

**Problem benzodiazepine use in Ireland:
treatment (2003 to 2008) and deaths
(1998 to 2007)**

Appendix

Delphine Bellerose, Suzi Lyons, Anne Marie Carew, Simone Walsh and Jean Long

National Drug
Treatment Reporting
System

This online Appendix is a supplement to HRB Trends Series 9, *Problem benzodiazepine use in Ireland: treatment (2003 to 2008) and deaths (1998 to 2007)*, available at www.drugsandalcohol.ie/14287

The Appendix may be cited as follows:

Bellerose D, Lyons S, Carew AM, Walsh S and Long J (2010) Problem benzodiazepine use in Ireland: treatment (2003 to 2008) and deaths (1998 to 2007). Appendix. HRB Trends Series 9. Dublin: Health Research Board.

Treatment by place of residence

Table 1 Benzodiazepine cases entering treatment, by HSE region of residence (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	1054		1026		1115		1222		1225		1719	
Dublin North East	384	(36.4)	314	(30.6)	374	(33.5)	402	(32.9)	371	(30.3)	487	(28.3)
Dublin Mid-Leinster	527	(50.0)	517	(50.4)	491	(44.0)	553	(45.3)	505	(41.2)	742	(43.2)
South	108	(10.2)	145	(14.1)	195	(17.5)	183	(15.0)	207	(16.9)	310	(18.0)
West	35	(3.3)	50	(4.9)	55	(4.9)	84	(6.9)	142	(11.6)	180	(10.5)

Table 2 Cases entering treatment who reported a benzodiazepine as their **main** problem substance, by HSE region of residence and by treatment status (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	76		103		75		96		163		167	
Dublin North East	13	(17.1)	23	(22.3)	15	(20.0)	23	(24.0)	49	(30.1)	48	(28.7)
Dublin Mid-Leinster	20	(26.3)	25	(24.3)	13	(17.3)	20	(20.8)	42	(25.8)	27	(16.2)
South	36	(47.4)	43	(41.7)	37	(49.3)	44	(45.8)	46	(28.2)	46	(27.5)
West	7	(9.2)	12	(11.7)	10	(13.3)	9	(9.4)	26	(16.0)	46	(27.5)
Previously treated cases	49		50		30		40		72		87	
Dublin North East	9	(18.4)	14	(28.0)	6	(20.0)	11	(27.5)	22	(30.6)	26	(29.9)
Dublin Mid-Leinster	17	(34.7)	15	(30.0)	8	(26.7)	6	(15.0)	26	(36.1)	17	(19.5)
South	19	(38.8)	16	(32.0)	13	(43.3)	19	(47.5)	18	(25.0)	23	(26.4)
West	~		5	(10.0)	~		~		6	(8.3)	21	(24.1)
New cases	27		47		42		50		85		74	
Dublin North East	~		9	(19.1)	8	(19.0)	12	(24.0)	26	(30.6)	19	(25.7)
Dublin Mid-Leinster	~		8	(17.0)	~		11	(22.0)	16	(18.8)	10	(13.5)
South	17	(63.0)	25	(53.2)	23	(54.8)	22	(44.0)	24	(28.2)	23	(31.1)
West	~		5	(10.6)	7	(16.7)	5	(10.0)	19	(22.4)	22	(29.7)
Treatment status not known	0		6		~		6		6		6	

