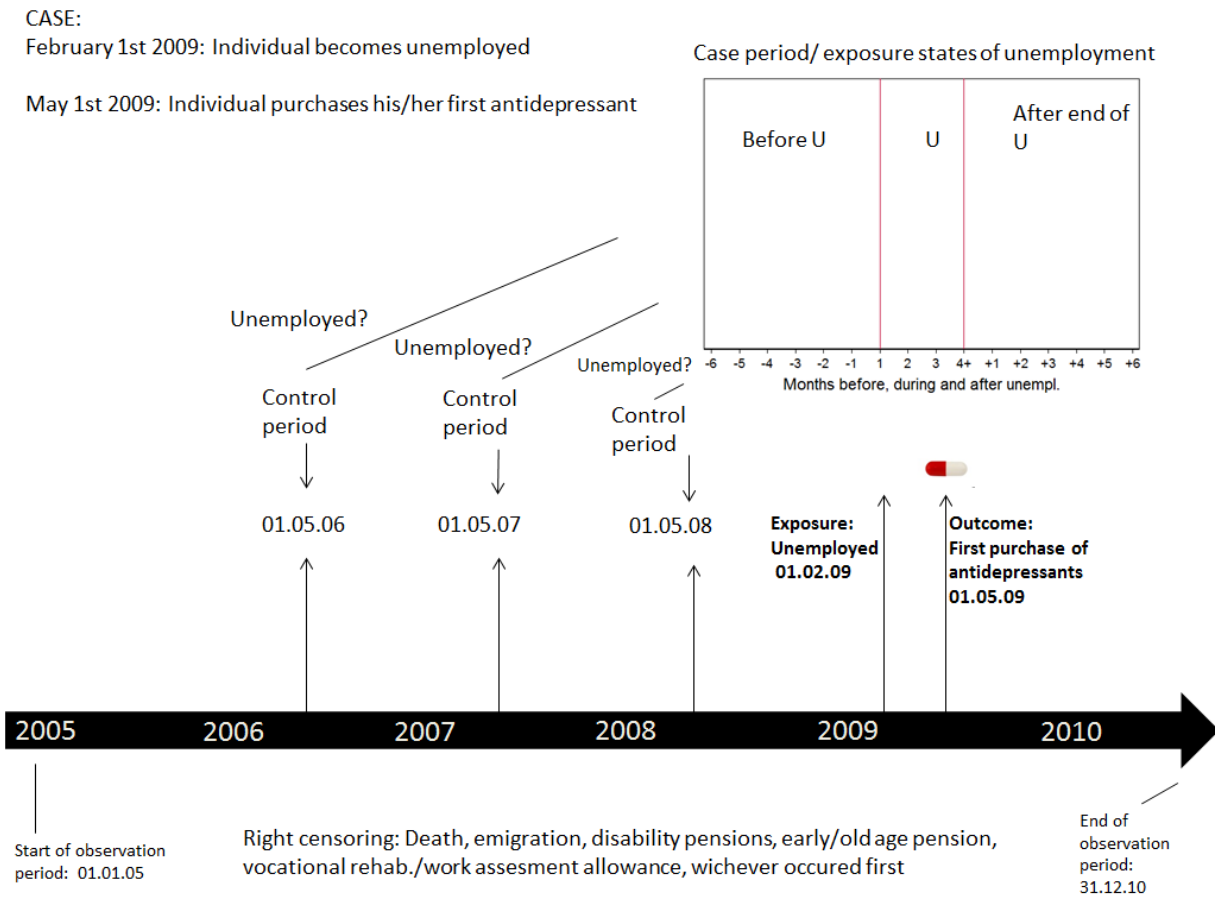
# Supplementary File

## Study design

In order to illustrate the case period (the 16 time states in relation to unemployment around the time of drug purchase) and the three control periods, we made a figure illustrating a case (S-Figure 1). We estimated the risk (odds ratio) of being exposed to unemployment around the date of having a *first* purchase of a psychotropic drug (here: antidepressant). Dichotomous variables indicating each person's time-state according to unemployment and psychotropic drug purchase were generated, making it possible to analyse the data with a conditional logistic fixed-effects estimator (within person), eliminating time-invariant confounding. In the analyses we compared the odds of exposure of unemployment within each individual's case and control periods.




**S-Figure 1** **Case-crossover study design indicating the time of the event (drug purchase) and the exposure states of unemployment 1-6 months before the date of unemployment, the 1,2,3, 4 or more months during unemployment and 1-6 months after end of unemployment.**

# Medication list

**S-Table 1** **Medications included in each outcome-group; N05A Antipsychotics, N05B Anxiolytics, N05C Hypnotics and sedatives, N06A Antidepressants. Daily defined doses (DDD) per 1000 inhabitants per day in the Norwegian population 2006-2010. See the report "Drug consumption in Norway 2006-2010" published by the Norwegian Institute of Public Health (2011:1) for details of consumption on each specific drug.**

| ATC | ATC level name | DDDs/1000 inhabitants/day | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| N05A | Antipsychotics | 8.4 | 8.7 | 8.9 | 8.9 | 9.0 | 9.1 |
| N05B | Anxiolytics | 19.6 | 19.2 | 19.1 | 19.3 | 18.9 | 18.0 |
| N05C | Hypnotics and sedatives | 39.5 | 41.2 | 43.1 | 44.2 | 44.6 | 44.3 |
| N06A | Antidepressants | 48.4 | 49.0 | 51.0 | 51.7 | 51.6 | 52.8 |
| A08A | Anti-obesity preparations, excl. diet products | 2.6 | 2.3 | 2.7 | 3.0 | 3.1 | 0.9 |
| A10A | Insulins and analogues | 17.1 | 17.5 | 17.8 | 18.5 | 18.5 | 18.7 |
| C01+C02+C03 +C07+C08+C09 +C10 | Cardiac therapy; Antihypertensives; Diuretics; Beta blocking agents; Calcium channel blockers; Agents acting on the renin-angiotensin system; Lipid modifying agents | 46.6 | 49.2 | 51.8 | 54.7 | 55.7 | 57.0 |
| H03A | Thyroid therapy | 19.0 | 19.6 | 20.4 | 21.2 | 21.5 | 22.3 |
| M01A +M02A | Antiinflammatory and antirheumatic products, nonsteroids; Topical products for joint and muscular pain | 33.2 | 33.5 | 33.7 | 32.9 | 32.1 | 32.2 |
| N02A | Opioids | 17.1 | 17.3 | 17.4 | 18.0 | 18.1 | 17.7 |
| N02B | Other analgesics and antipyretics | 5.6 | 6.6 | 7.7 | 9.2 | 10.6 | 11.9 |

