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Supplementary Table 2 - Included study characteristics and data

Author	Setting	Population	Data collection period	Follow-up period	Referred	Assessed	Age at referral / assessment	BR-sex at referral / assessment	Diagnosis / outcome of assessment	Reasons for discontinuing assessment	Receipt of psychological treatment	Eligible / referred for hormone treatment	Reasons for not seeking or receiving treatment	Started hormone treatment	Receipt of puberty / menstrual suppression	Receipt of masculinising/feminising hormones	Continuation / discontinuation of hormone treatment	Reasons for discontinuing treatment	Receipt of surgery
Australia																			
Hewitt 2012	Gender identity clinic in tertiary paediatric referral centre at the Royal Children's Hospital, Melbourne, Victoria	Children and adolescents age 0-17 referred to clinic for gender dysphoria.	Referred between 2003 and 2011	Follow-up ranged from 0 to 8.2 years	39	39	NR	NR	18 were pre-adolescent and continued with psychological counselling. 21 (13 bm, 8 bf, age 10.0 (4.13)) were approaching puberty or pubertal, and were referred for diagnosis of GD. Of these, 4 experienced resolution of GD or acceptance of gender variance with ongoing counselling and 17 experienced persistent GD with increased distress at puberty.	N/A	18 of the 39 were pre-adolescents who continued to have developmental psychological counselling	17 11 made or planned to make application to Family Court for treatment	Reasons for not seeking court-approved hormone treatment included: n=2 age close to 18 (court approval not required); n=1 court financial cost; n=1 family not supporting treatment; n=1 purchased oestrogen independently. 1 initiated before completion of puberty.	8 in total: 7 received court approved treatment (3 bm, 4 bf) 1 bm purchased oestrogen independently	4 (4 received Gnrh-a and CSH, 2 received Gnrh-a only). Initiated age 10–16. 1 received oestrogen and progesterone then medroxyprogesterone acetate for menstrual suppression before phase 1 treatment with Gnrh-a.	4 (4 received both Gnrh-a and CSH; 2 received CSH only). Initiated age 15.6–16.	All patients who had Gnrh-a went on to have CSH. Follow-up (ranging from 0–8.2 years) showed that no patient has ceased hormone treatment.	N/A	NR
Tollit 2021	Gender identity clinic in tertiary paediatric referral centre at the Royal Children's Hospital, Melbourne, Victoria	Children and adolescents age 0-17 referred to clinic with self-reported gender incongruence or seeking clinical guidance regarding their gender, and attended their first appointment within the study period.	First seen between January 2007 and December 2016	NR	359	359	Referral: All *14.3 (3.6 to 18.1) bf* *14.8 (3.4 to 18.1) bm *12.4 (3.8 to 17.9)	Referral: 166 (46.4%) males and 193 (53.8%) females	296 (81.1%) diagnosed with gender dysphoria (DSM-5). 41/354 (11.5%) changed gender identity over time; bm 21/165 (12.7%) and bf 20/191 (10.5%). Of those who were transgender at presentation 3.3% and 2.6% later identified as cisgender and non-binary respectively. Of the 26 patients who identified as non-binary at presentation, 31% later identified as transgender and 11.5% as cisgender.	NR	NR	236 (112 bf, 122 bm)		23 patients (8.8%) received both Gnrh-a and CSH 21 (13.2%) received Gnrh-a alone 25 (10.7%) received CSH alone 79 patients (33.8%) received either Gnrh-a and/or CSH 57 bf (50.9%) received menses suppression, and 7 bm (n= 7, 5.7%) were treated with anti-androgens Overall, 73/112 (65.2%) bf had at least one form of medical treatment and 45/122 of bm (36.9%). 39 received menses suppression or anti-androgens only. No children received any medical treatment Gnrh-a treatment: bm in the young adolescent group (10-14) (45.5%) and adolescent group (14+) (43.6%), bf 10-14 (17.2%) and 14+ (14.7%) 51.2% bf in 10-14 and 40.3% in 14+ received medication to suppress their menses CSH treatment: 34.6% bm treated with oestrogen and 41.2% bf treated with testosterone; 1 assigned female <14 years accessed CSH	54/236 (23%) Gnrh-a; bm 38/122 (32%) and bf 15/112 (13.4%) and 39/234 menses suppression or anti-androgens only. Average age at initiation of Gnrh-a was *14.7 (3.1, 10.3-17.8). For bm *15.0 (3.1, 10.10-17.2) and for bf *14.1 (4, 10.8-17.8). Average age at initiation of menses suppression in bf was *14.6 (2.3, 10.0-18.1). Average age at initiation of anti-androgens in bm was *16.8 (1, 11.2-19.0).	