

Transgender Medicine and Obesity

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May 5 2022

Financial Disclosures

- David E. Harris – “Canadian Obesity Weekend – May 2022”
- Bausch Inc. – Speaker, Advisory.
- Mitigation of Bias:
 - I will not be promoting any medications for weight management in this talk.
There will be minimal to no discussion of medication therapeutics for obesity

CanMEDS Roles Covered: HARRIS - “Canadian Obesity Weekend 2022”

X	Medical Expert (as <i>Medical Experts</i> , physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centered care. <i>Medical Expert</i> is the central physician Role in the CanMEDS Framework and defines the physician’s clinical scope of practice.)
X	Communicator (as <i>Communicators</i> , physicians form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.)
X	Collaborator (as <i>Collaborators</i> , physicians work effectively with other health care professionals to provide safe, high-quality, patient-centred care.)
	Leader (as <i>Leaders</i> , physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.)
X	Health Advocate (as <i>Health Advocates</i> , physicians contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.)
X	Scholar (as <i>Scholars</i> , physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.)
	Professional (as <i>Professionals</i> , physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.)

Outline

- Background to terminology
- Transgender persons living with obesity
- Hormone replacement therapy
- Surgical considerations
- What I will NOT cover: Adolescent and Pediatric care
 - BCMJ, 64(2): Mar 2022, 65-68
 - BCMJ, 64(1): Jan-Feb 2022, 23-25

My Background

- UBC trained Endocrinologist, Rotations in Transgender medicine
- Private practice
- Mayo clinic CME
- Obesity Medicine and Bariatric Surgery

Case Study

- D is a 44 yo person
- Identifies as Non-Binary, born and assigned female
- Has been transitioning for years prior to Endocrine care
- Overtly dressing neutral, more masculinized for ++ years
- Informed consent carried out about Hormone Replacement Therapy, Surgical Reassignment Surgery (SRS)
- Ht 5'9", Wt 270 lbs, BMI 40.5 kg/m²
- Application made for SRS - Mastectomy

It's not about classifying, but supporting

- Gender Identity – a person's sense of being a gender, non-binary, 2-spirit, queer
- Transgender – exp a gender identity not consistent with assigned sex (actv)
- Transsexual – feeling and psychological experience of gender identity not consistent with assigned sex
- Sexual orientation – personal preference
- Cross-dressing – wearing clothing of the opposite sex
- Gender Identity Disorder – incongruence of physical phenotype and gender identity – term no longer used, stigmatizing
 - 'Gender Incongruence'
- Gender Dysphoria – the experience of this state, with reported suffering
- De-transition – reports suggest 3-15% may experience

JCEM, 2009, 94(9): 3132-3154

JCEM, 2017, 102(11):3869-3903

Gooren, LJ. NEJM. 2011; 364:1251-7

DSM-5 – Gender Dysphoria

- Gender incongruence with assigned gender
- Long standing – >6 months, no other active mood disorders
- Two or more of:
 - Desire to be of alternate gender
 - Desire to be treated as different gender
 - Significant incongruence of gender and sexual characteristics
 - Desire for sexual characteristics of other gender
 - Desire to mitigate one's biological sexual characteristics
 - Strong conviction of typical reactions or feelings of other gender
- Distress or distress or impairment in social, work, or other important areas of functioning

WPATH

- World Prof Assoc of Transgender Health, volume 7
- International standards of care in Transgender Health report
 - Care for all persons living as Transgender
 - Hormone Replacement Summaries
 - Surgical Indications and Criteria.....
 - Extensive summary of all available surgical Procedures for gender affirming surgery



WPATH 27TH SCIENTIFIC SYMPOSIUM

MONTREAL, QUEBEC, CANADA

SEPTEMBER 16 - 20, 2022

Pre Courses: September 16 + 17

(Pre Courses include GEI and Surgeon's Only Courses)

Opening Session: September 17, 5PM Local Time

Scientific Program: September 18 - 20

Case Study Cont'd

- D is approved for Mastectomy in ONT
- Refused for surgery at two surgeons in ONT, BMI >30
- No other strong reasoning given, person reaches out to Endo
- Has previously done strong weight management programs – OptiFast900 CORE program at the Ottawa Hospital, considering options for weight management in spring 2022
- This is not about blaming surgeons, we have to review why this exists, and what the evidence basis is....