~ Less than five cases

Table 3 Cases entering treatment who reported a benzodiazepine as an **additional** problem substance, by HSE region of residence and by treatment status (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	982		928		1044		1129		1064		1562	
Dublin North East	371	(37.8)	291	(31.4)	359	(34.4)	381	(33.7)	322	(30.3)	441	(28.2)
Dublin Mid-Leinster	507	(51.6)	493	(53.1)	478	(45.8)	533	(47.2)	464	(43.6)	715	(45.8)
South	75	(7.6)	106	(11.4)	160	(15.3)	140	(12.4)	162	(15.2)	269	(17.2)
West	29	(3.0)	38	(4.1)	47	(4.5)	75	(6.6)	116	(10.9)	137	(8.8)
Previously treated cases	770		711		782		802		715		1032	
Dublin North East	300	(39.0)	230	(32.3)	263	(33.6)	244	(30.4)	202	(28.3)	248	(24.0)
Dublin Mid-Leinster	405	(52.6)	390	(54.9)	395	(50.5)	451	(56.2)	378	(52.9)	573	(55.5)
South	50	(6.5)	67	(9.4)	93	(11.9)	73	(9.1)	74	(10.3)	141	(13.7)
West	15	(1.9)	24	(3.4)	31	(4.0)	34	(4.2)	61	(8.5)	70	(6.8)
New cases	188		186		235		302		332		505	
Dublin North East	61	(32.4)	45	(24.2)	86	(36.6)	126	(41.7)	115	(34.6)	181	(35.8)
Dublin Mid-Leinster	89	(47.3)	94	(50.5)	68	(28.9)	71	(23.5)	78	(23.5)	134	(26.5)
South	25	(13.3)	37	(19.9)	66	(28.1)	64	(21.2)	86	(25.9)	124	(24.6)
West	13	(6.9)	10	(5.4)	15	(6.4)	41	(13.6)	53	(16.0)	66	(13.1)
Treatment status not known	24		31		27		25		17		25	

Table 4 Benzodiazepine cases entering treatment, by place of residence (Dublin or outside Dublin) (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	1054		1026		1115		1222		1225		1719	
Dublin	822	(78.0)	741	(72.2)	791	(70.9)	827	(67.7)	726	(59.3)	1077	(62.7)
Outside Dublin	232	(22.0)	285	(27.8)	324	(29.1)	395	(32.3)	499	(40.7)	642	(37.3)
Previously treated cases	816		758		810		839		787		1113	
Dublin	666	(81.6)	589	(77.7)	625	(77.2)	641	(76.4)	549	(69.8)	779	(70.0)
Outside Dublin	150	(18.4)	169	(22.3)	185	(22.8)	198	(23.6)	238	(30.2)	334	(30.0)
New cases	214		231		275		352		415		576	
Dublin	134	(62.6)	127	(55.0)	142	(51.6)	166	(47.2)	167	(40.2)	278	(48.3)
Outside Dublin	80	(37.4)	104	(45.0)	133	(48.4)	186	(52.8)	248	(59.8)	298	(51.7)
Treatment status not known	24		37		30		31		23		30	

Table 5 Cases entering treatment who reported a benzodiazepine as their **main** problem substance, by place of residence (Dublin or outside Dublin) (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	76		103		75		96		163		167	
Dublin	23	(30.3)	39	(37.9)	17	(22.7)	27	(28.1)	64	(39.3)	64	(38.3)
Outside Dublin	53	(69.7)	64	(62.1)	58	(77.3)	69	(71.9)	99	(60.7)	103	(61.7)
Previously treated cases	49		50		30		40		72		87	
Dublin	18	(36.7)	25	(50.0)	9	(30.0)	14	(35.0)	41	(56.9)	38	(43.7)
Outside Dublin	31	(63.3)	25	(50.0)	21	(70.0)	26	(65.0)	31	(43.1)	49	(56.3)
New cases	27		47		42		50		85		74	
Dublin	5	(18.5)	13	(27.7)	7	(16.7)	10	(20.0)	22	(25.9)	23	(31.1)
Outside Dublin	22	(81.5)	34	(72.3)	35	(83.3)	40	(80.0)	63	(74.1)	51	(68.9)
Treatment status not known	0		6		~		6		6		6	

~ Less than five cases

Table 6 Cases entering treatment who reported a benzodiazepine as an **additional** problem substance, by place of residence (Dublin or outside Dublin) (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	982		928		1044		1129		1064		1562	
Dublin	799	(81.4)	702	(75.6)	774	(74.1)	802	(71.0)	663	(62.3)	1015	(65.0)
Outside Dublin	183	(18.6)	226	(24.4)	270	(25.9)	327	(29.0)	401	(37.7)	547	(35.0)
Previously treated cases	770		711		782		802		715		1032	
Dublin	648	(84.2)	564	(79.3)	616	(78.8)	629	(78.4)	508	(71.0)	742	(71.9)
Outside Dublin	122	(15.8)	147	(20.7)	166	(21.2)	173	(21.6)	207	(29.0)	290	(28.1)
New cases	188		186		235		302		332		505	
Dublin	129	(68.6)	114	(61.3)	135	(57.4)	156	(51.7)	146	(44.0)	255	(50.5)
Outside Dublin	59	(31.4)	72	(38.7)	100	(42.6)	146	(48.3)	186	(56.0)	250	(49.5)
Treatment status not known	24		31		27		25		17		25	