48/234 (20.5%) CSH; bf 29/112 (25.9%) more likely to receive hormones than bm 18/122 (15.6%). Average age at initiation was *17.4 (1.3, 14.1-18.8). For bm *18.0 (1, 14.8-18.8) and for bf *17.0 (1.6, 15.1-18.8).	Single patient stopped Gnrh-a without progressing to hormones Single patient stopped CSH unexpectedly	NR	NR
Canada																			
Chiniara 2018	Large paediatric gender clinic at Hospital for Sick Children, Toronto. Medical clinic developed towards meeting medical needs of transgender adolescents.	Adolescents (age 12-18) presenting to clinic. Eligibility presence of gender dysphoria and desire for medical treatment.	Initial appointments from January 2014 to June 2016	Treatment initiation during study period	218	203	Assessment: bef 16.3 (1.63), bm 14.1 (1.7)	194 (76.8%) bf, 47 (23.2%) bm	12 adolescents did not follow up at the clinic after the first visit. 3 adolescents who were assessed were not included in the analysis because their initial visit had occurred at another clinic.	NR	NR	NR	NR	NR	115 treated with Gnrh-a during study period.	75 received hormones during the study period.	NR	NR	NR
Khatchadourian 2014	British Columbia Children's Hospital Transgender Programme - multidisciplinary team approach providing medical care and psychosocial support where adolescents referred from broader gender clinic.	Adolescents referred to programme for medical therapy. Eligibility criteria at least Tanner stage 2 and confirmed diagnosis of gender dysphoria.	Seen from January 1998 to December 2011.	NR	NR	84	Assessment: 16.6 (2.2)	45 (53.6%) bf, 39 (46.4%) bm	NR	NR	Most were receiving psychotherapy.	NR	NR	NR	27 (32%) started Gnrh-a (15 (33.3%) bf and 11 (29.7%) bm). Mean age at initiation 14.7 (1.9). 10 (37%) at Tanner stage 2-3 and 16 (59%) 4-5 (3 not reported). 12 received Gnrh-a at first visit. Median time from first visit to treatment 0.2 month (range 0-2.2). 25 (67.6%) bm took spironolactone as alternative to Gnrh-a (mean age 17.6 (1.9), all at Tanner stage 4-5).	43 (75%) adolescents treated during study period. 39 (87%) bf and 24 (65%) bm. Mean age 17.4 (1.9). 7 (11%) at Tanner stage 2-3 and 56 (89%) at 4-5 (3 not reported). 19 transitioned from Gnrh-a (14 bf, 5 bm). Median time from Gnrh-a initiation to CSH start 11.3 months (range 2.2-42). 15 received treatment at first visit. Median time from first visit to treatment 4.6 months (range 0-62).	Gnrh-a: Of the 14 bf who progressed to CSH, 7 continued Gnrh-a and 7 stopped after median 3 years (0.2-9.2). Of the 5 bm, 1 discontinued Gnrh-a. Of other 6 bm, 3 discontinued Gnrh-a. Data for remaining bf not reported. Cross-sex hormones: no patient discontinued permanently. 3 bf stopped temporarily (2 due to psychiatric difficulties, 1 due to distress over androgenic alopecia) but later resumed.	Gnrh-a: Of those who progressed to CSH, Gnrh-a was stopped at time of surgery (n=6), at start of CSH (n=2), due to side effects of Gnrh-a after 2 months of treatment (n=1). Of 3 who discontinued Gnrh-a monotherapy, 1 stopped after a few months due to emotional lability, 1 stopped but still wanted CSH (reason for stopping Gnrh-a not reported), 1 was undecided on gender at initiation of treatment and discontinued after 13 months and chose not to pursue transition.	9 (21.4%) bf had mastectomy (median age 18.1, range 14.9-22.1) during observation period. Of these 9, 6 proceeded to hysterectomy and salpingo-oophorectomy (median age 18.9, range 16.5-22.1), 1 other had hysterectomy and salpingo-oophorectomy (no mastectomy). 1 bm underwent elective breast augmentation surgery and tracheal shaving. Two had penectomy, orchidectomy, and vaginoplasty (at 18 and 21 years of age) during observation period.
