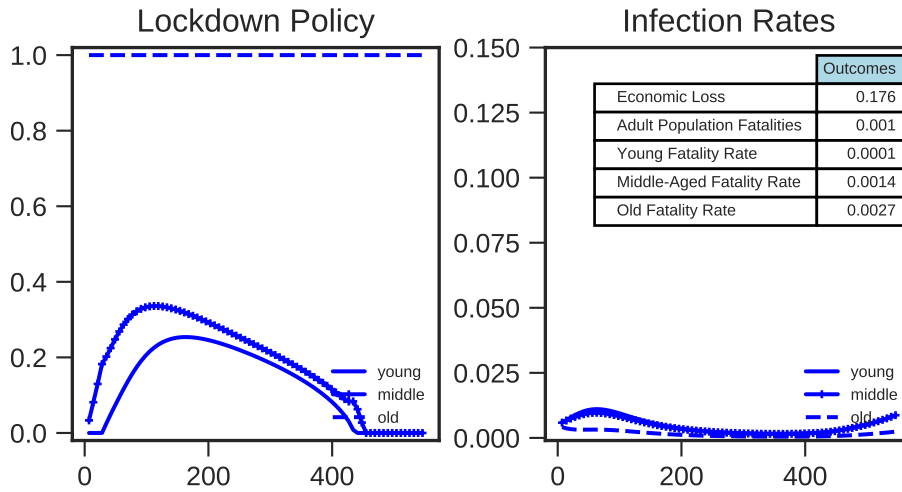
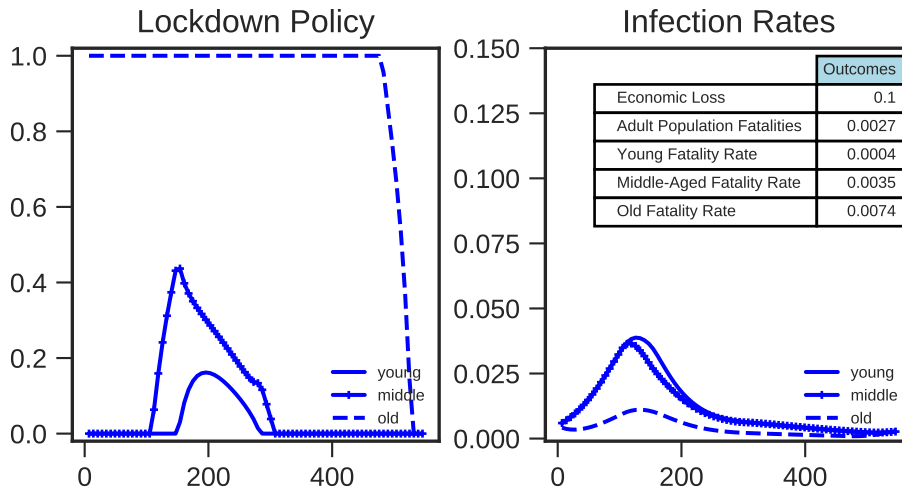


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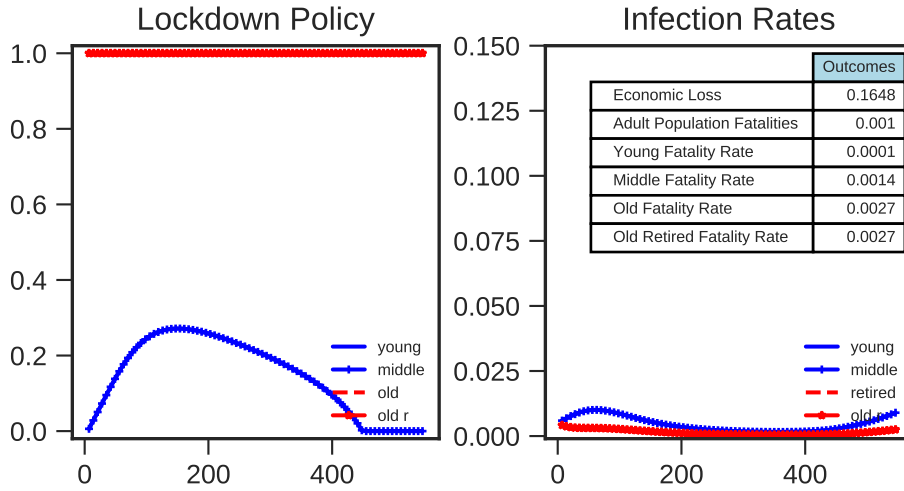