Transgender persons and Obesity

- Canadian Census – 1/300 Canadians identified as Transgender or Non-Binary, ~105,000 persons identified as such – April 27, 2022

Epidemiology and Population Health

Weight gain and obesity rates in transgender and gender-diverse adults before and during hormone therapy

M. Kyinn¹, K. Banks¹, S. Y. Leemaqz², E. Sarkodie³, D. Goldstein³ and M. S. Irwig ^{1,4,5}✉

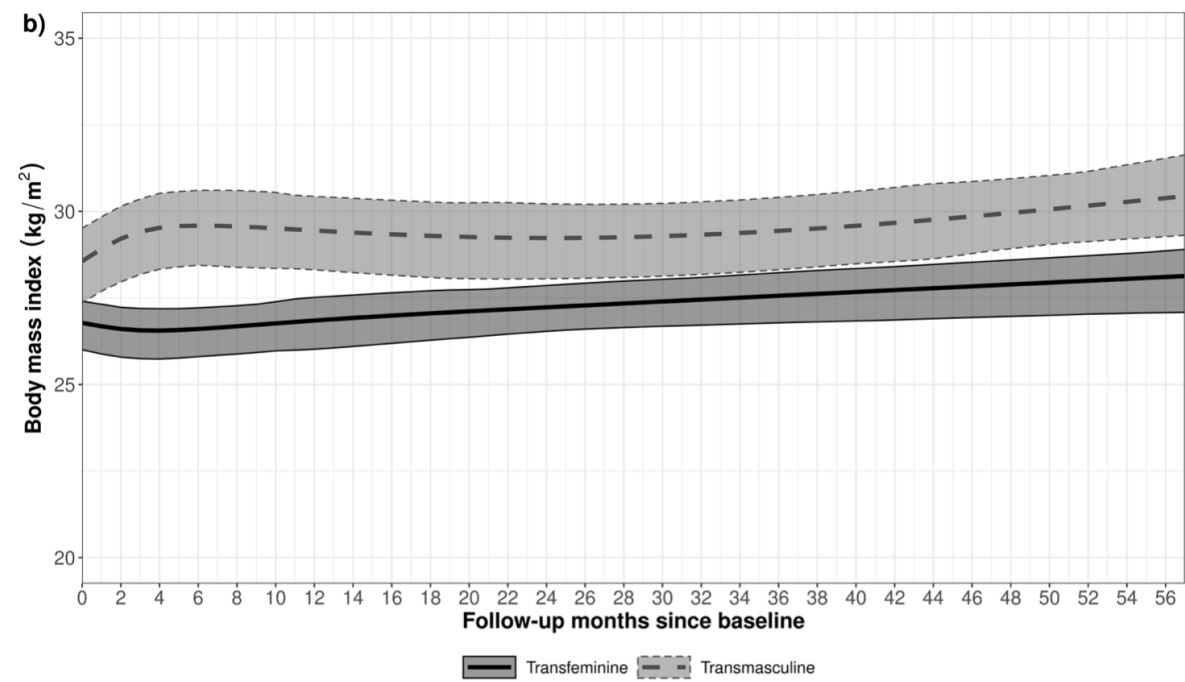
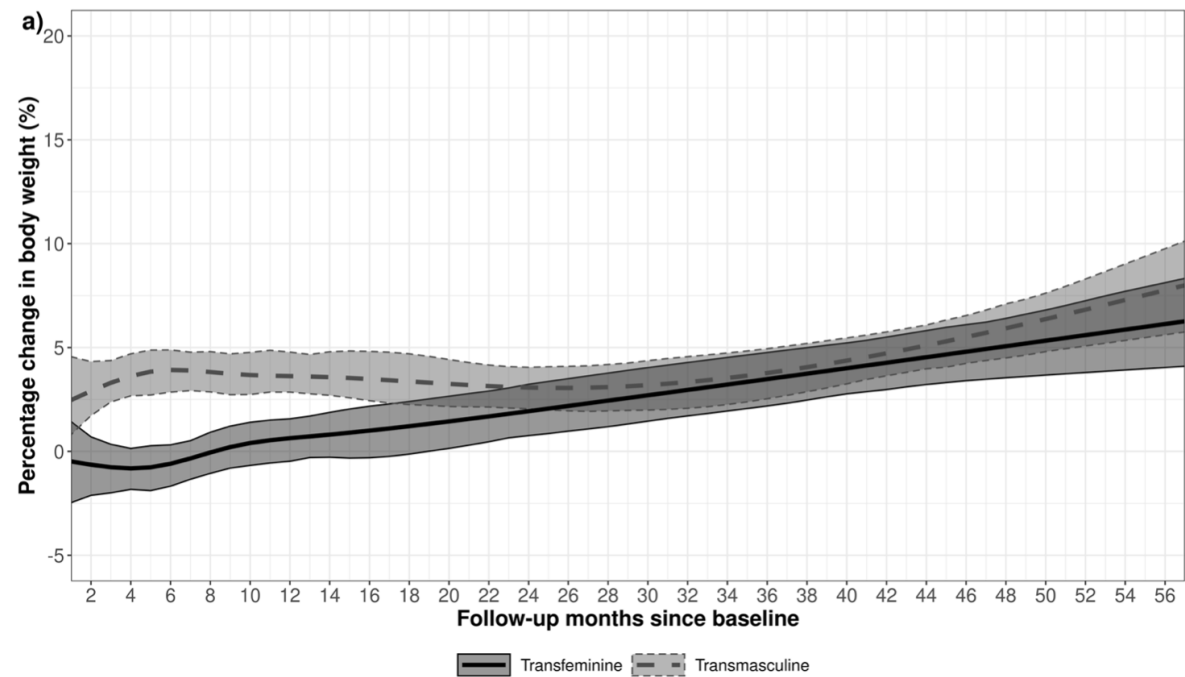
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Weight gain and obesity rates in transgender and gender-diverse adults before and during hormone therapy

