Supplementary Tables:

Table s1: Details on the datasets utilised in this study:

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Description</th>
<th>Coverage</th>
<th>Timescale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Welsh Demographics Service (WDS)</td>
<td>Register of all individuals who have ever had contact with the NHS or registered with a Welsh GP.</td>
<td>All individuals in Wales</td>
<td>Whole of the study period</td>
</tr>
<tr>
<td>Welsh Index of Multiple Deprivation (WIMD)</td>
<td>Dataset assigning a deprivation score derived from eight domains including employment, income and education to all Lower Super Output Areas (LSOAs; geographical areas comprising of around 1500 individuals). Individuals are assigned a deprivation index based on the LSOA of their current address in WDS.</td>
<td>All individuals in Wales</td>
<td>Whole of the study period</td>
</tr>
<tr>
<td>General Practice Database (GPD)</td>
<td>Attendance and clinical information for all primary care contacts. Includes diagnoses, symptoms and prescriptions.</td>
<td>79% of individuals in Wales from 333/432 GP practices</td>
<td>Whole of the study period</td>
</tr>
<tr>
<td>Patient Episode Database for Wales (PEDW)</td>
<td>Attendance and clinical information for all NHS Wales hospital admissions (both inpatient and day cases). Includes diagnoses, and specialty.</td>
<td>All individuals in Wales</td>
<td>Whole of the study period</td>
</tr>
<tr>
<td>Emergency Department Dataset</td>
<td>Administrative and clinical information for all NHS Wales Accident and Emergency Department attendances.</td>
<td>All individuals in Wales</td>
<td>Data available since 2009</td>
</tr>
</tbody>
</table>

Full details of these datasets are available at [www.sail databank.com](http://www.sail databank.com)
Table s2: List of read codes, ICD-10 codes and prescription codes utilised to identify ADHD and ASD:

<table>
<thead>
<tr>
<th>Concept</th>
<th>Read codes and prescription codes</th>
<th>ICD-10 codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADHD</td>
<td>Eu900, 9Ngp.., Eu9y7, E2E01, EU900, 6A61, 8BPT.., EU901, EU90.., E2E.., Zs91.00, ZS91.11, ZS91.12, dc1.., dw1.., dw2.., dw3..,</td>
<td>F90, F90.0, F90.1, F90.2, F90.8, F90.9</td>
</tr>
<tr>
<td>ASD</td>
<td>E140, Eu840, Eu841, Eu845, Eu84z-1, 1J9</td>
<td>F84.0, F84.5, F84.9</td>
</tr>
</tbody>
</table>
Table S3: Cox’s regression analysis: ADHD associations with outcomes

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HR</td>
<td>95% CI</td>
<td>HR</td>
</tr>
<tr>
<td>Anxiety / depression</td>
<td>ADHD</td>
<td>2.36</td>
<td>2.20, 2.53</td>
</tr>
<tr>
<td></td>
<td>Sex</td>
<td>0.44</td>
<td>0.41, 0.47</td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-harm</td>
<td>ADHD</td>
<td>5.70</td>
<td>5.07, 6.40</td>
</tr>
<tr>
<td></td>
<td>Sex</td>
<td>0.53</td>
<td>0.47, 0.60</td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol use</td>
<td>ADHD</td>
<td>3.95</td>
<td>3.42, 4.56</td>
</tr>
<tr>
<td></td>
<td>Sex</td>
<td>1.07</td>
<td>0.88, 1.28</td>
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<tr>
<td>Deprivation**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug use</td>
<td>ADHD</td>
<td>5.88</td>
<td>5.08, 6.80</td>
</tr>
<tr>
<td></td>
<td>Sex</td>
<td>1.49</td>
<td>1.21, 1.83</td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Emergency Department room use</td>
<td>ADHD</td>
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<td>1.31, 1.41</td>
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<td>0.92, 1.00</td>
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<td>Deprivation**</td>
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<tr>
<td>Any primary care use</td>
<td>ADHD</td>
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<td>2.46, 2.80</td>
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<tr>
<td></td>
<td>Sex</td>
<td>0.50</td>
<td>0.46, 0.53</td>
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<tr>
<td>Deprivation**</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Any hospital use (inc ED)</td>
<td>ADHD</td>
<td>1.36</td>
<td>1.31, 1.41</td>
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<tr>
<td></td>
<td>Sex</td>
<td>0.95</td>
<td>0.91, 0.99</td>
</tr>
<tr>
<td>Deprivation**</td>
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<td></td>
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</table>

Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; **WIMD quintile
Table s4: Binomial analysis of number of recorded incidents: ADHD and ASD associations with number of Anxiety/depression, self-harm and Emergency Department events

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>B</th>
<th>St. error</th>
<th>95% CI</th>
</tr>
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<td>Number of self-harm events</td>
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<td>0.004</td>
<td>0.35, 0.51</td>
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<tr>
<td>Number of Emergency Department visits</td>
<td>14916</td>
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<td>0.009</td>
<td>0.51, 0.55</td>
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<tr>
<td><strong>ASD</strong></td>
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<tr>
<td>Number of self-harm events</td>
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<td>Number of Emergency Department visits</td>
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<td>0.01</td>
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* Controlling for sex, age at end of follow up, proportion of follow up and deprivation
Table s5: **Cox's regression analysis: ADHD associations with self-harm using GP or hospital records only**

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<tr>
<th></th>
<th>Model 1</th>
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<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>HR 95% CI</td>
<td>HR 95% CI</td>
</tr>
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<td><strong>GP records</strong></td>
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</tr>
<tr>
<td>ADHD</td>
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<td>5.72 4.88, 6.70</td>
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</tr>
<tr>
<td>Sex</td>
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<td>0.43 0.36, 0.50</td>
<td></td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
<td>1.14 1.08, 1.20</td>
<td></td>
</tr>
<tr>
<td><strong>Hospital records</strong></td>
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<td></td>
</tr>
<tr>
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<td>5.94 4.95, 7.13</td>
<td>5.76 4.80, 6.92</td>
</tr>
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<td>0.44 0.37, 0.52</td>
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</tr>
<tr>
<td>Deprivation**</td>
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<td>1.12 1.05, 1.19</td>
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</tr>
</tbody>
</table>

Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; **WIMD quintile
Table s6: Cox’s regression analysis: **ADHD associations with outcomes MALES**

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<td></td>
<td>HR</td>
<td>95% CI</td>
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<tr>
<td>Anxiety/depression</td>
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<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>2.36</td>
<td>2.16, 2.57</td>
</tr>
<tr>
<td>Deprivation**</td>
<td>1.06</td>
<td>1.03, 1.09</td>
</tr>
<tr>
<td>Self-harm</td>
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<td>5.00, 6.61</td>
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<td>1.10, 1.22</td>
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<td>Alcohol use</td>
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<td>3.16, 4.33</td>
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<td>Deprivation**</td>
<td>1.13</td>
<td>1.07, 1.20</td>
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<tr>
<td>Drug use</td>
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<td>1.08, 1.21</td>
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<td>Emergency Department use</td>
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<td>ADHD</td>
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<td>1.27, 1.38</td>
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<td>1.02, 1.04</td>
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<tr>
<td>Any primary care use</td>
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<td></td>
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<td>ADHD</td>
<td>2.70</td>
<td>2.50, 2.92</td>
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<tr>
<td>Deprivation**</td>
<td>1.07</td>
<td>1.04, 1.10</td>
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<tr>
<td>Any hospital use (inc ED)</td>
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<tr>
<td>ADHD</td>
<td>1.32</td>
<td>1.27, 1.38</td>
</tr>
<tr>
<td>Deprivation**</td>
<td>1.03</td>
<td>1.02, 1.04</td>
</tr>
</tbody>
</table>

Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; ** WIMD quintile
Table s7: Cox’s regression analysis: **ADHD associations with outcomes FEMALES**

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
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<td></td>
<td>HR 95% CI</td>
<td>HR 95% CI</td>
</tr>
<tr>
<td>Anxiety/depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>2.35 2.09, 2.65</td>
<td>2.34 2.07, 2.64</td>
</tr>
<tr>
<td>Deprivation**</td>
<td>1.03 0.99, 1.07</td>
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</tr>
<tr>
<td>Self-harm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>5.57 4.51, 6.88</td>
<td>5.50 4.45, 6.80</td>
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<td>Deprivation**</td>
<td>1.05 0.98, 1.130</td>
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<tr>
<td>Alcohol use</td>
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</tr>
<tr>
<td>ADHD</td>
<td>5.45 3.84, 7.75</td>
<td>5.49 3.86, 7.80</td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
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<tr>
<td>Drug use</td>
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<tr>
<td>ADHD</td>
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<td>7.41 4.86, 11.30</td>
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<tr>
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<td>1.17 1.01, 1.35</td>
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<tr>
<td>Emergency Department use</td>
<td></td>
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<tr>
<td>ADHD</td>
<td>1.51 1.39, 1.63</td>
<td>1.49 1.38, 1.61</td>
</tr>
<tr>
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<td>1.05 1.03, 1.08</td>
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</tr>
<tr>
<td>Any primary care use</td>
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<td></td>
</tr>
<tr>
<td>ADHD</td>
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<td>2.44 2.18, 2.75</td>
</tr>
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<td>Deprivation**</td>
<td>1.04 0.99, 1.08</td>
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</tr>
<tr>
<td>Any hospital use (inc ED)</td>
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<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>1.52 1.41, 1.64</td>
<td>1.50 1.39, 1.62</td>
</tr>
<tr>
<td>Deprivation**</td>
<td>1.05 1.03, 1.08</td>
<td></td>
</tr>
</tbody>
</table>

Models incrementally adjusting for covariates. *Age at end of follow up period as time variable; **WIMD quintile
Table s8: Cox’s regression – associations between ADHD and outcomes, stratified by Welsh index of multiple deprivation (WIMD):

<table>
<thead>
<tr>
<th>Model 1*</th>
<th>Model 2**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety/depres sion</td>
<td>HR</td>
</tr>
<tr>
<td>WIMD 1:</td>
<td>2.34</td>
</tr>
<tr>
<td>WIMD 2:</td>
<td>2.97</td>
</tr>
<tr>
<td>WIMD 3:</td>
<td>2.41</td>
</tr>
<tr>
<td>WIMD 4:</td>
<td>2.10</td>
</tr>
<tr>
<td>WIMD 5:</td>
<td>2.20</td>
</tr>
</tbody>
</table>

| Self-harm | WIMD 1: | 5.17 | 3.61, 7.39 | 5.26 | 3.68, 7.53 |
| WIMD 2: | 10.51 | 7.43, 14.86 | 10.43 | 7.37, 14.75 |
| WIMD 3: | 6.58 | 4.97, 8.71 | 6.41 | 4.85, 8.49 |
| WIMD 4: | 4.72 | 3.72, 5.99 | 4.75 | 3.75, 6.03 |
| WIMD 5: | 4.46 | 3.66, 5.43 | 4.47 | 3.67, 5.44 |

| Alcohol use | WIMD 1: | 5.74 | 3.58, 9.23 | 5.78 | 3.60, 9.28 |
| WIMD 2: | 4.16 | 2.80, 6.14 | 4.15 | 2.81, 6.13 |
| WIMD 3: | 3.19 | 2.37, 4.29 | 3.19 | 2.37, 4.29 |
| WIMD 4: | 4.38 | 3.21, 5.96 | 4.37 | 3.21, 5.96 |
| WIMD 5: | 3.48 | 2.70, 4.49 | 3.48 | 2.70, 4.48 |

