SCHOOL OF MEDICINE

SEXUAL AND GENDER MINORITY HEALTH- NM ACP 2018

gender non-conforming/ transgender health

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basics| vocabulary

Sex/gender assigned at birth

Sexual orientation

Gender identity

Gender expression

Gender transition

Cis-gender

Transgender

Gender dysphoria/variance

Gender non-conforming

basics|

Prevalence: very few studies/census data

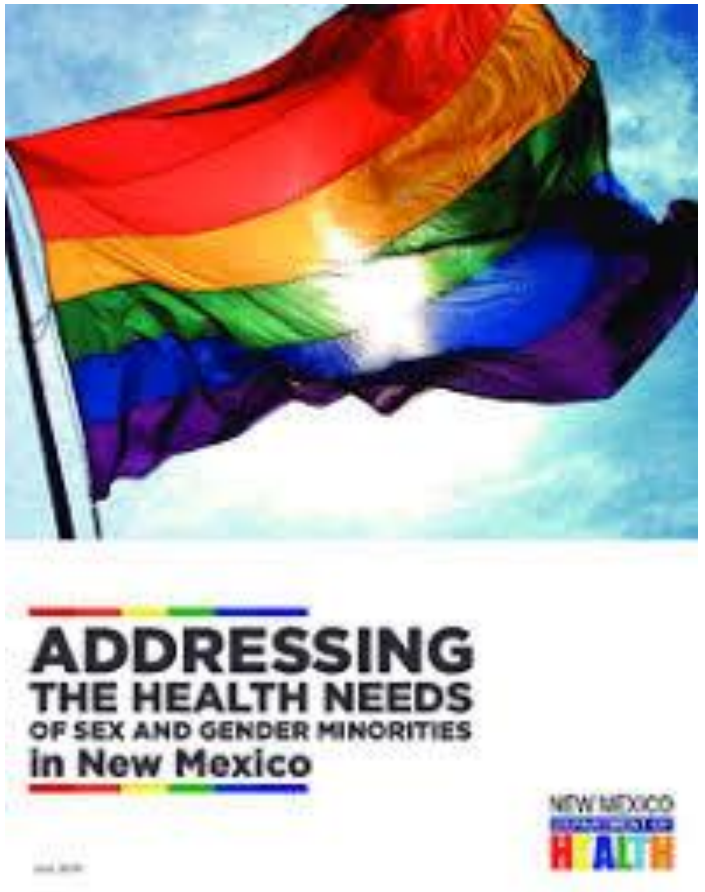
- National studies estimate .6-.8%
- New Mexico BRFSS- 1% adults and 2-4% children

Etiology

- several theories, no evidence

Diagnosis persistence

- Average age of gender identity as TG/GNC 8 years old



institutional discrimination| “injustice at every turn”

2011-6450 transgender and gender non-conforming

EVERY institution [family, job, education, housing]

Healthcare

+ 20% were refused care
+ 50% have had to teach their doctors
+ HIV 4X rate of general population
+ 28% postponed care for fear of discrimination
+ 41% ATTEMPTED suicide (1.6% gen pop)

http://www.thetaskforce.org/injustice-every-turn-report-national-transgender-discrimination-survey/

barriers to treatment

barriers to treatment

i might make a mistake

hormone therapy itself

being on hormones might affect other health issues

trauma history/need for resources

affirming health care

pronouns

it’s SO easy

UCSF Transgender “Center of Excellence”

