Supplemental Table S1.

| Variable | OR (95%CI) | p-value |
|--------------------------|-----------------------|---------|
| Number of screened drugs | 1.212 (0.951 - 1.544) | 0.12 |
| ВМІ | 1.047 (0.992 - 1.105) | 0.09 |
| Current smoking | 2.133 (0.868 - 5.242) | 0.09 |
| Former smoking | 0.775 (0.358 - 1.678) | 0.52 |
| Serum LDL-cholesterol | 1.812 (1.175 - 2.794) | 0.007 |
| HbA1c level | 1.043 (1.016 - 1.072) | 0.002 |
| Diabetic kidney disease | 2.150 (1.067 - 4.330) | 0.032 |
| Neuropathy | 1.186 (0.606 - 2.319) | 0.62 |
| Macrovascular disease | 2.004 (1.002 - 4.011) | 0.049 |

Univariate logistic regression model with non-adherence as study outcome.

Supplemental table S2. Sensitivity analysis (complete cases of variables considered for the multivariable model).

| , | Total population | Adherent | Non-adherent | p-value |
|---|-----------------------------|----------------------------|-----------------|---------|
| n (%) | 428 | 382 (89.3) | 46 (10.7) | - |
| Age (yr) | 64.2 ± 9.1 | 64.2 ± 8.9 | 63.6 ± 10.5 | 0.67 |
| Male, <i>n</i> (%) | 262 (61.2) | 234 (61.3) | 28 (60.9) | 0.96 |
| Prescribed drugs (n) | 5 [4-7] | 5 [4-7] | 6 [4-7] | 0.24 |
| Screened drugs (n) | 4 [2-5] | 4 [2-5] | 4 [3-5] | 0.07 |
| Detected drugs (n) | 3 [2-4] | 4 [2-5] | 3 [1-4] | 0.001* |
| Diabetes duration (yr) | 12 [7-18] | 12 [7-18] | 11 [5-19] | 0.79 |
| BMI (kg/m²) | 32.9 ± 6.0 | 32.8 ± 5.9 | 34.1 ± 6.5 | 0.17 |
| Waist-hip ratio ^a | 1.01 ± 0.09 | 1.01 ± 0.09 | 1.03 ± 0.08 | 0.10 |
| Smoking, <i>n</i> (%) | | | | 0.12 |
| Current smoker | 68 (15.9) | 56 (14.7) | 12 (26.1) | |
| Former smoker | 227 (53.0) | 207 (54.2) | 20 (43.5) | |
| Never smoker | 133 (31.1) | 119 (31.2) | 14 (30.4) | |
| Alcohol intake per week, n (%) ^a | | | | 0.37 |
| None | 142 (35.0) | 123 (34.0) | 19 (43.2) | |
| 1-13 units | 206 (50.7) | 185 (51.1) | 21 (47.7) | |
| ≥14 units | 58 (13.6) | 54 (14.9) | 4 (9.1) | |
| Physical activity – adherence to Dutch Healthy Exercise norm, <i>n</i> (%) ^a | 228 (54.2) | 207 (55.2) | 21 (45.7) | 0.22 |
| DHD-indexa | 70.5 ± 13.6 | 70.6 ± 13.8 | 69.8 ± 12.0 | 0.74 |
| ACR (mg/mmol) ^a | 12.4 ± 50.0 | 11.4 ± 49.2 | 20.9 ± 56.0 | 0.74 |
| LDL-cholesterol (mmol/L) | 2.0 ± 0.7 | 2.0 ± 0.7 | 2.2 ± 0.9 | 0.23* |
| LDL-cholesterol ≤2.5 mmol/L, n (%) | 341 (79.7) | 310 (81.2) | 31 (67.4) | |
| LDL-cholesterol \leq 2.3 mmol/L, n (%) | 183 (42.8) | 166 (43.5) | 17 (37.0) | 0.028* |
| HbA1c, % (mmol/mol) | 7.4 ± 3.2 | 7.4 ± 3.2 | 7.9 ± 3.5 (62.5 | 0.40 |
| HBATC, % (IIIIIIOI/IIIOI) | 7.4 ± 3.2 (57.8 ± 11.7) | 7.4 ± 3.2 (57.2 ± 11.2) | ± 14.7) | 0.004 |
| HbA1c on target, n (%) | 165 (38.6) | 152 (39.8) | 13 (28.3) | 0.13 |
| Systolic blood pressure (mmHg) | 139 ± 16 | 138 ± 16 | 141 ± 18 | 0.30 |
| Diastolic blood pressure (mmHg) | 76 ± 10 | 76 ± 10 | 77 ± 9 | 0.41 |
| BP on target, n (%) ^a | 189 (44.4) | 170 (44.6) | 19 (42.2) | 0.76 |
| Complications, n (%) | | | | |
| Microvascular diseases | 288 (67.3) | 250 (65.4) | 38 (82.6) | 0.019* |
| Retinopathya | 107 (25.2) | 92 (24.3) | 15 (32.6) | 0.22 |
| Neuropathy | 167 (39.0) | 143 (37.4) | 24 (52.2) | 0.05 |
| Diabetic kidney disease | 181 (42.3) | 153 (40.1) | 28 (60.9) | 0.007* |
| Macrovascular diseases | 164 (38.3) | 138 (36.1) | 26 (56.5) | 0.007* |
| Insulin use, n (%) | 280 (65.4) | 246 (64.4) | 34 (73.9) | 0.20 |