| Drug use: | WIMD 1: | 5.40 | 3.50, 8.33 | 5.36 | 3.47, 8.27 |
| WIMD 2: | 8.06 | 5.23, 12.42 | 8.12 | 5.27, 12.51 |
| WIMD 3: | 5.62 | 4.01, 7.88 | 5.65 | 4.03, 7.92 |
| WIMD 4: | 6.61 | 4.74, 9.20 | 6.57 | 4.72, 9.16 |
| WIMD 5: | 4.75 | 3.75, 6.01 | 4.74 | 3.75, 6.01 |

| ED Use: | WIMD 1: | 1.36 | 1.23, 1.50 | 1.36 | 1.23, 1.50 |
| WIMD 2: | 1.35 | 1.23, 1.48 | 1.35 | 1.23, 1.48 |
| WIMD 3: | 1.37 | 1.26, 1.48 | 1.36 | 1.26, 1.48 |
| WIMD 4: | 1.27 | 1.18, 1.37 | 1.27 | 1.18, 1.37 |
| WIMD 5: | 1.38 | 1.29, 1.47 | 1.38 | 1.29, 1.47 |

<p>| Any primary care use: | WIMD 1: | 2.41 | 2.00, 2.89 | 2.44 | 2.03, 2.93 |
| WIMD 2: | 3.29 | 2.77, 3.91 | 3.24 | 2.73, 3.85 |
| WIMD 3: | 2.74 | 2.36, 3.19 | 2.31 | 2.31, 3.12 |
| WIMD 4: | 2.42 | 2.11, 2.79 | 2.44 | 2.12, 2.81 |
| WIMD 5: | 2.42 | 2.16, 2.71 | 2.42 | 2.16, 2.72 |</p>
<table>
<thead>
<tr>
<th>Any hospital use (inc ED)</th>
<th>WIMD 1:</th>
<th>WIMD 2:</th>
<th>WIMD 3:</th>
<th>WIMD 4:</th>
<th>WIMD 5:</th>
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<td>1.26, 1.49</td>
<td>1.19, 1.38</td>
<td>1.29, 0.99</td>
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</tbody>
</table>

* Unadjusted association with ADHD; ** Association with ADHD, controlling for Sex.
Table s9: Cox’s regression analysis: ADHD associations with outcomes, sample with complete data coverage only

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety/depres</td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>HR</td>
<td>95% CI</td>
<td>HR</td>
</tr>
<tr>
<td>ADHD</td>
<td>2.23</td>
<td>2.07, 2.40</td>
</tr>
<tr>
<td>Sex</td>
<td>0.43</td>
<td>0.39, 0.46</td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-harm</td>
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<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>5.46</td>
<td>4.83, 6.18</td>
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<tr>
<td>Sex</td>
<td>0.53</td>
<td>0.46, 0.60</td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>3.81</td>
<td>3.29, 4.43</td>
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<tr>
<td>Sex</td>
<td>1.06</td>
<td>0.87, 1.30</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Drug use</td>
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</tr>
<tr>
<td>ADHD</td>
<td>5.59</td>
<td>4.80, 6.51</td>
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<tr>
<td>Sex</td>
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<tr>
<td>Emergency Department use</td>
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<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>1.36</td>
<td>1.31, 1.41</td>
</tr>
<tr>
<td>Sex</td>
<td>0.94</td>
<td>0.91, 0.99</td>
</tr>
<tr>
<td>Deprivation**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any primary care use</td>
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<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>2.46</td>
<td>2.30, 2.63</td>
</tr>
<tr>
<td>Sex</td>
<td>0.48</td>
<td>0.45, 0.52</td>
</tr>
<tr>
<td>Deprivation**</td>
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Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; **WIMD quintile
Table S10: Cox’s regression analysis: **ASD associations with outcomes**

