

COVID-19 Projections under different levels of non-pharmaceutical interventions

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Research Activities

- Randomized, adaptive phase 3 trials for COVID-19 therapeutics
 - Therapeutic use
 - Prophylactic use
- Randomized, adaptive phase 2b and 3 trials for COVID-19 vaccines
- Mathematical modeling of the transmission and control of SARS-CoV -2 on local and global scales

Preliminary modelling results going live in the next day or so

Alessandro Vespignani, Northeastern University



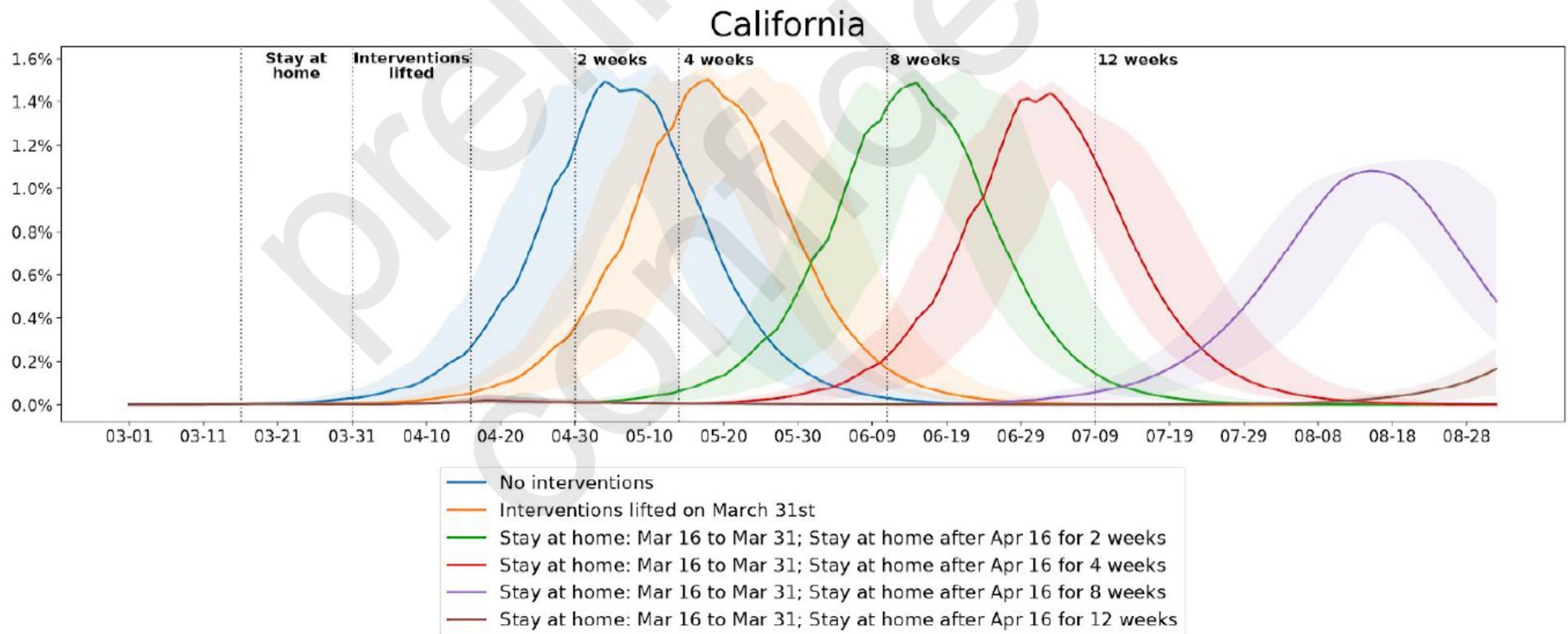
Laboratory for the
Modeling of Biological +
Socio-technical Systems