^a Missing values for waist-hip ratio (n = 6), alcohol intake (n = 22), physical activity (n = 7), DHD-index (n = 16), ACR (n = 27), blood pressure target (n = 2), retinopathy (n = 3).

Supplemental Figure S1. Discrepancies between prescribed medication and medication detected in urine and the actions taken based on these discrepancies.

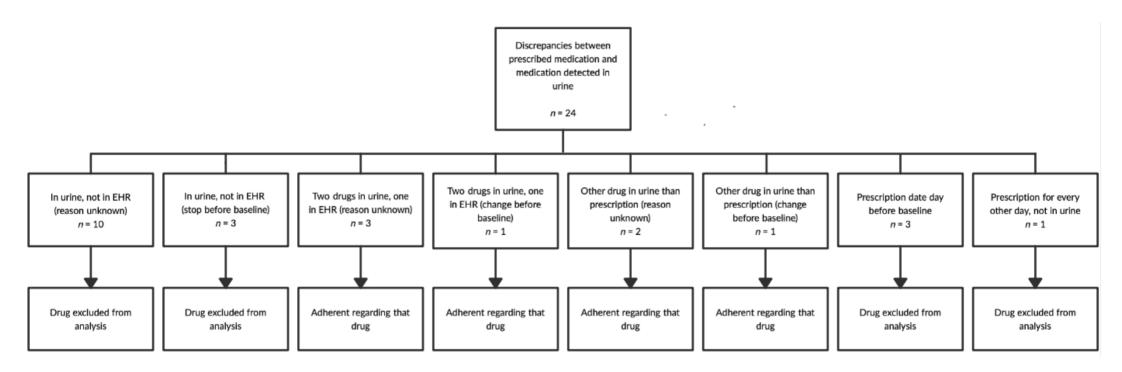


Figure legends

Supplemental Figure S1. Discrepancies between prescribed medication in the electronic health record (EHR) and medication detected in urine were numbered according to the type of discrepancy and consequences of the concerned discrepancy. A drug that was present in the urine sample while it was not prescribed was not included in the analysis if there was no known reason. The same applied to drugs that were present in the urine sample while the prescription was stopped before baseline. Patients were considered adherent if two drugs were present in the urine sample while only one of them was reported in the electronic patient file. The same applied to patients who switched between two drugs before baseline, which were both present in the urine sample. Patients with another drug present in the urine sample than the one reported in the electronic patient file due to a switch before baseline or without known reason were considered adherent. Drugs that were prescribed a day before baseline, were not included in the analysis. This was also the case for drugs that were taken every other day and not present in the urine sample.