Zucker 2010	The Gender Identity Service, which is housed within the Child, Youth, and Family Program at the Centre for Addiction and Mental Health, Toronto	Adolescents referred consecutively to and then assessed by the service.	Referred and assessed from 2000 to 2009	Longest time from assessment to follow-up was 10 years. Some patients had only recently been assessed.	165	109	Assessment: 16.8 (1.1)	55 (50.5%) bf, 54 (49.5%) bm	109 were assessed for gender dysphoria - outcome not reported. 56 of 165 adolescents were referred and assessed for other reasons: transvestic fetishism without co-occuring gender dysphoria (n=35), cross-gender behaviour with no explicit desire to be opposite sex and no differentiated sexual orientation (n=6), sexual minority adolescents referred due to parental concern and/or psychosocial or sexual problems (n=15).	N/A	NR	46/109 (50.6%) were recommended for puberty suppression (41 (74.5%) bf, 26 (46.3%) bm). Mean age 17.05 (1.76). Of the 46 not recommended (14 bf, 29 bm, mean age 16.58 (1.76)), 5 bm were later recommended for puberty suppression.	8 adolescents (6 bf and 2 bm) decided against treatment. 2 adolescents (bm) did not receive recommendation for treatment as did not attend feedback session. Unknown for 11 (4 bf, 3 bm) due to no follow-up.	Of the remaining 65, 1 patients were already receiving treatment at baseline (1 bf receiving cob, 2 bm receiving either puberty suppressing treatment or started cob). The other 60 started treatment following recommendation (23 bf, 16 bm). 1 bm who was not recommended for treatment received puberty suppressing treatment via a therapist.	60 of those recommended, started puberty suppressing treatment (23 bf, 16 bm) and 2 had received this at baseline. Status of 5 later recommended unknown. 1 additional bm not recommended for treatment received puberty suppressing treatment via a therapist.	NR	NR	NR	NR
Finland																			
Vehmas 2021	Adolescent gynecology clinic at Helsinki University Hospital	Referred to gender identity service due to symptoms of gender dysphoria before the age of 18 years subsequently diagnosed with gender dysphoria (ICD-10) and further referred to the adolescent gynecology clinic at Helsinki University Hospital for CSH.	Referred between January 2011 and December 2018	NR	NR	124	Assessment: *17.7 (14 to 19.8)*	104 (83.9%) bf and 20 (16.1%) bm	NR	NR	NR	124	N/A	124	64 bf prescribed lynestrenol (a progestin regimen) to suppress menstruation. At assessment, 12 bf had already used a progestin / contraceptive to suppress or prevent menstruation.	124 started hormone treatment (no data provided) At assessment, 3 bm reported use of under-the-counter hormonal treatment (included estradiol, cyproterone acetate and spironolactone)	NR	NR	NR
Israel																			
Segev-Becker 2020	Israeli Paediatric Gender Dysphoria Clinic at Dana-Dwek Children's Hospital in Tel Aviv Medical Centre	Consecutive children and adolescents with gender dysphoria (DSM-5) less than 18.	Referred between March 2013 and December 2018	Median follow up duration was 1.2 years (range 0 to 5.1 years)	106	106	Referral: *15.5 (4.6 to 18.1) Prepubertal group (n=10): *7.9 (4.3 to 10) Pubertal group (n=96): bef 15.9 (1.7) and bm 15.2 (1.7)	47 (44.3%) bm and 59 (55.7%) bef Prepubertal group: 9 bm and 1 bef Pubertal group: 38 bm and 58 bef	The majority of patients had been evaluated prior to referral and diagnosed with gender dysphoria according to the DSM-5 criteria prior to their first visit to the gender clinic. Those without a diagnosis were referred to mental health professionals experienced in child and adolescent gender development. Pre-pubertal children (n=10; 9m+9 and bf+1) were also offered psychological support.	NR	NR	96	NR	77	77 (80%) Gnrh-a at 15.4 (1.4, range 11 to 18.5)	65 either concurrently or later (age 16.5 (1.3), range 13 to 18.8).	2 bm receiving Gnrh-a and low dose oestrogen for 3 months discontinued. 19 patients chose not to pursue masculinising/feminising hormones at the time of analysis.	Discontinuation reasons: both chose not to continue to transition (1 autism spectrum condition, 1 homosexual male who was lost to follow up). Reasons for not starting masculinising / feminising hormones: Lack of complete GD diagnosis (n=12), lack of parental consent (n=6), delaying for fertility preservation (n=1) and others (n=3).	15 bf underwent breast reduction at *17.4 (16.3 to 19.3), 2 bm underwent breast augmentation and 2 bef underwent a vaginoplasty at <18.