Base: Safety Focused Optimal Targeted Policy for $\theta = 0.75$ $\eta = .9$ $\rho = 1.0$

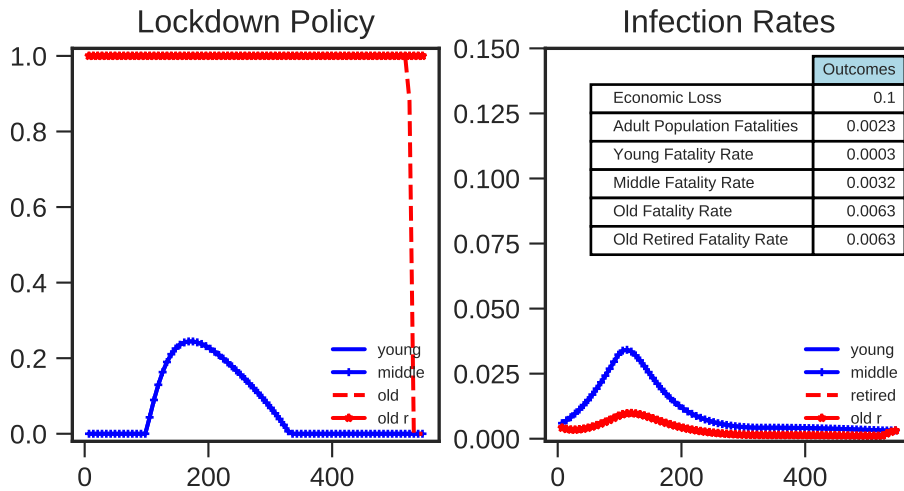


Base: Economy Focused Optimal Targeted Policy for $\theta = 0.75$ $\eta = .9$ $\rho = 1.0$

Figure A1: “Safety-focused” (top two panels) and “economy-focused” (bottom two panels) optimal fully-targeted policies.



Four Groups: Safety Focused Optimal SemiTargeted Policy for $\theta = 0.75$ $\eta = .9$ $\rho = 1.0$



Four Groups: Economy Focused Optimal SemiTargeted Policy for $\theta = 0.75$ $\eta = .9$ $\rho = 1.0$

Figure A2: “Safety-focused” (top panel) and “economy-focused” (bottom panel) optimal semi-targeted policies with separate old-working and old-retired groups.

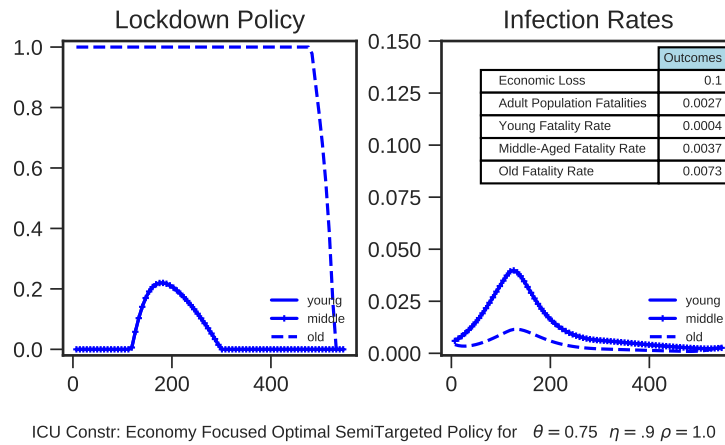
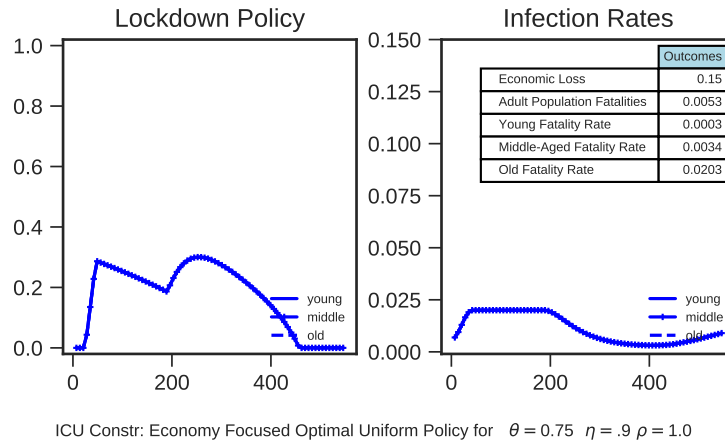