Table 7 New benzodiazepine cases entering treatment, by county of residence (NDTRS 2003–2008)

	Number	%
All cases	2063	100
Dublin	1014	49.2
Cork	361	17.5
Limerick	87	4.2
Wexford	68	3.3
Louth	45	2.2
Westmeath	42	2.0
Galway	41	2.0
Kildare	41	2.0
Wicklow	35	1.7
Donegal	31	1.5
Meath	30	1.5
Kerry	26	1.3
Tipperary North	26	1.3
Waterford	26	1.3
Carlow	24	1.2
Kilkenny	22	1.1
Sligo	20	1.0
Offaly	19	0.9
Clare	17	0.8
Mayo	16	0.8
Roscommon	15	0.7
Tipperary South	15	0.7
Cavan	14	0.7
Longford	11	0.5
Laois	11	0.5
Leitrim	~	~
Monaghan	~	~

~ Less than five cases

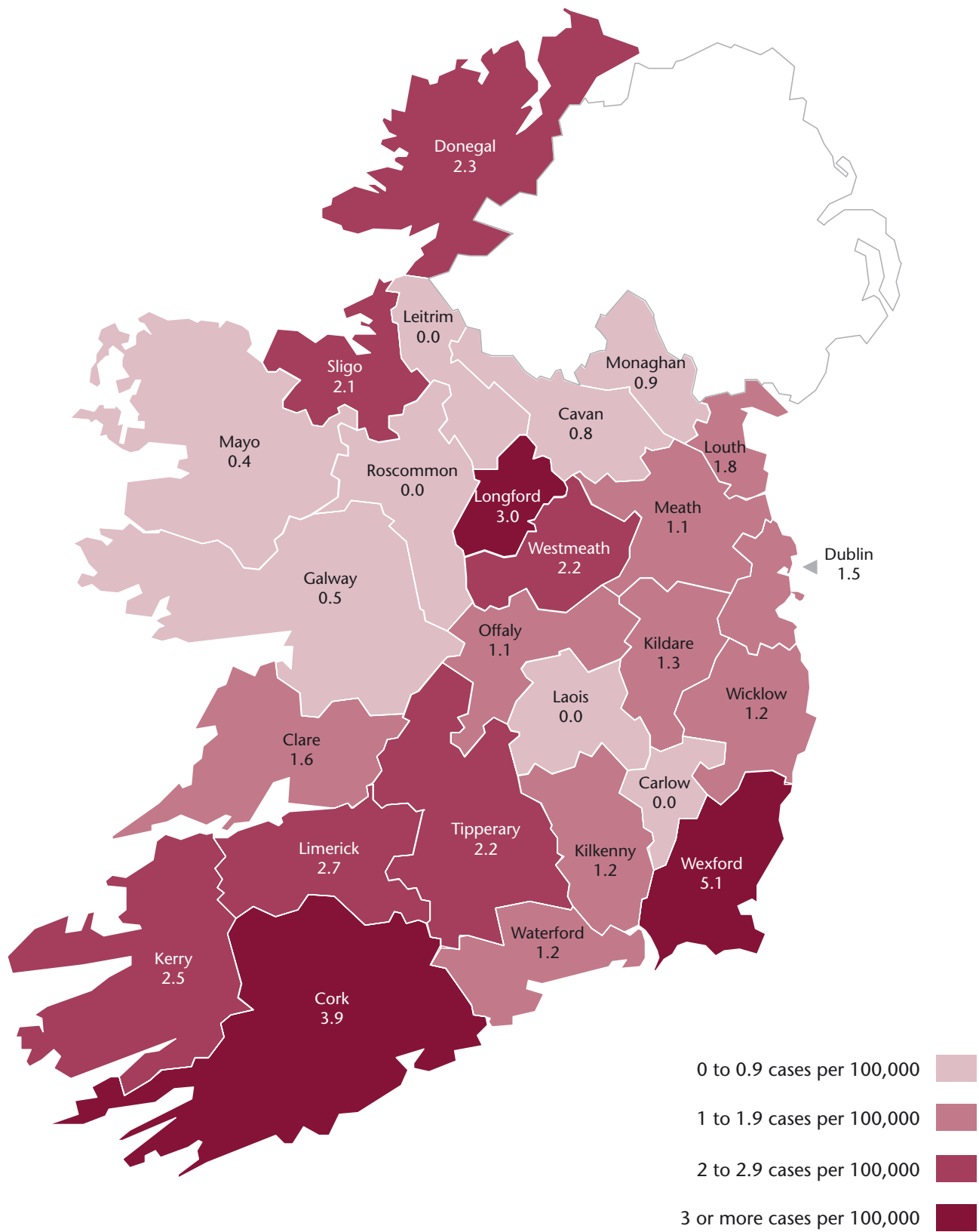


Figure 1 Average annual incidence of cases treated for a benzodiazepine as their main problem substance per 100,000 of the 15–64-year-old population, by county of residence (NDTRS 2003–2008; CSO 2007, 2009)

Table 8 New benzodiazepine cases entering treatment, by local health office (LHO) area of residence (NDTRS 2003–2008)

	Number	%
All cases	2063	100
Cork	361	17.5
Dublin North Central	256	12.4
Dublin North West	215	10.4
Dublin West	134	6.5
Dublin South West	133	6.4
Dublin North	129	6.3
Dublin South City	98	4.8
Limerick (excluding East Limerick)	87	4.2
Wexford	68	3.3
Longford and Westmeath	53	2.6
Carlow and Kilkenny	46	2.2
Louth	45	2.2
Kildare and South West Wicklow	43	2.1
Galway	41	2.0
Dublin South	33	1.6
Donegal	31	1.5
Wicklow East Coast	31	1.5
Laois and Offaly	30	1.5
Meath	30	1.5
Kerry	26	1.3
Tipperary NR and East Limerick	26	1.3
Waterford	26	1.3
Sligo and Leitrim	23	1.1
Clare	17	0.8
Cavan and Monaghan	17	0.8
Dublin South East	16	0.8
Mayo	16	0.8
Roscommon	15	0.7
Tipperary SR	15	0.7
LHO area unknown	2	0.1