Netherlands																			
Arnoldussen 2020	Specialised gender identity clinic - Center of Expertise on Gender Dysphoria at VU University Medical Center in Amsterdam.	All consecutively referred adolescents registered at clinic who could be potentially eligible for medical interventions.	Referred and registered between 2000 and 2016	NR	1072	965 completed assessment	Assessment: 14.6 (2.2), range 10.5–18.5 years	668 (62.3%) bef, 404 (37.7%) bm	908 (84.7%) were diagnosed with a form of gender dysphoria (using DSM-IV-TR between 2000 and 2014, and DSM-5 from 2015). 57 (5.3%) were not diagnosed. 9 of referred with diagnosis per year ranged from 70% to 97.6%. For 107 (10%) the diagnostic process ended early so diagnosis remained unknown.	For the majority, adolescents ended process due to discontinued wish for medical treatment. For a minority, psychologist ended process because psychological/social problems interfered with diagnostic assessment.	NR	908 (diagnosed)	NR	Mean % of adolescents diagnosed with gender dysphoria who started either treatment was 77.7% (range per year 53.8-94.9%). 846 extracted from graph.	NR	NR	NR	NR	NR
Brik 2020	Curium-Leiden University Medical Centre gender clinic in Leiden.	Children and adolescents registered at the clinic.	Started Gnrh-a between Nov 2010 and 1 Jan 2018.	Follow-up to July 2019.	NR	269 (registered)	NR	NR	216 of those registered were pubertal and within appropriate age range for treatment. Of these, 39 were not diagnosed with gender dysphoria, 9 had co-existing problems that interfered with diagnostic process and/or might interfere with successful treatment, 10 diagnostic evaluation ongoing, 9 had stopped attending assessment appointments.	NR	11 adolescents who received prolonged Gnrh-a treatment because of mental health and/or psychosocial problems had regular (approximately monthly) appointments with a psychologist at the gender clinic (n = 5) and/or received support from a local MHP (n = 9) during this period.	147	6 did not wish to receive hormone treatment	163	163 received Gnrh-a (38 bm median age 15.0 (range 11.1-18.6), 105 bef age 16.1 [10.1-17.9]). Median duration was 0.8 years (range 0.3–3.8). Prolonged use in 20 adolescents (3 bm, 17 bef) - reasons reported in paper.	125 progressed to hormones at the service: 36 bm (median age 16.2 (range 14.5-18.6)) after 1.0 (0.5-3.8) year of Gnrh-a, and 89 bef (median age 17.1 (14.9-18.8)) after 0.8 (0.3-3.7) years. 6 not yet eligible, 6 referred to another gender clinic (1 needed more time to decide, 5 not yet eligible), 1 later started as adult, 1 did not want treatment.	9 (1 bef, 1 bm) discontinued Gnrh-a after a median duration of 0.8 years (0.1-3.6). Discontinuation of masculinising/feminising hormones not reported.	6 (4 bef, 1 bm) no longer wanted medical treatment. 1 bf decided she did not want to live as a boy but dreaded breast development and menstruation; 1 bf still felt like a man but was happy to be "just me instead of a he or a she"; 1 bf felt in between genders; 1 bf expressed an inner feeling that she was a woman during treatment; 1 bm indicated he was happy living as a man. 2 later started masculinising/feminising hormones (1 as adolescent, 1 as adult), 1 re-started Gnrh-a after 5 months and progressed to hormones, and 1 still wanted hormones but was not yet eligible. Of these 2 experienced side-effects from Gnrh-a, 1 stopped treatment due to severe nausea and rapid weight loss 2.2 years into treatment - no cause determined, and 1 stopped due to difficulties attending clinic/pharmacy for injection/medication.	NR
de Vries 2011 and de Vries 2014	Center of Expertise on Gender Dysphoria, VU University Medical Center, Amsterdam	Consecutively referred adolescents.	Considered eligible for medical intervention between 2000 and 2008	To 2009 for masculinising or feminising hormones (de Vries 2011). To 2012 for surgery (de Vries 2014).	196	196	NR	NR	NR	NR	Treated adolescents were all regularly seen by one of the clinic's psychologists or psychiatrists. No other details provided.	140	NR	140 (111 prescribed Gnrh-a and followed-up in the study plus 29 who were age 16 and over so started masculinising/feminising hormones)	111 prescribed Gnrh-a (mean age at initiation for 70 who progressed to CSH during study 14.8 (1.9)).	Of 111 who started Gnrh-a, 70 subsequently started hormones up to 2009 (33 bm, 37 bef, mean age at initiation 14.6 (1.9)). Another 29 who were age 16 and over at diagnosis were prescribed hormones without first receiving puberty suppression.	NR	NR	Of 70 who started hormones, 62 had undergone surgery (1 bm died from postsurgical problems), 3 were not eligible for surgery, 5 surgical status not known. Of 55 who had surgery and took part in study, mean age at surgery was 19.2 (0.9). There were 22 bm and 33 bef.