M. Elizabeth Halloran, U. Wash. and Ira Longini, U FL

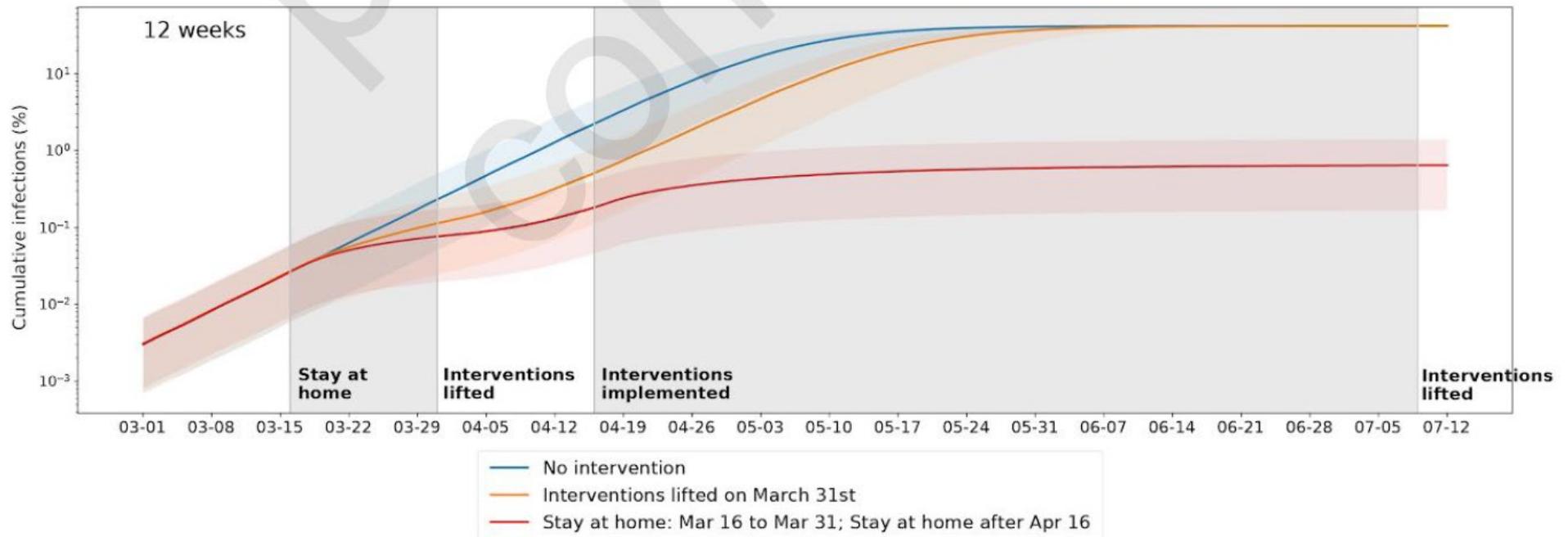


CENTER FOR
INFERENCE & DYNAMICS
OF INFECTIOUS DISEASES

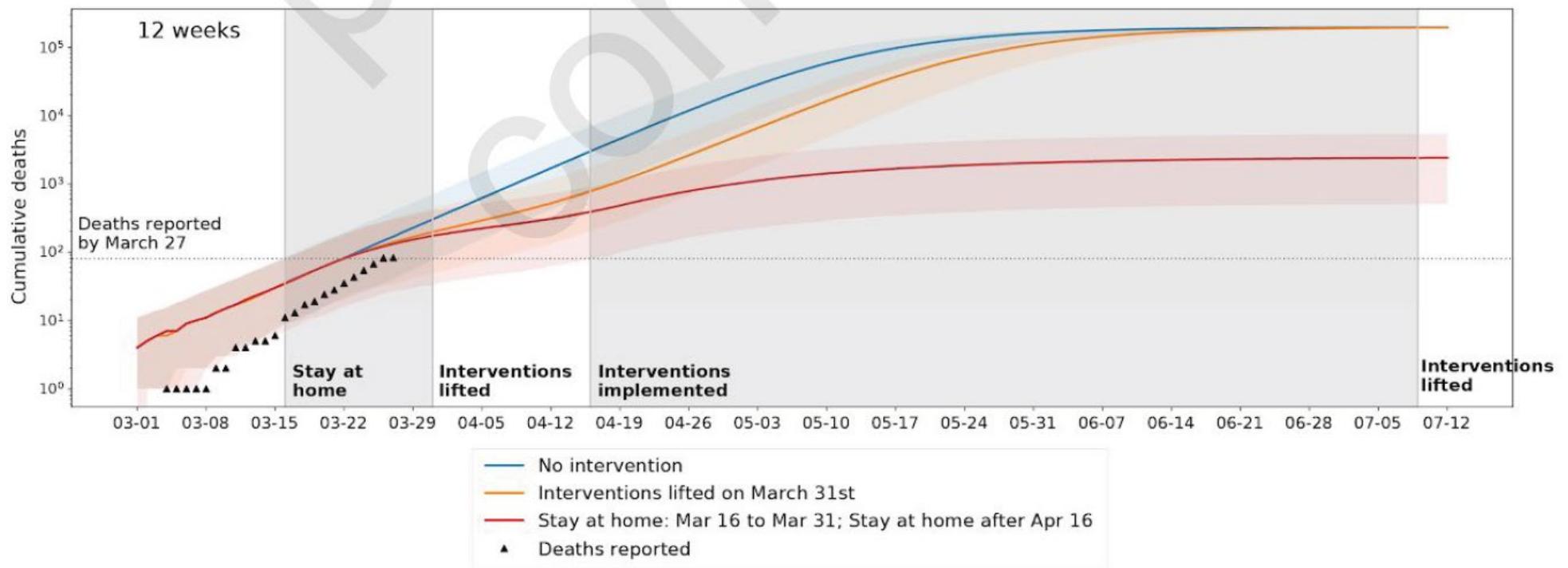
Daily new infections incidence different scenarios in California



Cumulative infections per 100 individuals for the different scenarios stay at home for 12 weeks in California



Cumulative number of deaths interventions are implemented 12 weeks in California



Cumulative clinical attack rate (AR) and cumulative number of deaths in California

	Stay at home (March 16-March 31) and after April 16 (in bracket the 90%CI)							
	2+2 weeks		2+4 weeks		2+8 weeks		2+12 weeks	
	Clinical AR(%)	Deaths	Clinical AR(%)	Deaths	Clinical AR(%)	Deaths	Clinical AR(%)	Deaths
