

## Supplementary Data

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**eTable 1: List of tests and associated NPU codes and analysis numbers.**

Tests	NPU codes and analysis numbers
<b>Total cholesterol</b> (categories: normal (<5.2 mmol/L), increased (5.2-6.3 mmol/L), high (≥6,3 mmol/L) according to the NCEP ATP III classification <sup>1</sup> )	NPU codes: NPU01566, NPU18412 Analysis number: 1566, 110223, 1510981, 1511230, 1622152, 1711566, 1811566
<b>HDL-C</b> (categories: low (F: <1.3, M: <1.0 mmol/L), normal (F:1.3-1.6, M: 1.0-1.6 mmol/L), high (≥1.6 mmol/L) according to the NCEP ATP III classification <sup>1</sup> )	NPU codes: NPU01567, NPU10157 Analysis numbers: : 1567, 110222, 1514405, 1622153, 1711567, 1811567
<b>LDL-C</b> (categories: normal (<3.4 mmol/L), increased (3.4-4.1 mmol/L), high (≥4.1 mmol/L) according to the NCEP ATP III classification <sup>1</sup> )	NPU codes: AAB00101-102, NPU01568, NPU10171 Analysis numbers: 1568, 110221, 1514407, 1622154, 1711568, 1811568
<b>Triglycerides</b> (categories: normal (<1.7 mmol/L), increased (1.7-2.3 mmol/L), high (≥2.3 mmol/L) according to the NCEP ATP III classification <sup>1</sup> )	NPU codes: NPU03620, NPU04094 Analysis numbers: 3620, 4094, 110224, 1511285, 1622151, 1713620, 1813620
<b>Non-fasting glucose</b> (categories: normal (<7.8 mmol/L), prediabetes (7.8-11.0 mmol/L), diabetes (>11.0 mmol/L) according to ADA <sup>2</sup> )	NPU codes: AAA00056, AAA00303, AAA00311, AAA00314, NPU02187, NPU02192, NPU04093, NPU08520-67, NPU08869-8916, NPU10063-113, NPU21531, NPU21533, NPU22070-89, NPU22095, NPU22099-126, NPU27412 Analysis numbers: 2187, 2192, 8544-67, 8904, 8909, 8914, 8916, 10065, 22127, 110303, 110317, 110320-21, 110323, 110607, 110611, 110615, 110624, 111624-25, 112089, 112196, 114301-12, 114341-84, 116880, 122241-44, 1510941, 1511501-49, 1511632-80, 1523098, 1610143-45, 1610424, 1610537, 1610541-43, 1610633-34, 1610640, 1612192, 1616571-83, 1616590-624, 1616636, 1710312, 1710316, 1710322, 1712187, 1712192, 1810302, 1810308-09, 1810311-12, 1810316, 1810322, 1812187, 1817015, 1817017-18, 1817229-53, 1817331-32, 1817349, 1817395-414, 1817425
<b>Fasting glucose</b> (categories: normal (<5.6 mmol/L), prediabetes (5.6-6.9 mmol/L), diabetes (>6.9 mmol/L) according to ADA <sup>2</sup> )	NPU codes: DNK35842, NPU02193, NPU02195, NPU08509, NPU08972, NPU22069 Analysis numbers: 22069, 112069, 112195, 113016, 114325, 1511500, 1511631, 1511700, 1525071, 1610134, 1610823, 1616560, 1616635, 1712188, 1812188, 1812195, 1817225
<b>HbA1c</b> (categories: normal (≤5.6%), prediabetes (5.7-6.4%), diabetes (≥6.5%) according to ADA <sup>2</sup> )	NPU codes: AAA00091-92, NPU02307, NPU03835, NPU27300 Analysis number: 153, 154, 159, 3835, 110285, 113835, 114835, 1510994, 1510996, 1512155, 1610135, 1613835, 1712307, 1713835, 1812307, 1817295

Abbreviations: NPU= Nomenclature for Properties and Units, HDL-C=High-Density Lipoprotein Cholesterol, LDL-C=Low-Density Lipoprotein Cholesterol, NCEP=National Cholesterol Education Program, ATP=Adult Treatment Panel, HbA1c= Hemoglobin A1c, ADA=American Diabetes Association,