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Wiepjes 2018	Specialised gender identity clinic - Center of Expertise on Gender Dysphoria at VU University Medical Center in Amsterdam.	All people who attended a gender identity clinic. Information on first visit presented. Registered but not visited were excluded.	Seen from 1972 to Dec 2015	% starting hormone treatment 5 years after initial unit, gonadectomy 5 years after starting hormone treatment.	NR	1360 (812 adolescents age 12-18, 548 children age <12)	Assessment: adolescent *16 (15, 17); child *9 (7, 10)	737 (54.2%) bif, 623 (45.8%) bim	NR	NR	NR	NR	NR	816 (595 adolescents and 221 children)	623 (41.0%) adolescents (28.7% bim, 50.8% bif) 221 (40.3%) children (33.8% bim, 49.1% bif)	327 (98.1%) of 333 adolescents (95.9% of bim, 99.3% of bif) who started puberty suppression continued to hormone treatment. A further 262 (52.2%) adolescents (63.9% bim, 30.8% bif) started hormones without puberty suppression because they were too old to start puberty suppression at diagnosis.	4 (1.9%) adolescents (0 (4.1%) bim, 2 (0.7%) bif) who started puberty suppression stopped and did not start hormone treatment. Discontinuation of masculinising/feminising hormones not reported.	NR	Of adolescents who were treated with hormones for at least 1.5 years and were at least 18 years old, 78.2% underwent gonadectomy (76.3% of bim - orchiectomy, 77.2% of bif - oophorectomy). Numbers not reported.
Scotland																					
McCallion 2021	Paediatric Endocrinology, Royal Hospital for Children, Glasgow	Young people diagnosed with gender dysphoria referred for puberty suppression with GnRH-a following assessment by mental health care professionals.	Referred between 2011 and 2019	Median follow up 1.9 years (range 0.1 to 5.9 years)	NR	91	Assessment: *14.6 (8.8 to 17.4); bif *14.1 (8.7 to 17.4) and bim *15.1 (9.8 to 17.6)	59 (65%) bif and 32 (35%) bim	NR	4 did not wish to proceed 2 pre-pubertal 1 medical comorbidities 1 unable to have appropriate assessments prior to starting treatment	NR	79		79	79 at age *14.8 (9.7 to 18) (51 bif at age *14.2 (9.7 to 17.6) and 28 bim at age *15.3 (11 to 18)). In 15 of the young people who received puberty suppression (11 bif and 4 bim), treatment started at an early pubertal stage (Tanner stage 2 or 3).	45 at *16.6 (16 to 18.8) (28 bif at age *16.4 (16 to 17.5) and 13 bim at age *16.5 (16 to 18.8))	6e (8%) young people discontinued GnRH-a following a duration of *6 months (6 to 18). Age at start of treatment was *15.2 (15.0 to 15.4). 79 young people who continued treatment were age *14.6 (9.7 to 18.0). One person discontinued masculinising/feminising hormones after 6 months.	Of the 6 who discontinued GnRH-a, for 3 gender dysphoria had desisted and for 3 treatment was stopped because they were not compliant with the treatment protocol. Of the 4, 3 (67%) had a mental health disorder and 2 (50%) had autism spectrum condition, the corresponding figures in those who continued treatment were 29 (38%) and 12 (16%). bim 4/28 (14%) and bif 2/51 (.4%). For the single person who stopped hormones, their gender dysphoria had desisted.	NR
Spain																					
DeCastro 2022	Catalonian Gender Identity Unit; Referrals made by pediatricians, general practitioners, mental health specialists or endocrinologists from Catalonia	All children and adolescents under 18 who attended the clinic	Attended between January 1999 and December 2016	Follow-up was an average of *2.6 years (4.7).	NR	140	OF 124 who were confirmed transgender minors, 102 were adolescents (age 12 to 17 y) and 21 were children (<12).	OF 140 assessed, bim:bif ratio was 2.1 in children and 1.1:2 in adolescents. OF 124 who were confirmed transgender minors, bim:bif ratio was 1.1:2 with no difference in age categories.	126 were confirmed transgender minors, 7 were under evaluation at the end of the study (6 of whom were children), 7 were not transgender, and 2 abandoned the follow-up before the assessment was completed. At the end of the study, 97.6% persisted in their identity, follow-up of *2.6 years (4.7). 