Table 1. Model specification and AIC for Final Model Selection for H1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Time poly** | **Random effects** | **AIC** | **# of** | **Note** |
| Linear. | None | 74582.75 | 0 |  |
| Linear. | Rand. Int for id | NA | NA | Does not Converge |
| Quadratic | None | 74519.65 | 1 | At least one element of the (projected) gradient is greater than 1e-3 |
| Cubic | None | 74499.45 | 1 | At least one element of the (projected) gradient is greater than 1e-3 |
| Quartic | None | 74449.25 | 1 | At least one element of the (projected) gradient is greater than 1e-3 |
| Quintic | None | 74437.81 | 1 | At least one element of the (projected) gradient is greater than 1e-3 |
| Sextic | None | 74423.61 | 1 | At least one element of the (projected) gradient is greater than 1e-3 |
| Septic | None | 74422.47 | 1 | At least one element of the (projected) gradient is greater than 1e-3 |

Table 2. Model specification and AIC for Final Model Selection for H2.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Time poly** | **Random effects** | **Interaction** | **AIC** | **# of** | **Note** |
| Linear. | None | Y | 16461.50 | 0 |  |
| Linear. | Rand. Int for id | Y | NA | NA | Does not Converge |
| Quadratic | None | Y | 16422.04 | 0 |  |
| Cubic | None | Y | 16406.04 | 0 |  |
| Quartic | None | Y | 16406.15 | 0 |  |
| Quintic | None | Y | 16382.50 | 0 |  |
| Sextic | None | Y | 16378.51 | 0 | At least one element of the (projected) gradient is greater than 1e-3 |
| Septic | None | Y | 16372.84 | 0 | Interaction no longer significant from here |
| Septic | None | N | 16374.00 | 0 |  |
| Octic | None | Y | 16369.03 | 0 | Octic term DF . |
| Nonic | None | Y | 16367.55 | 0 | Octic term DF . |