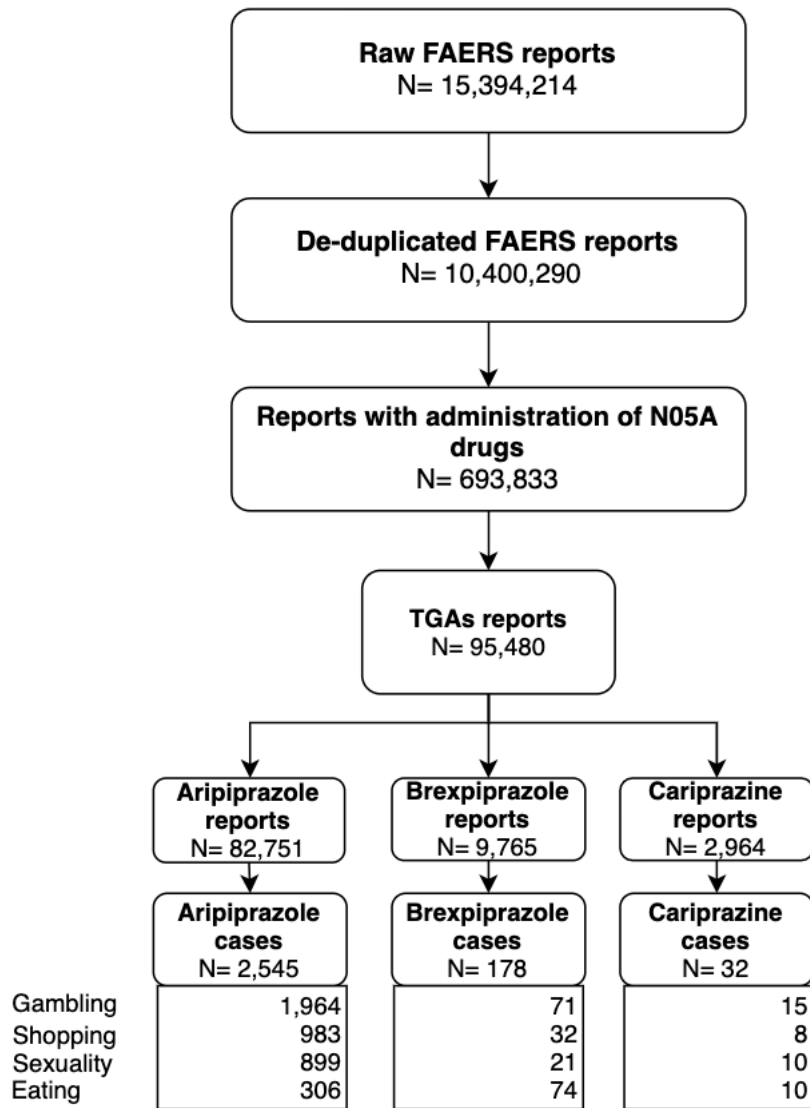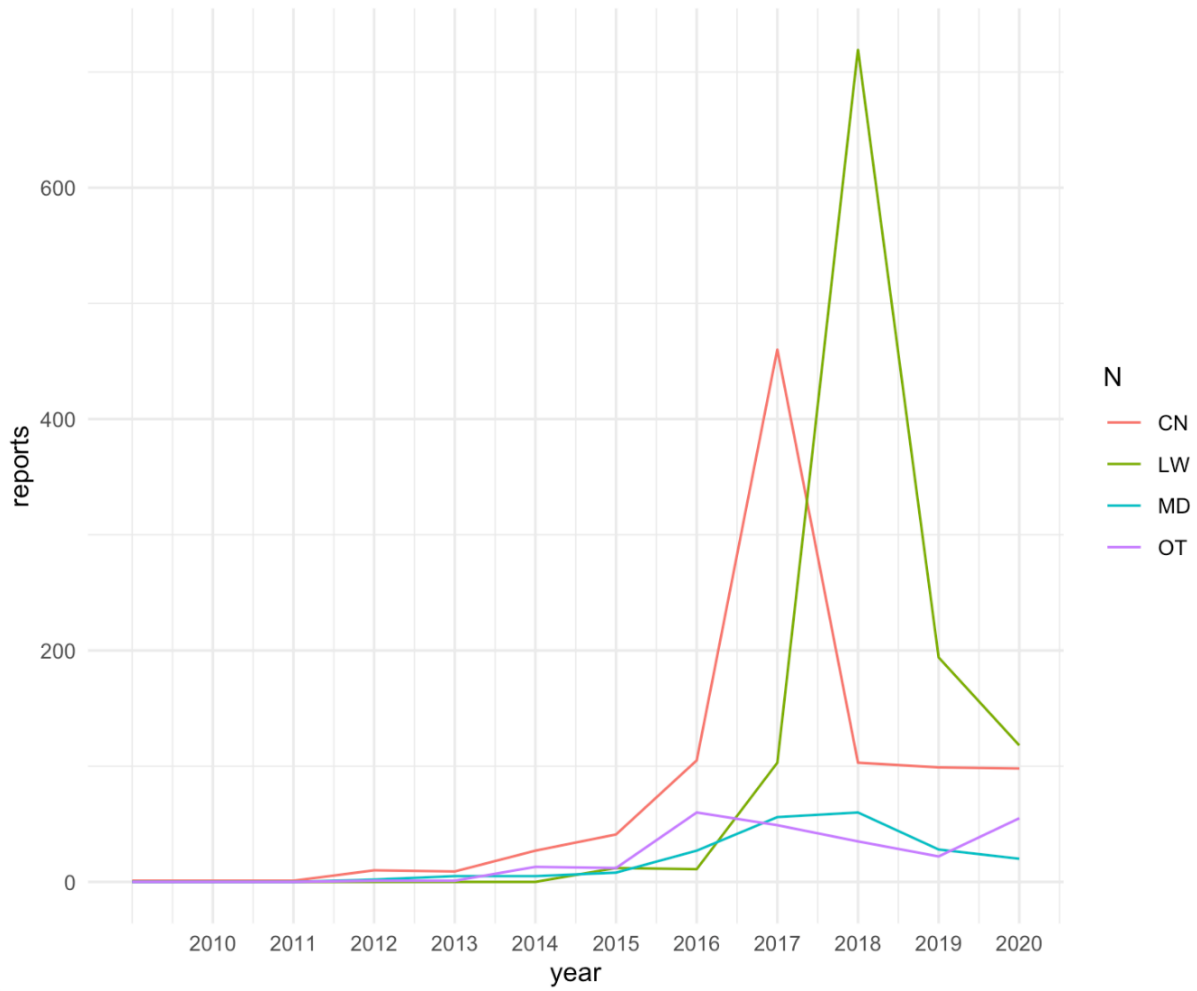**Figure S1. Flowchart showing the procedure for case-retrieval.**

