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Model No.
                          \lambda_{t,s} and \pi_s
 Model 1
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \operatorname{seifa}_s + \alpha_2 \operatorname{hhsize}_s + \alpha_3 \operatorname{homeless}_s + \alpha_4 \operatorname{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s
 Model 2
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \operatorname{seifa}_s + \alpha_2 \operatorname{hhsize}_s + \alpha_3 \operatorname{homeless}_s + \alpha_4 \operatorname{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_2 GPclinic,
 Model 3
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \text{ seifa}_s + \alpha_2 \text{ hhsize}_s + \alpha_3 \text{ homeless}_s + \alpha_4 \text{ AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s
 Model 4
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \alpha_4 \mathsf{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s
 Model 5
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \alpha_4 \mathsf{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + + \beta_2 GPclinic,
 Model 6
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \operatorname{seifa}_s + \alpha_2 \operatorname{hhsize}_s + \alpha_4 \operatorname{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s
 Model 7
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_3 \mathsf{homeless}_s + \alpha_4 \mathsf{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s
 Model 8
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \operatorname{seifa}_s + \alpha_3 \operatorname{homeless}_s + \alpha_4 \operatorname{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + + \beta_2 GPclinic,
 Model 9
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \operatorname{seifa}_s + \alpha_3 \operatorname{homeless}_s + \alpha_4 \operatorname{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s
Model 10
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_4 \mathsf{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s
Model 11
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \text{ seifa}_s + \alpha_4 \text{ Access Difficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + + \beta_2 GPclinic.
Model 12
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_4 \mathsf{AccessDifficulty}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}
Model 13
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \alpha_3 \mathsf{homeless}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s + \beta_3 \text{ AccessDifficulty}_s
Model 14
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \alpha_3 \mathsf{homeless}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_2 GPclinic, +\beta_3 AccessDifficulty,
Model 15
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \alpha_3 \mathsf{homeless}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_3 \text{ AccessDifficulty}_s
Model 16
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s + \beta_3 \text{ AccessDifficulty}_s
Model 17
                          \lambda_{ts} = \log(\mathsf{Pop}_{ts}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_2 GPclinic<sub>s</sub> + \beta_3 AccessDifficulty<sub>s</sub>
Model 18
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_2 \mathsf{hhsize}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_3 \text{ AccessDifficulty}_s
Model 19
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_3 \mathsf{homeless}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s + \beta_3 \text{ AccessDifficulty}_s
Model 20
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \operatorname{seifa}_s + \alpha_3 \operatorname{homeless}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_2 \text{ GPclinic}_s + \beta_3 \text{ AccessDifficulty}_s
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \alpha_3 \mathsf{homeless}_s + \phi_s + \theta_s + f(t)
Model 21
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_3 \text{ AccessDifficulty}_s
Model 22
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_2 \text{ GPclinic}_s + \beta_3 \text{ AccessDifficulty}_s
Model 23
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_2 GPclinic, +\beta_3 AccessDifficulty,
Model 24
                          \lambda_{t,s} = \log(\mathsf{Pop}_{t,s}) + \alpha_0 + \alpha_1 \mathsf{seifa}_s + \phi_s + \theta_s + f(t)
                          \pi_s = \beta_0 + \beta_1 \text{ GP}_s + \beta_3 \text{ AccessDifficulty}_s
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