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|---|---|
| **N05A** | **Antipsychotics** |
| N05AA | Phenothiazines with aliphatic side chain |
| N05AA01 | Chlorpromazine |
| N05AA02 | Levomepromazine |
| N05AB | Phenothiazines with piperazine structure |
| N05AB01 | Dixyrazine |
| N05AB02 | Fluphenazine |
| N05AB03 | Perphenazine |
| N05AB04 | Prochlorperazine |
| N05AB06 | Trifluoperazine |
| N05AB08 | Thioproperazine |
| N05AC | Phenothiazines with piperidine structure |

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|---|---|
| N05AC01 | Periciazine |
| N05AC02 | Thioridazine |
| N05AC04 | Pipotiazine |
| N05AD | Butyrophenone derivatives |
| N05AD01 | Haloperidol |
| N05AD03 | Melperone |
| N05AD08 | Droperidol |
| N05AE03 | Sertindole |
| N05AE04 | Ziprasidone |
| N05AE05 | Lurasidone |
| N05AF | Thioxanthene derivatives |
| N05AF01 | Flupentixol |
| N05AF03 | Chlorprothixene |
| N05AF05 | Zuclopenthixol |
| N05AG | Diphenylbutylpiperidine derivatives |
| N05AG02 | Pimozide |
| N05AG03 | Penfluridol |
| N05AH | Diazepines, oxazepines, thiazepines and oxepines |
| N05AH01 | Loxapine |
| N05AH02 | Clozapine |
| N05AH03 | Olanzapine |
| N05AH04 | Quetiapine |
| N05AH05 | Asenapine |
| N05AL | Benzamides |
| N05AL01 | Sulpiride |
| N05AL03 | Tiapride |
| N05AL05 | Amisulpride |
| N05AN | Lithium |
| N05AN01 | Lithium |

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|---|---|
| N05AX | Other antipsychotics |
| N05AX07 | Prothipendyl |
| N05AX08 | Risperidone |
| N05AX12 | Aripiprazole |
| N05AX13 | Paliperidone |
| **N05B** | **Anxiolytics** |
| N05BA | Benzodiazepine derivatives |
| N05BA01 | Diazepam |
| N05BA02 | Chlordiazepoxide |
| N05BA04 | Oxazepam |
| N05BA05 | Potassium clorazepate |
| N05BA06 | Lorazepam |
| N05BA08 | Bromazepam |
| N05BA09 | Clobazam |
| N05BA12 | Alprazolam |
| N05BB | Diphenylmethane derivatives |
| N05BB01 | Hydroxyzine |
| N05BC | Carbamates |
| N05BC01 | Meprobamate |
| N05BE | Azaspirodecanedione derivatives |
| N05BE01 | Buspirone |
| **N05C** | **Hypnotics and sedatives** |
| N05CA | Barbiturates, plain |
| N05CA01 | Pentobarbital |
| N05CA04 | Barbital |
| N05CA06 | Secobarbital |
| N05CB | Barbiturates, combinations |
| N05CB02 | Barbiturates in combination with other drugs |
| N05CC | Aldehydes and derivatives |

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|---|---|
| N05CC01 | Chloral hydrate |
| N05CD | Benzodiazepine derivatives |
| N05CD01 | Flurazepam |
| N05CD02 | Nitrazepam |
| N05CD03 | Flunitrazepam |
| N05CD04 | Estazolam |
| N05CD05 | Triazolam |
| N05CD08 | Midazolam |
| N05CF | Benzodiazepine related drugs |
| N05CF01 | Zopiclone |
| N05CF02 | Zolpidem |
| N05CF03 | Zaleplon |
| N05CH | Melatonin receptor agonists |
| N05CH01 | Melatonin |
| N05CM | Other hypnotics and sedatives |
| N05CM02 | Clomethiazole |
| N05CM05 | Scopolamine |
| N05CM06 | Propiomazine |
| N05CM09 | Valerianae radix |
| N05CM11 | Bromides |
| N05CM18 | Dexmedetomidine |
| N06 | Psychoanaleptics |
| **N06A** | **Antidepressants** |
| N06AA | Non selective monoamine reuptake inhibitors |
| N06AA01 | Desipramine |
| N06AA02 | Imipramine |
| N06AA04 | Clomipramine |
| N06AA05 | Opipramol |
| N06AA06 | Trimipramine |

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|---|---|
| N06AA07 | Lofepramine |
| N06AA08 | Dibenzepin |
| N06AA09 | Amitriptyline |
| N06AA10 | Nortriptyline |
| N06AA11 | Protriptyline |
| N06AA12 | Doxepin |
| N06AA21 | Maprotiline |
| N06AB | Selective serotonin reuptake inhibitors |
| N06AB03 | Fluoxetine |
| N06AB04 | Citalopram |
| N06AB05 | Paroxetine |
| N06AB06 | Sertraline |
| N06AB08 | Fluvoxamine |
| N06AB10 | Escitalopram |
| N06AF | Monoamine oxidase inhibitors, non selective |
| N06AF01 | Isocarboxazid |
| N06AF03 | Phenelzine |
| N06AF04 | Tranylcypromine |
| N06AG | Monoamine oxidase a inhibitors |
| N06AG02 | Moclobemide |
| N06AX | Other antidepressants |
| N06AX01 | Oxitriptan |
| N06AX02 | Tryptophan |
| N06AX03 | Mianserin |
| N06AX05 | Trazodone |
| N06AX06 | Nefazodone |
| N06AX09 | Viloxazine |
| N06AX11 | Mirtazapine |
| N06AX12 | Bupropion |

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| N06AX14 | Tianeptine |
| N06AX16 | Venlafaxine |
| N06AX18 | Reboxetine |
| N06AX21 | Duloxetine |
| N06AX22 | Agomelatine |
| N06AX25 | Hyperici herba |
| N06AX26 | Vortioxetine |
| **A08A** | **Antiobesity preparations, excl. diet products** |
| A08AA | Centrally acting antiobesity products |
| A08AA01 | Phentermine |
| A08AA02 | Fenfluramine |
| A08AA04 | Dexfenfluramine |
| A08AA05 | Mazindol |
| A08AA10 | Sibutramine |
| A08AA56 | Ephedrine, combinations |
| A08AB | Peripherally acting antiobesity products |
| A08AB01 | Orlistat |
| A08AX | Other antiobesity drugs |
| A08AX01 | Rimonabant |
| **A10A** | **Insulins and analogues** |
| A10AB | Insulins and analogues for injection, fast acting |
| A10AB01 | Insulin (human) |
| A10AB03 | Insulin (pork) |
| A10AB04 | Insulin lispro |
| A10AB05 | Insulin aspart |
| A10AB06 | Insulin glulisine |
| A10AC | Insulins and analogues for injection, intermediate acting |
| A10AC01 | Insulin (human) |
| A10AC03 | Insulin (pork) |