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Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; ** WIMD quintile
Table s11: Cox’s regression analysis: **ASD associations with self-harm using GP or hospital records only**

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Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; ** WIMD quintile
Table s12: Cox’s regression analysis: **ASD associations with outcomes MALES**

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Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; ** WIMD quintile
Table s13: Cox’s regression analysis: **ASD associations with outcomes FEMALES**

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Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; ** Proportion of follow up period with valid records *** WIMD quintile
Table s14: Cox’s regression – associations between ASD and outcomes, stratified by Welsh index of multiple deprivation (WIMD):

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</tr>
<tr>
<td>WIMD 1:</td>
<td>0.94</td>
<td>0.82, 1.07</td>
<td>0.94</td>
<td>0.82, 1.07</td>
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<tr>
<td>WIMD 2:</td>
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<td>0.83, 1.09</td>
<td>0.96</td>
<td>0.84, 1.09</td>
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<tr>
<td>WIMD 3:</td>
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<td>1.02</td>
<td>0.91, 1.15</td>
</tr>
<tr>
<td>WIMD 4:</td>
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<td>0.80, 0.99</td>
<td>0.89</td>
<td>0.80, 1.00</td>
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<tr>
<td>WIMD 5:</td>
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<td>0.86, 1.06</td>
<td>0.95</td>
<td>0.86, 1.06</td>
</tr>
<tr>
<td><strong>Any primary care use</strong></td>
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<td></td>
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<tr>
<td>WIMD 1:</td>
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<td>1.54, 2.50</td>
<td>2.00</td>
<td>1.57, 2.54</td>
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<tr>
<td>WIMD 2:</td>
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<td>1.47, 2.42</td>
<td>1.95</td>
<td>1.52, 2.51</td>
</tr>
<tr>
<td>WIMD 3:</td>
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<td>1.91, 2.96</td>
<td>2.28</td>
<td>1.83, 2.85</td>
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<td>WIMD 5:</td>
<td>WIMD 1:</td>
<td>WIMD 2:</td>
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<tr>
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<td>1.94</td>
<td>1.89</td>
<td>0.94</td>
<td>0.97</td>
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<tr>
<td></td>
<td>1.58, 2.39</td>
<td>1.57, 2.29</td>
<td>0.83, 1.07</td>
<td>0.85, 1.10</td>
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<tr>
<td></td>
<td>1.99</td>
<td>1.91</td>
<td>0.94</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>1.62, 2.45</td>
<td>1.58, 2.30</td>
<td>0.83, 1.08</td>
<td>0.85, 1.10</td>
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* Unadjusted association with ADHD; ** Association with ADHD, controlling for Sex and proportion of follow up.
Table s15: Cox’s regression analysis: **ASD associations with outcomes**