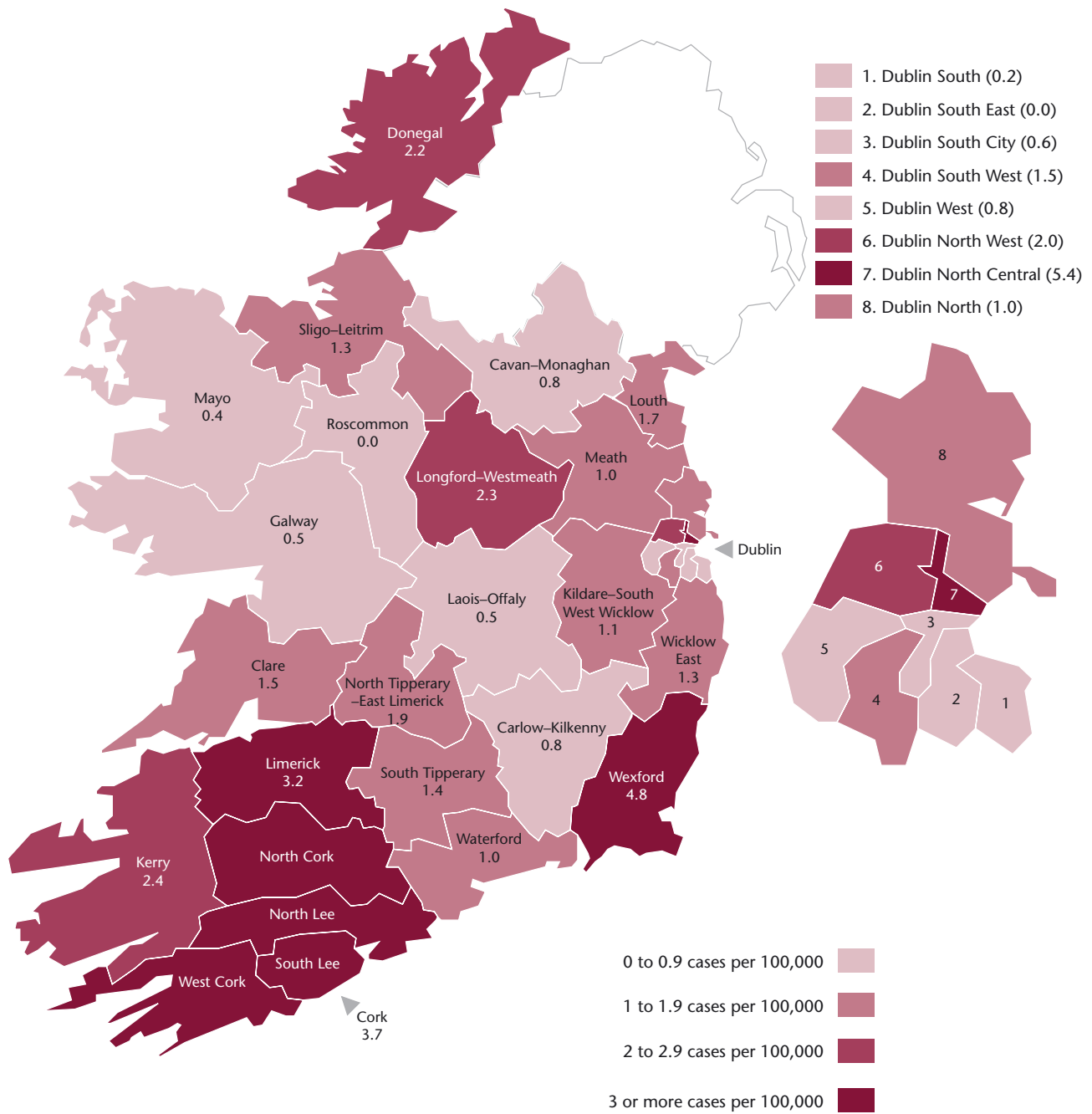


Figure 2 Average annual incidence of cases treated for a benzodiazepine as their main problem substance per 100,000 of the 15–64-year-old population, by local health office area of residence (NDTRS 2003–2008; CSO 2007, 2009)

Table 9 New benzodiazepine cases entering treatment, by local drugs task force (LDTF) area of residence (NDTRS 2003–2008)

	Number	%
All new cases	2063	100
North Inner City	190	9.2
Finglas–Cabra	105	5.1
Dublin North East	105	5.1
Ballymun	89	4.3
Tallaght	87	4.2
South Inner City	77	3.7
Clondalkin	71	3.4
Ballyfermot	45	2.2
Dun Laoghaire–Rathdown	45	2.2
Blanchardstown	44	2.1
Dublin 12	44	2.1
Canal Communities	19	0.9
Bray	10	0.5
Rest of Dublin	157	7.6
Outside Dublin	973	47.2
LDTF area unknown	2	0.1

Additional problem substances

Table 10 Number of additional problem substances used by cases entering treatment who reported a benzodiazepine as their main problem substance, by treatment status (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	76		103		75		96		163		167	
