Table 1: Data source characteristics, by country

Table 2: Absolute change in annual prevalence (in 100) of ADHD medication use per year

Figure 1: Overall annual prevalence of ADHD medication use in children 3 to 18 years old

Figure 2-5: Annual prevalence of ADHD medication use in children, by region, by age group

Figure 6: Overall annual prevalence of ADHD medication use in adults

Figure 7: Annual prevalence of ADHD medication use in adults, by region

## Appendix:

Table A1: Characteristics of ADHD medication records

Table A2: Ethical approvals

Table A3: Data Source References

Table A4: ADHD medication licensure status during study period, by country

Table A5a, A5b, A5c, A5d: Annual prevalence and percentage change of ADHD medication use in children 3 to 18 years old, by region

Table A6a, A6b, A6c, A6d: Annual prevalence and percentage change of ADHD medication use in adults

Table A7: Most commonly used medications in rank order, by country, 2010

Table A8: ADHD diagnosis prevalence from Thomas et al and ADHD medication prevalence from this study

Figure A1: Cross-sectional comparison of annual prevalence of ADHD medication use in children 3 to 18 years old, 2010

Figure A2: Cross-sectional comparison of annual prevalence of ADHD medication use in adults, 2010

Figure A3: Annual prevalence of ADHD medication use in children, by gender

Figure A4: Annual prevalence of ADHD medication use in adults, by gender

Figure A5: Annual prevalence of ADHD medication use in children and adults, by age group

Table 1: Data source characteristics, by country

| Country | Region           | Database                  | Study             | #     | Persons      | Denominator    | Health      | Child  | Adult |
|---------|------------------|---------------------------|-------------------|-------|--------------|----------------|-------------|--------|-------|
|         |                  |                           | start             | years | included     |                | system/data | data   | data  |
|         |                  |                           | year              |       | (% national  |                | source      | (3-18) | (19+) |
|         |                  |                           |                   |       | population)  |                |             |        |       |
| Norway  | Northern Europe  | Norwegian Prescription    | 2004              | 10    | 5·3 million  | # residents at | Universal   | ✓      | ✓     |
|         |                  | Database                  |                   |       | (100%)       | start of year  |             |        |       |
| Denmark | Northern Europe  | Danish National           | 2001              | 13    | 5.6 million  | # residents at | Universal   | ✓      | ✓     |
|         |                  | Prescription Registry     |                   |       | (100%)       | start of year  |             |        |       |
| Sweden  | Northern Europe  | Swedish Prescribed Drug   | 2005 <sup>a</sup> | 8     | 9.8 million  | # residents at | Universal   | ✓      | ✓     |
|         |                  | Register                  |                   |       | (100%)       | end of year    |             |        |       |
| Finland | Northern Europe  | Finnish Prescription      | 2005              | 8     | 5·5 million  | # residents at | Universal   | ✓      | ✓     |
|         |                  | Register                  |                   |       | (100%)       | end of year    |             |        |       |
| Iceland | Northern Europe  | The Icelandic Medicines   | 2003              | 11    | 0.33 million | # residents at | Universal   | ✓      | ✓     |
|         |                  | Registry                  |                   |       | (100%)       | start of year  |             |        |       |
| France  | Western/Southern | French National Health    | 2006              | 7     | 52 million   | # insured      | Universal   | ✓      | ✓     |
|         | Europe           | Insurance (CNAMTS)        |                   |       | (75%)        | persons at end |             |        |       |
|         |                  |                           |                   |       |              | of year        |             |        |       |
| Spain   | Western/Southern | Base de Datos para la     | 2001              | 14    | 4·8 million  | # enrollees at | Universal   | ✓      | ✓     |
|         | Europe           | Investigacion             |                   |       | (8.9%)       | midyear        |             |        | 19-45 |
|         |                  | Farmacoepidemiologica en  |                   |       |              |                |             |        | years |
|         |                  | Atencion Primaria (BIFAP) |                   |       |              |                |             |        |       |
| United  | Western/Southern | The Health Improvement    | 2001              | 14    | 11·1 million | # residents at | Universal   | ✓      | ✓     |
| Kingdom | Europe           | Network (THIN)            |                   |       | (6.2%)       | midyear        |             |        |       |