<table>
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<th>Model 3</th>
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<td>HR 95% CI</td>
<td>HR 95% CI</td>
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<td>Anxiety/Depression</td>
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<tr>
<td>ASD</td>
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<td>2.02 1.82, 2.24</td>
<td>2.02 1.82, 2.24</td>
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<tr>
<td>Sex</td>
<td>0.46 0.41, 0.51</td>
<td>0.46 0.41, 0.51</td>
<td>1.06 1.02, 1.09</td>
</tr>
<tr>
<td>Deprivation**</td>
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<td></td>
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</tr>
<tr>
<td>Self-harm</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ASD</td>
<td>2.96 2.45, 3.57</td>
<td>2.98 2.47, 3.60</td>
<td>2.98 2.47, 3.60</td>
</tr>
<tr>
<td>Sex</td>
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<td>0.47 0.38, 0.57</td>
<td>1.08 1.01, 1.15</td>
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<tr>
<td>Deprivation**</td>
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</tr>
<tr>
<td>Alcohol use</td>
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</tr>
<tr>
<td>ASD</td>
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<td>1.27 0.96, 1.68</td>
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<tr>
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<td>1.10 1.00, 1.21</td>
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<tr>
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<tr>
<td>Drug use</td>
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<tr>
<td>ASD</td>
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<td>1.94 1.42, 2.65</td>
<td>1.94 1.43, 2.65</td>
</tr>
<tr>
<td>Sex</td>
<td>2.23 1.38, 3.60</td>
<td>2.27 1.41, 3.67</td>
<td>1.19 1.07, 1.33</td>
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<tr>
<td>Deprivation**</td>
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<td></td>
</tr>
<tr>
<td>Emergency Department use</td>
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</tr>
<tr>
<td>ASD</td>
<td>0.95 0.90, 1.00</td>
<td>0.95 0.90, 1.00</td>
<td>0.95 0.90, 1.00</td>
</tr>
<tr>
<td>Sex</td>
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<td>0.98 0.92, 1.03</td>
<td>1.05 1.03, 1.06</td>
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<tr>
<td>Deprivation**</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Any primary care use</td>
<td>Any hospital use (inc ED)</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------</td>
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</tr>
<tr>
<td>ASD</td>
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<td>(1.68, 2.06)</td>
<td>(0.91, 1.01)</td>
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<td>1.87</td>
<td>0.96</td>
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<td></td>
<td>(1.69, 2.07)</td>
<td>(0.91, 1.01)</td>
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<td></td>
<td>1.87</td>
<td>0.96</td>
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<td>(1.69, 2.07)</td>
<td>(0.91, 1.01)</td>
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<tr>
<td></td>
<td>1.70</td>
<td>0.91</td>
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</tr>
<tr>
<td></td>
<td>(2.07)</td>
<td>(1.01)</td>
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</tr>
<tr>
<td>Sex</td>
<td>0.49</td>
<td>0.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.44, 0.54)</td>
<td>(0.92, 1.03)</td>
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<tr>
<td></td>
<td>0.49</td>
<td>0.98</td>
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</tr>
<tr>
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<td>(0.44, 0.54)</td>
<td>(0.92, 1.03)</td>
<td></td>
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<tr>
<td></td>
<td>1.05</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.02, 1.09)</td>
<td>(1.03, 1.06)</td>
<td></td>
</tr>
</tbody>
</table>

Models incrementally adjusting for covariates. * Age at end of follow up period as time variable; ** WIMD quintile
Supplementary table s16: Directly assessed ADHD hybrid cohort and e-cohort only sample comparisons:

<table>
<thead>
<tr>
<th></th>
<th>Nested ADHD sample</th>
<th>e-cohort sample</th>
<th>OR (95% CI) or t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>154</td>
<td>9379</td>
<td></td>
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<tr>
<td><strong>Male gender</strong></td>
<td>134 (87.0)</td>
<td>7583 (80.90)</td>
<td>1.587 (0.99, 2.55)</td>
</tr>
<tr>
<td><strong>Age at end of follow up (GP records)</strong></td>
<td>19.11 (2.20)</td>
<td>21.20 (3.80)</td>
<td>t=11.320, p&lt;0.001</td>
</tr>
<tr>
<td><strong>Deprivation index quintile</strong></td>
<td>3.435 (1.56)</td>
<td>3.421 (1.40)</td>
<td>t=-0.11, p=0.91</td>
</tr>
<tr>
<td><strong>Age at ADHD diagnosis: Mean (sd)</strong></td>
<td>8.41 (3.34)</td>
<td>10.57 (3.86)</td>
<td>t= 7.95 p&lt;0.001</td>
</tr>
<tr>
<td><strong>Age at ASD diagnosis: Mean (sd)</strong></td>
<td>9.33 (5.44)</td>
<td>10.96 (5.09)</td>
<td>t=1.45, p=0.15</td>
</tr>
<tr>
<td><strong>With comorbid ASD: N (%)</strong></td>
<td>26 (16.90)</td>
<td>1340 (14.30)</td>
<td>t=1.36, p=0.19</td>
</tr>
<tr>
<td><strong>Anxiety/depression- any: N (%)</strong></td>
<td>15 (9.70)</td>
<td>1977 (21.10)</td>
<td>0.40 (0.24, 0.69)</td>
</tr>
<tr>
<td><strong>Anxiety/depression events: Mean (sd)</strong></td>
<td>0.14 (0.50)</td>
<td>0.50 (1.45)</td>
<td>t=8.223, p&lt;0.001</td>
</tr>
<tr>
<td><strong>Drug use - any: N (%)</strong></td>
<td>10 (6.50)</td>
<td>800 (8.50)</td>
<td>0.745 (0.39, 1.42)</td>
</tr>
<tr>
<td><strong>Drug use - events: Mean (sd)</strong></td>
<td>0.08 (0.34)</td>
<td>0.27 (2.50)</td>
<td>t=0.15, p=0.36</td>
</tr>
<tr>
<td><strong>Alcohol use – any: N (%)</strong></td>
<td>5 (3.20)</td>
<td>675 (7.20)</td>
<td>0.43 (0.18, 1.06)</td>
</tr>
<tr>
<td><strong>Alcohol use – events: Mean (sd)</strong></td>
<td>0.06 (0.37)</td>
<td>0.19 (1.71)</td>
<td>t=0.93, p=0.35</td>
</tr>
<tr>
<td><strong>Self-harm – any: N (%)</strong></td>
<td>6 (3.9)</td>
<td>1158 (12.3)</td>
<td>t=6.947, p&lt;0.001</td>
</tr>
<tr>
<td><strong>Self-harm – events: Mean (sd)</strong></td>
<td>0.09 (0.50)</td>
<td>0.40 (1.91)</td>
<td>0.288 (0.13, 0.65)</td>
</tr>
<tr>
<td><strong>Emergency Department – any: N (%)</strong></td>
<td>98 (63.6)</td>
<td>6021 (64.2)</td>
<td>0.976 (0.701, 1.36)</td>
</tr>
<tr>
<td><strong>Emergency Department – events: Mean (sd)</strong></td>
<td>2.36 (3.81)</td>
<td>3.53 (7.18)</td>
<td>3.69, p&lt;0.001</td>
</tr>
</tbody>
</table>
Supplementary figures:

Figure S1:

Databases and process to identify directly assessed ADHD cohort:

Stage 1: Identification of ADHD and ASD codes and ADHD directly assessed cohort

<table>
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<th>Databases accessed</th>
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<tbody>
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<td>PEDW</td>
</tr>
<tr>
<td>GPD</td>
</tr>
<tr>
<td>WDS</td>
</tr>
</tbody>
</table>

264 directly assessed ADHD cases

235 individuals successfully linked (linkage score >0.9)

Proposed ICD, prescription and read codes identified in all individuals

Verified set of codes finalised

Abbreviations: ADHD= Attention Deficit Hyperactivity Disorder; GPD=General Practice Database; ICD= International Classification of Diseases; PEDW= Patient Episode Database for Wales; WDS=Welsh demographics Service.
Figure S2: Databases and process to identify individuals with ADHD and ASD:

Abbreviations: ADHD= Attention Deficit Hyperactivity Disorder; ASD= Autism Spectrum Disorder; DoB=Date of birth; EDDS= Emergency Department Dataset; GPD=General Practice Database; PEDW= Patient Episode Database for Wales; WDS=Welsh demographics Service; WIMD=Welsh Index of Multiple Deprivation; WoB=Week of birth.
Figure S3:

Associations between ADHD and early adult outcomes, by deprivation index:

WIMD= Welsh index of multiple deprivation. Quintiles 1-5, level 5 represents the most deprived areas.
Supplementary Figure S4:

Associations between ASD and early adult outcomes:

WIMD = Welsh index of multiple deprivation. Quintiles 1-5, level 5 represents the most deprived areas.