**eTable 2: List of disease categories and associated ICD-8 and ICD-10 codes.**

Disease category	ICD codes
<b>Schizophrenia<sup>a</sup></b>	ICD-8: 295.x9 excl. 295.79 ICD-10: F20
Paranoid subtype	ICD-10: F20.0
<b>Schizoaffective disorders<sup>a</sup></b>	ICD-8: 295.79, 296.89 ICD-10: F25
<b>Other schizophrenia spectrum disorders<sup>a</sup></b>	ICD-8: 297, 298.29-298.99, 299.04, 299.05, 299.09, 301.83 ICD-10: F21-24, F28-29
<b>Bipolar disorders<sup>a</sup></b>	ICD-8: 296.19, 296.39, 298.19 ICD-10: F30-31
<b>Other affective disorders<sup>a</sup></b>	ICD-8: 296.99, 301.19 ICD-10: F34, F38-39
<b>Depression (single and recurrent)<sup>a</sup></b>	ICD-8: 296.09, 296.29, 298.09, 300.49 ICD-10: F32-33
<b>Personality disorders<sup>a</sup></b>	ICD-8: 301.x9 excl. 301.19, 301.80, 301.81, 301.82, 301.84 ICD-10: F60
<b>Substance abuse<sup>a</sup></b>	ICD-8: 291.x9, 294.39, 303.x9, 303.20, 303.28, 303.90, 304.x9 ICD-10: F10-19
<b>ADHD<sup>a</sup></b>	ICD-8: 308.01 ICD-10: F90
<b>Suicide attempts<sup>b</sup></b>	ICD-8: E950-959 ICD-10: X60-84, T36-50, T52-60, S51, S55, S59, S61, S65, S69
<b>Diabetes<sup>c</sup></b>	ICD-8: 249, 250 ICD-10: E10-14, H36.0, O24 excl. O24.4
<b>Dyslipidemia</b>	ICD-8: 272.00, 279.00, 279.01 ICD-10: E78
<b>Obesity</b>	ICD-8: 277 ICD-10: E66

Abbreviations: ICD=International Classification of Disease, ADHD=Attention Deficit Hyperactivity Disorder.

<sup>a</sup> Defined according to ICD-codes for mental disorders used by Pedersen *et al* 2014 <sup>3</sup>.

<sup>b</sup> Defined as described in previous studies <sup>4,5</sup>.

<sup>c</sup> Defined by the ICD-codes used by the National Diabetes Register <sup>6</sup>.

**eTable 3: List of drugs and associated ATC-codes.**

<b>Drugs</b>	<b>ATC-codes</b>
<b>Antipsychotics</b>	N05A excl. N05AN
First-generation antipsychotics	N05AA01-04, N05AB02-04, N05AC01-02, N05AC04, N05AD01, N05AD05-06, N05AD08, N05AF01, N05AF03-05, N05AG02-03
Second-generation antipsychotics	N05AD03, N05AE03-04, N05AH01 - 05, N05AL01, N05AL05, N05AX08, N05AX12-13
<b>Antidepressants</b>	N06A
<b>Benzodiazepines</b>	N03AE, N05BA, N05CD, N05CF
<b>Antidiabetic drugs</b>	A10
Metformin	A10BA02
<b>Antiobesity preparations</b>	A08
<b>Lipid-lowering drugs</b>	C10

Abbreviations: ATC= Anatomical Therapeutic Chemical

**eTable 4: Baseline characteristics for schizophrenia patients with and without metabolic blood tests.**

Characteristic	With metabolic blood test(s)	Without metabolic blood test(s)	Total	P Value
<b>No. (%)</b>	1,040 (42.4)	1,412 (57.6)	2,452 (100)	<0.001
<b>Female, No. (%)</b>	455 (43.8)	580 (41.1)	1,035 (42.2)	0.19
<b>Primary education as highest completed level, No. (%) (n=2,402)</b>	640 (63.0)	938 (67.7)	1,578 (65.7)	0.02
<b>Age at first schizophrenia diagnosis, median (IQR), y</b>	25.7 (21.9-33.6)	27.4 (22.3-36.2)	26.7 (22.1-35.1)	<0.001
<b>Inpatient at first schizophrenia diagnosis, No. (%)</b>	424 (40.8)	501 (35.5)	925 (37.7)	0.008
<b>Paranoid subtype at first schizophrenia diagnosis, No. (%)</b>	590 (56.7)	733 (51.9)	1,323 (54.0)	0.02
<b>Age at first psychiatric diagnosis, median (IQR), y</b>	22.7 (19.0-29.1)	23.6 (19.6-30.4)	23.2 (19.4-29.8)	0.003
<b>Time since first psychiatric diagnosis, median (IQR), y</b>	1.6 (0-6.3)	1.8 (0-6.0)	1.7 (0-6.1)	0.71
<b>Previous psychiatric diagnoses, No. (%)</b>				
Substance abuse	325 (31.3)	434 (30.7)	759 (31.0)	0.79
Depression	369 (35.5)	385 (27.3)	754 (30.8)	<0.001
Other schizophrenia spectrum disorder	325 (31.3)	425 (30.1)	750 (30.6)	0.54
Personality disorder	252 (24.2)	399 (28.3)	651 (26.6)	0.03
Suicide attempt	280 (26.9)	327 (23.2)	607 (24.8)	0.03
Bipolar disorder	59 (5.7)	50 (3.5)	109 (4.5)	0.01
Schizoaffective disorder	42 (4.0)	45 (3.2)	87 (3.6)	0.26
ADHD	56 (5.4)	24 (1.7)	80 (3.3)	<0.001
<b>Previous antipsychotic treatment, No. (%)</b>	615 (59.1%)	858 (60.8%)	1,473 (60.1%)	0.42
<b>Total amount of antipsychotics before first-time schizophrenia diagnosis, median (IQR), DDD (n=1,473)</b>	136.0 (26.3-715.5)	149.2 (30.0-689.3)	142.8 (28.0-699.2)	0.51
<b>Previous use of antidepressants, No. (%)</b>	692 (66.5)	910 (64.5)	1,602 (65.3)	0.28

