# Supplementary Materials

**Supplementary Table 1.** Clinical populations within the adherent and non-adherent classes.

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| **Indication** | **Adherent (>80%)**  ***n* = 2864** | **Non-adherent (<80%)**  ***n* = 1318** |
| Addiction | 278 (44 %) | 354 (56 %) |
| Attention-deficit hyperactive disorder | 660 (59.2 %) | 455 (40.8 %) |
| Bipolar depression disorder | 17 (63 %) | 10 (37 %) |
| Chronic obstructive pulmonary disease | 0 (0 %) | 1 (100 %) |
| Congestive heart failure | 29 (74.4 %) | 10 (25.6 %) |
| Epilepsy | 5 (71.4 %) | 2 (28.6 %) |
| Healthy volunteers | 306 (90 %) | 34 (10 %) |
| Hepatitis C | 60 (88.2 %) | 8 (11.8 %) |
| HIV | 40 (46.5 %) | 46 (53.5 %) |
| Major depressive disorder | 675 (86.9 %) | 102 (13.1 %) |
| Parkinson’s diseases | 1 (50 %) | 1 (50 %) |
| Post-traumatic stress disorder | 74 (86 %) | 12 (14 %) |
| Psoriasis | 31 (96.9 %) | 1 (3.1 %) |
| Schizophrenia | 688 (70.9 %) | 282 (29.1 %) |

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**Supplementary Table 2.** Adherence among different clinical populations.

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| **Item** | **Adherence (%)** |
| All conditions, mean **±** std  Psoriasis  Healthy volunteers  Major depressive disorder  Hepatitis C  Post-traumatic stress disorder  Parkinson’s diseases  Epilepsy  Schizophrenia  Bipolar depression disorder  Attention-deficit hyperactive disorder  Congestive heart failure  Addiction  HIV | 81.9 **±** 22.7  94.8 **±** 10.4  92.4 **±** 15.7  92.0 **±** 16.9  90.5 **±** 14.9  89.8 **±** 16.1  88.3 **±** 12.6  86.1 **±** 14.9  82.6 **±** 15.3  80.8 **±** 19.3  77.3 **±** 14.8  74.7 **±** 13.4  70.3 **±** 12.7  67.9 **±** 13.9 |

**Supplementary Table 3.** Descriptive statistics of predictive features.

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| **Item** | **Value**  **n = 4182** |
| Trial length, mean ± std (weeks) | 10.5 ± 8.9 |
| Micro reimbursements, n (%)  No  Yes | 2371 (56.7 %)  1811 (43.3 %) |
| Dose length, mean ± std (seconds) | 70.5 ± 85.7 |
| Dose delay, mean ± std (hours) | 6.6 ± 4.86 |