- Washington DC study, 2007-15
- Great follow-up – 57 months
- Followed Weight parameters

Table 1. Baseline Characteristics of Study Population.

Characteristic	Overall	Trans Feminine	Trans Masculine
	<i>N</i> = 470	<i>n</i> = 247	<i>n</i> = 223
Weight (kg): Mean (SD)	80.2 (21.7)	82.0 (21.8)	78.2 (21.5)
Body mass index: <i>N</i> (%)			
<18.5	20 (4.3)	10 (4.0)	10 (4.5)
18.5–24.9	160 (34.0)	94 (38.1)	66 (29.6)
25–30	143 (30.4)	82 (33.2)	61 (27.4)
≥30	147 (31.3)	61 (24.7)	86 (38.6)
Comorbidities: <i>N</i> (%)			
Hypertension	57 (12.1)	39 (15.8)	18 (8.1)
Diabetes	10 (2.1)	7 (2.8)	3 (1.3)
Depression	87 (18.5)	43 (17.4)	44 (19.7)
Anxiety	65 (13.8)	29 (11.7)	36 (16.1)



Conclusion

- Interesting study that examined weight measure changes
- We notice that baseline characteristics of people carrying more weight in this study
- Hormone replacement therapy raises risk for weight gain
- Patients are required to take HRT for a year typically prior to many surgeries

HRT Summary

TABLE 1. Basic feminizing regimen in adults. (Adapted from “Endocrine therapy for transgender adults in British Columbia: Suggested guidelines”;⁶ updated April 2015.)

	Estrogen		Androgen antagonists	
Agent	Micronized 17beta-estradiol		Spironolactone	Cyproterone acetate
Brand name*	Estrace	Estradot, Oesclim	Aldactone	Androcur
Administration	Oral	Transdermal	Oral	Oral
Dose range	1–8 mg daily	50–200 mcg patch twice weekly	25–300 mg daily	12.5–50.0 mg daily
Cost of generic agent at usual dose [†] before dispensing fee [‡]	4 mg daily ~\$30 per month	100 mcg patch twice weekly ~\$40 per month	200 mg daily ~\$20 per month	50 mg daily ~\$45 per month
BC PharmaCare benefit	Yes	Possible on case-by-case basis via Special Authority request for patient with venous thromboembolism risk from oral estradiol	Yes	Yes (requires Special Authority)
Progestin options				
Agent	Micronized progesterone		Medroxyprogesterone acetate	
Brand name*	Prometrium		Provera	
Dose range	100–300 mg daily		10–40 mg daily	
Cost of usual dose [†] before dispensing fee [‡]	200 mg daily ~\$115 per month		20 mg daily ~\$20 per month	
PharmaCare benefit	No		Yes	

HRT Summary

TABLE 2. Basic masculinizing regimens in adults. (Adapted from “Endocrine therapy for transgender adults in British Columbia: Suggested guidelines”;⁶ updated April 2015.)

