

# Psychiatric morbidity in male remanded and sentenced committals to Irish prisons

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## Abstract

**Objectives:** To describe the prevalence of psychiatric morbidity and the treatment needs of new committals to Irish prisons.

**Methods:** A population survey of 615 prisoners representing 7.9% of male committals to Irish prisons in the year of survey, 313 remands (9.6% of total remand committals) and 302 sentenced committals (6.4% of total sentenced committals). The main outcome measures were ICD-10 diagnoses of mental disorder based on interviews using SADS-L and prison medical records.

**Results:** Current prevalence rates of any psychotic illness were 3.8% (remand) and 0.3% (sentenced), six month prevalence rate 5.1% (remand) and 2.6% (sentenced) and lifetime rate 9.3% (remand) and 6.6% (sentenced). Schizophrenia and drug/organic psychoses were the most common psychoses. Major depressive disorder had a current prevalence of 4.5% (remand) and 4.6% (sentenced), a six month prevalence of 4.8% (remand) and 6.0% (sentenced), and a lifetime prevalence of 8.6% (remand) and 15.9% (sentenced). Sixty-point-six per cent of the sample had a current substance misuse problem.

**Conclusions:** There is significant psychiatric morbidity in committal prisoners.

**Key words:** Committal; Prisoners; Morbidity.

## Introduction

The Criminal Law (Insanity) Act 2006<sup>1</sup> and preceding legislation allows no formal legal provision for the diversion of prisoners from court to local psychiatric hospitals. Those with serious mental illness await transfer to the Central Mental Hospital, the only designated forensic psychiatric hospital in Ireland. Limited bed capacity in the Central Mental Hospital can result in delays in transfer, meaning that prisoners remain in the prison environment which is non-therapeutic.

This study was part of the first large scale systematically

sampled survey of psychiatric morbidity in prisoners in Ireland.<sup>2,3</sup> We have reported that men on remand had a six month prevalence of psychosis of 7.6% while sentenced prisoners had a six month prevalence of psychosis of 2.7%. Although the sentenced figure is in line with an international meta-analysis,<sup>4</sup> the remand prevalence of psychosis was much higher than international averages.

This part of the study assessed psychiatric morbidity amongst prisoners at the point of entry to the prison system. This part of the study therefore examines whether the excess of those with psychosis in the remand population is a simple reflection of those committed or represents an accumulation of psychotic prisoners in the remand population. This survey is the first in the international literature to systematically examine morbidity in both remanded and sentenced committal prisoners. Birmingham *et al*'s 1996 UK survey<sup>5</sup> reported rates only for those committed to a remand prison.

Current rates of mental illnesses are the most relevant when assessing need in a committal sample and these have not previously been compared for remanded and sentenced committals. We describe the current, six month and lifetime prevalence of psychosis and other psychiatric illness in committal prisoners using validated research diagnostic instruments, and the assessed treatment needs of those who met international criteria for diagnosis.

## Method

### Prisons and participants

At the time of this study (2004) there were 15 prisons operating in Ireland of which three prisons accepted remand committals, ie. those committed to prison by the courts prior to trial or prior to sentence (Cloverhill, Limerick and Cork Prisons) and two prisons accepted sentenced committals, ie. those committed to prison following sentencing, who had not been in prison on remand (Mountjoy and Cork Prisons). In 2004 there were 10,657 committals of 8,820 persons to Irish prisons, of whom 7,914 (90%) were male, 7,778 (99%) men were aged 17 or over.<sup>6</sup> There were 4,659 committals of men (all ages) under sentence in 2004, and 3,255 men (all ages) were committed on remand.

Mountjoy and Cloverhill Prisons received the largest number of sentenced and remand committals respectively, between them accounting for 75% of the 7,914 men committed to prison in 2004. Cloverhill received a total of 2,974 committals in 2004 of whom 75% were on remand, 69% of all remand committals. Mountjoy Prison received 2,997 total sentenced committals (64% of total sentenced committals).