Figure S2. TGAs-induced ICDs reports through time, segregated by reporter type.
CN = patient, LW = lawyer, MD = physician, OT = other

Table S1. Other events co-occurring with ICDs, segregated by High-Level Term.
% has been calculated on the number of TGAs-related ICDs reports

HLT	%	PTs
economic circumstances	50	economic problem (1331);bankruptcy (375);inability to afford medication (13);insurance issue (7);poverty (1)
obsessive-compulsive disorders and symptoms	44	obsessive-compulsive disorder (1089);compulsive hoarding (240);trichotillomania (152);dermatillomania (125);compulsions (18);obsessive thoughts (12);body dysmorphic disorder (1);obsessive-compulsive symptom (1)
emotional and mood disturbances nec	34	emotional distress (798);irritability (88);anger (37);mood altered (18);euphoric mood (16);emotional disorder (15);frustration tolerance decreased (11);emotional poverty (7);dysphoria (6)
mental disorders nec	30	mental disorder (822);mental status changes (1)
suicidal and self-injurious behaviour	29	suicidal ideation (734);suicide attempt (670);intentional self-injury (15);self-injurious ideation (9);completed suicide (6);suicidal behaviour (3)
anxiety symptoms	26	anxiety (641);stress (55);agitation (52);nervousness (11);tension (1)
eating disorders nec	21	eating disorder (571);merycism (3);bulimia nervosa (2)
employment issues	17	loss of employment (442);unemployment (5);job dissatisfaction (3);stress at work (2);threat of redundancy (1)
mood alterations with depressive symptoms	17	anhedonia (382);depressed mood (56);feeling guilty (14);tearfulness (13);decreased interest (8);depressive symptom (6);feelings of worthlessness (4);feeling of despair (2);negative thoughts (1);psychomotor retardation (1)
disability issues	16	disability (407);physical disability (30);loss of personal independence in daily activities (22);impaired work ability (13);impaired driving ability (1);hearing aid user (1);wheelchair user (1);mental disability (1)
impulse control disorders	12	impulsive behaviour (199);impulse-control disorder (153);intermittent explosive disorder (1)
family and partner issues	11	divorced (267);marital problem (16);partner stress (15);family stress (6);pregnancy of partner (1)
housing circumstances	9	homeless (242)
criminal activity	9	theft (201);shoplifting (178);legal problem (24);imprisonment (21);sexual abuse (6);crime (5);physical assault (3);drug diversion (2)
disturbances in initiating and maintaining sleep	7	insomnia (166);middle insomnia (12);initial insomnia (3);hyposomnia (1)
social issues nec	7	personal relationship issue (103);social problem (94);impaired quality of life (14);refusal of treatment by patient (8);poor personal hygiene (7);substance use (6);exercise lack of (2);prostitute (2);patient uncooperative (1)
mental disorders due to a general medical condition nec	6	neuropsychiatric symptoms (161);neuropsychiatric syndrome (3)
depressive disorders	6	depression (153);major depression (19);persistent depressive disorder (9);perinatal depression (1)
behaviour and socialisation disturbances	5	aggression (64);paranoia (34);disinhibition (13);hostility (13);social avoidant behaviour (8);homicidal ideation (8);antisocial behaviour (6);grandiosity (6);personality change (5);soliloquy (3);violence-related symptom (3);negativism (2);suspiciousness (2);disturbance in social behaviour (1);indifference (1);impatience (1)
substance related and addictive disorders	5	alcoholism (32);drug dependence (31);dependence (28);alcohol abuse (25);drug abuse (23);substance abuse (15);substance dependence (9);nicotine dependence (7);behavioural addiction (4);tobacco abuse (3);drug use disorder (2);alcohol use disorder (2)

Figure S3. Distribution of individual maladaptive behaviors in antipsychotic associated ICDs.