56.4% followed-up for at least 2 years and 29.8% for at least 5 years. In the children all of them persisted in their affirmed gender, with follow-up of at least 2 years in 38.1% (n = 8) and at least 5 years in 19.0% (n = 3). Three of the transgender children became adolescents and one reached adulthood during the follow-up period.	NR	NR	NR	NR	1 of 3 adolescents (bim) who was identified as desisters at follow-up expressed doubts about being transgender during the third year of follow-up without having initiated hormonal treatment. Confusion regarding gender identity and sexual orientation was observed.	NR	13 (10 bim and 3 bif) were prescribed GnRH-a, average age 13.3 (6.5 to 17.4)	35 (13 bim and 21 bif) were prescribed hormones, average age 17.3 (15.3 to 26.2)	2 of 3 desisters (bim) identified at follow-up experienced doubts about being transgender after initiating hormones. For one, this occurred in adolescence in the second year of follow-up (confusion regarding both their gender identity and sexual orientation was observed). It is unclear whether they discontinued treatment. The other experienced doubts during adulthood, after 46 years of follow-up and a completed transition (socially, hormonally and surgically). At the end of follow-up, the subject was ambivalent about their gender identity, which resulted in low adherence to hormone treatment.	NR	NR
Estevez de Antonio 2013	Andalusian Gender Team which was formed in 1998 at Carlos Haya University Hospital, in Malaga, Spain	Children and adolescents with gender dysphoria.	Seen between 2000 to 2012	NR	NR	141	15 age <12 years (12 bim and 3 bif) and 126 age 12-17 (98 bim and 32 bif)	107 (75.9%) bim and 34 (24.1%) bif	Of the 15 children, gender dysphoria desisted in 2 bim and 11 were still under psychological evaluation. Of the 126 adolescents, 7 dropped out (all bim) and in 1 bim gender dysphoria desisted. Three were excluded (meaning unclear) and 28 were still under psychological evaluation.	NR	NR	NR	NR	n= 89 (2 children and 5 adolescents (all bim) received luteinising hormone-releasing hormone analogues and 82 adolescents received masculinising or feminising hormones)	7 bim (2 children and 5 adolescents)	82	NR	NR	14 bif had re-assignment surgery and 22 bim genitoplastic surgeries; 46 were awaiting surgery
UK																					
Costa 2015	Gender Identity Development Service (GIDS) in London	Consecutive series of adolescents referred to service.	Referred between 2010 and 2014	Time 0: baseline assessment Time 1: 6 months from baseline and eligibility for puberty supression Time 2: 12 months from baseline Time 3: 18 months from baseline	436	201	Referral: 15.74 (1.38) Assessment: 15.52 (1.41)	Referral: bim/bif ratio 1:1.7 Assessment: 1:1.6	All 201 adolescents who completed the diagnostic procedure fulfilled DSM-IV-TR criteria for Gender Identity Disorder. 235 adolescents did not complete the diagnostic procedure.	NR	201 received psychological support.	121	60 were classified as immediately eligible. 61 were classified as delayed eligible as clinicians needed more time to make the decision of starting GnRH-a because of comorbid psychiatric problems and/or psychological difficulties.	121	60 immediately eligible started GnRH-a 0.75 ± 0.59 years from baseline (after assessment) 61 delayed eligible started 1.5 ± 0.61 years from baseline	NR	NR	NR	NR	NR
US																					
Chen 2016a	Paediatric Endocrinology clinic, Indianapolis	All patients seen in clinic for gender dysphoria, gender identity disorder or gender identity.	Seen in the clinic between January 2002 and April 2015	NR	NR	38	Assessment: 14.4 (1.1)	24 (62.1%) bim and 22 (57.9%) bif	At presentation, 29% had received a GD-specific psychological evaluation and recommendation for treatment. 57.9% had pursued an RLE (real life experience - living full-time as identified gender) which is a criteria for masculinising / feminising hormone treatment.	NR	NR	NR	NR	15 (5 bim and 10 bif)	15 received puberty suppression at average age of 15.5 (1.1) 9 GnRH-a (2 bim and 7 bif) 3 bif progestins 3 bim androgen-receptor blocker	8 of the 15 who received puberty suppression progressed to hormones (4 bim and 4 bif) at average age of 16.2 (1.4)	NR	NR	NR
