### Table 3: Chain of Temporally Constrained LASSO regressions

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Y** | **X2** | **X3** | **X4** | **X5** | **X6** | **X7** | **X8** | **X9** | **X10** | **X11** | **X12** | **X13** | **X14** | **X15** | **X16** | **X17** | **X19** | **X20** |
| **R2** | **0.74** | **0.55** | **~~0.00~~** | **0.82** | **0.73** | **0.91** | **0.86** | **~~0.04~~** | **0.60** | **0.69** | **0.93** | **0.57** | **0.86** | **0.69** | **~~0.07~~** | **~~0.03~~** | **0.69** | **~~0.09~~** | **0.95** |
|  |
|  | **Y** | **X2** | **~~X3~~** | **X4** | **X5** | **X6** | **X7** | **~~X8~~** | **X9** | **X10** | **X11** | **X12** | **X13** | **X14** | **~~X15~~** | **~~X16~~** | **X17** | **~~X19~~** | **X20** |
| **D1** | **3.55** | 2.40 |  | 3.77 | 4.33 | 4.42 | 4.13 |  |  | 3.34 | 4.43 |  | 5.37 |  |  |  |  |  | 4.47 |
| **D2** | **0.97** | 1.29 |  | 1.88 |  | 1.71 | 1.51 |  | 3.52 | 1.04 | 1.84 | 3.47 |  | 4.07 |  |  | 3.86 |  | 1.84 |
| **X1** |  | 1.19 |  | 0.52 |  | 0.15 | 0.09 |  |  |  | 0.08 |  |  |  |  |  |  |  | ~~0.03~~ |
| **X2** |  |  | ~~0.86~~ | 1.12 | 1.37 | 0.31 | 1.47 | ~~0.14~~ | ~~0.04~~ | 0.81 | 0.56 | 0.96 | 0.12 | 0.67 |  |  |  |  | 0.53 |
| **X3** |  |  |  | 0.17 |  | 0.90 | 0.39 |  | 0.41 |  | 0.11 |  |  |  |  |  | 0.76 | ~~0.26~~ | 0.10 |
| **X4** | ~~0.01~~ |  |  |  | 1.24 | 0.30 | 1.48 | ~~0.29~~ |  | 0.60 | 0.34 |  | 0.66 |  |  |  |  |  | ~~0.05~~ |
| **X5** |  |  |  |  |  | ~~0.00~~ | 0.06 | ~~0.98~~ | 1.30 | 1.10 |  | 0.60 | 0.58 |  | ~~1.76~~ |  |  |  | 0.49 |
| **X6** | **0.07** |  |  |  |  |  | 0.36 | ~~0.40~~ |  | 0.51 | 0.11 | 0.42 |  | 0.26 |  |  | 0.37 |  | ~~0.05~~ |
| **X7** | **0.21** |  |  |  |  |  |  | ~~0.25~~ | 0.07 | 1.43 | 0.36 |  | 0.46 |  | ~~1.18~~ | ~~1.27~~ |  | ~~0.66~~ |  |
| **X8** | **0.06** |  |  |  |  |  |  |  | ~~0.03~~ |  | 0.69 |  | 0.39 |  | ~~0.36~~ | ~~0.78~~ | 0.53 |  |  |
| **X9** |  |  |  |  |  |  |  |  |  |  | 0.37 |  | 0.46 | 0.15 | ~~0.61~~ |  | 0.37 |  | 0.09 |
| **X10** | **0.87** |  |  |  |  |  |  |  |  |  | 0.40 | 0.13 |  | 1.38 |  |  | 0.68 | ~~1.26~~ | 0.28 |
| **X11** | **0.18** |  |  |  |  |  |  |  |  |  |  |  |  | 0.32 | ~~0.59~~ |  | 0.35 | ~~0.30~~ | ~~0.03~~ |
| **X12** |  |  |  |  |  |  |  |  |  |  |  |  | 1.48 |  |  |  | 1.07 |  | 0.10 |
| **X13** |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.83 |  |  |  | ~~1.46~~ | 0.11 |
| **X14** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ~~0.34~~ | 0.46 |  |  |
| **X15** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ~~0.49~~ | ~~0.49~~ | ~~0.74~~ | ~~0.03~~ |
| **X16** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.08 |
| **X17** | **0.12** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ~~0.15~~ | ~~0.04~~ |
| **X18** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **X19** | ~~0.03~~ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.56 |
| **X20** | **0.22** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Notes:** Table reports results for 19 regressions. Variables are listed in first column, in temporal order of occurrence. Chain of regression starts from left to right, each column indicating a separate LASSO regression. Cell values indicate regression coefficients. White cells without a value indicate zero coefficients. Grey cells indicate variables not used as independent variables in the regression. Regression coefficient with values less than 0.05 (clinically not significant) and models with R-squared value below 0.1 (poor fit of the model to the data) have been removed in the remaining analytical procedures.D1: Age, D2: Female, X1: Shivering, X2: Fatigue, X3: Loss of taste, X4: Fever, X5: Headaches, X6: Loss of smell, X7: Chills, X8: Muscle aches X9: Diarrhea, X10: Cough, X11: Shortness of breath, X12: Runny nose, X13: Sore throat, X14: Loss of balance, X15: Vomiting, X16: Joint pain, X17: Loss of appetite, X18: Wheezing, X19: Difficulty breathing, X20: Excessive sweating, Y: Covid- 19 Test Results. R2 is McFadden Pseudo R-squared in LASSO logistic regression. |