A short pilot study of prison remand committals in October and November 2000<sup>7</sup> had indicated that 2.2% of individuals newly committed to the prison had a psychosis. We estimated that the lifetime community prevalence of psychosis is

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of the order of 1%.<sup>8,9</sup>

We wished to be able to detect a prevalence of psychosis of over 2% at a 5% significance level. We calculated that for each sample, at least 300 interviews would be required to accomplish this, 300 remand committals and 300 sentenced committals.

Those transferred from remand to sentenced status without a period at liberty were not counted as 'sentenced committals' as this would have led to double counting. Therefore all committals within scope were new receptions in the prison, whether remand or sentenced.

Within both prisons (Cloverhill for remands, Mountjoy for sentenced) participants were sampled consecutively from committal lists of all those received, recorded by prison staff at prison reception. If over 10 committals were received on any particular day, every third committal prisoner on the list was asked to participate. All committals were interviewed within seventy two hours of reception.

The study was approved by the research ethics committees for the Irish Prison Service and the National Forensic Mental Health Service. Informed and valid consent was obtained in writing from participants before proceeding to interview. Decliners were not placed under duress to be interviewed.

A semi-structured interview schedule incorporating the Schedule for Affective Disorders and Schizophrenia-Lifetime version (SADS-L)<sup>10</sup> was administered to each subject by post-membership psychiatric trainees who had been trained in the use of the SADS-L.

Additional questions were asked where indicated, to obtain information regarding depressive adjustment reaction, which is not included in the SADS-L. Demographic, personal and psychiatric histories were obtained. International Classification of Mental and Behavioural Disorders – 10 revision<sup>11</sup> diagnoses were recorded. The Inmate Medical Records were consulted post-interview to corroborate and further inform diagnoses as allowed by the semi structured SADS-L interview schedule.

Inter-rater reliability was assessed by 32 separate joint interviews of 16 participants. For primary diagnostic categories this yielded Cohen's kappa of 1 indicating total agreement between raters. Weekly interviewer review meetings and discussions of diagnostic difficulties with the research supervisor also aided reliability as the survey progressed.

## Assessment

Immediate treatment needs were assessed based on committal diagnosis and mental state. Treatment needs were split into four categories; prison health services, in-reach psychiatric services, drug and alcohol treatment services, and inpatient psychiatric care in the Central Mental Hospital.

## Results

A total of 615 committal males over the age of 18 were interviewed within 72 hours of reception in the prison, representing 7.9% of the total 7,778 adult male committals to Irish prisons for 2004. Prisoners numbering 313 were interviewed in Cloverhill, representing 9.6% of all male remand committals and 14% of committals to Cloverhill. At Mountjoy Prison, 302 were interviewed, representing 6.4% of the total 4,659 sentenced committals, 10.1% of committals to Mountjoy.

The overall mean refusal rate was 8.7% between both

**Table 1: Comparison between demographic characteristics of sentenced and remand committals**

Characteristic	Remand n = 313	Sentenced n = 302	Statistical comparison
Mean age	28.7 (SD 8.9)	30.5 (SD 9.8)	T = -2.5 p = 0.014
Married	33.3% (104)	36.2% (109)	$\chi^2 = 2.2$ p = 0.1
Violent offence	10.2% (40)	12.9% (39)	$\chi^2 = 0.1$ p = 0.8
Minority ethnicity*	28% (88)	11% (34)	$\chi^2 = 27.5$ p < 0.001
6 month prevalence of mental illness	17.1% (52)	15.0% (45)	$\chi^2 = 0.3$ p = 0.6
6 month prevalence of substance use disorder	61.8% (193)	60.8% (183)	$\chi^2 = 0.1$ p = 0.8

\* = non-Caucasian, non-EU or Traveller

prisons. Participants had a mean age of 29.8 years (sd 9.4, n = 615). Participants did not differ from 5,546 Irish committals for whom full data was available regarding age (28.9 years, sd 9.5) and 82% were Irish or EU citizens (7,231 of 8,201)<sup>6</sup>, compared to 493 of 615 in this survey (80%). However *Table 1* shows that remand committals were slightly younger than sentenced committals, and were more likely than sentenced committals to be from an ethnic minority (non-Caucasian, non-European Union citizens or Irish Travellers).