South East Heights vs. Truman

feminizing hormone therapy

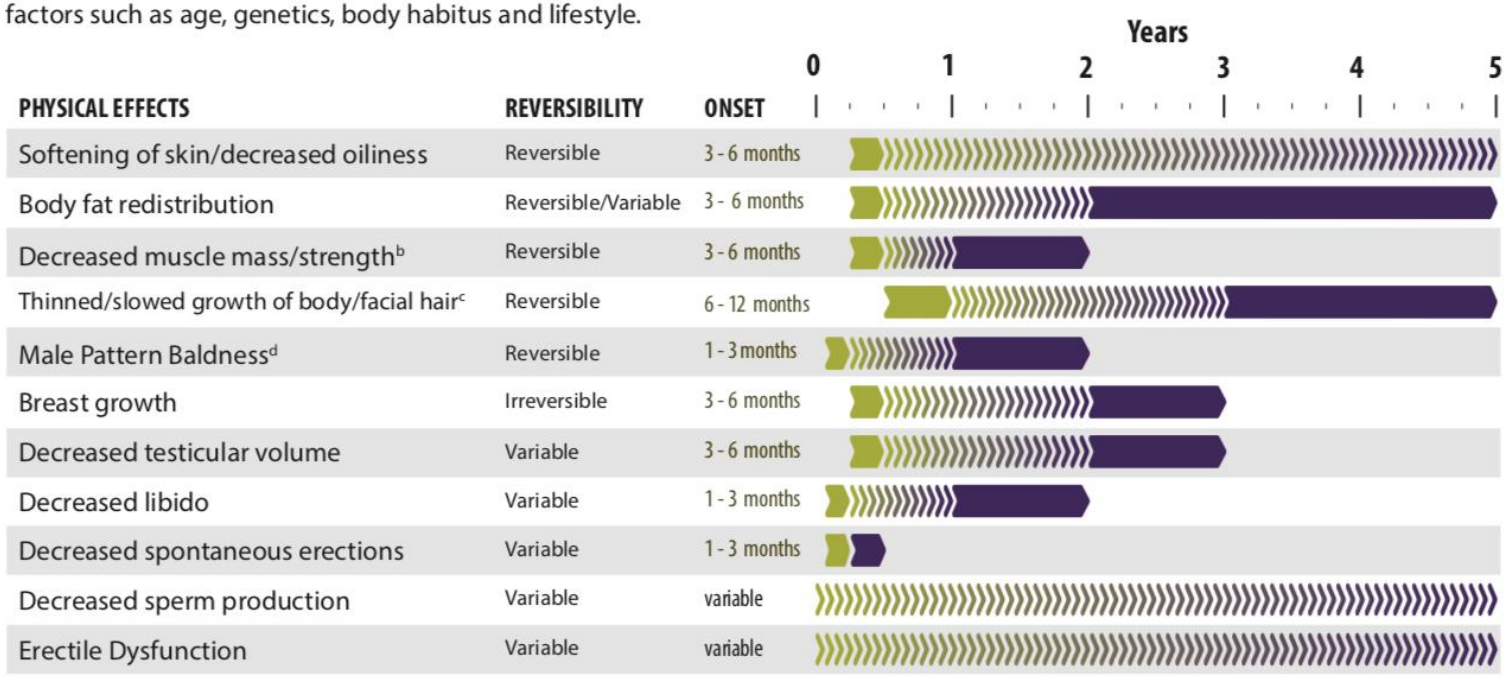
Formulations	Starting Dose	Maximum Dose	Cost* (4 weeks)
Spironolactone	50 - 100 mg OD	200 mg BID	$16.56[a] - $40.58[b]
Cyproterone	12.5 - 25 mg OD	50 mg OD	$32.98[c] - $101.92[d]
Conjugated Estrogen*	0.625 mg OD	1.25 mg OD	$20.01[e]
Estradiol (oral)*	1 - 2mg OD	4 mg OD	$18.53 - $40.14[f] **Covered by ODB with EAP request**
Estradiol Patch (transdermal) *[g]	0.1 mg OD / apply path 2x/week	0.2 mg OD / apply path 2x/week	$39.97 - $69.95[h]
Estradiol valerate** injectable (IM)[i]	10mg q 2/52	10mg q 1/52	$14.20 - $28.40

feminizing hormone therapy

EFFECTS AND EXPECTED TIME COURSE OF A REGIMEN CONSISTING OF AN ANTI-ANDROGEN AND ESTROGEN

The degree and rate of physical effects is dependent on the dose and route of administration[6], as well as client-specific factors such as age, genetics, body habitus and lifestyle.