One drug	19	(25.0)	30	(29.1)	16	(21.3)	21	(21.9)	28	(17.2)	38	(22.8)
Two drugs	32	(42.1)	25	(24.3)	24	(32.0)	34	(35.4)	56	(34.4)	48	(28.7)
Three drugs	15	(19.7)	26	(25.2)	15	(20.0)	20	(20.8)	33	(20.2)	41	(24.6)
Four drugs	10	(13.2)	22	(21.4)	20	(26.7)	21	(21.9)	46	(28.2)	40	(24.0)
Previously treated cases	49		50		30		40		72		87	
One drug	16	(32.7)	5	(10.0)	7	(23.3)	7	(17.5)	8	(11.1)	12	(13.8)
Two drugs	18	(36.7)	14	(28.0)	8	(26.7)	18	(45.0)	30	(41.7)	25	(28.7)
Three drugs	10	(20.4)	18	(36.0)	6	(20.0)	8	(20.0)	13	(18.1)	29	(33.3)
Four drugs	5	(10.2)	13	(26.0)	9	(30.0)	7	(17.5)	21	(29.2)	21	(24.1)
New cases	27		47		42		50		85		74	
One drug	3	(11.1)	23	(48.9)	8	(19.0)	11	(22.0)	19	(22.4)	22	(29.7)
Two drugs	14	(51.9)	8	(17.0)	14	(33.3)	16	(32.0)	26	(30.6)	22	(29.7)
Three drugs	5	(18.5)	7	(14.9)	9	(21.4)	10	(20.0)	18	(21.2)	12	(16.2)
Four drugs	5	(18.5)	9	(19.1)	11	(26.2)	13	(26.0)	22	(25.9)	18	(24.3)
Treatment status unknown	0		6		3		6		6		6	

