



Benzodiazepine Misuse in the West of Ireland

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Minor Tranquillisers & Sedatives



- What are they?
- Wonder drugs?
- Panacea or curse?

- Broad Classification:
 - Benzodiazepines and related drugs
 - Anxiolytics, for anxiety management
 - Hypnotics, for producing sleep

Origin & Purpose

- Group of drugs used for relieving anxiety and/or bringing on sleep
- Discovered in late-1950s
- Marketed first as a safer alternative to barbiturates, an older class of drug for relieving anxiety, which had been linked to accidental death and suicide

Wonder Drugs?

- Achieved global prescribing popularity in 1970s and 1980s
- Librium & Valium accounted for half of all psychoactive drug prescriptions dispensed in the US in mid-1970s
- Approximately 17 now on the market
- ‘Z’ drugs brought to market later, partly in response to concerns about tolerance, dependence and withdrawal

Panacea or Curse?

- Neither!
- “Despite adverse effects, dependence and inappropriate use, benzodiazepines remain an appropriate pharmacological treatment for anxiety, one of the most prevalent forms of human suffering.” (Salzman 1999)
- Issue is not about correct use for appropriate therapeutic reason, but the problems that can and do occur if they are used inappropriately

Increasing Usage

- Benzodiazepines Committee identified increasing usage of minor tranquillisers and sedatives as a concern in 2002
- Good Practice Prescribing Guidelines to promote better prescribing and cut down inappropriate use
- Critical Question: have these guidelines worked in counties Galway, Mayo and Roscommon?

Rising Drug Costs

- Increasing Exchequer Spend (GMS, DP & LTI Drug Schemes, 2000-2007)
 - Doubled from 2000-2007
 - €0.86m to €1.92m (GMR Region)
 - Cumulative: €11.5m (GMR Region)
 - €14.01m to €26.42m (Ireland)
 - Cumulative: €168.9 (Ireland)
- Professional Fees > Drug Costs!
 - Occurred in GMS in 2006 and 2007 (GMR Region)
 - Occurred in GMS in 2007 and in the DPS in both 2006 and 2007 (Ireland)

Data Sets



1. **Health Research Board:** statistics from the National Drug Treatment Reporting System
2. **Health Service Executive:** records of prescriptions reimbursed from the public purse under the three main drug refund schemes

HSE Data: General Profile



- Some 89,721 individuals prescribed benzodiazepines and z drugs in GMR Region between 2000 and 2007
- Number of Patients up year on year
 - c.25,000 in 2000
 - c.33,000 in 2007

Annual Averages

- Approx. 54% over 65 years (around 12.5% of regional population over 65 in Census 2006)
- Approx. 38% male (males and females evenly split in regional population in Census 2006)
- Number of GMS patients exceeds number of DPS patients by a factor of five most years
- **Conclusion: Women, older people and poorer people over-represented; and men and people on higher incomes under-represented.**

Number of Prescriptions

- Total: 1.5 million from 2000-2007
- Over 65s got 62% overall and 66% in GMS
- Women got 64% overall and 66% in GMS
- Almost 88% to medical card holders
- Only 12% to 'private' patients
- Yet GMS has c.52% of all eligible people
- DPS has nearly all of the remainder

Top 5 Drugs: Number Rx

- **GMS + DPS + LTI**
 1. Temazepam
 2. Diazepam
 3. Zopiclone
 4. Alprazolam
 5. Bromazepam

GMS

1. Temazepam
2. Diazepam
3. Alprazolam
4. Zopiclone
5. Bromazepam

DPS

- Alprazolam
- Zopiclone
- Diazepam
- Temazepam
- Zolpidem

Drug Usage

- **Measure = Defined Daily Dose**

- DDD is the assumed average daily dose of a drug used for its main indication in adults i.e. individuals > 15 years.
- Statistical Measure defined by World Health Organization that allows an accurate estimate to be made of the percentage of the population being treated daily with a drug or drugs.
- Expressed as DDDs / 1,000 / Day of the population of the relevant drug scheme.

Drug Usage - Summary

DDDs/ 1000/ Day	2000	2001	2002	2003	2004	2005	2006	2007
GMS	74.24	73.06	83.79	89.48	95.51	99.00	96.67	99.32
DPS	15.41	14.33	12.44	11.21	11.07	13.28	13.13	14.17
GMS > DPS	5x	5x	7x	8x	9x	7x	7x	7x

Drug Usage - DDDs in GMS

- Usage fell by 2% in 2001 - a full year *before* good practice prescribing guidelines published.
- Rose every year except one (2006) thereafter.
- Increases were 15% in 2002, and 7% each year in 2003, 2004 and 2005; and 3% in 2007.
- In 2000, c 7.5% of GMS population was being treated daily with benzodiazepines and z drugs. In 2007, this had increased to c 10% of the scheme population.
- **Conclusion: Good Practice Prescribing Guidelines had no positive effect.**

Drug Usage - DDDs in DPS

- Usage decreased four years in a row (2001 to 2004) but fluctuated in both directions the following three years.
- Reductions were 7%, 13%, 10% and 1% from 2001-2004.
- Usage increased significantly in 2005 - went up 20%. Decreased 1% in 2006 but rose 8% in 2007.
- In 2000, around 1.5% of the DPS population was being treated daily with minor tranquillisers and sedatives. By 2007, this number was largely unchanged, albeit that significant reductions were achieved in between.
- **Conclusion: Guidelines may have had a positive effect, albeit usage low to start and low compared to GMS.**

Long Term Use & Prescribing

- Quantity of Doses per form appears to be well within the limits recommended
- Average DDDs per GMS Form = 21.54 Days
- Average DDDs per DPS Form = 20.08 Days
- However, long term usage and long term prescribing patterns suggest otherwise

Long Term Use & Prescribing

- **Long Term Use** = Individual in GMS or DPS who is prescribed > 56 DDDs per year (two months supply or more) for two to eight consecutive years.
- **Long Term Prescribing** = Doctor in the GMS who prescribes > 56 DDDs per year (two months supply or more) to an individual in the GMS Scheme for two to eight consecutive years.

Long Term Use

	2 CY	3 CY	4 CY	5 CY	6 CY	7 CY	8 CY	Total
GMS	4,141	2,445	1,643	1,276	1,036	903	2,403	13,847
DPS	891	383	237	158	136	84	134	2,023
LTI	10	10	7	13	4	4	17	65
Total	5,042	2,838	1,887	1,447	1,176	991	2,554	15,935

CY = Consecutive Years

Long Term Prescribing (GMS)

	2 CY	3 CY	4 CY	5 CY	6 CY	7 CY	8 CY	Total
No. of Doctors	390	270	233	213	189	165	160	415

CY = Consecutive Years

Critical Findings

- Nearly 1 in 5 of all individuals getting two months supply or more per year for two to eight consecutive years.
 - Almost 9 / 10 in GMS
- Significant number of GPs in GMS are prescribing two months supply or more per year to the same patient for two to eight consecutive years
 - Number of GPs = 415

HRB Data: NDTRS

- **Conclusions**

- Few coming forward for treatment compared to numbers receiving prescriptions, esp. long term
- Males are a majority of cases
- Majority of cases are under 40
- Diazepam pre-eminent on the street (one of the most frequently prescribed of the benzodiazepines)

Recommendations

- Monitoring & Collaborative Action
 - Health Service Executive
 - Professional Regulators
- Elevate Status of Good Practice Prescribing Guidelines
- Higher Control Schedule?
- Information & Empowerment
- Education & Training
- Joined-Up Care / Service Model
- Extend NDTRS Reporting to GPs