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| A10AC30 | Combinations |
| A10AD | Insulins and analogues for injection, intermediate or long combinded with fast acting |
| A10AD01 | Insulin (human) |
| A10AD03 | Insulin (pork) |
| A10AD04 | Insulin lispro |
| A10AD05 | Insulin aspart |
| A10AE | Insulins and analogues for injection, long acting |
| A10AE01 | Insulin (human) |
| A10AE02 | Insulin (beef) |
| A10AE04 | Insulin glargine |
| A10AE05 | Insulin detemir |
| A10AE06 | Insulin degludec |
| **C01** | **Cardiac therapy** |
| C01A | Cardiac glycosides |
| C01AA | Digitalis glycosides |
| C01AA04 | Digitoxin |
| C01AA05 | Digoxin |
| C01AB | Scilla glycosides |
| C01AB01 | Proscillaridin |
| C01B | Antiarrhythmics, class i and iii |
| C01BA | Antiarrhythmics, class ia |
| C01BA01 | Quinidine |
| C01BA02 | Procainamide |
| C01BA03 | Disopyramide |
| C01BA05 | Ajmaline |
| C01BB | Antiarrhythmics, class ib |
| C01BB01 | Lidocaine |
| C01BB02 | Mexiletine |

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| C01BC | Antiarrhythmics, class ic |
| C01BC03 | Propafenone |
| C01BC04 | Flecainide |
| C01BD | Antiarrhythmics, class iii |
| C01BD01 | Amiodarone |
| C01BD02 | Bretylium tosilate |
| C01BD05 | Ibutilide |
| C01BD07 | Dronedarone |
| C01BG | Other antiarrhythmics, class i and iii |
| C01BG11 | Vernakalant |
| C01C | Cardiac stimulants excl. cardiac glycosides |
| C01CA | Adrenergic and dopaminergic agents |
| C01CA01 | Etilefrine |
| C01CA02 | Isoprenaline |
| C01CA03 | Norepinephrine |
| C01CA04 | Dopamine |
| C01CA06 | Phenylephrine |
| C01CA07 | Dobutamine |
| C01CA09 | Metaraminol |
| C01CA10 | Methoxamine |
| C01CA13 | Prenalterol |
| C01CA14 | Dopexamine |
| C01CA17 | Midodrine |
| C01CA24 | Epinephrine |
| C01CA26 | Ephedrine |
| C01CE | Phosphodiesterase inhibitors |
| C01CE01 | Amrinone |
| C01CE02 | Milrinone |
| C01CX | Other cardiac stimulants |

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| C01CX08 | Levosimendan |
| C01D | Vasodilators used in cardiac diseases |
| C01DA | Organic nitrates |
| C01DA02 | Glyceryl trinitrate |
| C01DA08 | Isosorbide dinitrate |
| C01DA14 | Isosorbide mononitrate |
| C01DX | Other vasodilators used in cardiac diseases |
| C01DX12 | Molsidomine |
| C01DX16 | Nicorandil |
| C01E | Other cardiac preparations |
| C01EA | Prostaglandins |
| C01EA01 | Alprostadil |
| C01EB | Other cardiac preparations |
| C01EB03 | Indometacin |
| C01EB09 | Ubidecarenone |
| C01EB10 | Adenosine |
| C01EB15 | Trimetazidine |
| C01EB16 | Ibuprofen |
| C01EB17 | Ivabradine |
| C01EB18 | Ranolazine |
| C01EB21 | Regadenoson |
| **C02** | **Antihypertensives** |
| C02A | Antiadrenergic agents, centrally acting |
| C02AB | Methyldopa |
| C02AB01 | Methyldopa (levorotatory) |
| C02AC | Imidazoline receptor agonists |
| C02AC01 | Clonidine |
| C02AC05 | Moxonidine |
| C02C | Antiadrenergic agents, peripherally acting |

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| C02CA | Alpha adrenoreceptor antagonists |
| C02CA01 | Prazosin |
| C02CA04 | Doxazosin |
| C02CC | Guanidine derivatives |
| C02CC02 | Guanethidine |
| C02D | Arteriolar smooth muscle, agents acting on |
| C02DB | Hydrazinophthalazine derivatives |
| C02DB01 | Dihydralazine |
| C02DB02 | Hydralazine |
| C02DC | Pyrimidine derivatives |
| C02DC01 | Minoxidil |
| C02DD | Nitroferricyanide derivatives |
| C02DD01 | Nitroprusside |
| C02K | Other antihypertensives |
| C02KD | Serotonin antagonists |
| C02KD01 | Ketanserin |
| C02KX | Antihypertensives for pulmonary arterial hypertension |
| C02KX01 | Bosentan |
| C02KX02 | Ambrisentan |
| C02KX03 | Sitaxentan |
| C02KX04 | Macitentan |
| C02KX05 | Riociguat |
| **C03** | **Diuretics** |
| C03A | Low ceiling diuretics, thiazides |
| C03AA | Thiazides, plain |
| C03AA01 | Bendroflumethiazide |
| C03AA03 | Hydrochlorothiazide |
| C03AA06 | Trichlormethiazide |
| C03AB | Thiazides and potassium in combination |

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|---|---|
| C03AB01 | Bendroflumethiazide and potassium |
| C03B | Low ceiling diuretics, excl. Thiazides |
| C03BA | Sulfonamides, plain |
| C03BA04 | Chlortalidone |
| C03BA05 | Mefruside |
| C03BA08 | Metolazone |
| C03C | High ceiling diuretics |
| C03CA | Sulfonamides, plain |
| C03CA01 | Furosemide |
| C03CA02 | Bumetanide |
| C03CA04 | Torasemide |
| C03CB | Sulfonamides and potassium in combination |
| C03CB02 | Bumetanide and potassium |
| C03CC | Aryloxyacetic acid derivatives |
| C03CC01 | Etacrynic acid |
| C03D | Potassium sparing agents |
| C03DA | Aldosterone antagonists |
| C03DA01 | Spironolactone |
| C03DA02 | Potassium canrenoate |
| C03DA04 | Eplerenone |
| C03DB | Other potassium sparing agents |
| C03DB01 | Amiloride |
| C03DB02 | Triamterene |
| C03E | Diuretics and potassium sparing agents in combination |
| C03EA | Low ceiling diuretics and potassium |
| C03EA01 | Hydrochlorothiazide and potassium sparing agents |
| C03X | Other diuretics |
| C03XA | Vasopressin antagonists |
| C03XA01 | Tolvaptan |