Patterns of benzodiazepine use

Table 11 Route of administration for cases entering treatment who reported a benzodiazepine as their main problem substance, by treatment status (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	76		103		75		96		163		167	
Inject	~		~		0 (0.0)		0 (0.0)		0 (0.0)		~	
Smoke	0 (0.0)		0 (0.0)		0 (0.0)		~		~		0 (0.0)	
Eat or drink	74 (97.4)		101 (98.1)		74 (98.7)		94 (97.9)		159 (97.5)		165 (98.8)	
Not known	0 (0.0)		~		~		~		~		~	
Previously treated cases	49		50		30		40		72		87	
Inject	~		~		0 (0.0)		0 (0.0)		0 (0.0)		~	
Smoke	0 (0.0)		0 (0.0)		0 (0.0)		~		0 (0.0)		0 (0.0)	
Eat or drink	47 (95.9)		49 (98.0)		30 (100.0)		39 (97.5)		71 (98.6)		85 (97.7)	
Not known	0 (0.0)		0 (0.0)		0 (0.0)		0 (0.0)		~		~	
New cases	27		47		42		50		85		74	
Eat or drink	27 (100.0)		46 (97.9)		41 (97.6)		50 (100.0)		83 (97.6)		74 (100.0)	
Not known	0 (0.0)		~		~		0 (0.0)		~		0 (0.0)	
Treatment status unknown	0		6		3		6		6		6	

~ Less than five cases

Table 12 Frequency of benzodiazepine use in the month prior to entering treatment by cases who reported a benzodiazepine as their main problem substance, by treatment status (NDTRS 2003–2008)

	2003		2004		2005		2006		2007		2008	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
All cases	76		103		75		96		163		167	
No use in the last month	11 (14.5)		22 (21.4)		8 (10.7)		10 (10.4)		19 (11.7)		26 (15.6)	
Once a week or less	~		~		~		~		9 (5.5)		9 (5.4)	
2–6 times per week	10 (13.2)		8 (7.8)		10 (13.3)		14 (14.6)		19 (11.7)		25 (15.0)	
Daily	49 (64.5)		64 (62.1)		52 (69.3)		61 (63.5)		106 (65.0)		101 (60.5)	
Not known	~		6 (5.8)		~		7 (7.3)		10 (6.1)		6 (3.6)	
Previously treated cases	49		50		30		40		72		87	
No use in the last month	8 (16.3)		9 (18.0)		~		5 (12.5)		10 (13.9)		16 (18.4)	
Once a week or less	~		~		0 (0.0)		~		~		6 (6.9)	
2–6 times per week	7 (14.3)		~		~		7 (17.5)		9 (12.5)		14 (16.1)	
Daily	29 (59.2)		34 (68.0)		24 (80.0)		23 (57.5)		48 (66.7)		48 (55.2)	
Not known	~		~		~		~		~		~	
New cases	27		47		42		50		85		74	
No use in the last month	~		12 (25.5)		6 (14.3)		~		9 (10.6)		10 (13.5)	
Once a week or less	0 (0.0)		~		~		~		~		~	
2–6 times per week	~		~		6 (14.3)		7 (14.0)		10 (11.8)		11 (14.9)	
Daily	20 (74.1)		26 (55.3)		27 (64.3)		35 (70.0)		56 (65.9)		48 (64.9)	
Not known	~		~		~		~		6 (7.1)		~	
Treatment status unknown	0		6		~		6		6		6	

~ Less than five cases

Table 13 Cases entering treatment who reported a benzodiazepine as their main problem substance, by age group and by gender (NDTRS 2003–2008)