Hormone treatment results in both reversible and irreversible feminization.



PHYSICAL EFFECTS	REVERSIBILITY	ONSET
Softening of skin/decreased oiliness	Reversible	3 - 6 months
Body fat redistribution	Reversible/Variable	3 - 6 months
Decreased muscle mass/strength[b]	Reversible	3 - 6 months
Thinned/slowed growth of body/facial hair[c]	Reversible	6 - 12 months
Male Pattern Baldness[d]	Reversible	1 - 3 months
Breast growth	Irreversible	3 - 6 months
Decreased testicular volume	Variable	3 - 6 months
Decreased libido	Variable	1 - 3 months
Decreased spontaneous erections	Variable	1 - 3 months
Decreased sperm production	Variable	variable
Erectile Dysfunction	Variable	variable

a) Estimates represent published and unpublished clinical observations
b) Significantly dependent on amount of exercise
c) Complete removal of male facial and body hair requires electrolysis, laser treatment, or both
d) No regrowth, loss stops

Expected Onset
Expected Maximum Effect[a]

masculinizing hormone therapy

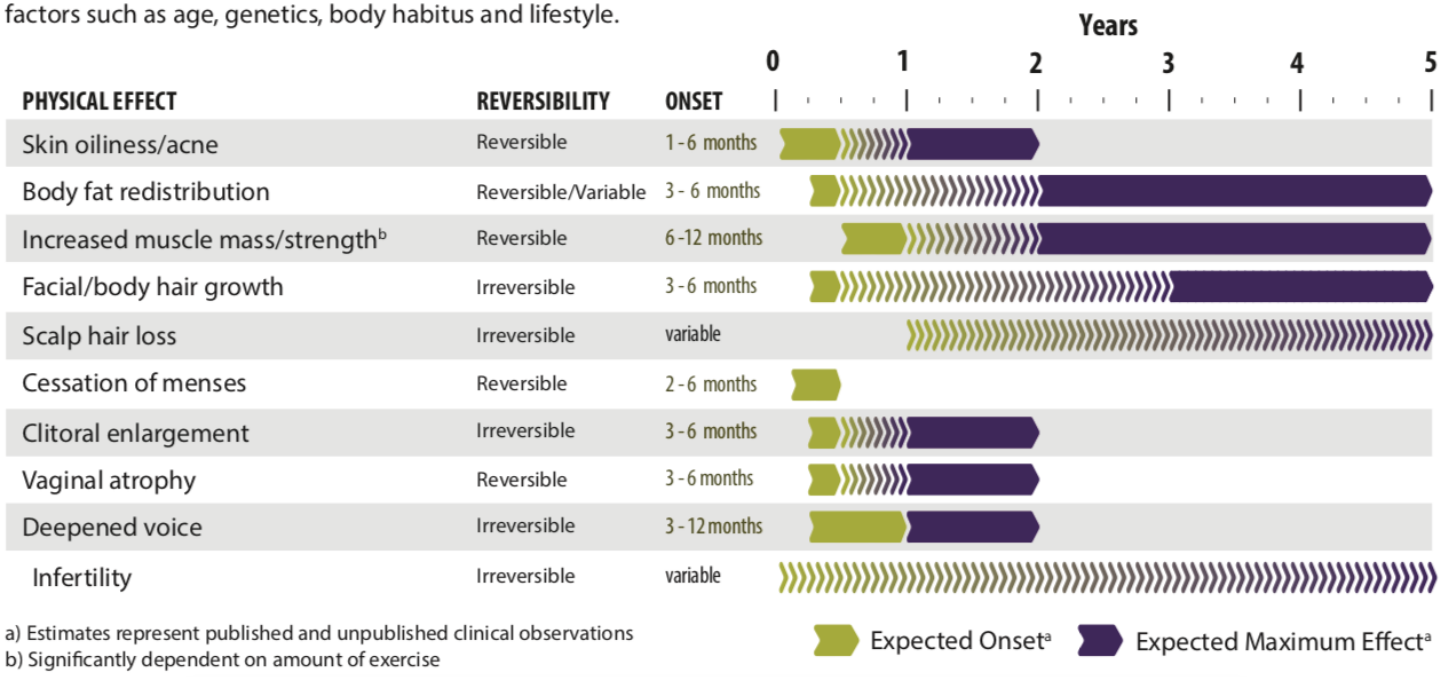
Formulations	Starting Dose	Maximum Dose	Cost Per Unit	Approx. Cost* (4 weeks)
Testosterone enanthate (IM)	50mg q week or 100 mg q 2 weeks	100mg q week or 100 mg q 2 weeks	$69.03 per vial (each vial contains 200mg/mL x 5mL = 1000mg)	$13.81 - $27.60 **Generally approved by ODB with EAP request**
Testosterone cyponiate (IM)	50mg q week or 100 mg q 2 weeks	100mg q week or 100 mg q 2 weeks	$43.31 per vial (each vial contains 100mg/mL x 10mL = 1000mg)	$8.66- $17.32 **Generally approved by ODB with EAP request**
Testosterone Patch (transdermal)	2.5 - 5 mg OD	5 - 10 mg OD	$159.27 / 60 x 2.5mg patches $159.27 / 30 x 5mg patches	$74.33 - $297.30
Testosterone Gel (transdermal)[i]	2.5 - 5g OD (2-4 pumps, equivalent to 25-50 mg testosterone)	5 - 10g OD (4-8 pumps, equivalent to 50-100 mg testosterone)	$85.90 / 30 x 2.5g patches $147.29 / 30 x 5g patches $167.55 / 2 pump bottles[j] **Only gel in packets (not in pump form) covered by ODB**	Sachets $80.17 - $274.94 Bottles $78.19 - 312.76
Testosterone Gel (transdermal, axillary)[k]	1.5 - 3g OD (1-2 pumps, equivalent to 30-60 mg testosterone)	3 - 4.5mL OD (2-3 pumps, equivalent to 60-90 mg testosterone)	$166.89 / pump bottle[l] **Only gel in packets (not in pump form) covered by ODB**	$77.88[a] - $233.65 **Axiron not covered by ODB**