	Injection (intramuscular or subcutaneous)		Transdermal
Agent	Testosterone cypionate	Testosterone enanthate	Testosterone crystals in gel
Brand name	Depo-Testosterone	Delatestryl	AndroGel
Dose range	25–100 mg subcutaneous/intramuscular weekly or 50–200 mg intramuscular every 2 weeks. Adjust dose to achieve mid-normal male testosterone range on sample drawn halfway through injection cycle		2.5–10.0 g daily
Cost of average dose before dispensing fee	50 mg per week ~\$14 per month	50 mg per week ~\$16 per month	5 g daily ~\$160 per month
BC PharmaCare benefit	Yes, with Special Authority stating female-to-male transgender	Yes, with Special Authority stating female-to-male transgender	Possible on case-by-case basis with Special Authority stating female-to-male transgender and contraindication to intramuscular injection

Note: Self-injection techniques for patients are provided in the *Transgender Health Injection Guide* https://fenwayhealth.org/wp-content/uploads/2015/07/COM-1880-trans-health_injection-guide_small_v2.pdf.

Incidence of Complications in Chest Wall Masculinization for the Obese Female-to-Male Transgender Population: A Case Series

Idanis M. Perez-Alvarez ¹, Elizabeth G. Zolper ², Jonathan Schwitzer ², Kenneth L. Fan ², Gabriel A. Del Corral ^{3*}

Chest wall surgery report

- Classically persons with obesity and trans-male are denied surgery due to complications
- Maryland, retrospec, 2018-19
- BMI>30
- Primary outcome – surgical site complications
- Results:
 - N=27, Average BMI – 39.2
 - D cup size average, 80% grade 3 ptosis
 - ~15% active smokers
 - 70% mood disorder
- Complications:
 - 31.5% overall at 2.1 mo followup
 - 18.5% partial nipple graft loss
 - 5.6% total nipple graft loss
 - 3.7% seroma
 - 2.9% Infection
 - No OR returns
- 77.8% satisfaction rate post op
- Conclusions:
 - Complication rate is apparently similar to persons with non-obese weight ranges

Breast Surgery

Female-to-Male Gender-Confirming Drainless Mastectomy May Be Safe in Obese Males

Eric M. Pittelkow, MD; Stephen P. Duquette, MD; Farrah Rhamani, BS;
Corianne Rogers, MD; and Sidhbh Gallagher, MD

Chest wall surgery at different weight ranges

- Retrospective review
- N=145
- Mastectomy w Nipple graft
 - 1. BMI <30
 - 2. BMI 30-39.9
 - 3. BMI 40-49.9
 - 4. BMI >50 (super)
- Results
 - Breast tissue resected (grams) increased with BMI ranges
 - OR times higher with BMI ranges
 - 129 min vs 171 min
 - Significant, positive increase in infections: 3, 4;
 - But no differences b/w groups ½
 - Higher revision rate in non-obese
- Conclusions
 - Chest wall surgery could be considered at BMI range 30-39.9,

Summary

- Several studies have now looked at BMI and sexual reassignment surgery, and many recent study show NO significant correlation
 - Other types that I didn't review today: eg. penile inversion with Vaginoplasty
- Willingness to pay for the OR facility (eg. admission, revision, tx complications) to accommodate for complications becomes a core part of this debate, as we see from surgical studies they are advocating for the BMI <30 to be challenged, but there is probably a reasonable argument BMI<40 is optimal for reduction of complication rate

Conclusions

- Transgender care is about treating suffering, dysphoria, but also celebrating changes on the journey of the person transitioning
- Obesity rates are higher in the trans-masculine population, and HRT causes a progression in weight in all classes of weight and transgender or Non-binary person (HRT are obesogenic agents)
- BMI has been used as a cut off to avoid complications classically for specific reassignment surgeries (mainly chest), but this is complicated by RECENT studies demonstrating weight is not a correlated co-variant