Age group	Male		Female		Gender not recorded	
	n	(%)	n	(%)	n	(%)
All cases	406		270		4	
17 years or under	52	(12.8)	13	(4.8)	~	
18–19	43	(10.6)	12	(4.4)	0	(0.0)
20–24	86	(21.2)	42	(15.6)	~	
25–29	81	(20.0)	36	(13.3)	~	
30–34	50	(12.3)	39	(14.4)	0	(0.0)
35–39	39	(9.6)	31	(11.5)	~	
40–44	21	(5.2)	33	(12.2)	0	(0.0)
45–49	17	(4.2)	28	(10.4)	0	(0.0)
50 years or over	16	(3.9)	34	(12.6)	0	(0.0)
Age not recorded	~		~		0	(0.0)

~ Less than five cases

Table 14 Cases entering treatment who reported a benzodiazepine as their main problem substance, by age first used benzodiazepines and by gender (NDTRS 2003–2008)

Age first used	Male		Female		Gender not recorded	
	n	(%)	n	(%)	n	(%)
All cases	406		270		4	
14 years or under	68	(16.7)	29	(10.7)	~	
15–19	148	(36.5)	67	(24.8)	~	
20–24	63	(15.5)	33	(12.2)	~	
25–29	34	(8.4)	33	(12.2)	0	(0.0)
30–34	15	(3.7)	25	(9.3)	0	(0.0)
35–39	5	(1.2)	18	(6.7)	0	(0.0)
40–44	6	(1.5)	8	(3.0)	0	(0.0)
45–49	~		6	(2.2)	0	(0.0)
50 years or over	6	(1.5)	8	(3.0)	0	(0.0)
Age first used not recorded	59	(14.5)	43	(15.9)	0	(0.0)