March 31	0.07 [0.02-0.16]	172 [45-380]	0.07 [0.02-0.16]	172 [42-380]	0.07 [0.02-0.16]	179 [50-414]	0.07 [0.02-0.17]	174 [33-404]
April 30	0.39 [0.09-0.86]	960 [250-2,151]	0.38 [0.09-0.834]	962 [239-2,139]	0.4 [0.10-0.86]	1013 [288-2,237]	0.4 [0.1-0.89]	970 [200-2,210]
May 31	5.33 [1.49-9.92]	8,396 [2,336-17,188]	0.84 [0.22-1.79]	2,303 [580-4,962]	0.58 [0.16-1.3]	2,113 [630-4668]	0.59 [0.15-1.29]	2,031 [424-4,581]
June 30	38.23 [30.87-39.8]	123,950 [75,050-146,647]	17.44 [6.87-24.6]	32,070 [10,213-52,782]	0.75 [0.20-1.6]	2,582 [762-5,616]	0.63 [0.16-1.38]	2,363 [495-5,303]
July 12	40.92 [39.14-41.14]	168,034 [138,328-177,750]	32.67 [20.49-36.4]	89,178 [41,633-114,717]	1.31 [0.37-2.6]	3,513 [1,067-7,342]	0.64 [0.16-1.4]	2,410 [507 [5,402]

The colors of the cells, from green to orange, indicate when the daily number of ICUs needed will surpass the state's capacity

Thank you