Figure A3: Optimal uniform and semi-targeted policies with a hard constraint on ICU numbers.

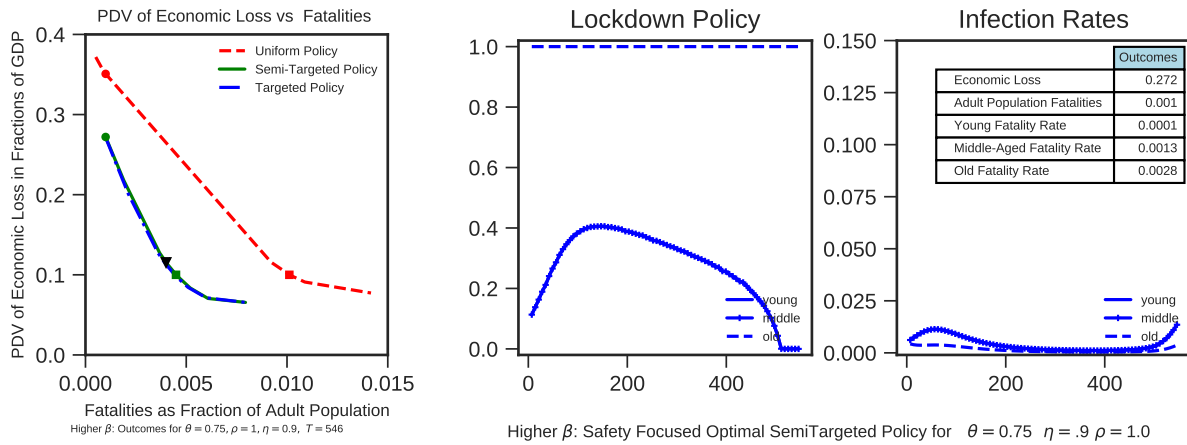
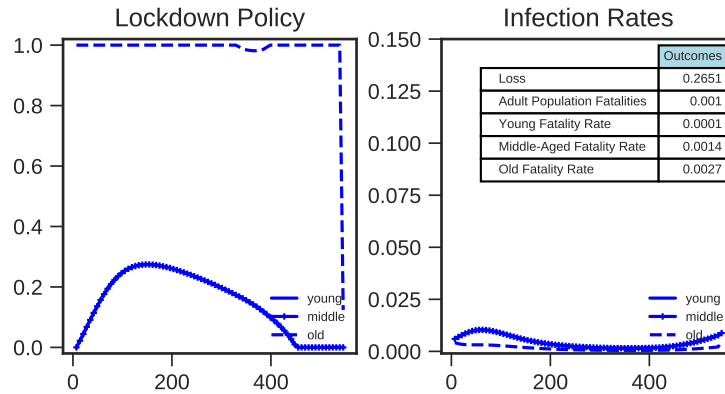
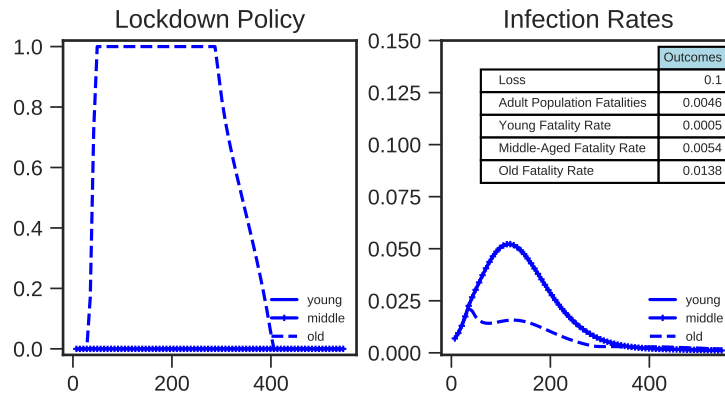