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| **C07** | **Beta blocking agents** |
| C07A | Beta blocking agents |
| C07AA | Beta blocking agents, non selective |
| C07AA01 | Alprenolol |
| C07AA02 | Oxprenolol |
| C07AA03 | Pindolol |
| C07AA05 | Propranolol |
| C07AA06 | Timolol |
| C07AA07 | Sotalol |
| C07AA12 | Nadolol |
| C07AB | Beta blocking agents, selective |
| C07AB02 | Metoprolol |
| C07AB03 | Atenolol |
| C07AB07 | Bisoprolol |
| C07AB09 | Esmolol |
| C07AB12 | Nebivolol |
| C07AG | Alpha and beta blocking agents |
| C07AG01 | Labetalol |
| C07AG02 | Carvedilol |
| C07B | Beta blocking agents and thiazides |
| C07BB | Beta blocking agents, selective, and thiazides |
| C07BB07 | Bisoprolol and thiazides |
| C07BB12 | Nebivolol and thiazides |
| **C08** | **Calcium channel blockers** |
| C08C | Selective calcium channel blockers with mainly vascular effects |
| C08CA | Dihydropyridine derivatives |
| C08CA01 | Amlodipine |
| C08CA02 | Felodipine |
| C08CA03 | Isradipine |

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| C08CA05 | Nifedipine |
| C08CA06 | Nimodipine |
| C08CA13 | Lercanidipine |
| C08CX | Other selective calcium channel blockers with mainly vascular effects |
| C08CX01 | Mibefradil |
| C08D | Selective calcium channel blockers with direct cardiac effects |
| C08DA | Phenylalkylamine derivatives |
| C08DA01 | Verapamil |
| C08DB | Benzothiazepine derivatives |
| C08DB01 | Diltiazem |
| **C09** | **Agents acting on the renin angiotensin system** |
| C09A | Ace inhibitors, plain |
| C09AA | Ace inhibitors, plain |
| C09AA01 | Captopril |
| C09AA02 | Enalapril |
| C09AA03 | Lisinopril |
| C09AA04 | Perindopril |
| C09AA05 | Ramipril |
| C09AA09 | Fosinopril |
| C09AA10 | Trandolapril |
| C09AA15 | Zofenopril |
| C09B | Ace inhibitors, combinations |
| C09BA | Ace inhibitors and diuretics |
| C09BA02 | Enalapril and diuretics |
| C09BA03 | Lisinopril and diuretics |
| C09BA15 | Zofenopril and diuretics |
| C09BB | Ace inhibitors and calcium channel blockers |
| C09BB02 | Enalapril and lercanidipine |
| C09C | Angiotensin ii antagonists, plain |

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|---|---|
| C09CA | Angiotensin ii antagonists, plain |
| C09CA01 | Losartan |
| C09CA02 | Eprosartan |
| C09CA03 | Valsartan |
| C09CA04 | Irbesartan |
| C09CA06 | Candesartan |
| C09CA07 | Telmisartan |
| C09CA08 | Olmesartan medoxomil |
| C09D | Angiotensin ii antagonists, combinations |
| C09DA | Angiotensin ii antagonists and diuretics |
| C09DA01 | Losartan and diuretics |
| C09DA02 | Eprosartan and diuretics |
| C09DA03 | Valsartan and diuretics |
| C09DA04 | Irbesartan and diuretics |
| C09DA06 | Candesartan and diuretics |
| C09DA07 | Telmisartan and diuretics |
| C09DA08 | Olmesartan medoxomil and diuretics |
| C09DB | Angiotensin ii antagonists and calcium channel blockers |
| C09DB01 | Valsartan and amlodipine |
| C09DB02 | Olmesartan medoxomil and amlodipine |
| C09DX | Angiotensin ii antagonists, other combinations |
| C09DX01 | Valsartan, amlodipine and hydrochlorothiazide |
| C09DX03 | Olmesartan medoxomil, amlodipine and hydrochlorothiazide |
| C09X | Other agents acting on the renin angiotensin system |
| C09XA | Renin inhibitors |
| C09XA02 | Aliskiren |
| C09XA52 | Aliskiren and hydrochlorothiazide |
| **C10** | **Lipid modifying agents** |
| C10A | Lipid modifying agents, plain |

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|---|---|
| C10AA | Hmg coa reductase inhibitors |
| C10AA01 | Simvastatin |
| C10AA02 | Lovastatin |
| C10AA03 | Pravastatin |
| C10AA04 | Fluvastatin |
| C10AA05 | Atorvastatin |
| C10AA06 | Cerivastatin |
| C10AA07 | Rosuvastatin |
| C10AA08 | Pitavastatin |
| C10AB | Fibrates |
| C10AB01 | Clofibrate |
| C10AB02 | Bezafibrate |
| C10AB04 | Gemfibrozil |
| C10AB05 | Fenofibrate |
| C10AC | Bile acid sequestrants |
| C10AC01 | Colestyramine |
| C10AC02 | Colestipol |
| C10AC04 | Colesevelam |
| C10AD | Nicotinic acid and derivatives |
| C10AD01 | Niceritrol |
| C10AD02 | Nicotinic acid |
| C10AD06 | Acipimox |
| C10AD52 | Nicotinic acid, combinations |
| C10AX | Other lipid modifying agents |
| C10AX02 | Probucol |
| C10AX06 | Omega 3 triglycerides incl. other esters and acids |
| C10AX09 | Ezetimibe |
| C10B | Lipid modifying agents, combinations |
| C10BA | Hmg coa reductase inhibitors in combination with other lipid modifying agents |

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| C10BA02 | Simvastatin and ezetimibe |
| C10BA05 | Atorvastatin and ezetimibe |
| **H03A** | **Thyroid preparations** |
| H03AA | Thyroid hormones |
| H03AA01 | Levothyroxine sodium |
| H03AA02 | Liothyronine sodium |
| H03AA03 | Combinations of levothyroxine and liothyronine |
| H03AA04 | Tiratricol |
| H03AA05 | Thyroid gland preparations |
| **M01A** | **Antiinflammatory and antirheumatic products, non steroids** |
| M01AA | Butylpyrazolidines |
| M01AA01 | Phenylbutazone |
| M01AB | Acetic acid derivatives and related substances |
| M01AB01 | Indometacin |
| M01AB02 | Sulindac |
| M01AB05 | Diclofenac |
| M01AB15 | Ketorolac |
| M01AB16 | Aceclofenac |
| M01AB55 | Diclofenac, combinations |
| M01AC | Oxicams |
| M01AC01 | Piroxicam |
| M01AC06 | Meloxicam |
| M01AE | Propionic acid derivatives |
| M01AE01 | Ibuprofen |
| M01AE02 | Naproxen |
| M01AE03 | Ketoprofen |
| M01AE14 | Dexibuprofen |
| M01AE17 | Dexketoprofen |
| M01AE52 | Naproxen and esomeprazole |