Chen 2016b	Gender and Sex Development Program at the Ann & Robert H. Lurie Children's Hospital of Chicago (formerly known as Children's Memorial Hospital), Illinois	Eligible patients are youth under 25 years of age, and parental participation is required for youth under the age of 18.	July 2013 to February 2016	NR	NR	220	Assessment: 14 were age <=11 (10 bim), 154 were 12-18 (59 bim) and 12 were >=19 (4 bim)	100 (45.5%) bim and 120 (54.5%) bif	NR		103 patients had initial clinical appointments with a behavioral health clinician (reason / provision unclear)	NR	116	34 started on GnRH-a	20 started on oestrogen and 62 started on testosterone	NR	NR	To date, 24 patients have been seen for consultation and 7 have completed gender-affirming chest surgery.
Handler 2019	Specialty clinic in Oakland, California which was established for Kaiser Permanente Northern California members and serves as a referral hub for transition-related services for transgender and gender-non-conforming members.	Transgender and gender-non-conforming under 18 year olds throughout Northern California. Patients could be referred by any health care provider or by self-referral.	Referred between February 2015 and June 2018	NR	417	417	Referred: *15 (3 to 17)	116 (27%) bim and 303 (73%) bif	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Total N=106 surgeries involving 89 unique patients with 57 having at least one surgery before the age of 18 80 Mastectomy, 9 Hysterectomy, 7 Vaginoplasty, 4 Facial feminization surgery and/or chondrolaryngoplasty, 2 Phalloplasty and/or metoidioplasty, 2 Mammoplasty
Kuper 2019	Gender Education and Care Interdisciplinary Support program in Dallas, TX	Adolescents (12-18) presenting for an initial assessment before initiation of gender-affirming medical care	Initial assessments occurred between 2014 and 2017	NR	158	158 (data reported for 149)	Assessment: n=149, 15.3 (1.52, 12–18)	53 (35.6%) bim and 96 (64.4%) bif	All but 1 participant met full criteria for gender dysphoria at the time of assessment. This participant had not consistently identified with his gender identity for greater than the required 6 months but subsequently met criteria at a follow-up visit.	NR	NR	NR	2 lost to follow-up	146 (96 received CSH, 7 puberty supernssion only, 42 puberty suppression and CSH, 1 spironolactone only)	7 received puberty suppression only at a mean of 4.3 months (4.1, range 0–11) occuring between the initial assessment and start of treatment. 42 received puberty suppression and hormones at a mean of 2.6 months (2.1, range 0–10) for puberty suppression and 7.9 months (5.9, range 0–22) for hormones.	96 received hormones with a mean 1.8 months (1.4, range 0–36) occuring between the initial assessment and start of treatment. 42 received puberty suppression and hormones with a mean of 2.6 months (2.1, range 0–10) for puberty suppression and 7.9 months (5.9, range 0–22) for hormones.	NR	NR	NR
Leon 2021	Gender Wellness Center (GWC), a rural clinic providing primary and gender-affirming medical care to transgender and gender-expansive youth and adults in Upstate New York	Pediatric and young adult patients (ages 7–26) receiving care at the clinic agreeing to be included in the registry (88% of those referred)	Registered between April 2017 and December 2019	NR	NR	185	Assessment: *16.3 (1.1, 4.9 to 21.8)	151 (82.1%) bif and 53 (28.8%) bim	NR	NR	NR	NR	NR	159 (86%) medically transitioning: 49 (30.8%) had lifetime or current use of GnRH-a, 123 (74.6%) had lifetime or current use of masculinising/feminising hormones, and 17 (10.8%) had a gender-affirming surgical procedure.	49 (30.8%) had lifetime or current use of GnRH-a.	119 (74.6%) had lifetime or current use of hormones.	NR	NR	17 (10.8%) had a gender-affirming surgical procedure.