masculinizing hormone therapy

EFFECTS AND EXPECTED TIME COURSE OF A REGIMEN CONSISTING OF TESTOSTERONE

The degree and rate of physical effects is dependent on the dose and route of administration[6], as well as client-specific factors such as age, genetics, body habitus and lifestyle.

Hormone treatment results in both reversible and irreversible masculinization.



a) Estimates represent published and unpublished clinical observations
b) Significantly dependent on amount of exercise

toolkit

RESOURCES

1. Endocrine society guidelines 2017
2. UCSF Transgender Center of Excellence
3. WPATH Standards of Care
4. Rainbow health hormone guides
5. memcclain@salud.unm.edu

LINKS

1.https://academic.oup.com/jcem/article/102/11/3869/4157558

2.http://transhealth.ucsf.edu/trans?page=lib-topic-care

3.http://www.wpath.org/site_page.cfm?pk_association_webpage_menu=1351

4.https://www.rainbowhealthontario.ca/TransHealthGuide/index.html

5. Contact me any time!

HIV Pre-Exposure Prophylaxis (PrEP)

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DEPARTMENT OF MEDICINE

HIV PrEP: Effectiveness Cochrane review 2012

Tenofovir + Emtricitabine compared to placebo for preventing HIV in high-risk individuals

Patient or population: High-risk HIV-uninfected individuals (including serodiscordant couples, men who have sex with men and sex workers)
Settings: High, middle and low income settings
Intervention: Oral Tenofovir + Emtricitabine
Comparison: placebo

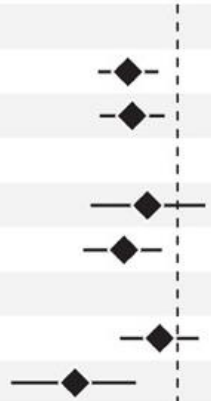
Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Placebo	TDF+ FTC			
HIV infection	Study population		RR 0.49 (0.28 to 0.85)	8813 (4 studies)	⊕⊕⊕⊖ **Moderate** [1]
	39 per 1000	19 per 1000 (11 to 33)			
Serious adverse events	Study population		RR 1 (0.83 to 1.19)	6862 (3)	⊕⊕⊕⊖ **Moderate** [1]

Cochrane Database of Systematic Reviews 2012, Issue 7. Art. No.: CD007189. DOI: 10.1002/14651858.CD007189.pub3.