In accordance with the research ethics approval, an anonymised review of the inmate medical records of 50 males who declined to participate was carried out by GPs (not by the researchers). No excess of psychosis or other mental illness was found amongst those who declined to participate when compared to participants. This indicates that those with mental illness were not more likely to exclude themselves.

## Diagnosis

A total of 148 (47%) remand and 100 (33%) sentenced committals had a history of contact with community psychiatric services either as outpatients or inpatients. Current psychiatric disorder (ICD-10 diagnosis based on SADS-L interview) was present in 11.9% of participants at interview. Diagnoses are shown in *Table 2*.

A substance use disorder, either harmful use of or dependence on drugs or alcohol, was the most common diagnosis at 60.6% followed by anxiety disorders 5.1%, and depressive disorders 4.6%. Specific phobia was the most common current anxiety disorder at 3.1%.

Of those with depressive episodes, 3.7% met diagnostic criteria for a current severe depressive episode, 5.2% for a six month prevalence of severe depressive episode and 11.9% for a lifetime severe depressive episode. The prevalence of affective disorders and anxiety disorders is shown in *Table 2*.

Of the 13 participants (2.1%) with a current psychotic illness (ie. active symptoms such as delusions, hallucinations

Table 2: Diagnoses (ICD-10) for whole sample (n = 615)

Diagnosis		Current (%) [95 % CI]	6 month (%) [95 % CI]	Lifetime (%) [95 % CI]
Psychotic disorders	Any Psychosis	13 (2.1) [1.2-3.6]	24 (3.9) [2.6-5.7]	49 (8.0) [6.1-10.4]
	Schizophrenia	3 (0.5) [0.2-1.4]	5 (0.8) [0.3-1.9]	8 (1.3) [0.7-2.6]
	Psychotic mood disorder	7 (1.1) [0.6-2.3]	13 (2.1) [1.2-3.6]	27 (4.4) [3.0-6.3]
	Substance induced psychosis	2 (0.3) [0.1-1.2]	4 (0.7) [0.3-1.7]	10 (1.6) [0.9-3.0]
	Other psychotic disorder	1 (0.2) [0.0-0.9]	2 (0.3) [0.1-1.2]	4 (0.7) [0.3-1.7]
Mood disorders	All depression	28 (4.6) [3.2-6.5]	39 (6.3) [4.7-8.6]	89 (14.5) [11.9-17.5]
	Moderate or severe depression <sup>#</sup>	28 (4.6) [3.2-6.5]	33 (5.4) [3.8-7.4]	75 (12.2) [9.8-15.0]
	Mania <sup>##</sup>	4 (0.7) [0.3-1.7]	4 (0.7) [0.3-1.7]	14 (2.3) [1.4-3.8]
	Dysthymia	7 (1.1) [0.6-2.3]	7 (1.1) [0.6-2.3]	7 (1.1) [0.6-2.3]
Anxiety disorders	All anxiety disorders	31 (5.0) [3.6-7.1]	33 (5.4) [3.8-7.4]	38 (6.2) [4.5-8.4]
	Panic disorder	3 (0.5) [0.2-1.4]	5 (0.8) [0.3-1.9]	8 (1.3) [0.7-2.5]
	Generalized anxiety disorder	6 (1.0) [0.4-2.1]	6 (1.0) [0.4-2.1]	7 (1.1) [0.6-2.3]
	Obsessive compulsive disorder	7 (1.1) [0.6-2.3]	7 (1.1) [0.6-2.3]	8 (1.3) [0.7-2.5]
	Phobic disorder	19 (3.1) [2.0-4.8]	19 (3.1) [2.0-4.8]	21 (3.4) [2.2-5.2]
Alcohol and substance use disorders	Alcohol dependence	143 (23.3) [20.1-26.8]	148 (24.1) [20.9-27.6]	210 (34.1) [30.5-38.0]
	Any alcohol use disorder <sup>*</sup>	221 (35.9) [32.2-39.8]	227 (36.9) [33.2-40.8]	305 (49.6) [45.7-53.5]
	Drug dependence	202 (32.8) [29.3-36.7]	206 (33.5) [29.9-37.3]	216 (35.1) [31.5-39.0]
	Any substance use disorder <sup>*</sup>	371 (60.3) [56.4-64.1]	376 (61.1) [57.2-64.9]	425 (69.1) [65.3-72.0]
Any mental illness <sup>**</sup>	73 (11.9) [9.6-14.7]	97 (15.8) [13.1-18.9]	149 (24.2) [21.0-27.8]	