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|---|---|
| M01AG | Fenamates |
| M01AG02 | Tolfenamic acid |
| M01AH | Coxibs |
| M01AH01 | Celecoxib |
| M01AH02 | Rofecoxib |
| M01AH03 | Valdecoxib |
| M01AH04 | Parecoxib |
| M01AH05 | Etoricoxib |
| M01AH06 | Lumiracoxib |
| M01AX | Other antiinflammatory and antirheumatic agents, non steroids |
| M01AX01 | Nabumetone |
| M01AX05 | Glucosamine |
| **M02A** | **Topical products for joint and muscular pain** |
| M02AA | Antiinflammatory preparations, non steroids for topical use |
| M02AA07 | Piroxicam |
| M02AA10 | Ketoprofen |
| M02AA13 | Ibuprofen |
| M02AA15 | Diclofenac |
| M02AB | Capsaicin and similar agents |
| M02AB01 | Capsaicin |
| M02AC | Preparations with salicylic acid derivatives |
| M02AX | Other topical products for joint and muscular pain |
| M02AX10 | Various |
| **N02A** | **Opioids** |
| N02AA | Natural opium alkaloids |
| N02AA01 | Morphine |
| N02AA03 | Hydromorphone |
| N02AA05 | Oxycodone |
| N02AA08 | Dihydrocodeine |

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|---|---|
| N02AA51 | Morphine, combinations |
| N02AA55 | Oxycodone, combinations |
| N02AA59 | Codeine, combinations excl. psycholeptics |
| N02AB | Phenylpiperidine derivatives |
| N02AB01 | Ketobemidone |
| N02AB02 | Pethidine |
| N02AB03 | Fentanyl |
| N02AB72 | Pethidine, combinations with psycholeptics |
| N02AC | Diphenylpropylamine derivatives |
| N02AC01 | Dextromoramide |
| N02AC03 | Piritramide |
| N02AC04 | Dextropropoxyphene |
| N02AC54 | Dextropropoxyphene, combinations excl. psycholeptics |
| N02AD | Benzomorphan derivatives |
| N02AD01 | Pentazocine |
| N02AE | Oripavine derivatives |
| N02AE01 | Buprenorphine |
| N02AG | Opioids in combination with antispasmodics |
| N02AG01 | Morphine and antispasmodics |
| N02AG02 | Ketobemidone and antispasmodics |
| N02AG03 | Pethidine and antispasmodics |
| N02AX | Other opioids |
| N02AX02 | Tramadol |
| N02AX06 | Tapentadol |
| N02AX52 | Tramadol, combinations |
| **N02B** | **Other analgesics and antipyretics** |
| N02BA | Salicylic acid and derivatives |
| N02BA01 | Acetylsalicylic acid |
| N02BA11 | Diflunisal |

| | |
|---|---|
| N02BA51 | Acetylsalicylic acid, combinations excl. psycholeptics |
| N02BB | Pyrazolones |
| N02BB01 | Phenazone |
| N02BB02 | Metamizole sodium |
| N02BB51 | Phenazone, combinations excl. psycholeptics |
| N02BB54 | Propyphenazone, combinations excl. psycholeptics |
| N02BE | Anilides |
| N02BE01 | Paracetamol |
| N02BE05 | Propacetamol |
| N02BE51 | Paracetamol, combinations excl. psycholeptics |
| N02BE71 | Paracetamol, combinations with psycholeptics |
| N02BG | Other analgesics and antipyretics |
| N02BG07 | Flupirtine |
| N02BG08 | Ziconotide |
| N02BG10 | Cannabinoids |

## Descriptive statistics of the "supplementary" study population (other drugs than psychotropics)

**S-Table 2** Descriptive statistics at baseline (2004) for individuals on medication and individuals both on medication and unemployed (study population) during the observation period (2005-2010). Gender distribution, age (mean and standard deviation (SD)) and proportion of individuals in each category. No missing on gender and age.