HIV PrEP: Efficacy

iPrex study 2010: 2499 MSM

Subgroup	FTC–TDF	Placebo	FTC–TDF	Placebo	Hazard Ratio (95% CI)	P Value
	no. of patients		*no. of events*			
Analysis						
Intention-to-treat	1251	1248	38	72	0.53 (0.36–0.78)	0.001
Modified intention-to-treat	1251	1248	36	64	0.56 (0.37–0.85)	0.005
As treated						0.48
<50% Pill use	NA	NA	13	17	0.68 (0.33–1.41)	
≥50% Pill use	NA	NA	23	47	0.50 (0.30–0.82)	
Pill use						0.02
<90% Pill use	NA	NA	28	34	0.79 (0.48–1.31)	
≥90% Pill use	NA	NA	8	30	0.27 (0.12–0.59)	



Grant RM et al., *N Engl J Med* 2010;363:2587-99

HIV PrEP: Efficacy

"In the FTC–TDF group, among subjects with a detectable study-drug level, as compared with those without a detectable level, the odds of HIV infection were lower by a factor of 12.9 (95% CI, 1.7 to 99.3; P<0.001), corresponding to a relative reduction in HIV risk of 92% (95% CI, 40 to 99; P<0.001). After adjustment for reported unprotected receptive anal intercourse, the relative risk reduction was 95% (95% CI, 70 to 99; P<0.001)."

Most frequently quoted by advocates and media

However, this was a nested case-control analysis involving only 77 participants

Grant RM et al., *N Engl J Med* 2010;363:2587-99

Who should consider PrEP?

Men (and transgender women) who have sex with men, unless in mutually monogamous relationship

HIV-discordant couples

Injection drug users

Sex workers

Anyone with multiple sex partners/inconsistent condom use

Anyone with high-risk sex partners (#1-5 above)

Residents of high-prevalence areas

What patients should know

Need to take every day: NOT a night-of or morning-after pill

Intended to be used with condoms, not instead of them

Need to get lab work every 3 months while taking meds

Dearth of data regarding use during pregnancy and breastfeeding (appears safe thus far)

What clinicians should know

Baseline labs: HIV ab, creatinine, HBS ag, HBS ab, HB core ab (IgG/total), pregnancy test

If hepatitis B screening is negative/nonimmune, vaccinate

Every 3 months: HIV ab, pregnancy test

After 3 months, then every 6 months: creatinine

Every 6 months: bacterial STI testing (include all relevant sites: pharyngeal, rectal, urine). Consider hepatitis C and syphilis testing also.

When NOT to prescribe PrEP

If HIV screen returns positive

If baseline renal function is abnormal

If HBS ag is +: consult GI or ID first

If HB core ab is + : consult GI or ID first

Potential toxicities of tenofovir disoproxil fumarate (TDF)

Minor/self-limited: rash (subsides with diphenhydramine), nausea, insomnia

Renal toxicity: increased creatinine, proteinuria/Fanconi syndrome

Osteoporosis

Insurance/payment aspects

TDF/FTC fixed-dose combination (Truvada®) has a formal FDA indication for PrEP

Cost: ~$1200/month

Is covered by all insurances; a few require prior authorization

Copayments may be high

Manufacturer does have copayment assistance programs

DOH/Ryan White programs may help low-income NM residents

Future developments

Intermittent use vs. continuous use

TDF vs. TAF

Other agents, including depot injectables

Resources

https://www.cdc.gov/hiv/risk/prep/index.html

(search “CDC HIV PrEP”)