<sup>#</sup> Excludes mild depression and dysthymia; <sup>##</sup> Includes mania, hypomania and bipolar affective disorder; <sup>\*</sup> Includes harmful use and dependence; <sup>\*\*</sup> Excludes substance use disorder.

and thought disorder at the time of interview), seven had a psychotic mood disorder, three schizophrenia, two substance-induced psychosis, and one an organic psychosis. A total of 24 (3.9%) had a six month prevalence and 49 (8%) had a lifetime prevalence of a psychosis (see Table 2).

Current rates of psychosis were greater in the remand committals (12 individuals, 3.8%, 95% CI 2.2-6.6%) than in the sentenced committals (one person, 0.3%, 95% CI 0.1-1.9%) Chi-squared = 9.1, df = 1, p = 0.003. Six month and lifetime prevalence of psychoses also tended to be greater in remand committals though these did not reach statistical significance (see Table 3). There was a tendency for major depressive disorder (moderate or severe) to be more common in sentenced men, though this reached statistical significance only for lifetime prevalence (Chi-squared = 7.6, df = 1, p = 0.006). The same trend for anxiety disorders to be more common in sentenced committals did not reach statistical significance (see Table 3).

Table 2 shows the rates of harmful use of and dependence on alcohol and drugs. Co-morbidity of substance use disorders (harmful use or dependence) and mental illnesses was neither more nor less common than expected from the general prevalence of substance use disorders in this population.

Lifetime prevalence of a substance use disorder was 69.1% overall, while for those with a lifetime diagnosis of psychosis, lifetime substance use disorder was 64.2%, severe depressive disorder 52%, non-psychotic mood disorder 71.4% and

anxiety disorder 67.7% (Chi-squared all non-significant).

Although opiate dependence and harmful use were identified in 26% of committals, this accounts for a relatively small part of all substance dependence and harmful use (61% overall), with cannabis 29%, benzodiazepines 10%, ecstasy 2.5%, amphetamines 1%, hallucinogens 0.6% and alcohol 37%.

Table 4 shows that those with a psychosis were no more likely to be charged with a violent offence than others. Four of 24 with a six month prevalence of psychosis were charged with an offence against another person and 83% of those with a psychosis were charged with non-violent offences compared to 84% of those without a psychosis (Chi-squared = 0, df = 1, p = 0.9). The 12 'other' offences by those with a six month prevalence of psychosis included immigration (1), motoring (2), public order (5), possession of drugs (2), possession of a weapon (1) and uncategorised (1).

When prisoners committed to prison on remand were considered separately, 88% (14 of 16) of those with a six month prevalence of psychosis were charged with a non-violent offence. For sentenced committals 75% (6 of 8) sentenced prisoners with a six month prevalence of psychosis had been convicted of a non-violent offence.

#### Immediate treatment needs

A total of 19.8% (122) were deemed to require referral

**Table 3: Comparison of mental illness rates (%) between remand and sentenced committals**

		Current (%) [95 % CI]	Six month (%) [95 % CI]	Lifetime (%) [95 % CI]
Psychoses	Remand n = 313	12 (3.8) [2.2-6.6]	16 (5.1) [3.2-8.1]	29 (9.3) [6.5-13.0]
	Sentenced n = 302	1 (0.3) [0.1-1.9]	8 (2.6) [1.3-5.1]	20 (6.6) [4.3-10.0]
Moderate or severe depression	Remand n = 313	14 (4.5) [2.7-7.4]	15 (4.8) [2.9-7.8]	27 (8.6) [6.0-12.3]
	Sentenced n = 302	14 (4.6) [2.8-7.6]	18 (6.0) [3.8-9.2]	48 (15.9) [12.2-20.4]
Anxiety Disorders	Remand n = 313	14 (4.5) [2.7-7.4]	14 (4.5) [2.7-7.4]	14 (4.5) [2.7-7.4]
	Sentenced n = 302	17 (5.6) [3.5-8.8]	19 (6.3) [4.1-9.6]	24 (7.9) [5.4-11.6]