Rate of ICDs on the number of reports on the left, behavioral distribution on the right. Only the first 10 antipsychotics in order of case number, plus cariprazine, were shown.
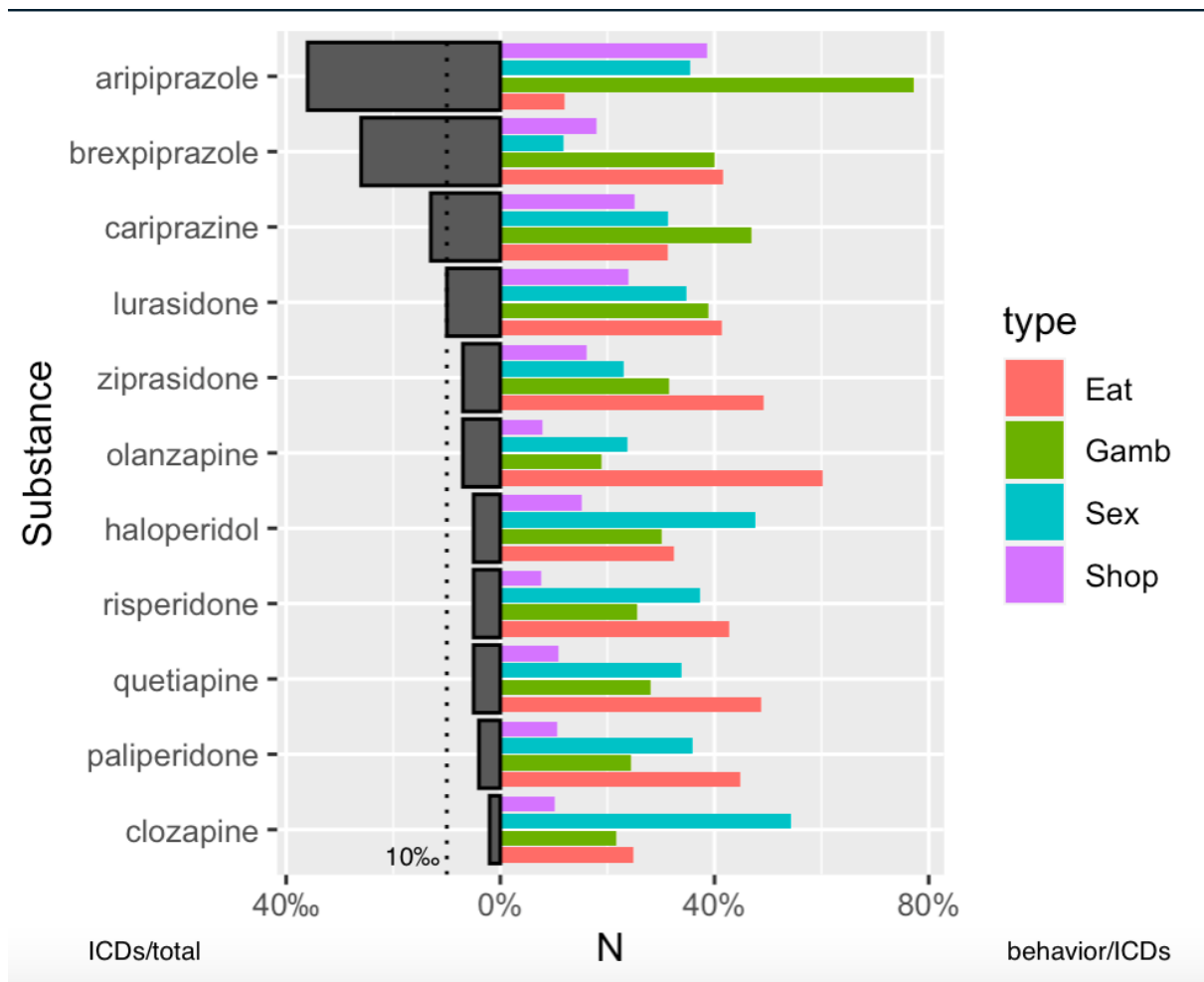
Figure S4. Antipsychotics associated with ICDs
