & Cross Sex Hormones

Antiretrovirals & Hormones

- Data based on studies with oral contraceptives (ethinylestradiol)
- Oestrogens metabolized by CYP3A4
- Protease inhibitors & NNRTI interactions possible
  - Avoid using unboosted fosamprenavir with oestrogens - APV C min ↓ 20%
  - Boosted proteases reduce oestradiol levels, monitor oestradiol levels 2-4 weeks after ARV change

Things to be aware of…

- Higher CVD mortality
  - Increased deaths from CVD HR 2.5 (1.2–5.3)
  - Ethinyl estradiol 3.64 (1.52–8.73)
  - Fatal stroke <65 years, SMR 2.11 (95% CI: 1.32–3.21)
- Lower BMD
  - Screen for osteoporosis (DXA)
- “if you have it, check it”
  - Screen organs that are present

Dhejne C et al.,Plos One 2011 ;Wierckx J Sex Med 2012;9:2641–2651,Van Caenegem, Bone 54 (2013) 92–97; Asscheman 2011

CVD Risk Factors & HIV

- Tobacco
  - High smoking prevalence 30.7% among transgender persons
- Hyperlipidemia on hormones
  - Increased triglycerides (MTF, FTM)
  - Decreased HDL (FTM)
- Inflammation
  - Early increase IL-6, IL-1 and IL-8 (MTF)
- HIV
  - Less likely to be on ART, less likely to have undetectible VL

Bye et al, 2005; Wilson et al, 2009; Elamin 2010; Melendez et al, APJH 2005; Sevelius et al, JANAC, 2010;

Creating a Welcoming Space

- Use language that is sensitive to transgender identities throughout facility
- Accommodations that are trans inclusive/gender neutral
- Attention to pronouns, names
- Training for all staff
- Targeted health promotion

Acknowledgements

Rona Vail, MD, Susan Weiss, FNP, Peter Meacher, MD & the Callen-Lorde Team

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ADDITIONAL SLIDES

NHS Gender Clinics

- The Gender Identity Clinic, Charing Cross, London
- The Tavistock and Portman NHS Foundation Trust, Tavistock Centre (under 18)
- The Laurels Clinic of Gender and Sexual Medicine, Devon
- Leeds Gender Identity Service, Newsam Centre, Leeds
- Northern Region GD Service, Newcastle
- Northamptonshire Gender Dysphoria Service, Daventry
- Nottingham Gender Clinic
- Town Close Gender Identity Clinic, Norwich
- Porterbrook Clinic, Sheffield
- Gender Identity Clinic, Hergest Unit, Ysbyty Gwynedd, Bangor, Wales
- Sandyford, Gender Identity Services, Glasgow

Trans in the UK

- Initial referrals handled by GP
- Generally the medical transition is handled by the specialist services – gender identity clinic
- 7 specialist clinics GICs focused on transition, 3 specialist genital reconstruction centers, since April 2013 all have been commissioned and funded centrally
- clinicQ, joint venture with local NHS provider Trust

Protections

- Sex discrimination Act 1975 – unable to discriminate on the basis of sex for employment, education, housing, goods, facilities, services
- Sex Discrimination (Gender Reassignment) Regulations 1999 & Sex Discrimination Regulations 2008 extended protections to those who have undergone gender reassignment
- Gender Recognition Act 2004 – gender recognition certificate, legal recognition, including birth certificate change

Special Concerns for Trans Men

- Even less known about risk among FTM clients
  - Prevalence of HIV 0-3%
  - Prevalence of STIs 6-37%
- Risk Behavior
  - 26% transgender men start having sex with men after initiation of hormones
  - High rates of unprotected anal/frontal sex
  - Substance use during sex
  - Sex work
- Biology
  - Testosterone →atrophic vaginitis

(Herbst, 2008; Conare, 1997; Kenagy, 2002; Reisner, 2010 ; Rowniak, 2011)

Androgen Blockers

Spironolactone

- K^+-sparing diuretic
- Interferes with testosterone production and blocks androgen receptors

5-α-reductase inhibitors: Finasteride, Dutasteride

- Decrease synthesis of 5-α-dihydrotestosterone

Leuprolide acetate

- GnRH analog, main use as puberty blocker

Cyproterone Acetate

- Synthetic steroidal antiandrogen drug
- Progestogen and antigonadotropic properties

Mortality from Cardiovascular Disease

	Number of events cases/ controls 1973–2003	Outcome incidence rate per 1000 person-years 1973–2003 (95% CI)		Crude hazard ratio (95% CI) 1973–2003	Adjusted* hazard ratio (95% CI) 1973–2003	Adjusted* hazard ratio (95% CI) 1973–1988	Adjusted* hazard ratio (95% CI) 1989–2003
		Cases	Controls				
Any death	27/99	7.3 (5.0–10.6)	2.5 (2.0–3.0)	2.9 (1.9–4.5)	2.8 (1.8–4.3)	3.1 (1.9–5.0)	1.9 (0.7–5.0)
Death by suicide	10/5	2.7 (1.5–5.0)	0.1 (0.1–0.3)	19.1 (6.5–55.9)	19.1 (5.8–62.9)	N/A	N/A
Death by cardiovascular disease	9/42	2.4 (1.3–4.7)	1.1 (0.8–1.4)	2.6 (1.2–5.4)	2.5 (1.2–5.3)	N/A	N/A
Death by neoplasm	8/38	2.2 (1.1–4.3)	1.0 (0.7–1.3)	2.1 (1.0–4.6)	2.1 (1.0–4.6)	N/A	N/A
Any psychiatric hospitalisation‡	64/173	19.0 (14.8–24.2)	4.2 (3.6–4.9)	4.2 (3.1–5.6)	2.8 (2.0–3.9)	3.0 (1.9–4.6)	2.5 (1.4–4.2)
Substance misuse	22/78	5.9 (3.9–8.9)	1.8 (1.5–2.3)	3.0 (1.9–4.9)	1.7 (1.0–3.1)	N/A	N/A
Suicide attempt	29/44	7.9 (5.5–11.4)	1.0 (0.8–1.4)	7.6 (4.7–12.4)	4.9 (2.9–8.5)	7.9 (4.1–15.3)	2.0 (0.7–5.3)
Any accident	32/233	9.0 (6.3–12.7)	5.7 (5.0–6.5)	1.6 (1.1–2.3)	1.4 (1.0–2.1)	1.6 (1.0–2.5)	1.1 (0.5–2.2)
Any crime	60/350	18.5 (14.3–23.8)	9.0 (8.1–10.0)	1.9 (1.4–2.5)	1.3 (1.0–1.8)	1.6 (1.1–2.4)	0.9 (0.6–1.5)
Violent crime	14/61	3.6 (2.1–6.1)	1.4 (1.1–1.8)	2.7 (1.5–4.9)	1.5 (0.8–3.0)	N/A	N/A

Dhejne C et al. (Plos One 2011)

British HIV Association

BHIVA

21st Annual Conference of the British HIV Association (BHIVA)

#BHIVA2015

21–24 April 2015

The Brighton Centre, Brighton, UK