| Hong Kong | Asia and Oceania | Hong Kong Clinical Data              | 2001 | 15 | 7 million  | # residents at | Universal      | ✓     | ✓ |
|-----------|------------------|--------------------------------------|------|----|------------|----------------|----------------|-------|---|
|           |                  | Analysis and Reporting               |      |    | (100%)     | midyear        |                |       |   |
|           |                  | System (CDARS)                       |      |    |            |                |                |       |   |
|           |                  |                                      |      |    |            |                |                |       |   |
| Taiwan    | Asia and Oceania | Taiwan National Health               | 2002 | 9  | 1 million  | # residents at | Universal      | ✓     | ✓ |
|           |                  | Insurance Research                   |      |    | (5 %)      | midyear        |                |       |   |
|           |                  | Database (NHIRD)                     |      |    |            |                |                |       |   |
| Japan     | Asia and Oceania | Japan Medical Data Center            | 2010 | 6  | 4 million  | # enrollees at | Persons        | ✓     | ✓ |
|           |                  | Database (JMDC)                      |      |    | (3%)       | midyear        | enrolled in    |       |   |
|           |                  |                                      |      |    |            |                | the insurance  |       |   |
|           |                  |                                      |      |    |            |                | plans          |       |   |
| Australia | Asia and Oceania | Australian Pharmaceutical            | 2009 | 6  | 22 million | # residents at | Universal      | ✓     | ✓ |
|           |                  | Benefits Scheme (PBS)                |      |    | (100%)     | midyear        |                |       |   |
| Canada    | North America    | Quebec Pregnancy Cohort <sup>a</sup> | 2001 | 9  | b          | # insured      | Persons        | ✓     |   |
|           |                  |                                      |      |    |            | persons at end | insured by the | 3-11  |   |
|           |                  |                                      |      |    |            | of year        | Régie de       | years |   |
|           |                  |                                      |      |    |            |                | l'Assurance    |       |   |
|           |                  |                                      |      |    |            |                | Maladie du     |       |   |
|           |                  |                                      |      |    |            |                | Québec         |       |   |
|           |                  |                                      |      |    |            |                | (RAMQ)         |       |   |
|           |                  |                                      |      |    |            |                | prescription   |       |   |
|           |                  |                                      |      |    |            |                | drug           |       |   |
|           |                  |                                      |      |    |            |                | insurance      |       |   |
|           |                  |                                      |      |    |            |                | plan           |       |   |

| US         | North America | Truven Marketscan         | 2001 | 14 | 40 million <sup>1</sup> | # enrolled | Commercially  | ✓ | ✓     |
|------------|---------------|---------------------------|------|----|-------------------------|------------|---------------|---|-------|
| MarketScan |               |                           |      |    | (~13%)                  | persons at | insured       |   | 19-64 |
| (Private)  |               |                           |      |    |                         | midyear    | persons       |   | years |
| US         | North America | Medicaid Analytic Extract | 2001 | 10 | 29-38                   | # enrolled | Publically    | ✓ | ✓     |
| Medicaid   |               |                           |      |    | million                 | persons at | insured       |   |       |
| (Public)   |               |                           |      |    | ~ 20%                   | midyear    | persons (low  |   |       |
|            |               |                           |      |    |                         |            | income and    |   |       |
|            |               |                           |      |    |                         |            | disabilities) |   |       |

<sup>&</sup>lt;sup>a</sup> The Swedish Prescribed Drug Register started recording individual data in July 2005.

<sup>&</sup>lt;sup>b</sup> Canadian data is from the Quebec Pregnancy Cohort, a population based cohort study of over 289 000 pregnancies among 186 000 women during the years of 1998-2009. The data used in this study included 159 064 children.

Table 2: Absolute change in annual prevalence (in 100 person) of ADHD medication use per year

|                            | Country  Australia | Children (3 to 18 year                        | Adult (19 or above) |      |   |        |        |
|----------------------------|--------------------|---|---------------------|------|---|--------|--------|
| Region                     |                    | Average absolute change per year <sup>a</sup> | 95% CI              |      | Average absolute change per year <sup>a</sup> | 95% CI |        |
| Asia and Oceania           |                    | 0.08  | 0.06                | 0.09 | 0.02  | 0.01   | 0.02   |
|                            | Hong Kong          | 0.10  | 0.08                | 0.12 | 0.0006  | 0.0005 | 0.0008 |
|                            | Japan              | 0.06  | 0.02                | 0.10 | 0.01  | 0.006  | 0.02   |
|                            | Taiwan             | 0.17  | 0.15                | 0.20 | 0.002   | 0.002  | 0.003  |
| North America              | Canada             | 0.24  | 0.19                | 0.29 | NA  | NA     | NA     |
|                            | US MarketScan      | 0.13  | 0.09                | 0.17 | 0.12  | 0.10   | 0.13   |
|                            | US Medicaid        | 0.19  | 0.11                | 0.26 | 0.09  | 0.06   | 0.12   |
| Northern Europe            | Denmark            | 0.15  | 0.12                | 0.17 | 0.05  | 0.04   | 0.06   |
|                            | Finland            | 0.11  | 0.11                | 0.12 | 0.01  | 0.0004 | 0.02   |
|                            | Iceland            | 0.24  | 0.22                | 0.26 | 0.10  | 0.08   | 0.11   |
|                            | Norway             | 0.08  | 0.05                | 0.11 | 0.04  | 0.03   | 0.04   |
|                            | Sweden             | 0.26  | 0.24                | 0.27 | 0.07  | 0.07   | 0.08   |
| Western/Southern<br>Europe | France             | 0.02  | 0.02                | 0.03 | 0.002   | 0.002  | 0.002  |
|                            | Spain              | 0.14  | 0.13                | 0.15 | 0.007   | 0.004  | 0.009  |
|                            | UK                 | 0.02  | 0.02                | 0.03 | 0.003   | 0.003  | 0.004  |

 $<sup>^{</sup>a}$ Linear regression models were used to test for time trends in the annual prevalence and the absolute changes in prevalence throughout the study period; separate linear regression models were fit for each country. All p-values are < 0.05