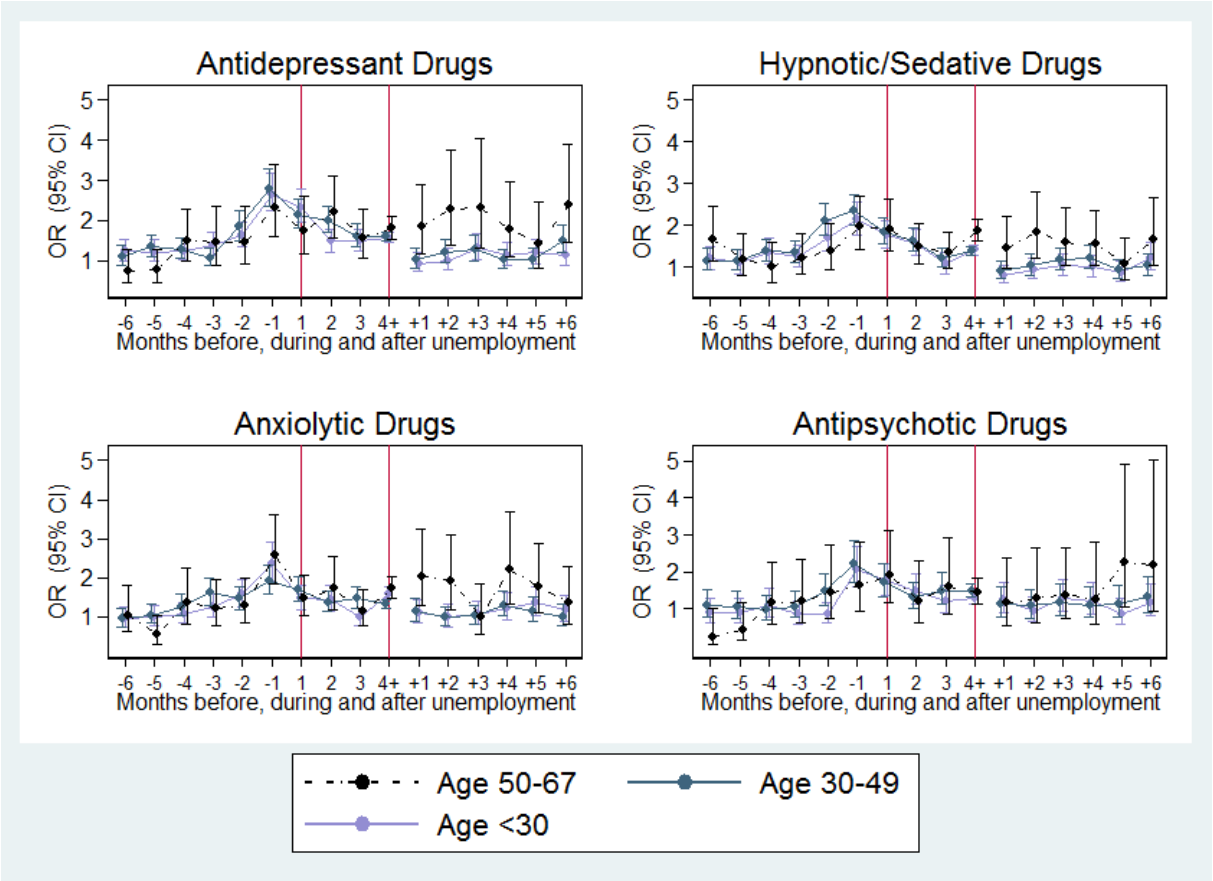
| **Baseline characteristics** | **Anti-obesity drugs (A08)** | **A08 + unempl.** | **Anti-diabetic drugs (A10A )** | **A10A + unempl.** | **Heart therapy (C01+ C02+ C03+ C07+ C08+C09+ C10)** | **C01-C10 + unempl.** | **Thyroid therapy (H03A)** | **H03A + unempl.** | **Anti-inflammatory and anti-rheumatic drugs (M01A+M02A)** | **M01A+M02A + unempl.** |
|---|---|---|---|---|---|---|---|---|---|---|
| **N** | 69 636 | 7577 (11) | 82446 | 7085 (9) | 582862 | 37015 (6) | 101090 | 7 148 (7) | 1509625 | 130032 (9) |
| Women (%) | 52 376 (75) | 5 795 (76) | 32090 (39) | 2910 (41) | 261209 (45) | 15735 (43) | 81524 (81) | 5685 (80) | 739845 (49) | 59449 (46) |
| Age (mean/SD) | 39(11.2) | 34 (10.1) | 46 (11.8) | 40 (12.0) | 48 (10.5) | 43 (11.6) | 45(11.6) | 38 (11.6) | 40 (12.1) | 35 (11.3) |
| **Age cat. (%)** | | | | | | | | | | |
| 18-29 years | 14842 (21) | 3045 (40) | 9301 (11) | 1575 (22) | 34750 (6) | 5344 (14) | 11982 (12) | 1822 (25) | 326446 (21) | 50046 (39) |
| 30-49 years | 40013 (58) | 3895 (52) | 35005 (43) | 3606 (51) | 244080 (42) | 18720 (51) | 18808 (48) | 3845 (54) | 780856 (52) | 62912 (48) |
| 50-67 years | 14781 (21) | 637 (8) | 38140 (46) | 1904 (27) | 304032 (52) | 12951 (35) | 40300 (40) | 1481 (21) | 402323 (27) | 17074 (13) |
| **Education (%)** | | | | | | | | | | |
| Compulsory | 17712 (25) | 2849 (38) | 19269 (23) | 2406 (34) | 121467 (21) | 11686 (31) | 18956 (19) | 2050 (29) | 335896 (22) | 47386 (36) |
| Intermediate | 34436 (50) | 3334 (44) | 40882 (50) | 3121 (44) | 291762 (50) | 17653 (48) | 46561 (46) | 3052 (43) | 715790 (47) | 54016 (42) |
| Tertiary | 15005 (22) | 956 (12) | 19657 (24) | 1037 (15) | 158531 (27) | 5902 (16) | 33196 (33) | 1604 (22) | 415297 (28) | 20081 (15) |
| Missing (%) | 2033 (3) | 438 (6) | 2638 (3) | 521 (7) | 11102 (2) | 1774 (5) | 2377 (2) | 442 (6) | 42642 (3) | 8549 (7) |

S-Table 2 (cont.) Descriptive statistics at baseline (2004) for individuals on medication and individuals both on medication and unemployed (study population) during the observation period (2005-2010). Gender distribution, age (mean and standard deviation (SD)) and proportion of individuals in each category. No missing on gender and age.