Figure A4: Frontiers and “safety-focused” optimal semi-targeted policies for higher value for transmission rate β , calibrated to match $R_0 = 2.4$.

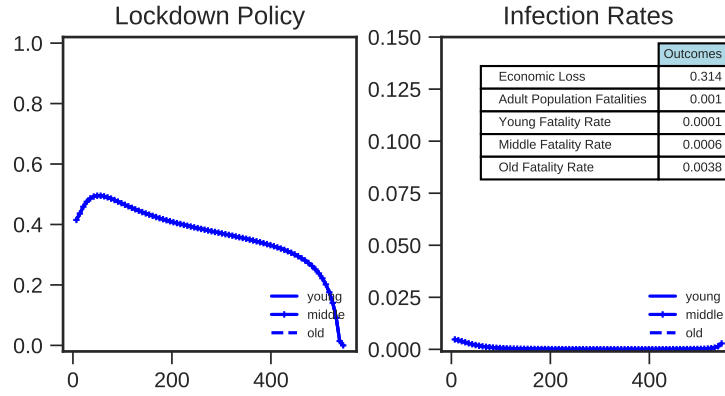
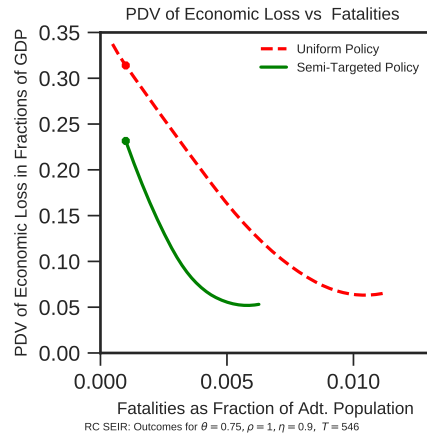


With Disutility: Safety Focused Optimal SemiTargeted Policy for $\theta = 0.75$ $\eta = .9$ $\rho = 1.0$

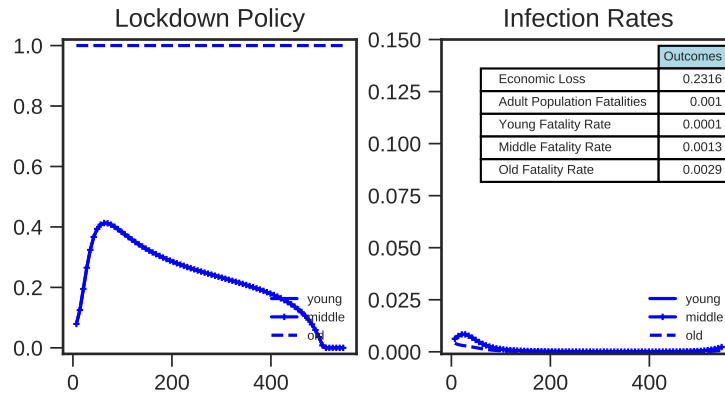


With Disutility: Economy Focused Optimal SemiTargeted Policy for $\theta = 0.75$ $\eta = .9$ $\rho = 1.0$

Figure A5: “Safety-focused” and “economy-focused” semi-targeted policies when there is an additional disutility of lockdown equivalent to 25% of the young and middle-aged wage.