Nahata 2017	Large multidisciplinary gender program for hormone therapy at a Midwestern pediatric academic center, established in 2016	All patients with ICD 9/10 codes for gender dysphoria, referred to endocrinology for hormone therapy (puberty suppression and/or hormones)	2014 to 2016	NR	NR	79	Assessment: *15 (9 to 18)	51 (64.6%) bif and 28 (35.4%) bim	NR	NR	NR	NR	18 of those prescribed GnRH-a did not start this (2 had no documented information about coverage and 16 were denied coverage (*15.1 years, range: 10.8–18.8, Tanner stages: 2–5) and could not start treatment)	NR	9 begun GnRH-a (mdn average age *15.3 (12.8–17.3), Tanner stage 2-5)	40 initiated hormones	NR	NR	NR
O'Bryan 2018	Gender Wellness Center (GWC), a rural clinic providing primary and gender-affirming medical care to transgender and gender-expansive youth and adults in Upstate New York	Pediatric patients (age <22) receiving care at the clinic agreeing to be included in the registry (88% of those referred)	Unclear	NR	NR	139	Enrollment: 17.5 (3.1, range 8 to 21) Assessment: 16.7 (3.0)	42 (30%) bim and 97 (70%) bif	NR	NR	NR	NR	NR	123 (89.1%) were medically transitioning, defined in terms of use of GnRH-a, hormones and/or surgery.	41 (29.5%) had received puberty suppression (past or present use)	106 (76.3%) had received hormones (past or present use)	2 discontinued treatment (1 after taking GnRH-a, 1 while taking GnRH-a and hormones). 1 stopped GnRH-a for a number of years but subsequently resumed treatment. 1 stopped hormone therapy but continued on GnRH-a.	One patient desisted after GnRH-a and one reverted to a gender identity concordant with their registered sex at birth after GnRH-a and hormones. The patient who stopped hormone therapy but continued on GnRH-a was still exploring an emerging gender identity.	20 (14.4%) had undergone gender-affirming surgery
Spack 2012	The Gender Management Service (GeMS), a multi-disciplinary gender identity clinic established in Jan 1998 providing medical treatment, formerly the Endocrine Division at Children's Hospital, Boston.	Consecutive initial visits of patients with gender identity disorder seen at clinic. Prior to 2007, only adolescents referred by mental health professionals were accepted by the service. Following this, pre-pubertal children were also accepted.	Presented for an initial visit between Jan 1998 and Feb 2010	NR	NR	97	Assessment: 14.8 (3.4) *16 (4 to 20)	54 (55.7%) bif and 43 (44.3%) bim	NR	NR	NR	14 patients needed to wait for pubertal signs (3 <8, 2 age 9, 8 at age 10 and 1 age 12, 7 bim and 7 bif)	54 (57.7%) 50 started treatment within 1 week of initial visit. Others started later (average 9 (6.7) months after initial visit) although type of treatment for these not reported. Reasons reported either not yet Tanner stage 2 or too pubertally advanced for suppression but too young for hormones. Medical intervention initiated at average age of 15.6 (2.8)	Of 50 who started treatment within 1 week of initial visit, 11 treated with GnRH-a at Tanner stage 2/3	Of 50 who started treatment within 1 week of initial visit, 39 started on hormones at Tanner stage 4/5	NR	NR	NR

BiR sex = Birth-registered sex; bim = birth-registered male; bif = birth-registered female; GnRH-a = Gonadotropin releasing hormone analogues; CSH = Cross sex hormones; NR = Not reported; N/A = Not applicable, * [] = Median [range], * () = Median (interquartile range), Values are mean (standard deviation) unless otherwise stated.