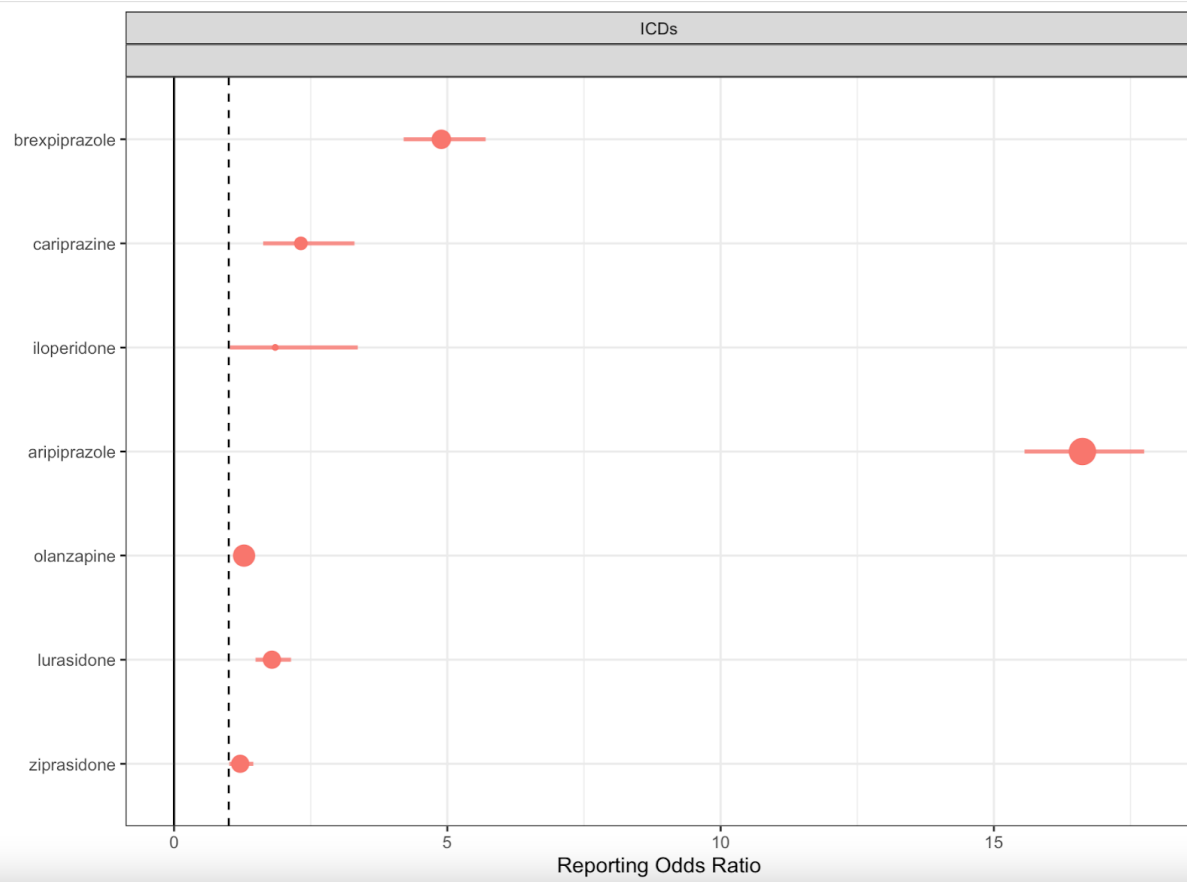
Substance	ROR
ziprasidone	1.21 (1.01-1.45) [118]
lurasidone	1.79 (1.49-2.14) [121]
olanzapine	1.28 (1.16-1.41) [442]
aripiprazole	16.62 (15.56-17.75) [2545]
iloperidone	1.85 (1.02-3.36) [11]
cariprazine	2.32 (1.63-3.3) [32]
brexpiprazole	4.89 (4.2-5.7) [178]

