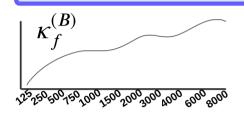
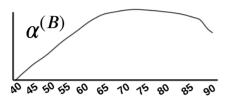
Baseline Model

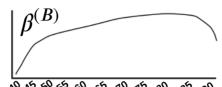
$$\pi_f = \alpha^{(B)} + \beta^{(B)} \kappa_f^{(B)} + \epsilon_f^{(B)}$$

$$\kappa_f^{(B)} = \theta^{(B)} + \phi_1^{(B)} \kappa_{f-1}^{(B)} + \omega_f^{(B)}$$

Baseline Model Ouput



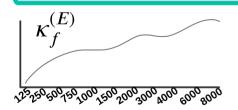


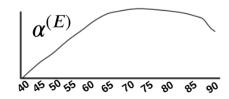


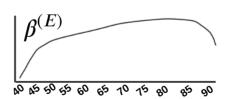
Extended Model

$$\begin{split} \tilde{\pi}_f &= \alpha^{(E)} + \beta^{(E)} \kappa_f^{(E)} + \gamma_{(Q)}^{\mathsf{T}} \ \pi^{(Q)} + \gamma_{(N)}^{\mathsf{T}} \ \pi^{(N)} + \epsilon_f^{(E)} \\ \kappa_f^{(E)} &= \theta^{(E)} + \phi_1^{(E)} \kappa_{f-1}^{(E)} + \omega_f^{(E)} \end{split}$$

Extended Model Ouput







Inference Procedures

PS1

 $H_0: \mathbf{\Theta}(\mathcal{M}_{\mathrm{B},d,h}) = \mathbf{\Theta}(\mathcal{M}_{\mathrm{B},d',h'})$

 $H_1: \mathbf{\Theta}(\mathcal{M}_{\mathrm{B},d,h}) \neq \mathbf{\Theta}(\mathcal{M}_{\mathrm{B},d',h'})$

 $H_0: \mathbf{\Theta}(\mathcal{M}_{\mathrm{E},d,h}) = \mathbf{\Theta}(\mathcal{M}_{\mathrm{E},d',h'})$

 $H_1: \mathbf{\Theta}(\mathcal{M}_{\mathrm{E},d,h}) \neq \mathbf{\Theta}(\mathcal{M}_{\mathrm{E},d',h'})$

PS2

 $H_0: \mathbf{\Theta}(\mathcal{M}_{\mathrm{B},d,h}) = \mathbf{\Theta}(\mathcal{M}_{\mathrm{E},d',h'})$

 $H_1: \mathbf{\Theta}(\mathcal{M}_{\mathrm{B},d,h}) \neq \mathbf{\Theta}(\mathcal{M}_{\mathrm{E},d',h'})$



Overall Population

By PTA Category

By Sex