**Table 4: Offence categories in those with psychosis in the six months prior to committal according to remand or sentenced status.**

Offence category	Total male committal sample (n = 615)	Psychosis in six months prior to committal					
		REMAND n= 313		Sentenced n = 302		Whole sample n = 615	
		Yes n = 16	No n = 297	Yes n = 8	No n = 294	Yes n = 24	No n = 591
Murder	1 (0.2%)	0	1 (0.3%)	0	0	0	1 (0.2%)
Manslaughter	2 (0.3%)	0	2 (0.7%)	0	0	0	2 (0.3%)
Sexual	17 (3%)	0	5 (1.7%)	0	12 (4%)	0	17 (3%)
Other offences against person	81 (13%)	2 (13%)	45 (15%)	2 (25%)	32 (11%)	4 (16.6%)	77 (13%)
Property	144 (23%)	6 (38%)	80 (27%)	2 (25%)	56 (49%)	8 (33.0%)	136 (23%)
Other*	370 (60%)	8 (50%)	164 (55%)	4 (50%)	194 (66%)	12 (50.0%)	358 (61%)

\*Other\* offences are non-violent offences tried in the District court

to prison healthcare services (primary care) for psychiatric reasons and 16.7% (103) of the sample were deemed to require psychiatric treatment by psychiatric in-reach services other than for drug and alcohol problems. Over a third of participants in remand and in sentenced samples needed treatment by drug/alcohol treatment services (38.6% / 36.8%). Three point nine per cent (24) of participants were deemed to require treatment as inpatients in a psychiatric hospital, in each case due to psychosis.

**Discussion**

*Key messages:*

- A survey of psychiatric morbidity in men newly committed to Irish prisons yielded current diagnoses of psychiatric disorder of 11.9% of whom 2.1% were found to be suffering with psychotic illness
- Over half of these committals were deemed to have an immediate psychiatric treatment need. Of those committed to Irish prisons 3.9% were deemed to require transfer to a psychiatric hospital for treatment
- Prison mental health in-reach and inpatient forensic psychiatric services require considerable expansion to meet these needs
- The most pressing need is for diversion services for remand prisoners, to ensure that priority is given to the care of

individuals with severe and enduring mental illness, in the least restrictive environment possible.

Current rates of psychosis in committal prisoners in Irish prisons are higher than community norms.<sup>8,9</sup> The most interesting finding is the high prevalence of co-morbid mental illnesses and substance misuse (harmful use or dependence on drugs or alcohol). Substance misuse, broadly defined is by far the most common mental health problem associated with imprisonment. The mentally ill committed to prison are selected for imprisonment directly or indirectly due to substance misuse in the same way as those who are not mentally ill.

Because mental illness is a vulnerability factor for substance misuse problems just as substance misuse is associated with the onset of many mental illnesses,<sup>12</sup> the mentally ill are at increased risk of substance misuse or dependence,<sup>13</sup> and therefore at increased risk of imprisonment. Those with co-morbid schizophrenia and substance misuse problems are at increased risk of violence, with the best evidence for alcohol and cannabis.<sup>14,15</sup> The risk is also increased for suicidal ideation.<sup>16,17</sup>

The prevalence of psychosis and other mental illnesses in remanded and sentenced prisoners<sup>3,4</sup> may be explained by criminal justice system obstacles to engaging with local mental health services, or by the stresses of imprisonment

precipitating or provoking relapse of mental disorder. The high prevailing rate of co-morbid substance misuse (as found in committals) significantly complicates the management of these mentally ill individuals, and is likely to have hindered their engagement and compliance with community treatment.<sup>18</sup>

### Implications for practice

The 3.9% of committal prisoners in need of transfer to psychiatric hospital equates to 372 individuals per annum. These have been committed to prison although unfit for imprisonment due to current psychosis. Many of these are charged with minor or nominal offences. There is a need for expansion of in-reach psychiatric services to some committal prisons in Ireland.