Figure S5. Antipsychotics associated with individual maladaptive behaviors
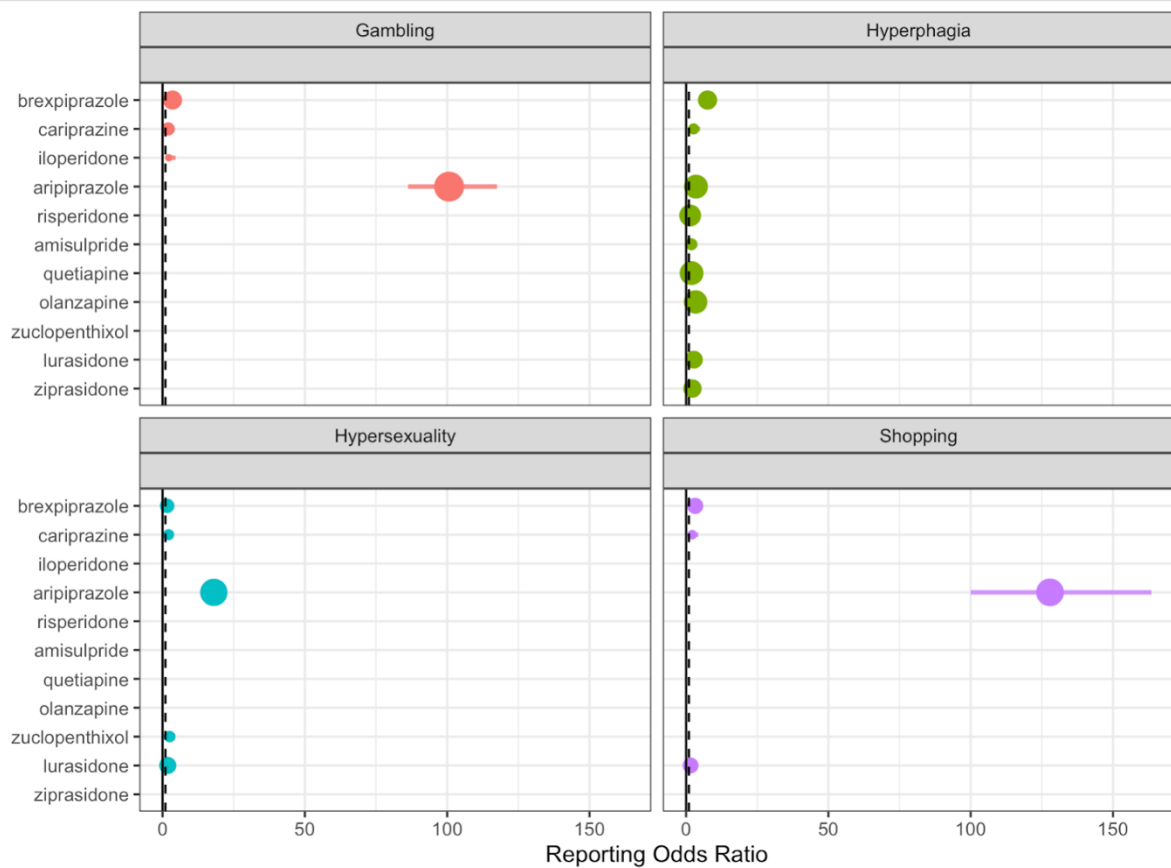
Gambling	
Substance	**ROR**
aripiprazole	100.66 (86.22-117.51) [1964]
iloperidone	2.16 (1.02-4.56) [7]
cariprazine	1.99 (1.19-3.31) [15]
brexpiprazole	3.49 (2.75-4.43) [71]

