



# Patterns of Prescribing of Selective Serotonin Reuptake Inhibitors in Children in QRESEARCH

*An analysis using QRESEARCH  
for the Department of Health*

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## 1 EXECUTIVE SUMMARY

This report uses the Pilot QRESEARCH (43 practices) dataset to report on the prescribing of Selective Serotonin Reuptake Inhibitors (SSRIs) to patients aged under 18 in 2002.

In 2002, 160 patients aged under 18 were prescribed an SSRI in this population with 56,866 patient years – 2.81 patients on SSRI per 1000 person years. Paroxetine was only prescribed to 27 (17%). Most of these prescriptions (19 of the 27) were issued to females in the 15-17 age group.

Using June 2002 prescriptions as indicative of numbers taking paroxetine on 1st July 2002, there were 10 patients on paroxetine at that point in time, a rate of 0.19 per 1000 mid-year population. This suggests that 2 people per 10,000 population aged under 18 were on paroxetine at any moment in time in 2002.

## 2 AIMS

SSRIs are an effective and widely used treatment for depression. There are six individual SSRIs available. These are: Citalopram, Escitalopram, Fluoxetine, Fluvoxamine Maleate, Paroxetine (this includes Seroxat) and Sertraline. The use of Paroxetine (Seroxat) in patients under the age of 18 has been the cause of concern. The specification was:

“The MHRA have recently advised that the anti depressant Seroxat not be prescribed to children and adolescents. We would be very interested to know how many children and adolescents received Seroxat over the last year and how many, on average, are

taking it at a point of time in the year. This is also relevant to the child and mental health NSFs [example of analysis of the number of patients receiving prescriptions]”

The aim of this work was, therefore, to:

Analyse the number, age and gender of patients aged under 18 receiving SSRIs, including and specifically Paroxetine, over the year and at any point in the year 2002

### **3 METHODOLOGY**

#### **3.1 Eligible population**

The analysis for this report used prescriptions by age and sex for the calendar year 2002 (i.e. period January 2002 to December 2002 inclusive). The eligible population for the search was all registered patients aged under 18 years in 2002. All 43 practices in the QRESEARCH pilot database had used their EMIS computer system for the whole of 2002, and so were eligible for inclusion.

#### **3.2 Numerator for prescribing rate**

The numerator for the rate was the number of patients issued one or more prescriptions for and SSRI, by preparation.

#### **3.3 Denominator for prescribing rate**

We used two different denominators to derive two different rates. These were

(a) Person years at risk for registered population.

This is the sum of the number of days each patient was registered with their QRESEARCH practice, divided by the number of days (365.25) in the year.

(b) Mid-year population.

This is defined as the number of patients registered on 1 July 2002 and for the whole of the preceding six months.

## 4 RESULTS

### 4.1 Estimated number of children and adolescents prescribed an SSRI at some time in 2002

There were 56865.9 person years of observation for 2002 across the 43 practices contributing to the QRESEARCH pilot database. Overall, there were 160 patients under 18 years old who had been prescribed one or more SSRI during the year, giving a rate of 2.81 per 1000 person years (95% CI 2.39 to 3.28). Paroxetine was the third most commonly used SSRI with a rate of 0.47 patient prescribed per 1,000 person years (95% CI 0.31 to 0.69). The prescribing rate per 1,000 mid year population is shown in the accompanying spreadsheet.

**Table 1: Patients under 18 years prescribed SSRI during 2002 by individual preparation. Rates are per 1000 person years and per mid year population**

Type of SSRI	Number of patients aged <18 prescribed drug	% of 160*	rate per 1000 person years	LCL	UCL
Paroxetine	27	16.9	0.47	0.31	0.69
Escitalopram	1	0.6	0.02	0.00	0.10
Fluoxetine	95	59.4	1.67	1.35	2.04
Fluvoxamine	0	0.0	0.00	0.00	0.06
Sertraline	17	10.6	0.30	0.17	0.48
Citalopram	32	20.0	0.56	0.39	0.79
<b>All SSRIs</b>	<b>160</b>	<b>100.0</b>	<b>2.81</b>	<b>2.39</b>	<b>3.28</b>

\* some patients were prescribed more than one type of SSRI in 2002

Table 2 shows the age-sex breakdown of patients prescribed paroxetine at any point during 2002. The rate was highest in girls aged 15 to 19 years (3.82 per 1000 person years, 95% CI 2.30 to 5.97), three times the rate for boys of the same age. The all-ages rate was 2.3 times higher in females than males (26.72 and 11.38 per 1000 person years, respectively). This was similar to the ratio found in Key Health Statistics from General Practice for 1998 for all patients of all ages (44.8 and 20.3 per 1000 patients, respectively).