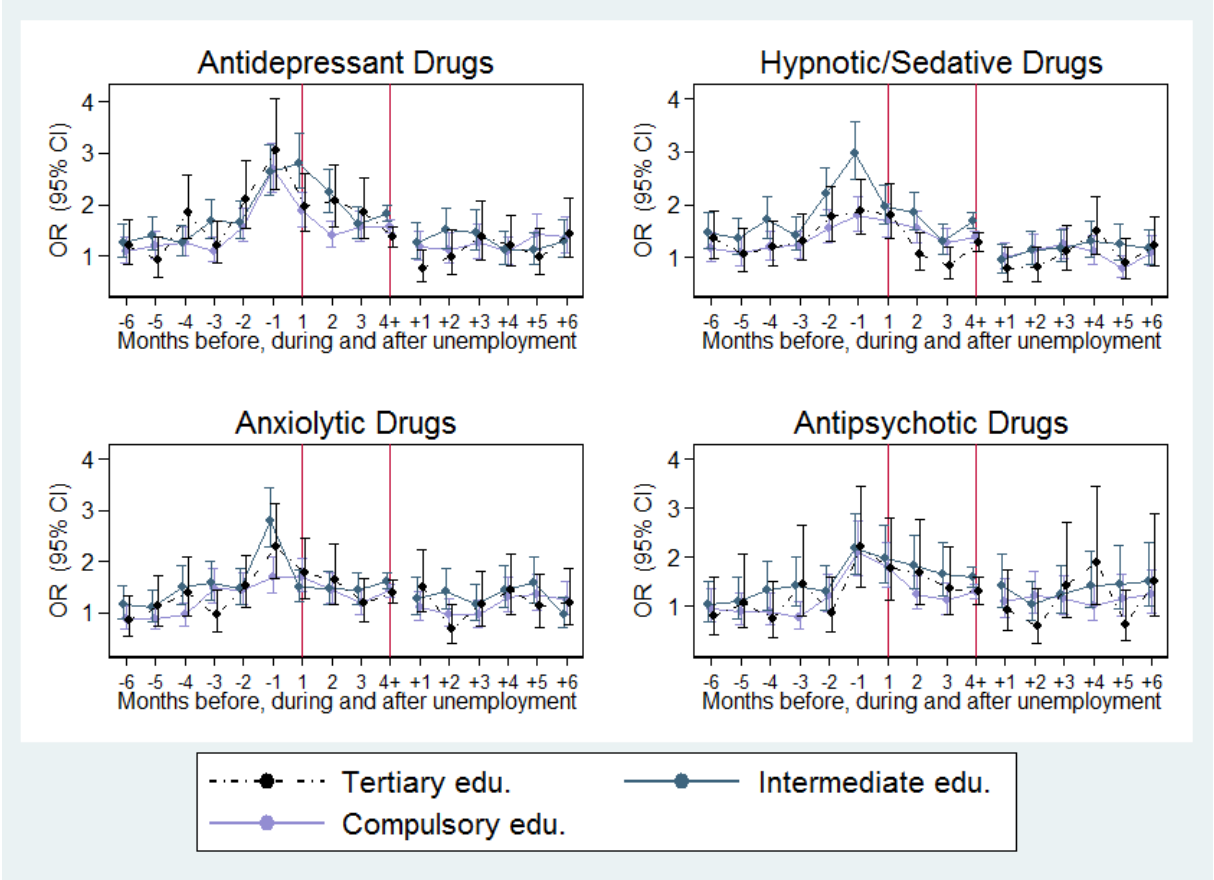
| **Baseline characteristics** | **Opioids (N02A)** | **N02A + unempl.** | **Analgesics/ antipyretics (N02B )** | **N02B + unempl.** |
|---|---|---|---|---|
| **N** | 939357 | 87301 (9) | 469107 | 42518 (9) |
| Women (%) | 454445 (48) | 39358(45) | 251132 (54) | 21125 (50) |
| Age (mean/SD) | 41(12.2) | 35 (11.3) | 42 (12.0) | 36 (11.4) |
| **Age cat. (%)** | | | | |
| 18-29 years | 199247 (21) | 33616 (39) | 78886 (17) | 14372 (34) |
| 30-49 years | 477729 (51) | 42352 (48) | 239428 (51) | 21753 (51) |
| 50-67 years | 262381 (28) | 11333 (13) | 150793 (32) | 6393 (15) |
| **Education (%)** | | | | |
| Compulsory | 222486 (24) | 33404 (39) | 114966 (25) | 16398 (38) |
| Intermediate | 444198 (47) | 35747 (41) | 227336 (48) | 17740 (42) |
| Tertiary | 245383 (26) | 12501 (14) | 112703 (24) | 5350 (13) |
| Missing (%) | 27290 (3) | 5649 (6) | 14102 (3) | 3030 (7) |

## Psychotropic drug purchase stratified by age and educational level

In order to reduce the number of figures in the paper, we present the stratified analyses of the main analysis in S-Figure 2 and S-Figure 3 below. The results are commented in the paper.



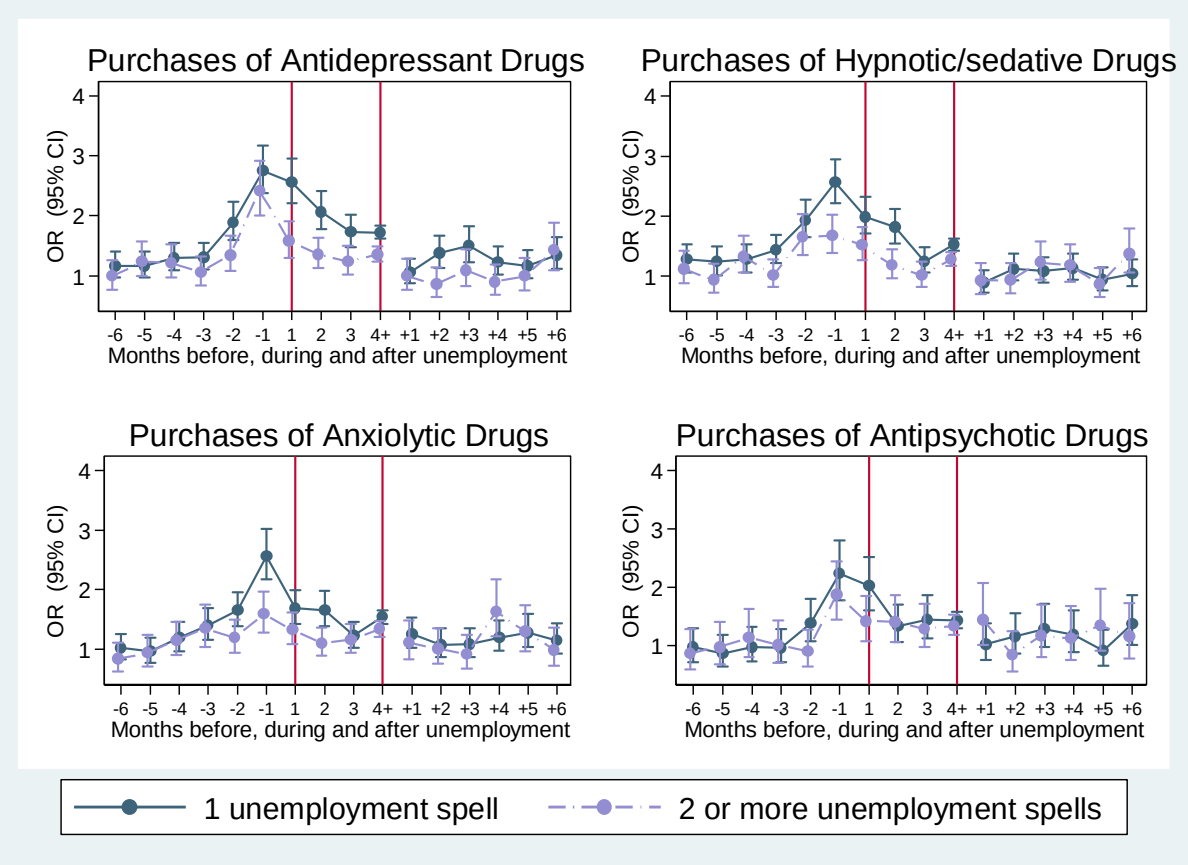

**S-Figure 2** **Odds ratios (OR) with 95% Confidence Intervals (CI) of having a first purchase of antidepressants, hypnotic/sedative drugs, anxiolytic drugs and antipsychotic drugs, respectively, while being in a state of unemployment (1-6 months before, 1,2,3,4 or more months during (between vertical lines) and 1-6 months after the end of unemployment). Control periods = 12, 24 and 36 months before the date of drug purchase. Start of the observation period was January 1st 2005; the end was December 31st 2010. Stratified by age.**