Hypersexuality	
Substance	**ROR**
lurasidone	1.81 (1.33-2.47) [42]
zuclopenthixol	2.46 (1.36-4.47) [11]
aripiprazole	18 (16.05-20.17) [899]
cariprazine	2.11 (1.13-3.94) [10]
brexpiprazole	1.6 (1.04-2.47) [21]

Shopping	
Substance	**ROR**
lurasidone	1.59 (1.1-2.3) [29]
aripiprazole	127.87 (100-163.52) [983]
cariprazine	2.15 (1.07-4.33) [8]
brexpiprazole	3.18 (2.23-4.52) [32]

Hyperphagia	
Substance	**ROR**
ziprasidone	2.24 (1.71-2.91) [58]
lurasidone	2.74 (2.06-3.64) [50]
olanzapine	3.34 (2.9-3.83) [266]
quetiapine	1.92 (1.68-2.19) [296]
amisulpride	1.86 (1.05-3.29) [12]
risperidone	1.43 (1.21-1.69) [163]
aripiprazole	3.48 (3.05-3.98) [306]
cariprazine	2.64 (1.41-4.94) [10]
brexpiprazole	7.54 (5.94-9.56) [74]

Table S2. Cariprazine cases. The drug may have been stopped after the onset of the event (T), and Dechallenge (D) or Rechallenge (R) may have verified.