Characteristic	With metabolic blood test(s)	Without metabolic blood test(s)	Total	P Value
<b>Previous use of benzodiazepines, No. (%)</b>	495 (47.6)	750 (53.1)	1,245 (50.8)	0.007
<b>Previous metabolic diagnoses and/or treatment, No. (%)</b>				
Obesity	53 (5.1)	39 (2.8)	92 (3.8)	0.003
Diabetes	23 (2.2)	18 (1.3)	41 (1.7)	0.07
Dyslipidemia	8 (0.8)	6 (0.4)	14 (0.6)	0.26
Antiobesity preparations	59 (5.7)	93 (6.6)	152 (6.2)	0.35
Antidiabetic drugs <sup>a</sup>	28 (2.7)	21 (1.5)	49 (2.0)	0.04
Lipid-lowering drugs	22 (2.1)	14 (1.0)	36 (1.5)	0.02

Abbreviations: IQR= Interquartile range, ADHD=Attention Deficit Hyperactivity Disorder, DDD=Defined Daily Dose.

<sup>a</sup> Metformin-prescriptions redeemed by women aged 20-39 years were excluded.

**eTable 5: Baseline characteristics for people with schizophrenia with baseline metabolic blood tests by previous antipsychotic drug prescription(s).**

Characteristic	Without previous antipsychotic drugs	With previous antipsychotic drugs	Total	p value
<b>No. (%)</b>	425 (40.9)	615 (59.1)	1,040 (100)	<0.001
<b>Female, No. (%)</b>	161 (37.9)	294 (47.8)	455 (43.8)	0.002
<b>Primary education as highest completed level, No. (%) (n=1,016)</b>	251 (60.3)	389 (64.8)	640 (63.0)	0.14
<b>Age at first schizophrenia diagnosis, median (IQR), y</b>	24.6 (21.7-30.8)	27.0 (22.1-35.2)	25.7 (21.9-33.6)	<0.001
<b>Inpatient at first schizophrenia diagnosis, No. (%)</b>	167 (39.3)	257 (41.8)	424 (40.8)	0.42
<b>Paranoid subtype at first schizophrenia diagnosis, No. (%)</b>	215 (50.6)	375 (61.0)	590 (56.7)	0.001
<b>Age at first psychiatric diagnosis, median (IQR), y</b>	23.1 (19.9-29.2)	22.2 (18.3-29.1)	22.7 (19.0-29.1)	0.009
<b>Time since first psychiatric diagnosis, median (IQR), y</b>	0.1 (0-2.1)	3.3 (0.6-8.1)	1.6 (0-6.3)	<0.001
<b>Previous psychiatric diagnoses, No. (%)</b>				
Substance abuse	86 (20.2)	239 (38.9)	325 (31.3)	<0.001
Depression	99 (23.3)	270 (43.9)	369 (35.5)	<0.001
Other schizophrenia spectrum disorder	69 (16.2)	256 (41.6)	325 (31.3)	<0.001
Personality disorder	56 (13.2)	196 (31.9)	252 (24.2)	<0.001
Suicide attempt	56 (13.2)	224 (36.4)	280 (26.9)	<0.001
ADHD	13 (3.1)	43 (7.0)	56 (5.4)	0.006
<b>Previous use of antidepressants, No. (%)</b>	218 (51.3)	474 (77.1)	692 (66.5)	<0.001
<b>Previous use of benzodiazepines, No. (%)</b>	104 (24.5)	391 (63.6)	495 (47.6)	<0.001

Abbreviations: IQR= Interquartile range, ADHD=Attention Deficit Hyperactivity Disorder.