RC: SEIR : Safety Focused Optimal Uniform Policy for $\theta = 0.75 \eta = .9 \rho = 1.0$



RC: SEIR : Safety Focused Optimal SemiTargeted Policy for $\theta = 0.75 \eta = .9 \rho = 1.0$

Figure A6: SEIR model – frontiers and optimal “safety-focused” uniform and semi-targeted policy.

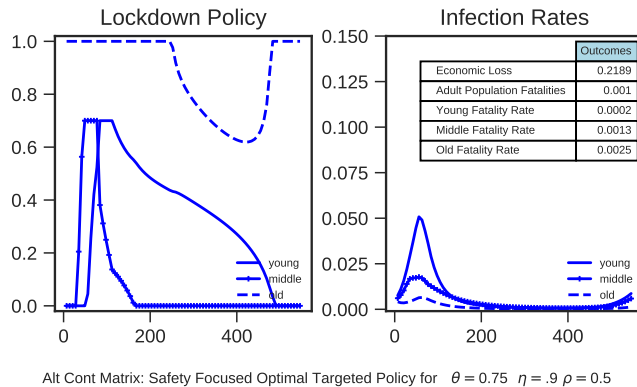
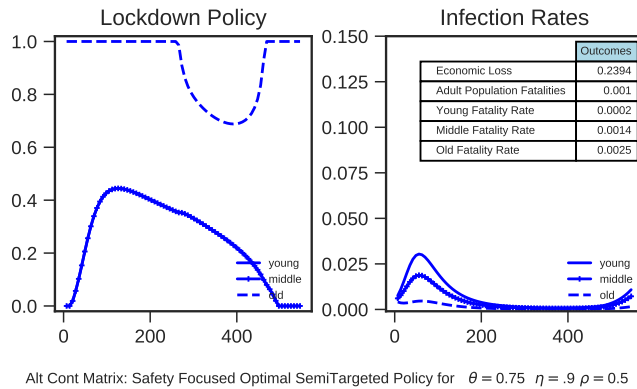
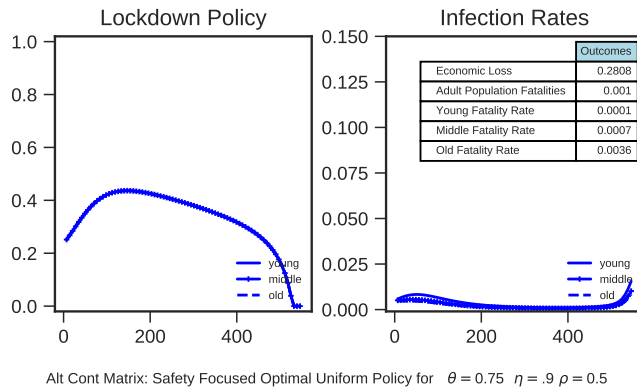
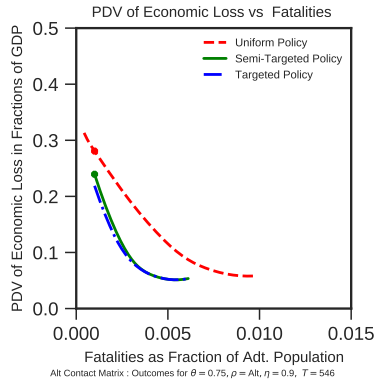


Figure A7: Frontiers and “safety-focused” uniform, semi-targeted and fully-targeted optimal policies for the baseline model calibrated to the BBC pandemic study contact matrix.