Case	age	sex	country	time to onset (dd)	stopped	other explanatory drugs	ICD
1	57	Male	DE	55	T (D)		hypersexuality
2	31	Male	US	15	T (D)		compulsive shopping
3		Female	US			aripiprazole	hyperphagia
4		Female	US				gambling
5		Female	US	2			hyperphagia
6		Female	US				food craving
7	30	Female	US		T	aripiprazole; brexpiprazole	compulsive sexual behaviour; compulsive shopping; gambling disorder
8		Female	US	1	T		hyperphagia
9	40	Male	US				libido increased
10	56	Female	US			aripiprazole	gambling disorder
11	47	Female	US		T (D)		hyperphagia
12	29	Female	US			aripiprazole	binge eating; compulsive shopping
13	51	Female	US		T (D)		gambling disorder
14	47	Female	US		T (D;R)		hyperphagia
15		Female	US				gambling disorder
16		Female	US			aripiprazole	binge eating; compulsive shopping
17		Male	US				gambling disorder
18		Male	US			aripiprazole	gambling
19			US				libido increased
20	26	Female	US				gambling disorder
21		Male	US		T (D)		gambling disorder
22		Male	DE	55	T (D)		hypersexuality
23	57	Male	DE		T (D)		hypersexuality
24		Male	DE	55	T (D)		hypersexuality
25		Female	US			aripiprazole; brexpiprazole	compulsive sexual behaviour; compulsive shopping; gambling disorder
26		Female	US			aripiprazole	compulsive sexual behaviour; compulsive shopping; gambling disorder
27	52	Female	US			aripiprazole	compulsive shopping; gambling disorder
28	55	Female	US	1		brexpiprazole	gambling; hyperphagia
29	22	Male	US				gambling disorder
30		Female	US			aripiprazole	binge eating; compulsive shopping
31		Female	US				gambling disorder
32		Female	US				hypersexuality

SESSION – Chi-Squared Statistics

Chi-squared statistics for sex distribution. 2x2 chi-squared tests for independence with Yates correction, comparing reports of men and women treated with TGAs with and without the ICD conditions. In the central cells, data are thus reported: observed (expected) [standardized residuals]. The p-value is shown before the Holm-Bonferroni correction (see Table 1).

	TGA_any ICD	Other TGA	*Marginal Row Totals*
Female	1274 (1430.98) [-6.65]	41447 (41290.02) [6.65]	42721
Male	1122 (965.02) [6.65]	27668 (27844.98) [-6.65]	28790
Marginal Column Totals	2396	69115	71511

The chi-square statistic is 43.95798. The *p*-value is <0.000001.

	TGA_Gambling	Other TGA	*Marginal Row Totals*
Female	902 (1049.59) [-7.27]	41447 (41299.41) [7.27]	42349
Male	855 (707.41) [7.27]	27668 (27835.59) [-7.26]	28523
Marginal Column Totals	1757	69115	70872

The chi-square statistic is 52.49489. The *p*-value is <0.000001.

	TGA_Hypersexuality	Other TGA	*Marginal Row Totals*
Female	390 (493.36) [-7.38]	41447 (41343.64) [7.38]	41837
Male	435 (331.64) [7.38]	27668 (27791.36) [-7.38]	28103
Marginal Column Totals	825	69115	69940

The chi-square statistic is 53.9853. The *p*-value is <0.000001.

	TGA_Shopping	Other TGA	*Marginal Row Totals*
Female	557 (551.62) [0.36]	41447 (41343.64) [-0.36]	42004
Male	363 (368.38) [-0.36]	27668 (27791.36) [0.36]	28031
Marginal Column Totals	920	69115	70035

The chi-square statistic is 0.1092905. The *p*-value is 0.740953.

	TGA_Hyperphagia	Other TGA	*Marginal Row Totals*
Female	229 (205.75) [2.56]	41447 (41470.25) [-2.56]	41676
Male	114 (137.25) [-2.56]	27668 (27664.75) [2.56]	27782
Marginal Column Totals	343	69115	69458

The chi-square statistic is 6.31942. The *p*-value is 0.011942.