**eTable 6: Baseline characteristics for people with schizophrenia with baseline metabolic blood tests by gender and previous antipsychotic drug prescription(s).**

Characteristic	Males				Females				Overall <i>p</i> value*
	Without antipsychotic drugs	With antipsychotic drugs	Total	<i>p</i> value	Without antipsychotic drugs	With antipsychotic drugs	Total	<i>p</i> value	
<b>No. (%)</b>	264 (45.1)	321 (54.9)	585 (100)	0.02	161 (35.4)	294 (64.6)	455 (100)	<0.001	<0.001
<b>Primary education as highest completed level, No. (%) (n=1016)</b>	154 (60.2)	215 (68.9)	369 (65.0)	0.03	97 (60.6)	174 (60.4)	271 (60.5)	0.97	0.14
<b>Age at first schizophrenia diagnosis, median (IQR), y</b>	25.0 (22.1-30.7)	28.7 (22.6-35.8)	26.8 (22.4-33.8)	<0.001	23.9 (21.2-31.1)	25.2 (21.8-33.8)	24.6 (21.5-33.1)	0.06	0.02
<b>Inpatient at first schizophrenia diagnosis, No. (%)</b>	109 (41.3)	140 (43.6)	249 (42.6)	0.57	58 (36.0)	117 (39.8)	175 (38.5)	0.43	0.18
<b>Paranoid subtype at first schizophrenia diagnosis, No. (%)</b>	133 (50.4)	213 (66.4)	346 (59.2)	<0.001	82 (50.9)	162 (55.1)	244 (53.6)	0.39	0.08
<b>Age at first psychiatric diagnosis, median (IQR), y</b>	24.0 (20.1-29.4)	23.7 (19.0-30.5)	23.9 (19.5-30.1)	0.51	22.1 (19.6-28.8)	21.1 (17.6-27.0)	21.6 (18.5-27.2)	0.01	<0.001
<b>Time since first psychiatric diagnosis, median (IQR), y</b>	0.04 (0-1.8)	2.5 (0.4-7.4)	1.0 (0-5.3)	<0.001	0.2 (0-2.3)	4.0 (1.1-8.4)	2.4 (0.2-6.8)	<0.001	<0.001
<b>Prior psychiatric diagnoses, No. (%)</b>									
Substance abuse	65 (24.6)	163 (50.8)	228 (39.0)	<0.001	21 (13.0)	76 (25.9)	97 (21.3)	0.001	<0.001
Depression	46 (17.4)	103 (32.1)	149 (25.5)	<0.001	53 (32.9)	167 (56.8)	220 (48.4)	<0.001	<0.001
Other	46 (17.4)	137 (42.7)	183 (31.3)	<0.001	23 (14.3)	119 (40.5)	142 (31.2)	<0.001	0.98



Characteristic	Males			p value	Females			p value	Overall p value*
	Without antipsychotic drugs	With antipsychotic drugs	Total		Without antipsychotic drugs	With antipsychotic drugs	Total		
schizophrenia spectrum disorder									
Personality disorder	27 (10.2)	61 (19.0)	88 (15.0)	0.003	29 (18.0)	135 (45.9)	164 (36.0)	<0.001	<0.001
Suicide attempt	30 (11.4)	92 (28.7)	122 (20.9)	<0.001	26 (16.2)	132 (44.9)	158 (34.7)	<0.001	<0.001
ADHD	9 (3.4)	30 (9.4)	39 (6.7)	0.004	4 (2.5)	13 (4.4)	17 (3.7)	0.30	0.04
<b>Total amount (DDD) of antipsychotics prior to first schizophrenia diagnosis (n=615)</b>	NA	126.0 (26.7-655.5)	NA	NA	NA	146.6 (26.3-900.0)	NA	NA	0.39
<b>Prior non-antipsychotic treatment, No. (%)</b>									
Antidepressants	116 (43.9)	220 (68.5)	336 (57.4)	<0.001	102 (63.4)	254 (86.4)	356 (78.2)	<0.001	<0.001
Benzodiazepines	59 (22.4)	179 (55.8)	238 (40.7)	<0.001	45 (28.0)	212 (72.1)	257 (56.5)	<0.001	<0.001

Abbreviations: IQR=Interquartile range, ADHD=Attention Deficit Hyperactivity Disorder, DDD=Defined daily dose, NA=Not available.

\* p value for the overall differences between male and female.

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