A court liaison process initiated at the time of remand committal could successfully divert those with severe mental illness charged with less serious offences to local psychiatric hospitals where they can be treated. At the time of writing, such a process was being piloted in Cloverhill Prison. Those with severe mental illnesses charged with serious offences should be diverted to secure forensic psychiatric beds, and sufficient numbers of such beds can be calculated from this and related data.

The next most pressing need is for integrated provision in community mental health services for the needs of those with severe mental illnesses and co-morbid harmful use of drugs or alcohol, or dependence.<sup>19-21</sup> Forensic mental health services for those with co-morbid severe mental illness and substance misuse take an abstinence oriented approach to recovery and emphasise a broader range of intoxicants than just opiates, because of the increased rates of relapse, suicide and violence in those with co-morbidity.

General adult services may have to consider abandoning 'harm reduction' strategies which encourage 'controlled' drinking and use of other intoxicants for those with severe mental illness and co-morbid substance misuse.

This paper should be read as the first in a sequence, here describing psychiatric morbidity in male committals within 72 hours of reception, followed by the male remanded population<sup>3</sup> and the male sentenced population.<sup>4</sup> Taken together, these papers demonstrate that the prevalence of psychoses on reception in remand prison (six month prevalence 5.1%, 95% CI 3.2-8.1% (see Table 3)) is less than the prevalence in the cross-sectional remand population (six month prevalence 7.6% as a weighted mean of all remand prisons in the State, 8.6% for Cloverhill prison only),<sup>3</sup> while the prevalence of psychosis amongst men committed to prison on sentencing (six month prevalence 2.6%, 95% CI 1.3-5.1% (see Table 3)) is similar to the cross-sectional sentenced prisoner sample (six month prevalence 2.7%).<sup>4</sup>

This suggests that those with severe mental illnesses (psychoses) are accumulating on remand, perhaps because they are treated more severely by the criminal justice system, or perhaps because they are more likely to break down in prison.

Whatever the underlying process may be, the six month prevalence in the remand cross-sectional population<sup>3</sup> was shown to be much higher than in an international meta-analysis.<sup>5</sup> The Irish mental health and criminal justice systems are failing young men with severe mental illnesses, who are falling

through the net of community mental health provision.<sup>22,23</sup> We found that 87.5% (14 of 16) of those with a six month prevalence of psychosis committed on remand (unconvicted) were charged with non-violent offences. Those with psychosis are disproportionately over-represented in the prison remand population compared to the sentenced population. People with psychosis are detained for minor offences (as shown in Table 4) that do not ultimately lead to prison sentences, hence the lower prevalence of psychosis in the sentenced prisoner samples (Tables 3 and 4 in this paper and Duffy et al<sup>4</sup>). This is a serious form of discrimination<sup>24</sup> and requires urgent action through better targeting of community mental health services in cities, to meet the needs of young men with psychosis and co-morbid substance misuse problems, along with enhanced prison in-reach, court liaison<sup>25</sup> and court diversion services<sup>26</sup>.

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cerebrovascular  
disease.<sup>1</sup>