**S-Figure 3** **Odds ratios (OR) with 95% Confidence Intervals (CI) of having a first purchase of antidepressants, hypnotic/sedative drugs, anxiolytic drugs and antipsychotic drugs, respectively, while being in a state of unemployment(1-6 months before, 1,2,3,4 or more months during (between vertical lines) and 1-6 months after the end of unemployment). Control periods = 12, 24 and 36 months before the date of drug purchase. Start of the observation period was January 1st 2005; the end was December 31st 2010. Stratified by educational level.**

## Unemployment frequency during the observation period (2005 to 2010)

As having repeated unemployment spells can be associated with deteriorated health (see main manuscript), we wanted to explore the effect of potentially having several unemployment spells during the observation period. We compared individuals with multiple unemployment spells with those only experiencing one episode of unemployment. The results are commented in the paper:




**S-Figure 4** **Odds ratios (OR) with 95% Confidence Intervals (CI) of having a first purchase of antidepressants, hypnotic/sedative drugs, anxiolytic drugs and antipsychotic drugs, respectively, while being in a state of unemployment (1-6 months before, 1,2,3,4 or more months during (between vertical lines) and 1-6 months after the end of unemployment). Control periods are 12, 24 and 36 months before the date of drug purchase. Start of the observation period was January 1st 2005; the end was December 31st 2010. Stratified by 1 vs. 2 or more unemployment spells during the observation period.**

## STROBE statement

The authors confirm that the STROBE checklist was followed in this article:

| | Item No | Recommendation |
|---|---|---|
| **Title and abstract** | 1 | (*a*) Indicate the study's design with a commonly used term in the title or the abstract<br><br>Author: Study design(case-crossover) is included in the title |
| | | (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found<br><br>**Author: See abstract.** |
| **Introduction** | | |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported<br><br>**Author: See sections one and two in the introduction.** |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses<br><br>**Author: See sections three, four and five in the introduction.** |
| **Methods** | | |
| Study design | 4 | Present key elements of study design early in the paper<br><br>**Author: See sections under the subheadings "Data provision" and "Design and study population". Also, see the illustration of the study design in S-table 1 in the supplementary file.** |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection<br><br>**Author: See sections under the subheadings "Data provision" and "Design and study population"** |
| Participants | 6 | (*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up<br><br>*Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls<br><br>*Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants<br><br>**Author: Case-crossover study: See sections under the subheadings "Data provision" and "Design and study population". Also, see figure 1.** |
| | | (*b*) *Cohort study*—For matched studies, give matching criteria and number |

| | | |
|---|---|---|
| | | of exposed and unexposed<br><br>*Case-control study*—For matched studies, give matching criteria and the number of controls per case<br><br>**Author: In the case-crossover design, individuals are matched with themselves – at different times in life. See sections under the subheading "Design and study population"** |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable<br><br>**Author: See sections under subheadings "Outcome ascertainment" and "Exposure to unemployment". Confounding is commented in the first section under the subheading "Design and study population".** |
| Data sources/ measurement | 8* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group<br><br>**Author: All data was provided from national registries. See sections under subheading "Data provision".** |
| Bias | 9 | Describe any efforts to address potential sources of bias<br><br>**Author: See first sections under subheadings "Design and study population" and "Main analysis".** |
| Study size | 10 | Explain how the study size was arrived at<br><br>**Author: See sections under subheadings "Data provision", Design and study population". Also, see figure 1.** |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why<br><br>**Author: See sections under subheadings "Data provision", "Main analysis" and "Subgroup analyses"** |
| Statistical methods | 12 | (*a*) Describe all statistical methods, including those used to control for confounding<br><br>**Author: See sections under subheadings "Main analysis" and "Subgroup analyses"** |
| | | (*b*) Describe any methods used to examine subgroups and interactions<br><br>**Author: See section under subheading "Subgroup analyses". Also, see comments on stratified analyses in the supplementary file.** |
| | | (*c*) Explain how missing data were addressed<br><br>**Author: There were no missing data in the main analyses, as commented in table 1.** |

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|---|---|---|
| | | (*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed<br><br>*Case-control study*—If applicable, explain how matching of cases and controls was addressed<br><br>*Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy<br><br>**Author: Case-crossover. Right censoring (loss to follow-up) was described under the subheading "Outcome ascertainment".** |
| | | (*e*) Describe any sensitivity analyses<br><br>**Author: Sensitivity/supplementary analyses are described under the subheading "Supplementary analyses".** |
| **Results** | | |
| Participants | 13* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed<br><br>**Author: See Figure 1 and Table 1.** |
| | | (b) Give reasons for non-participation at each stage<br><br>**Author: See "Design and study population" under Methods.** |
| | | (c) Consider use of a flow diagram<br><br>**Author: See Figure 1.** |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders<br><br>**Author: See Table 1 in the manuscript and S-Table 1 and S-Table 2 in the supplementary file. Also, see the first section under "Results".** |
| | | (b) Indicate number of participants with missing data for each variable of interest<br><br>Author: **See Table 1 in the manuscript and S-Table 2 in the supplementary file.** |
| | | (c) *Cohort study*—Summarise follow-up time (eg, average and total amount)<br><br>Author: Not relevant in a case-crossover. The observation period was 2005 to 2010, as described in the second section under the subheading "Design and |

| | | |
|---|---|---|
| | | study population". |
| Outcome data | 15* | *Cohort study*—Report numbers of outcome events or summary measures over time |
| | | *Case-control study*—Report numbers in each exposure category, or summary measures of exposure<br><br>**Author: Case-crossover study – all study participants are both exposed and have the outcome, as described in "Methods" under the subheading "Design and study population" and in Figure 1.** |
| | | *Cross-sectional study*—Report numbers of outcome events or summary measures |
| Main results | 16 | *(a)* Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included<br><br>**Author: See the second section under "Results". Also, see Figure 2-4 providing odds rations with 95% confidence intervals.** |
| | | *(b)* Report category boundaries when continuous variables were categorized<br><br>**Author: See Table 1.** |
| | | *(c)* If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period<br><br>**Author: Not relevant.** |
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses<br><br>**Author: See Figure 3-4 in the manuscript and S-Figure 2-4 in the supplementary file.** |
| **Discussion** | | |
| Key results | 18 | Summarise key results with reference to study objectives<br><br>**Author: See section one under "Discussion".** |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias<br><br>**Author: See subheading "Strengths and limitations".** |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence<br><br>Author: See subheadings **"Strengths and limitations", "Previous studies" and "Interpretation".** |

| | | |
|---|---|---|
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results<br><br>**Author: See section under subheading "Context and generalizability"** |
| **Other information** | | |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based<br><br>**Author: See section under subheading "Funding".** |

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.