**Table 2: Patient prescribed paroxetine during 2002 by age and sex.**

<b>sex</b>	<b>Ageband</b>	<b>Number of patients prescribed drug</b>	<b>patient years</b>	<b>rate per 1000 person years</b>	<b>LCL</b>	<b>UCL</b>
males	0 to 4 years	0	7,347.9	0.00	0.00	0.50
males	5 to 9 years	0	8,135.7	0.00	0.00	0.45
males	10 to 14 years	0	8,619.6	0.00	0.00	0.43
males	15 to 17 years	6	4,875.0	1.23	0.45	2.68
<b>males</b>	<b>17 and under</b>	<b>6</b>	<b>28,978.1</b>	<b>0.21</b>	<b>0.08</b>	<b>0.45</b>
females	0 to 4 years	0	6860.1	0.00	0.00	0.54
females	5 to 9 years	0	7,670.0	0.00	0.00	0.48
females	10 to 14 years	2	8,383.6	0.24	0.03	0.86
females	15 to 17 years	19	4,974.0	3.82	2.30	5.97
<b>females</b>	<b>17 and under</b>	<b>21</b>	<b>27,887.8</b>	<b>0.75</b>	<b>0.47</b>	<b>1.15</b>
Total	0 to 4 years	0	14,208.0	0.00	0.00	0.26
Total	5 to 9 years	0	15,805.7	0.00	0.00	0.23
Total	10 to 14 years	2	17,003.2	0.12	0.01	0.42
Total	15 to 17 years	25	9,849.0	2.54	1.64	3.75
<b>Total</b>	<b>17 and under</b>	<b>27</b>	<b>56,865.9</b>	<b>0.47</b>	<b>0.31</b>	<b>0.69</b>

#### **4.2 Estimated number of children and adolescents treated with paroxetine on 1 July 2002**

The next analysis determined the number of patients prescribed paroxetine at a single point in time.

##### **4.2.1 Numerator**

The numerator for this rate is the number of patients issued a prescription for paroxetine in June 2002 (assumes each prescription lasts one month).

##### **4.2.2 Denominator**

The denominator for prescribing rate was the mid-year population. This is defined as the number of patients registered on 1 July 2002 and for the whole of the preceding six months. This shows that less than half of the patients prescribed paroxetine during 2002 as a whole had a single script in June 2002.

**Table 3: Age-sex breakdown of patients prescribed paroxetine in June 2002  
(therefore assumed to be on paroxetine on 1st July 2002)**

<b>sex</b>	<b>Ageband</b>	<b>No. of patients prescribed drug</b>	<b>mid year population</b>	<b>Rate per 1000 population</b>	<b>LCL</b>	<b>UCL</b>
males	0 to 4 years	0	5,651	0.00	0.00	0.65
males	5 to 9 years	0	7,911	0.00	0.00	0.47
males	10 to 14 years	0	8,413	0.00	0.00	0.44
males	15 to 17 years	2	4,792	0.42	0.05	1.51
<b>males</b>	<b>17 and under</b>	<b>2</b>	<b>26,767</b>	<b>0.07</b>	<b>0.01</b>	<b>0.27</b>
females	0 to 4 years	0	5,314	0.00	0.00	0.69
females	5 to 9 years	0	7,469	0.00	0.00	0.49
females	10 to 14 years	1	8,137	0.12	0.00	0.68
females	15 to 17 years	7	4,861	1.44	0.58	2.97
<b>females</b>	<b>17 and under</b>	<b>8</b>	<b>25,781</b>	<b>0.31</b>	<b>0.13</b>	<b>0.61</b>
Total	0 to 4 years	0	10,965	0.00	0.00	0.34
Total	5 to 9 years	0	15,380	0.00	0.00	0.24
Total	10 to 14 years	1	16,550	0.06	0.00	0.34
Total	15 to 17 years	9	9,653	0.93	0.43	1.77
<b>Total</b>	<b>17 and under</b>	<b>10</b>	<b>52,548</b>	<b>0.19</b>	<b>0.09</b>	<b>0.35</b>

## 5 CONCLUSIONS

This analysis is based on the QRESEARCH pilot database of 43 practices. Within a few months the full database covering approximately 500 practices and with a wider geographic spread will be available if a further analysis is required.

Although 160 patients aged under 18 were prescribed an SSRI in this population in 2002, paroxetine was only prescribed to 27 (17%). Most of these prescriptions (19 of the 27) were issued to females in the 15-17 age group.

Using June 2002 prescriptions as indicative of numbers taking paroxetine on 1st July 2002, there were 10 patients on paroxetine at that point in time. This suggests that 2 people per 10,000 population aged under 18 were on paroxetine at any moment in time in 2002.

This analysis has shown good comparability with Key Health Statistics and has validated the potential to use QRESEARCH for similar studies in future.