One Period=7 days (costs scaled by 1,000,000 during optimization)
Solved using solve\_and\_process\_lagrangian\_threshold\_0.075\_use\_smart\_stepsize\_True\_L1\_optGap\_0.025\_L2\_optGap\_0.075\_L2\_max\_time\_500 Infected - No intervention Infected Cumulative Deaths - No intervention Cumulative Deaths Recovered - No intervention Recovered Susceptible - No intervention 250000 Susceptible \$800,000 Cumulative Costs of Interventions Cumulative Cost Total Cumulative Cost Total - No intervention 200000 \$600,000 <u>≤</u> 150000 - \$400,000 100000 - \$200,000 20 28 98 100 Period 98 99 -27 -28 -98 -99 -97 2. Social Gatherings (in a house) A:  $\$[0, 0, 0, 0] \cdot 10^2$ B:  $\$[0 , 0 , 0 , 0 ] \cdot 10^2$ C:  $\$[8 , 10 , 12 , 14 ] \cdot 10^2$ 3. Non-Food Service (bank, retail, etc) 2 3 3 2 2 1 \$7.7e+ \$3.2e+ \$4.4e+ 0.536 \$3.7e+ \$1.4e+05 \$3.7e+ \$0.0 \$1.8e+ \$1.4e+05 0.509 1.000 \$4.9e+09 \$0.0 \$4.9e+09 1.000 \$4e+10 \$3.7e+09 \$3.7e+10 0.509 \$4.1e+08 \$0.0 \$4.1e+08 1.000

Movement

A: \$[5000 ,10000] 10<sup>2</sup> **B:** \$[10000,20000] 10<sup>2</sup> C:  $\$[10 , 14 ] \cdot 10^2$ P: [.95 ,.93 ]

A:  $\$[0, 0] \cdot 10^2$ **B**:  $\$[0, 0] \cdot 10^2$ C:  $\$[10 , 14 ] \cdot 10^2$ P: [.99 ,.95 ]

Education (University level)

P: [.99 ,.99 ,.97 ,.93 ]

A: \$[2500 ,5000 ,10000] ·10<sup>2</sup> B:  $\$[5000, 10000, 20000] \cdot 10^2$ C:  $\$[8 , 10 , 14 ] \cdot 10^2$ P: [.99 ,.95 ,.93 ]

A:  $\$[0 , 0 , 0 ] \cdot 10^2$ B:  $\$[0 , 0 , 0 ] \cdot 10^2$ 

C: \$[8 ,10 ,14 ] 10<sup>2</sup> P: [.99 ,.95 ,.93 ]

A:  $\$[2500,5000,10000]\cdot 10^2$ 

B: \$[5000 ,10000,20000] 10<sup>2</sup> C: \$[8] , 10 , 14  $]\cdot 10^2$ P: [.99 ,.95 ,.93 ]

4. Restaurants

5. Masking

6. Mega Events

7. Border Control A:  $\$[5000, 10000] \cdot 10^2$ **B:** \$[10000,20000] 10<sup>2</sup>

A:  $\$[0] 10^2$ **B:** \$[0]  $1.10^2$ 

C:  $\$[10] 10^2$ P: [.93 ]

C: \$[10 ,14 ]·10<sup>2</sup> P: [.95 ,.93 ]

8. Physical Distancing

Cost Per Period: TOTAL

**Probability Factor** 

Cost Per Period: POLICY Cost Per Period: DISEASE

A: \$[5000 ,10000] 10<sup>2</sup>

**B:** \$[10000,20000] 10<sup>2</sup> C: \$[10 ,14 ] 10<sup>2</sup> P: [.95 ,.93 ]