**Prescribing Information** (Please refer to full Summaries of Product Characteristics [SmPCs] before prescribing) **Reminyl**® XL 8mg, 16mg and 24mg prolonged release capsules; **Reminyl** 4mg, 8mg and 12mg Tablets and 4mg/ml Oral Solution. **Presentation:** Galantamine (as hydrobromide) provided as 8mg, 16mg and 24mg capsules; 4mg, 8mg and 12mg tablets; and 4mg/ml oral solution. **Uses:** Symptomatic treatment of mild to moderately severe Alzheimer's dementia (AD). **Dosage and administration:** Oral. Confirm diagnosis of probable mild to moderately severe AD prior to treatment. **Adults/Elderly:** Capsules to be taken once daily (o.d.), Tablets and oral solution to be taken twice daily (b.d.). Ensure adequate fluid intake during treatment. Capsules to be swallowed whole not chewed or crushed. **Starting dose:** 8mg/day (8mg o.d. capsule or 4mg b.d. tablet or oral solution) for 4 weeks. **Initial maintenance dose:** 16mg/day (16mg o.d. capsule or 8mg b.d. tablet or oral solution) for at least 4 weeks. **Maintenance dose:** 24mg/day (24mg o.d. capsule or 12mg b.d. tablet or oral solution). Evaluate patients regularly – see SmPCs for full details. Consider reducing dose to 16mg/day if patient cannot tolerate higher dose or no increased benefit shown. **Moderate hepatic impairment:** reduce dose – see SmPCs. **Children:** Not recommended. **Contraindications:** Hypersensitivity, severe hepatic/severe renal impairment, patients with both significant renal and hepatic dysfunction. **Special Warnings and Precautions:** Benefit has not been demonstrated in other types of dementia or memory impairment (e.g. mild cognitive impairment) – see SmPCs. Cardiovascular conditions, predisposition or history of gastrointestinal ulcers, gastrointestinal obstruction/surgery, convulsions, cerebrovascular disease, severe asthma, obstructive pulmonary disease or active pulmonary infections (e.g. pneumonia), urinary obstruction, bladder surgery. **Capsules:** contain sucrose. **Tablets:** contain lactose and 12mg tablet also contains E110. **Oral solution:** contains methyl and propyl parahydroxybenzoate. **Interactions:** Other cholinomimetics, beta-blockers, digoxin, anaesthetics, CYP2D6 or CYP3A4 inhibitors, certain calcium-channel blocking agents, amiodarone. **Pregnancy and Lactation:** Not recommended. **Undesirable Effects:** Very common (>1/10): Nausea, vomiting. Common (>1/100 to <1/10): Rhinitis, urinary tract

infections, anorexia, weight decrease, confusion, depression (very rarely with suicidality), insomnia, dizziness, somnolence, syncope, tremor, hypertension, abdominal pain, diarrhoea, dyspepsia, asthenia, fatigue, fever, headache, malaise, fall, injury. Uncommon (>1/1,000 to <1/100): Paraesthesia, tinnitus, atrial arrhythmia, myocardial infarction, myocardial ischaemia, palpitation, cerebrovascular disease, transient ischaemic attack, leg cramps. Rare (>1/10,000 to <1/1,000): Dehydration (leading to renal insufficiency and renal failure), hypokalaemia, aggression, agitation, hallucinations, seizures, bradycardia (severe), rash. Very rare (<1/10,000): Worsening of Parkinsonism, AV block, hypotension, dysphagia, gastrointestinal bleeding, elevated liver enzymes, hepatitis, increased sweating. **Overdose:** General supportive measures. Atropine in severe cases. **Legal category:** POM. **Product Authorisation numbers:** Capsules: PA 535/6/5-7, Tablets: PA 535/6/2-4 and Oral Solution: PA 535/6/1. **Product Authorisation holder:** Shire Pharmaceuticals Limited, Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP, UK. Distributed by: Cahill May Roberts, Pharmapark, Chapelizod, Dublin 20. Further information is available from: Shire Pharmaceuticals Limited, Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP UK. Tel: +44 1256 894000. **Reminyl** is a registered trademark of Shire. **Pharmaceutical Development Limited in Ireland. Date of revision:** November 2007. **Date of preparation:** June 2009. **Item Number:** IRE/REM/09/0007.

Adverse events should be reported to the Pharmacovigilance Unit at the Irish Medicines Board (IMB) ([imbpharmacovigilance@imb.ie](mailto:imbpharmacovigilance@imb.ie)). Information about adverse event reporting can be found on the IMB website ([www.imb.ie](http://www.imb.ie)). Adverse events may also be reported to Shire Pharmaceuticals Ltd on +44 1256 894000. **Shire**

Once-Daily  
**Reminyl XL**  
Galantamine Hydrobromide

Reminyl helps keep them together.

Reminyl is licensed for the symptomatic treatment of mild to moderate Alzheimer's dementia.<sup>1</sup>

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