~ Less than five cases

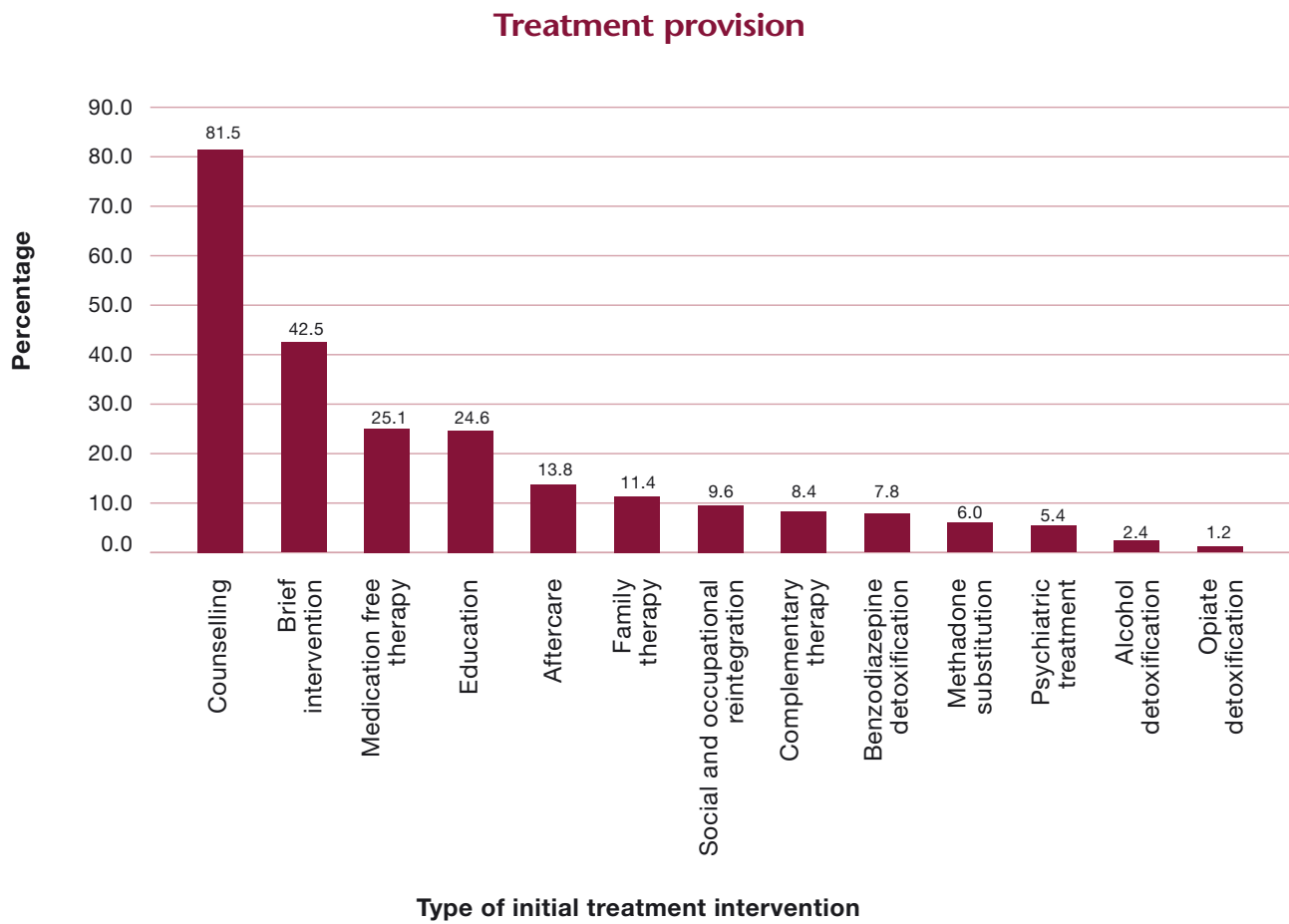


Figure 3 Percentage of cases entering treatment who reported a benzodiazepine as their main problem substance, by type of initial treatment intervention availed of (NDTRS 2008)

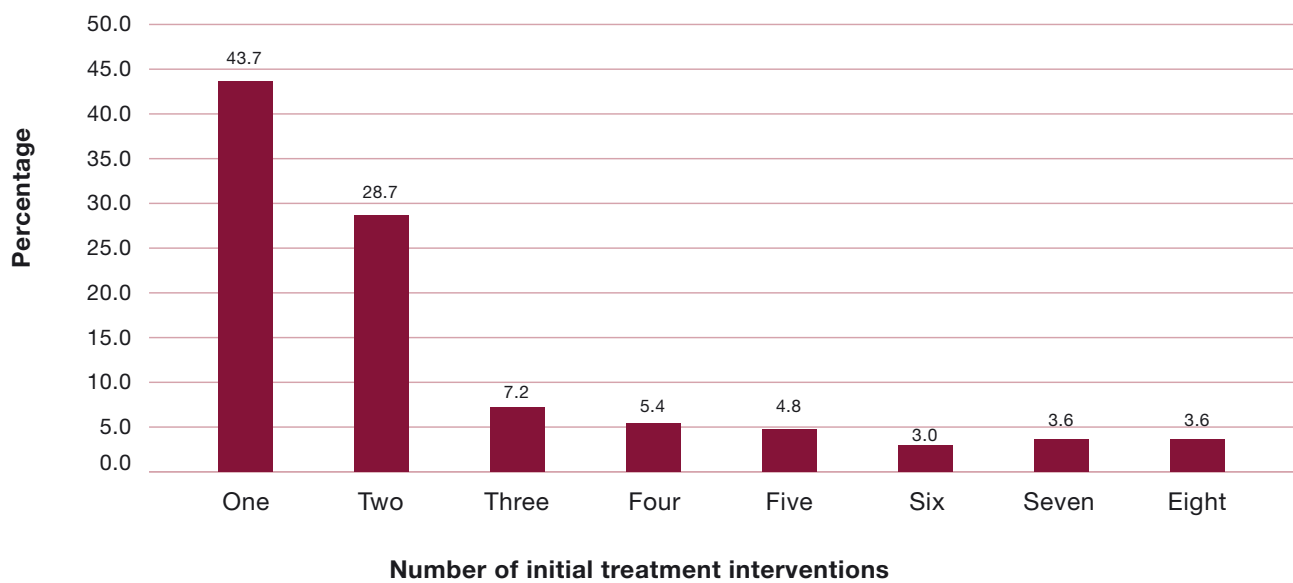


Figure 4 Percentage of cases entering treatment who reported a benzodiazepine as their main problem substance, by number of treatment interventions availed of (NDTRS 2008)