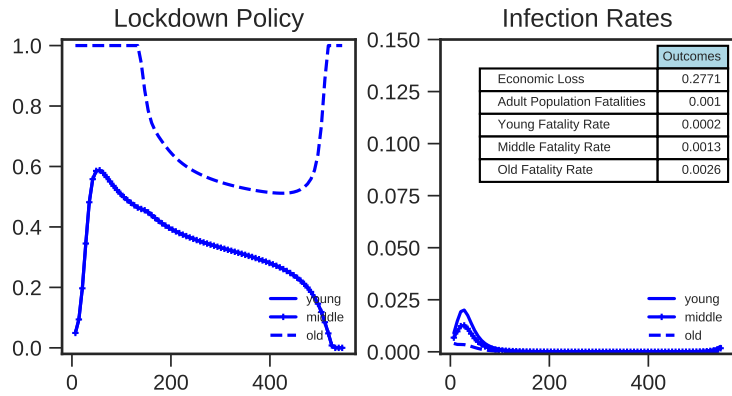
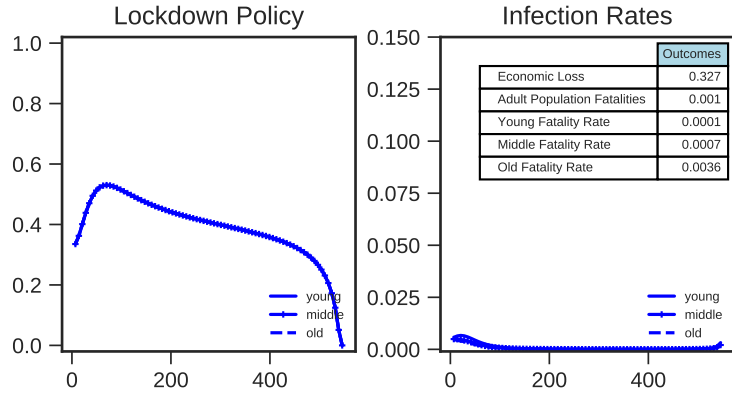
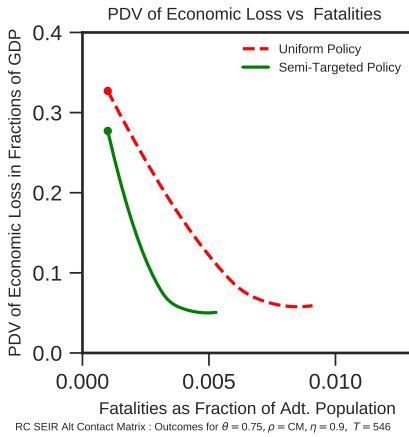


Figure A8: Frontiers and “safety-focused” optimal semi-targeted policies for the SEIR model calibrated to the BBC pandemic study contact matrix.

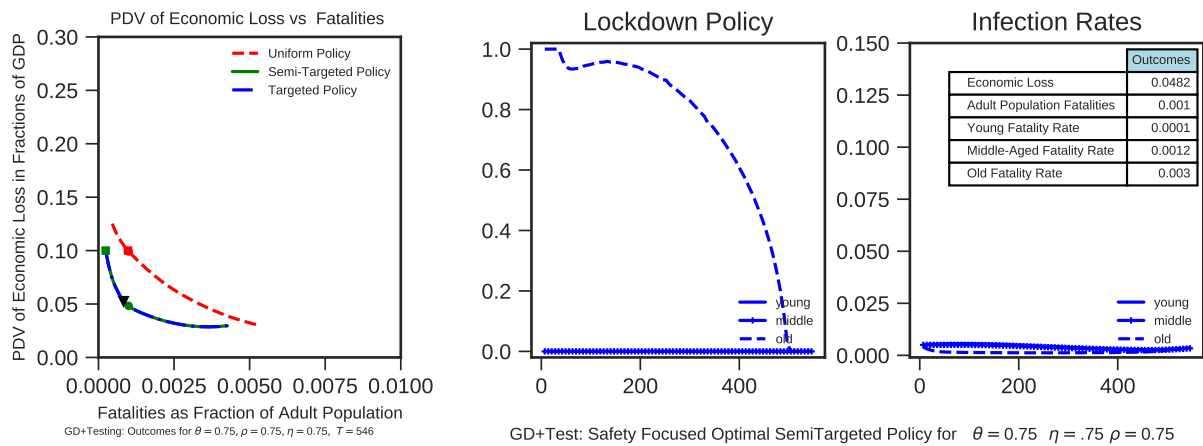


Figure A9: Frontiers and “safety-focused” optimal semi-targeted policies with group distancing and testing.